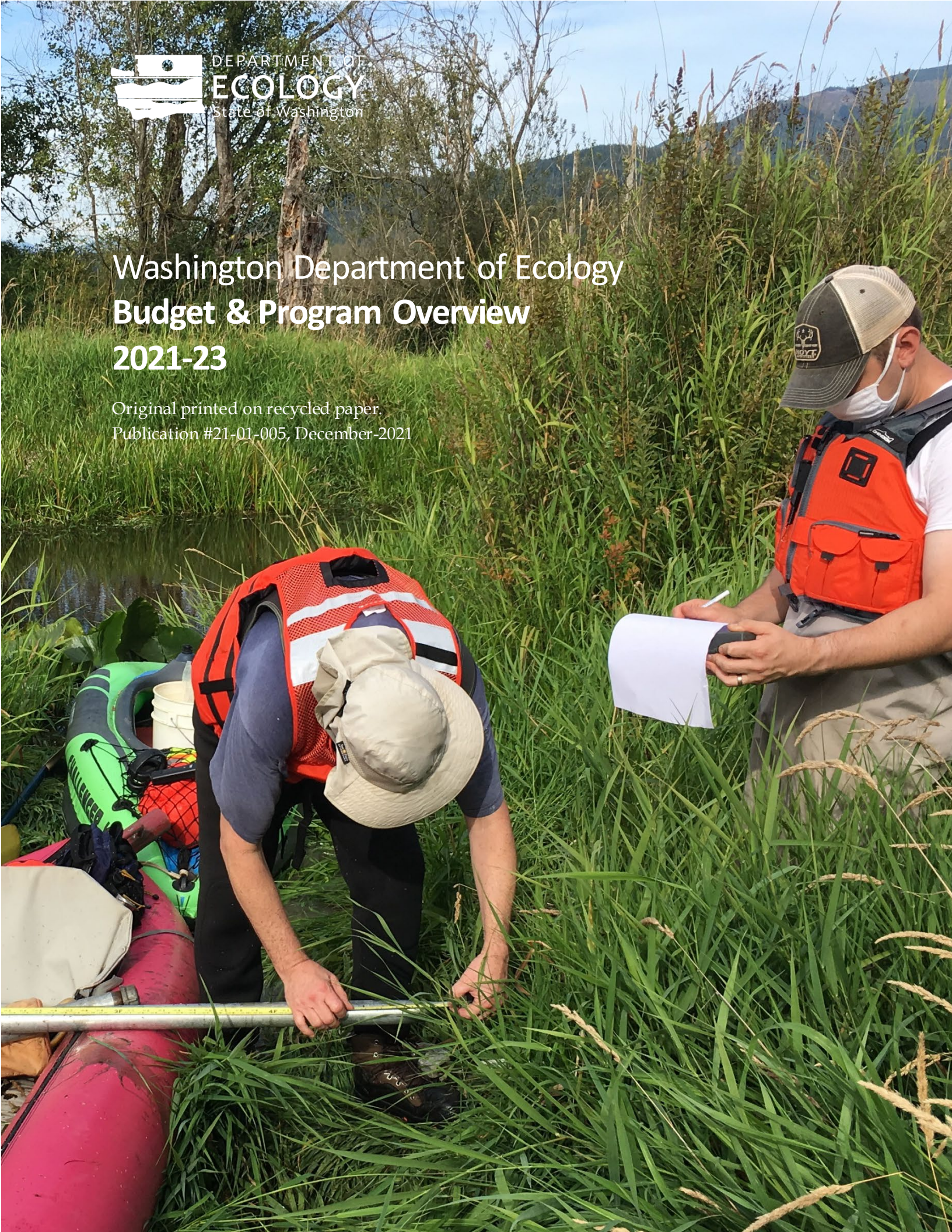




DEPARTMENT OF
ECOLOGY
State of Washington

Washington Department of Ecology Budget & Program Overview 2021-23

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Publication and Contact Information

This document is available on the Department of Ecology’s website at:

<https://fortress.wa.gov/ecy/publications/summarypages/2101005.html>

For more information contact:

Financial Services Program
PO Box 47600
Olympia, WA 98504-7600
Phone: 360-407-6985

Washington State Department of Ecology – www.ecology.wa.gov

- Headquarters, Olympia 360-407-6000
- Northwest Regional Office, Shoreline 206-594-0000
- Southwest Regional Office, Olympia..... 360-407-6300
- Central Regional Office, Union Gap 509-575-2490
- Eastern Regional Office, Spokane..... 509-329-3400

To request ADA accommodation, including materials in a format for the visually impaired, call Ecology at 360-407-6985 for Valerie Pearson, or visit <https://ecology.wa.gov/accessibility>. People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.

Cover photo: Water Quality scientists Chris Martin (left) and Scott Bohling (right) work on piezometers at Turner Creek in the Skagit Watershed. The piezometer network will help Ecology and our partner, the Upper Skagit Indian Tribe, to better understand groundwater interactions with recent habitat restoration improvements to support steelhead trout recovery.

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Message from the Director



If there's one thing we can count on — it is change. Our Budget and Program Overview book reflects many exciting changes for the Department of Ecology. At the same time, these changes exist alongside our already strong environmental portfolio and the good work we do across all of our environmental and administrative programs.

Our mission to protect and preserve the environment for current and future generations stays the same. As does our vision to restore Washington's environment and natural resources while valuing our economy because, in Washington, we know that a healthy environment and a healthy economy go hand-in-hand.

How we go about achieving our mission and vision is changing. It received a big boost during the 2021 legislative session, with the passage of the Healthy Environment for All (HEAL) Act, the Climate Commitment Act, the Clean Fuel Standard, and other new responsibilities assigned to this agency.

We're embarking on a new path — a path that's providing us additional resources along with tremendous responsibilities.

No group of people should be overburdened by environmental pollution, and no group should be left behind as our state works to build a healthier environment. Those principles guided the creation of the HEAL Act, bringing greater focus and additional resources to the communities most affected by pollution.

We're entering a new era in fighting climate change. Governor Inslee's Clean Fuel Standard and his cap and invest bill, the Climate Commitment Act, put Washington at the forefront of the clean economy. Ours is just the second state in the nation to have a comprehensive economy-wide program to reduce greenhouse gas emissions. This accomplishment puts Washington on track to reach net zero emissions by 2050.

Through our capital budget, we are able to invest in communities across Washington, helping them tackle contamination lingering in the environment for decades, such as pollution left behind from past commercial and industrial practices. We're helping restore lands so they can be redeveloped to add value to communities, including supporting affordable housing.

Importantly, the bulk of our budget is passed on to local communities through grants and loans, helping address environmental challenges where we live, work, and play.

Polluted stormwater runoff threatens the health of our waters as do failing sewage systems. Our Water Quality funding helps counties and cities upgrade their infrastructure and reduce pollution from wherever it comes.

We're taking creative approaches to reduce flooding hazards by combining salmon recovery with river habitat restoration projects. And, as our climate warms, communities faced with

diminished water supplies are helping us implement projects to manage the impacts of drought and become more climate resilient.

Our success is based on engagement, collaboration, and building partnerships with all Washingtonians. This document describes our priorities and goals and the breadth of our environmental work. We at Ecology are excited to embrace these new challenges and change and, with you, get to work.

With gratitude,

A handwritten signature in black ink, appearing to read 'Laura Watson', written in a cursive style.

Laura Watson
Director

2021-23 Introduction – Agency Budget

Strategic Framework

Vision

Our innovative partnerships sustain healthy land, air, and water in harmony with a strong economy.

Mission

Protect, preserve, and enhance Washington’s environment for current and future generations.

Values

- Environmental stewardship
- Environmental justice
- Public health, safety, and welfare
- Diversity, equity, and inclusion
- Problem solving and innovation
- Continuous improvement
- Collaborative and respectful relations

Goals

- Support and engage our communities, customers, and employees
- Reduce and prepare for climate impacts
- Prevent and reduce toxic threats and pollution
- Protect and manage our state’s waters
- Protect and restore Puget Sound

This book provides an overview of Ecology’s 2021-23 biennial budget – where the money comes from, how it will be used, and what we want to see happen as a result of our work. The book starts with a broad, agencywide view, and continues with profiles of individual programs.

Our work is incredibly complex and diverse, and that is reflected in our budget. We use up to 72 separate accounts and are the administrator of 63 of those accounts. Every even-numbered year, we submit a request to the Governor for our capital and operating budgets. These requests support our two-year strategic plan, and each individual budget request is tied to our strategic priorities and statewide performance goals. This ensures our resources support carefully planned and vetted activities and items. In odd-numbered years, we submit supplemental budget requests to address changing needs.

The 2021 Legislature passed a \$666.7 million 2021-23 operating budget for Ecology. Two major new climate programs established during the 2021 session come with significant new resources for Ecology. The operating budget includes \$23.1 million and 52.2 FTEs for Ecology to implement the Climate Commitment Act, and \$3.56 million and 9.2 FTEs for Ecology to implement the Clean Fuel Standard. The Healthy

Environment for All (HEAL) Act brings new resources to the state’s environmental justice (EJ) efforts, including \$1.54 million and 5.1 FTEs to Ecology for our responsibilities under the Act. The budget also funds Ecology’s Title VI/Advancing EJ budget request, which provides an additional FTE to help us meet obligations under Title VI of the Civil Rights Act.

Ecology’s capital budget includes spending authority for priority investments throughout Washington State. This budget is supported by dedicated environmental funds, federal dollars, and state bonds for projects throughout the state.

Around 70 percent of Ecology’s total budget is passed through to local partners for work in communities throughout Washington. Most of this money is provided directly to local governments and communities through grants, loans, and contracts to help them make environmental improvements. Pass-through funds directly create jobs, improve economic development, and protect environmental and public health through projects like cleaning up

and preventing toxic sites, addressing flood hazards, protecting and restoring Puget Sound, and addressing local environmental and public health priorities.

In this book, each program’s profile includes context for its work and descriptions of the activities funded in the 2021-23 operating and capital budgets, including the intended results and how performance will be measured. Throughout the book, pie charts and tables are used to show the source of funding and how it is allocated. Information about our accounts is in the back of the book.

Executive Leadership Team – Directory

Director and Deputy Director

Director	Laura Watson	360-407-7001
Confidential Assistant	Teri North.....	360-407-7009
Deputy Director.....	Heather Bartlett	360-407-7011
Confidential Assistant	Judy Decker	360-407-7014
Office of Equity & Env. Justice.....	Millie Piazza.....	360-407-6177

Office of the Attorney General

Assistant Attorney General for Ecology	Andy Fitz.....	360-586-6752
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Program Administration Directors

Administrative Services	James Pendowski.....	360-407-6829
Communications.....	Dustin Terpening.....	360-407-7004
Tribal Affairs	Tyson Oreiro.....	360-407-7017
Financial Services.....	Erik Fairchild	360-407-7005
Government Relations	Denise Clifford.....	360-407-7003
Human Resources	Sandi Stewart.....	360-407-6218
Information Technology Services	Cristie Fredrickson.....	360-407-7048
Office of Chehalis Basin	Andrea McNamara Doyle	360-407-6548
Office of Columbia River.....	Tom Tebb	509-574-3989
Special Assistant to the Director.....	Stu Clark.....	360-407-7600
Special Assistant to the Director.....	Sharlett Mena.....	360-407-7012

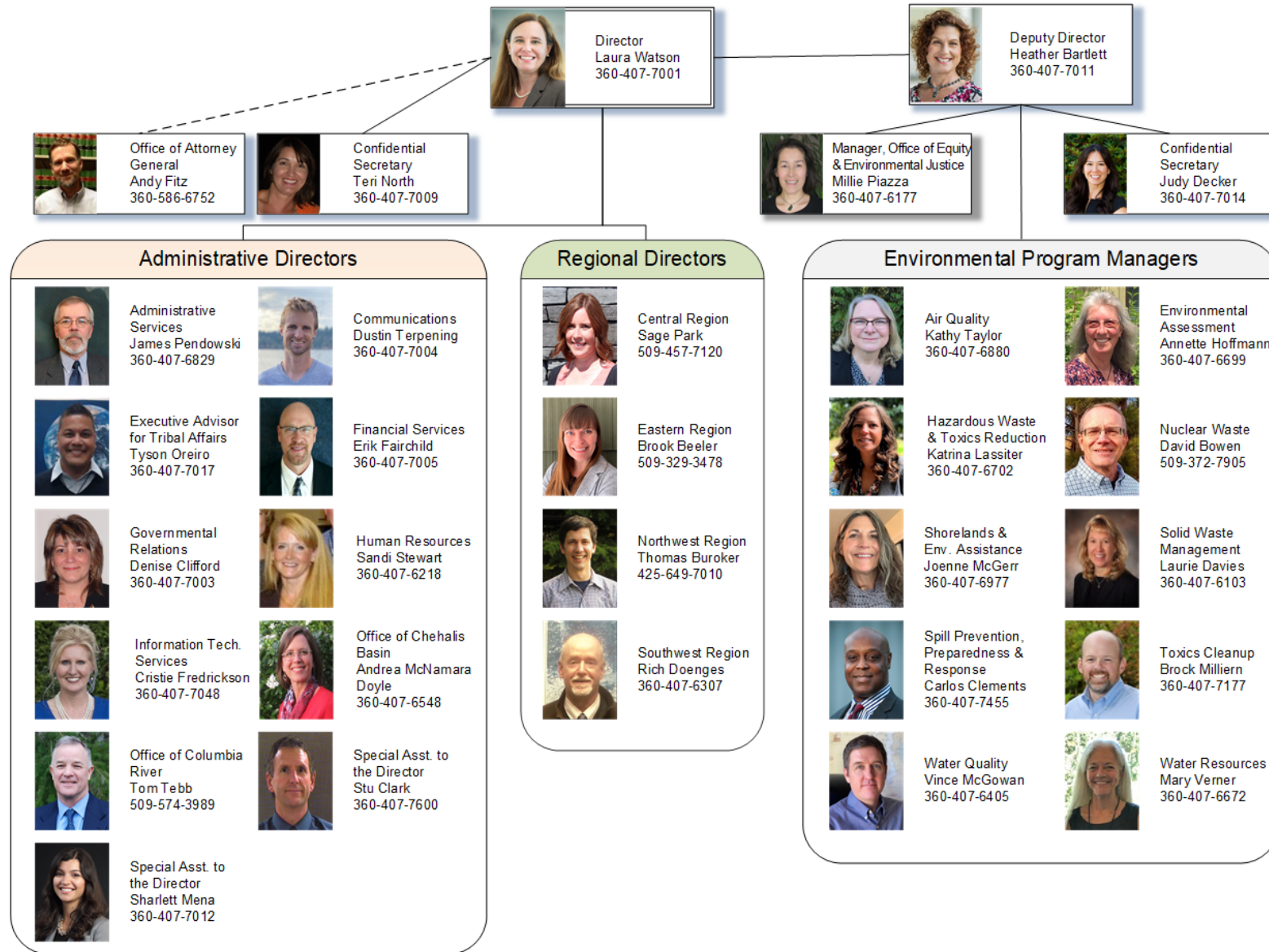
Regional Office Directors

Central.....	Sage Park.....	509-457-7120
Eastern	Brook Beeler	509-329-3516
Northwest	Tom Buroker.....	425-649-7010
Southwest.....	Rich Doenges.....	360-407-6307

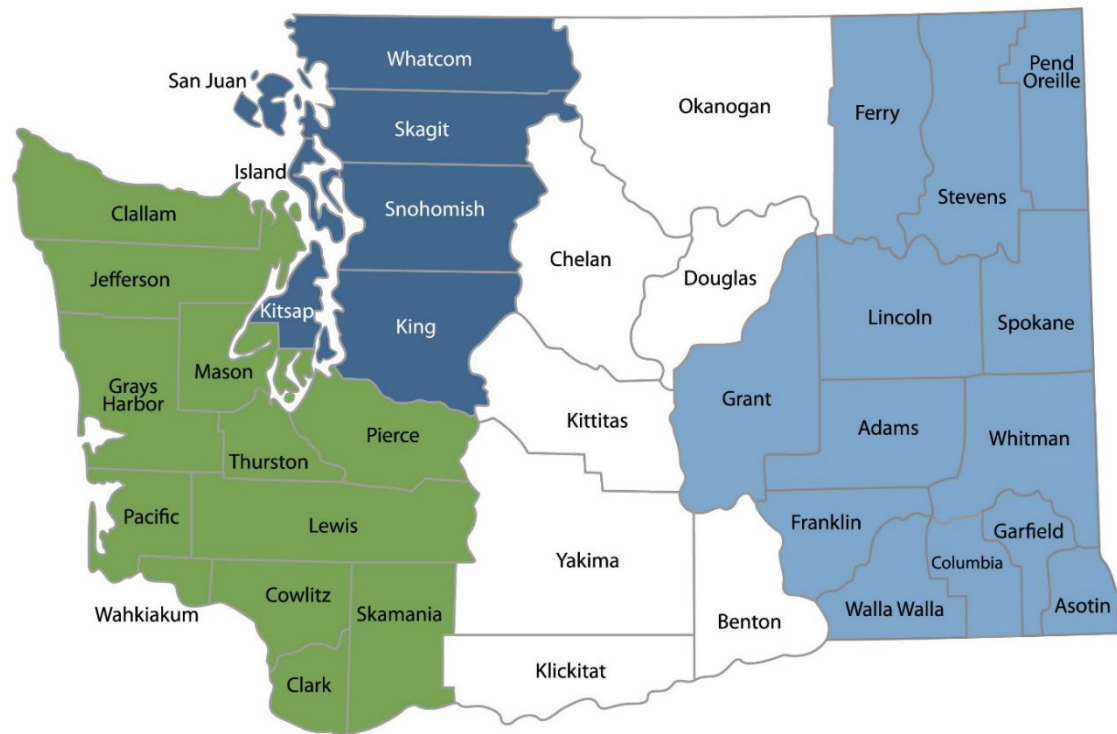
Environmental Program Directors

Air Quality.....	Kathy Taylor.....	360-407-6880
Environmental Assessment.....	Annette Hoffmann.....	360-407-6699
Hazardous Waste and Toxics Reduction....	Katrina Lassiter.....	360-407-6702
Nuclear Waste	David Bowen.....	509-372-7905
Shorelands & Environmental Assistance....	Joenne McGerr.....	360-407-6977
Solid Waste Management.....	Laurie Davies.....	360-407-6103
Spills Prevention.....	Carlos Clements.....	360-407-7455
Toxics Cleanup.....	Brock Milliern.....	360-407-7177
Water Quality	Vince McGowan.....	360-407-6405
Water Resources	Mary Verner	360-407-6672

Executive Leadership Team – Organizational Chart



Headquarters & Regional Offices



Southwest Region
360-407-6300

Northwest Region
206-594-0000

Central Region
509-575-2490

Eastern Region
509-329-3400

Headquarters

Mailing: PO Box 47600, Olympia, WA 98504-7600
Street: 300 Desmond Drive SE, Lacey, WA
Phone: 360-407-6000

Northwest Regional Office

Counties served: Island, King, Kitsap, San Juan, Skagit, Snohomish, and Whatcom
Mailing: PO Box 330316, Shoreline, WA 98133-9716
Street: 15700 Dayton Avenue North, Shoreline, WA 98133-9716
Phone: 206-594-0000

Southwest Regional Office

Counties served: Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, and Wahkiakum
Mailing: PO Box 47775, Olympia, WA 98504-7775
Street: 300 Desmond Drive SE, Lacey, WA
Phone: 360-407-6300

Central Regional Office

Counties served: Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima
Street: 1250 West Alder Street, Union Gap, WA 98903-0009
Phone: 509-575-2490

Eastern Regional Office

Counties served: Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman
Street: N. 4601 Monroe Street, Spokane, WA 99205-1295
Phone: 509-329-3400

Field Offices

Bellingham Field Office

Street: 913 Squalicum Parkway, Suite 101, Bellingham, WA 98225-2078

Phone: 360-255-4400

Vancouver Field Office

Street: 12121 NE 99th Street, Suites 2100-2120, Vancouver, WA 98682-2346

Phone: 360-690-7171

Program Locations

Nuclear Waste Program, Richland Office

Street: 3100 Port of Benton Boulevard, Richland, WA 99354-1670

Phone: 509-372-7950

Office of Chehalis Basin¹

Mailing: PO Box 47600, Olympia, WA 98504-7600

Street: 300 Desmond Drive SE, Lacey, WA

Phone: 360-407-6000

Office of Columbia River²

Street: 1250 West Alder Street, Union Gap, WA 98903-0009

Phone: 509-575-2490

Padilla Bay National Estuarine Research Reserve³

Street: 10441 Bayview-Edison Road, Mt. Vernon, WA 98273-9668

Phone: 360-428-1558

Limited Purpose Locations

Staff are available by appointment only in these offices.

Manchester Environmental Laboratory

Street: 7411 Beach Drive East, Port Orchard, WA 98366

Phone: 360-871-8800

Laboratory Accreditation Office

Mailing: PO Box 488; Manchester, WA 98353-0488

Street: 7411 Beach Drive East, Port Orchard, WA 98366

Phone: 360-871-8840

Environmental Assessment Program, Operations Center

Mailing: PO Box 47710; Olympia, WA 98504-7710

Street: 8270 28th Court, NE; Lacey, WA 98516-7148

Phone: 360-480-9224

Walla Walla Water-Master Office at the Walla Walla Community College

Street: 500 Tausick Way, Walla Walla, WA 99362-9270

Phone: 509-329-3400

¹ The Office of Chehalis Basin is located within the Headquarters Office located in Lacey.

² The Office of Columbia River is located within the Central Regional Office located in Union Gap.

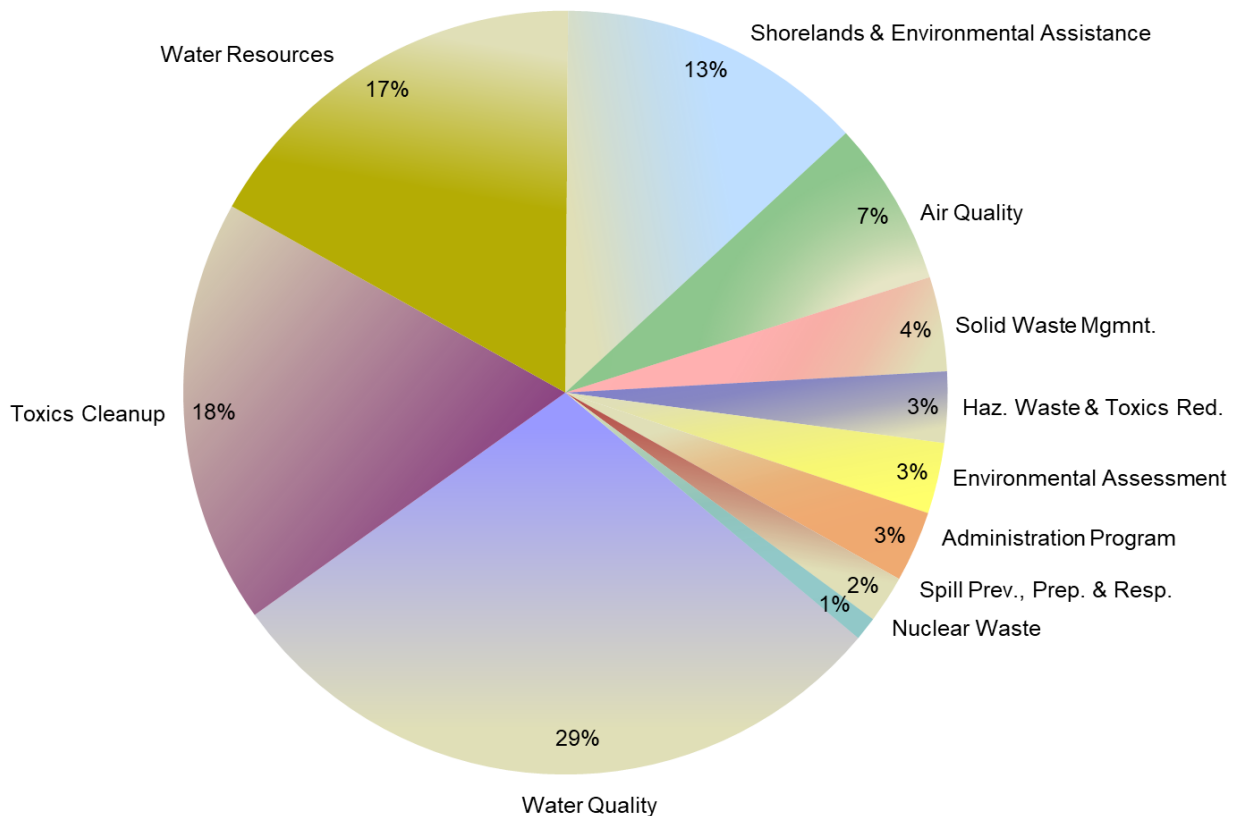
³ The Reserve is managed by Ecology's Shorelands and Environmental Assistance Program.

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2021-23 Biennium Budget \$2.0 Billion

Ecology carries out its mission through 10 environmental programs, plus agency administration. Our combined Operating and Capital Budget is divided among these programs and includes funds Ecology will pass through to other entities.

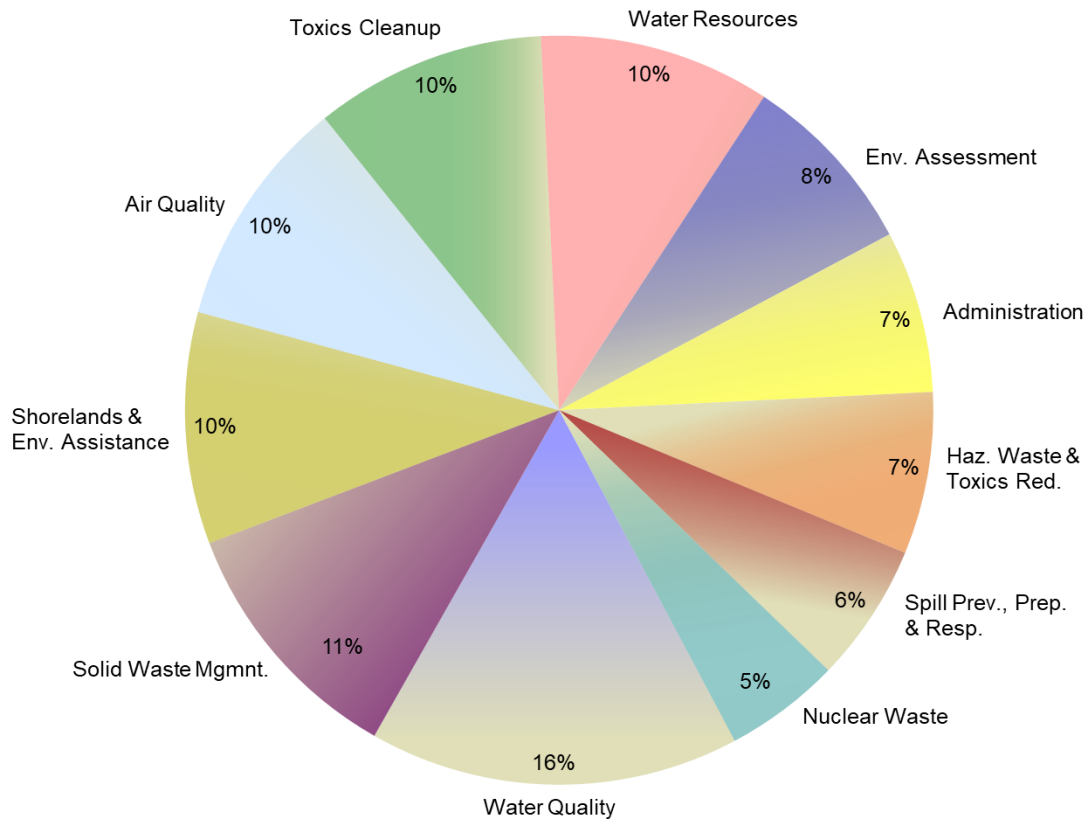
Programs	FTEs	Operating	Capital	Operating + Capital	%
Water Quality	265.6	\$106,912,000	\$468,467,512	\$575,379,512	29%
Toxics Cleanup	214.9	66,786,000	282,151,379	348,937,379	18%
Water Resources	164.8	63,554,000	269,831,371	333,385,371	17%
Shorelands & Environmental Assistance	189.2	71,534,000	188,344,831	259,878,831	13%
Air Quality	192.8	71,504,000	63,000,093	134,504,093	7%
Solid Waste Management	126.4	74,296,000	4,868,483	79,164,483	4%
Hazardous Waste & Toxics Reduction	140.7	44,782,000	8,259,884	53,041,884	3%
Environmental Assessment	181.2	52,437,000	270,120	52,707,120	3%
Administration Program	187.2	45,337,000	5,404,107	50,741,107	3%
Spill Prevention, Preparedness & Response	91.1	38,952,000	0	38,952,000	2%
Nuclear Waste	102.8	31,056,000	1,925,571	32,981,571	1%
Total	1,856.7	\$667,150,000	\$1,292,523,351	\$1,959,673,351	100%



2021-23 Biennium Operating Budget⁴ \$667.2 Million

By Program

Programs	Operating	%
Water Quality	\$106,912,000	16%
Solid Waste Management	74,296,000	11%
Shorelands & Env. Asst.	71,534,000	10%
Air Quality	71,504,000	10%
Toxics Cleanup	66,786,000	10%
Water Resources	63,554,000	10%
Environmental Assessment	52,437,000	8%
Administration ⁵	45,337,000	7%
Hazardous Waste and Toxics Reduction	44,782,000	7%
Spill Prevention, Preparedness & Response	38,952,000	6%
Nuclear Waste	31,056,000	5%
Total	\$667,150,000	100%



⁴ Source: 2021-23 enacted operating budget allotment control totals.

⁵ The agency *Administration Program* is funded by operating and capital budgets and is a small percentage (3%) of the total budget. See the agency *Administration Program* section for more detail.

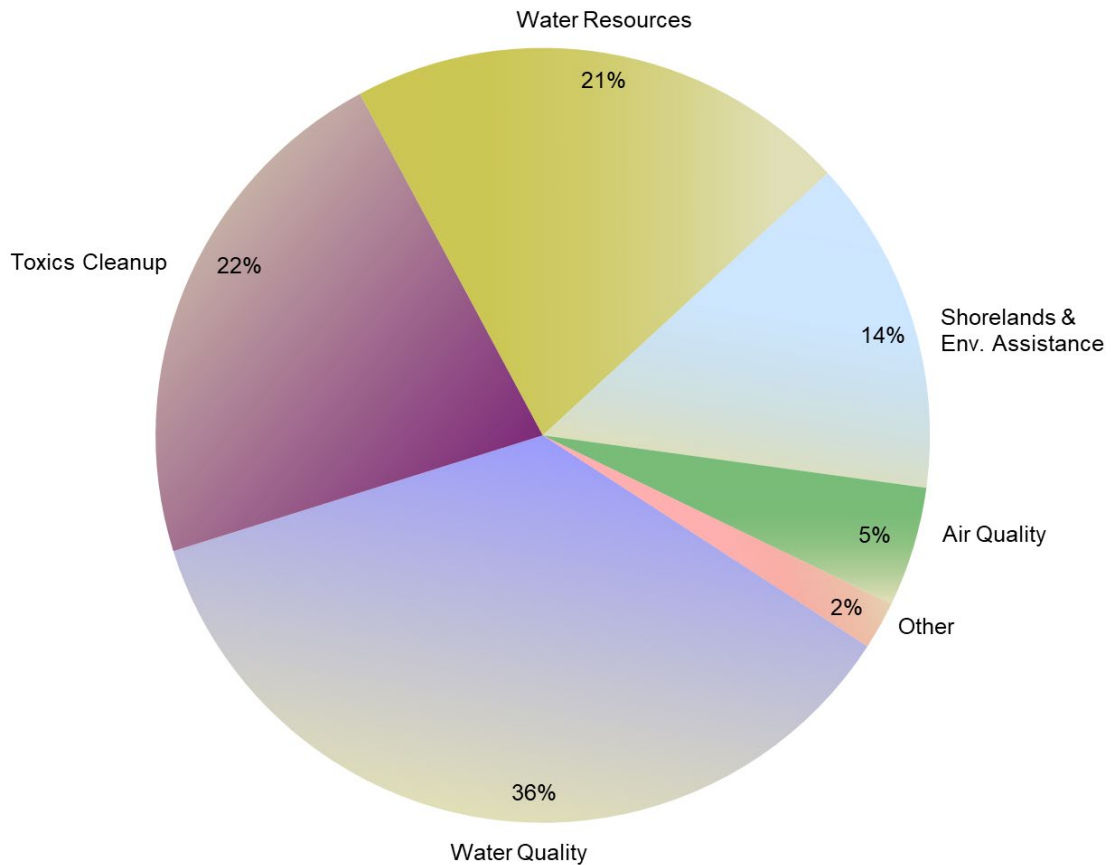
By Fund Source

General Funds	Amount	%
General Fund - Federal (001)	\$100,217,000	15.0%
General Fund - State (001)	88,581,000	13.3%
General Fund - Private/Local (001)	27,292,000	4.1%
Dedicated Accounts	Amount	%
Model Toxics Control Operating (23P)	\$288,702,000	43.3%
Water Quality Permit (176)	47,874,000	7.2%
Waste Reduction, Recycling & Litter Control (044)	26,921,000	4.0%
Radioactive Mixed Waste (20R)	22,877,000	3.4%
Hazardous Waste Assistance (207)	7,570,000	1.1%
Oil Spill Response (223)	7,076,000	1.1%
Oil Spill Prevention (217)	6,695,000	1.0%
Climate Investment (26B)	5,139,000	0.8%
Air Operating Permit (219)	4,909,000	0.7%
Water Pollution Control Revolving Administration (564)	4,688,000	0.7%
Reclamation (027)	4,370,000	0.7%
Air Pollution Control (216)	4,259,000	0.6%
Flood Control Assistance (02P)	4,128,000	0.6%
Underground Storage Tank (182)	3,992,000	0.6%
Biosolids Permit (199)	2,668,000	0.4%
Worker & Community Right-to-Know (163)	2,008,000	0.3%
Coastal Protection (408)	1,064,000	0.2%
Electronic Products Recycling (11J)	829,000	0.1%
Site Closure (125)	582,000	0.1%
Wood Stove Education & Enforcement (160)	575,000	0.1%
Dedicated Marijuana (315)	574,000	0.1%
Wastewater Treatment Plant Operator Certification (21H)	552,000	0.1%
Model Toxics Control Operating - Private/Local (23P)	499,000	0.1%
Recycled Content (25R)	482,000	0.1%
Clean Fuels Program (25Q)	382,000	0.1%
Voluntary Cleanup (23V)	344,000	0.1%
Product Stewardship Programs (16T)	248,000	<.1%
State Drought Preparedness and Response (05W)	204,000	<.1%
State & Local Improvements Revolving - Water Supply Facilities (Referendum 38) (072)	186,000	<.1%
Basic Data (116)	170,000	<.1%
Aquatic Lands Enhancement (02R)	150,000	<.1%
Paint Product Stewardship (23W)	140,000	<.1%
Photovoltaic Module Recycling (22G)	76,000	<.1%
Water Rights Tracking System (10G)	48,000	<.1%
State Emergency Water Projects Revolving (032)	40,000	<.1%
Water Rights Processing (16V)	39,000	<.1%
Total	\$667,150,000	100.0%

2021-23 Biennium Capital Budget⁶ \$1.3 Billion

By Program

Programs	Capital	%
Water Quality	\$468,467,512	36%
Toxics Cleanup	282,151,379	22%
Water Resources	269,831,371	21%
Shorelands & Environmental Assistance	188,344,831	14%
Air Quality	63,000,093	5%
Other:		
Hazardous Waste & Toxics Reduction	8,259,884	<1%
Administration	5,404,107	<1%
Solid Waste Management	4,868,483	<1%
Nuclear Waste	1,925,571	<1%
Environmental Assessment	270,120	<1%
Total	\$1,292,523,351	100%



⁶ Source: 2021-23 enacted capital budget allotments.

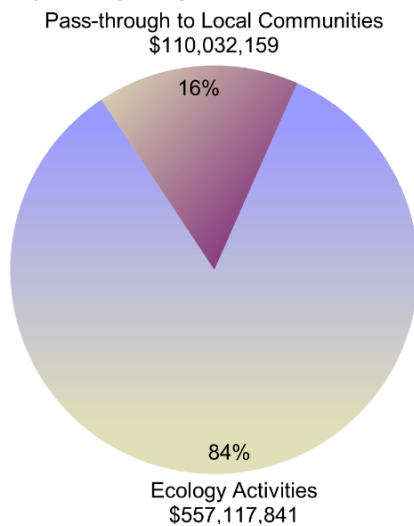
By Fund Source

Accounts	Amount	%
State Building Construction(057)	\$471,859,929	36.51%
Model Toxics Control Capital (23N)	283,183,225	21.91%
Water Pollution Control Revolving - State (727)	167,778,374	12.98%
Model Toxics Control Stormwater (23R)	116,259,129	8.99%
Watershed Restoration and Enhancement Bond (366)	73,440,235	5.68%
Water Pollution Control Revolving - Federal (727)	53,568,531	4.14%
General Fund - Private/Local (001)	38,585,468	2.99%
Cleanup Settlement (15H)	25,642,104	1.98%
Air Pollution Control (216)	14,412,862	1.12%
State Taxable Building Construction Account (355)	14,055,918	1.09%
General Fund - Federal (001)	11,950,006	0.92%
Columbia River Basin Water Supply Development (10P)	8,241,198	0.64%
Columbia River Basin Water Supply Revenue Recovery (296)	6,697,446	0.52%
Site Closure (125)	1,925,571	0.15%
State Drought Preparedness and Response (05W)	1,878,959	0.15%
Waste Tire Removal (08R)	1,206,015	0.09%
Freshwater Aquatic Weeds (222)	1,086,229	0.08%
Aquatic Algae Control (10A)	457,368	0.04%
State & Local Improvements Revolving - Water Supply Facilities (Referendum 38) (072)	294,784	0.02%
Total	\$1,292,523,351	100.0%

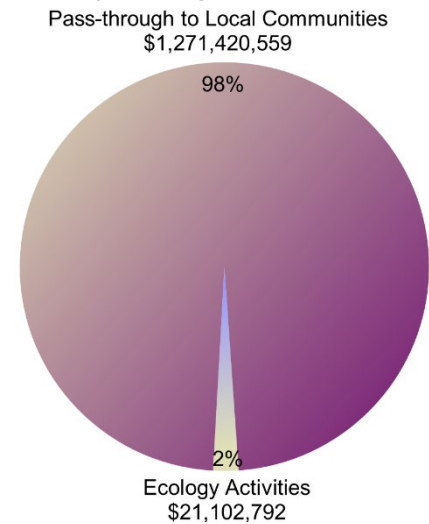
2021-23 Biennium Pass-through Funding⁷ \$1.4 Billion

Most of the money Ecology manages is “passed through” to local governments and communities to do environmental work. This money is awarded as grants or loans and is also contracted directly for things such as floodplain management and habitat improvement, water supply development and instream flow protection, local solid waste management and air toxics prevention, building water pollution control facilities, cleaning up publicly owned and orphaned or abandoned contaminated sites, local Washington Conservation Corp placements, and supporting community awareness and involvement in hazardous waste management and pollution prevention.

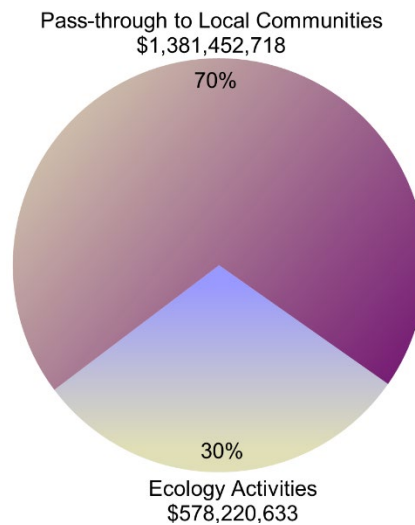
Operating Budget = \$667.2 Million



Capital Budget = \$1.3 Billion



Combined Operating + Capital Budget = \$2.0 Billion



⁷ Later in this publication is additional information on pass-through funding; see *Ecology's Data - Where It Comes From*.



Beth Friedman with Ecology (left) and Odelle Hadley (right) with Olympic Region Clean Air Agency perform maintenance on an air quality monitoring station in Lacey, Washington.

Air Quality Program

Program Mission

The mission of the Air Quality Program is to protect and improve air quality in Washington.

Environmental Threats

Air pollution is a significant threat to public health that can cause lung disease, worsen existing heart and lung diseases, increase chronic breathing problems, elevate cancer risks, and decrease lung function in children – making them more vulnerable to chronic lung disease as adults. Air pollution can also contribute to early death. Ecology estimates conservatively that approximately 1,100 people die each year in Washington due

to fine particle air pollution and that air pollution leads to hundreds of millions of dollars in societal costs each year in Washington.

The U.S. Environmental Protection Agency (EPA) sets national ambient air quality standards for six types of air pollutants. All areas of Washington, except a small area in Whatcom County, currently meet these federal air quality standards for all six pollutants. The small area in Whatcom County near an aluminum smelter does not meet the federal standard for sulfur dioxide, but 11 communities around the state are at risk of violating the federal standard for fine particulate pollution. Another threat comes from ozone; in late 2015, EPA tightened its ground-level ozone standard. Two large areas surrounding Seattle and the Tri-cities are at risk of violating the new ozone limit.

Meeting federal standards is very important. It reduces illnesses and health care costs associated with air pollution and lowers the risk of substantial financial and economic impacts on the state, local communities, businesses, and residents. The latest scientific studies show air pollution harms health, even at levels that do not violate federal standards. Many communities that meet standards may exceed “unhealthy” pollution levels multiple times a year, exposing residents to significant health risks.

The risks tied to inhaling the extremely fine particles in smoke and diesel engine exhaust are the primary air pollution health concern in Washington. There are hundreds of other chemicals, known as toxic air pollutants, that enter the atmosphere from a wide variety of sources. Regulations require emission controls for many sources that emit air toxics, but there are currently no health-based outdoor air standards for these chemicals. Studies are increasingly showing they pose significant risks to human health and the environment. We partner with local

Air Quality Program

clean air agencies to identify and monitor these pollutants.

Air pollutants also contaminate man-made materials, property, and soil, and damage vegetation, crops, animals, and wildlife; they impair visibility and affect the climate. Toxic air pollutants are not only emitted to the air and breathed by people, but are deposited to the land and waters of the state. Studies show this air deposition is a significant pollution source that can damage water quality and contaminate marine and river sediments.

Increasing levels of carbon dioxide and other greenhouse gases contribute to climate change and global warming and pose a major threat to public health and the environment in Washington. Studies show climate change will result in more extreme weather events, like droughts and floods, and will lead to sea-level rise. These impacts of climate change threaten our state's public safety, critical infrastructure, and biodiversity. Climate change has also been tied to more frequent wildfires, posing a threat to public safety and resulting in hazardous levels of particle pollution. Climate change is linked to higher levels of ozone near the ground, which harms people's health and puts areas in Washington at risk of failing to meet the more stringent federal standards.

Authorizing Laws

- *Federal Clean Air Act*
- *Chapter 70A.05 RCW, Integrated Climate Change Response Strategy*
- *Chapter 70A.15 RCW, Clean Air Act*
- *Chapter 70A.25 RCW, Motor Vehicle Emission Control*
- *Chapter 70A.30 RCW, Motor Vehicle Emission Standards*
- *Chapter 70A.45 RCW, Limiting Greenhouse Gas Emissions*
- *Chapter 70A.60 RCW, Hydrofluorocarbons – Emissions Reduction*

- *Chapter 70A.65 RCW, Greenhouse Gas Emissions – Cap and invest program*
- *Chapter 70A.535 RCW, Transportation Fuel – Clean Fuels Program*
- *Chapter 80.80 RCW, Greenhouse Gas Emissions – Baseload Electric Generation Performance Standard*

Constituents/Interested Parties

- *Motorists, transportation agencies, and motor vehicle-related businesses.*
- *Business, industry, and affiliated trade associations.*
- *Wood stove and fireplace users, manufacturers, and related businesses.*
- *Agricultural businesses.*
- *Public health community.*
- *General public.*

Focus Areas

Reducing Health Risks from Air Pollution

Over the past several years, hundreds of scientific studies have been conducted on the health effects of air pollution. These studies consistently show air pollution, mainly fine particle pollution and ozone pollution, are more dangerous to human health than previously thought. Exposure to levels of pollution well below EPA's existing national air quality standards can result in a range of diseases and, in some cases, premature death. Ecology estimates that fine particle pollution alone contributes to approximately 1,100 premature deaths and more than \$190 million in health costs each year in Washington. This finding motivates Ecology's efforts to identify and implement new strategies to protect public health from fine particle air pollution.

Addressing Violations of Federal Standards

EPA is required to use the most current health information to set air quality standards that are protective of public health. In the last decade, EPA has adopted tougher

outdoor air quality standards for fine particulates, nitrogen dioxide, ozone, and sulfur dioxide. Ecology must continue to assess and adapt its air pollution prevention and control policies, tools, and approaches to meet these cleaner air standards, limit public exposure to toxic air pollution, and avoid the economic sanctions that come when areas violate federal standards.

Developing federally required clean air plans for areas that violate standards will significantly increase monitoring, technical analysis, and strategy development work for Ecology. Ecology works with local air agencies and communities to prevent violations of federal air quality standards before they occur, to avoid costly and demanding regulatory interventions needed to return communities to clean air status. Since 2016, Ecology has awarded over \$1.2 million in grants to local communities for projects that provide locally led solutions to protect air quality and avoid the public health and economic consequences of violating federal standards. Ecology is in the process of expanding this grant program using funds provided in Ecology's 2021-2023 operating budget.

Reducing Harmful Diesel Pollution

Ecology has identified diesel exhaust fine particulates as the air pollutant most harmful to public health in Washington. Seventy percent of the cancer risk from airborne pollutants is attributable to the fine particulates in diesel exhaust. It makes healthy people more at risk for respiratory disease and worsens the symptoms of people with health problems such as asthma, heart disease, and lung disease. Nearly five million people in Washington live or work close to highways, ports, and other major transportation corridors where they are most likely to be exposed to diesel exhaust.

Ecology's diesel strategy seeks to decrease the amount of diesel pollution emitted into the air and reduce the negative

health effects of diesel pollution—especially for children, the elderly, and sensitive populations whose existing health problems put them at higher risk, and economically disadvantaged communities with environmental justice concerns that are exposed to more air pollution.

Ecology's clean diesel grant program provides and installs better emissions controls on older vehicles and equipment; scraps and replaces old, high-polluting vehicles with new, low-emission vehicles; replaces old, high-polluting engines with new, low-emission engines; and installs idle-reduction equipment to reduce emissions created by unnecessary engine idling. Replacing or retrofitting these older vehicles typically reduces toxic emissions by 30 to 99 percent.

The clean diesel grant program has upgraded over 15,700 diesel engines, resulting in reductions of more than 75 tons of diesel particulates each year. School bus retrofits and replacements have reduced exposure of toxics emissions for the 380,000 children that ride school buses.

Ecology is also investing \$141 million from the Volkswagen federal settlement and state penalty funds in projects that reduce greenhouse gas emissions and toxic diesel pollution. These projects will help Washington accelerate its transition to a zero-emission transportation system.

The benefits to human health outweigh the costs of reducing diesel pollution. The California Air Resources Board has found that every dollar invested in reducing diesel emissions results in three to eight dollars in savings in improved health, avoided health problems, and lowered operating and maintenance costs for diesel fleets. In all, the Union of Concerned Scientists estimates that, for every dollar invested in diesel retrofits, nine to sixteen dollars are returned to society.

Air Quality Program

Reducing Harmful Smoke Pollution

Ecology has determined that fine particle smoke pollution from residential wood-burning and similar activities is the second greatest toxic threat from air pollution in Washington. In addition, burning household trash (which is illegal in Washington), yard waste, debris from land clearing, and agricultural and forest waste materials all create significant amounts of air pollution that harm public health. Washington's clean air law defines which types of outdoor burning are allowed and where.

The most significant public health concern comes from using wood for home heating. During winter months, stagnant weather conditions and smoke from wood heating devices contribute to serious air quality problems in multiple communities throughout the state. Pollution from this source is a major factor in violations of the federal fine particle standard and for areas that measure levels close to the federal standard.

Ecology and local air quality agencies are taking steps to reduce this pollution by issuing home-heat burn bans on days when pollution levels spike upward. Ecology also partners with local entities to incentivize residents in the most affected areas to scrap older, more-polluting wood stoves and replace them with newer, cleaner models, or switch to alternative forms of heat.

To date, Ecology and its local air agency partners have changed out nearly 6,000 older, uncertified stoves in high wood stove use communities that are violating, or at risk of violating, federal air pollution standards. Over 2,100 more uncertified wood stoves have been collected, rendered inoperative, and recycled through successful decommission-incentive programs that remove the dirtiest stoves from the secondary market. These combined strategies have resulted in lower air pollution measurements and significantly improved air quality,

especially in two of Washington's worst polluted communities – Tacoma/Pierce County and Yakima – and helped bring them into compliance with federal air quality standards.

Many farmers in Washington practice agricultural burning to manage their agricultural waste and prevent diseases. Ecology works to balance the needs of farmers to practice agricultural burning with communities' needs to protect clean air and public health. Through permitting, we ensure that agricultural producers burn in ways that mitigate the negative health effects from smoke. We also monitor the impact of agricultural burning on air quality through a network of air monitors and by tracking complaints from the public. Ecology also partners with research institutions to find alternatives to agricultural burning that work for farmers, the public, and the environment.

There is also increased interest in prescribed burning to prevent or reduce the risk of wildfire. The Washington Department of Natural Resources (DNR) is responsible for issuing and regulating burn permits for refuse or waste forest material. DNR issues permits in urban growth areas for outdoor burning that reduce the risk of wildfire. Ecology is working with DNR to help reduce smoke impacts to communities and to update the statewide Smoke Management Plan.

Ecology has also noted increased interest in burning biomass for energy, including burning wood and other organic wastes. At the same time, pressure to reduce burning is increasing. With wildfire smoke becoming a regular occurrence during the summer months across Washington, more people understand the health consequences of breathing smoke particles and do not like to be "smoked out." Ecology expects changes in burning laws and regulations as state and local agencies struggle to find the balance between clean air, reasonable alternatives to burning, and acceptable burning practices.

Monitoring Air Quality

Ecology works with EPA, Tribes, and local air agencies to maintain a network of more than 75 air monitoring stations that continuously measure air pollution. We use this data as a tool to communicate when air pollution reaches unhealthy levels. Based on this information, people can adjust their daily activities to minimize unhealthy effects. Air monitoring data also helps Ecology track long-term trends and identify areas where we need to do more to reduce air pollution.

Monitoring air quality and forecasting smoke levels is especially critical during wildfire season. Wildfire smoke is a major threat to human health. Smoke from wildfires is the largest source of particle pollution in Washington. Breathing smoke causes wheezing and coughing, heart and lung disease, and death. The number of acres burned by wildfires each year is increasing as climate change reduces winter snowpack, and produces hotter and drier summers. Ecology may add temporary air quality monitors during major wildfire smoke events to improve information on air quality conditions. Ecology also works with the Washington departments of Natural Resources and Health, the U.S. Forest Service, and the National Weather Service to forecast and track wildfire smoke. By disseminating information on current smoke levels, smoke forecasts, and health warnings, Ecology helps people make informed decisions to reduce their exposure to harmful air pollution.

Visibility and Regional Haze

Residents complain when air pollution haze affects scenic views like Mount Rainier, the Olympics, and the Columbia Gorge. Federal law requires the state to eliminate human-caused visibility impairment in our national parks and wilderness areas by 2064. Ecology evaluated pollution sources that contribute to haze and submitted its plan to EPA. The plan includes industrial source controls and other

strategies to achieve and maintain federally-required visibility goals. Ecology is updating the visibility plan to ensure the state makes further progress toward the federal goals.

Responding to Climate Change

In 2020, the Washington Legislature set new greenhouse gas emission limits to combat climate change. Under the law, the state is required to reduce emission levels by specified milestones:

- 2020 – reduce to 1990 levels.
- 2030 – 45 percent below 1990 levels.
- 2040 – 70 percent below 1990 levels.
- 2050 – 95 percent below 1990 levels and achieve net zero emissions.

To make meaningful reductions in greenhouse gas emissions, the public, industry, and policy-makers must know what activities emit those gases and how much they emit. Ecology has a specific role to create a high-level emissions inventory that catalogues emissions for the state over time, by industry, and by other economic sectors. State law also requires Ecology to operate a greenhouse gas reporting program that requires entities that emit certain quantities of greenhouse gases to report those emissions. This information is used to track progress in meeting state limits and help us design policies to reduce greenhouse gas emissions across Washington.

Climate Commitment Act

In 2021, the Washington Legislature adopted the Climate Commitment Act. The Act directs Ecology to adopt rules and establish a comprehensive cap and invest program to reduce carbon pollution from the state's largest emitting sources and industries to achieve the greenhouse gas limits in state law. Ecology is conducting three separate rulemakings to implement the program, which will start January 1, 2023. We are also taking action required under the law to make sure communities that bear the greatest

Air Quality Program

burdens from air pollution today see healthier air as the state cuts greenhouse gases and criteria pollutant emissions.

Clean Fuel Standard

Ecology also works to reduce greenhouse gas and criteria pollutant emissions from vehicles and motor fuels. Emissions from the transportation sector are the largest single source of greenhouse gases in Washington.

The 2021 Legislature adopted a Clean Fuel Standard that requires fuel suppliers to gradually reduce the carbon intensity of transportation fuels to 20 percent below 2017 levels by 2038. Fuel suppliers can achieve these reductions by improving the efficiency of their fuel production processes, producing or blending low-carbon biofuels into the fuel they sell, and purchasing credits generated by low-carbon fuel providers. Ecology announced rulemaking for the Clean Fuel Standard in July 2021.

Zero Emission Vehicles

Ecology implements California's Clean Car Standards for greenhouse gas emissions from gasoline- and diesel-powered cars and trucks. In 2020, the Washington Legislature adopted changes to Washington's Clean Cars Law that require Ecology to adopt a Zero Emission Vehicle (ZEV) program. The ZEV program will include new requirements to increase the number of zero emission vehicles sold in Washington. Ecology started rulemaking to adopt the new ZEV program standards in June 2021. The requirements will take effect in 2024.

Hydrofluorocarbons

Ecology is also taking action to help the state transition away from the use of potent greenhouse gases known as hydrofluorocarbons, or HFCs. These gases, often used in refrigeration systems, can have thousands of times the impacts of carbon dioxide, the most common greenhouse gas. Ecology adopted a new rule in December

2020 that requires manufacturers to notify Ecology of products and equipment using HFCs restricted under a 2019 law and phase out the restricted HFCs starting January 1, 2020. In 2021, the Legislature expanded on the 2019 law and directed Ecology to set new requirements for HFCs used in certain air conditioning and refrigeration equipment and ice rinks. Ecology is also required to establish a refrigerant management program starting in 2024 to reduce refrigerant emissions from large air conditioning and refrigeration equipment and develop recommendations for managing the end-of-life disposal of refrigerants. Ecology started this work in the summer of 2021.

Clean Energy Transportation

Ecology also has an important role of implementing the Clean Energy Transformation Act that was adopted in 2019. This Act will transition the state to a 100 percent carbon-free electricity supply by 2045. The Washington Department of Commerce and the Washington Utilities and Transportation Commission are leading this effort. Ecology adopted a new rule in January 2021 to establish energy transformation project requirements.

Innovative and Effective Control of Commercial and Industrial Emissions

Commercial and industrial air pollution is well controlled in Washington. Ecology issues timely permits for new construction and modifications of air pollution sources and provides ongoing permit management, technical assistance, and compliance inspections. These activities assure permit conditions are met and air pollutants are controlled appropriately at commercial and industrial facilities within Ecology's jurisdiction.

Ecology continues to explore new and better ways to streamline permitting and emission tracking processes. Because businesses rarely operate in the same way or

use the same materials, Ecology usually tailors permits for each air pollution source. Where businesses are relatively similar (e.g., dry cleaners and auto body shops), Ecology uses general orders (categorical permits) for specific source types. Ecology continues to update and maintain seven general orders and plans to create another general order for compost facilities. This makes permitting easier, quicker, cheaper, and more certain for small businesses.

Each year businesses must submit information about their emissions to Ecology and pay a fee based on those emissions. Ecology is in the middle of a multiyear effort to streamline this reporting and billing by creating an online Source Management System. Businesses will be able to log into the system to record their information and see electronic versions of their permits. Once completed, this effort will reduce paper and time and increase efficiency for businesses and Ecology. Ecology plans to expand the online system to store inspection documents. Also, businesses will one day be able to electronically submit permit applications and pay the application fee electronically, which now must be paid by check.

Ecology regularly surveys its permitting and inspection clients. We also seek feedback on our web pages to promote continuous improvement and dialogue with our customers.

Activities, Results, and Performance Measures

Climate Change Mitigation and Adaptation

This activity supports the work the agency does to conduct a biennial greenhouse gas emissions inventory, administer the state's mandatory greenhouse gas reporting program, and help state agencies and higher education institutions identify and report their greenhouse gas emissions and develop strategies to reduce those emissions.

It also supports the work the agency does to implement a portfolio of policies to reduce greenhouse gas emissions to meet the state's greenhouse gas emission limits.

Expected Results

The state's greenhouse gas emissions are reduced overall to:

- 1990 levels or 90,500,000 metric tons by 2020.
- Fifty million metric tons, or 45 percent below 1990 levels by 2030.
- Twenty-seven million metric tons, or 70 percent below 1990 levels by 2040.
- Five million metric tons, or 95 percent below 1990 levels by 2050.
- Public health and the environment are protected.

Performance Measure

- Amount of greenhouse gas emissions produced statewide (in million metric tons).

Prevent Unhealthy Air and Violations of Air Quality Standards

This activity supports the work the agency does to develop and implement State Implementation Plans to maintain healthy air, prevent violations, and clean up areas that violate standards, as quickly as possible.

Expected Results

Washington meets federal air quality standards, and health problems linked to unsafe air are minimized. Communities have the tools to restore their air quality, and violations are prevented.

Performance Measure

- Number of areas in Washington measuring air quality levels that are not in compliance with federal air quality standards.

Air Quality Program

Measure Air Pollution Levels and Emissions

This activity supports the work the agency does to collect and monitor air quality and emissions data used to assess trends; assist compliance; and assess control strategies, health effects, and environmental damage from air pollution.

Expected Results

- The agency uses comprehensive and high quality data to make policy decisions about how to manage air pollution in the state.
- Washington meets state and federal air quality standards.
- Public health and the environment are protected.

Performance Measure

- Percentage of monitoring data that is valid.

Reduce Air Pollution from Industrial and Commercial Sources

This activity supports the work the agency does to ensure new and existing industrial and commercial facilities that emit significant levels of air pollution comply with state and federal air quality standards.

Expected Results

Facilities receive permits, technical assistance, and inspections so federal and state laws are met and public health and the environment are protected.

Performance Measure

- Average number of days it takes to process Notice of Construction permit applications.

Reduce Health and Environmental Threats from Smoke

This activity supports the work the agency does to:

- Administer the state's smoke management program that oversees outdoor burning and wood stoves.
- Assist communities, local health organizations, and fire suppression agencies with health impact messaging and recommendations during large-scale wildfire events.

Expected Results

- Smoke from outdoor burning and wood burning for residential heat are managed through permitting, daily burn ban forecasts, curtailments, and wood stove exchange programs.
- Public health and environmental threats from smoke are minimized.

Performance Measures

- Number of residents exposed to air quality that does not meet healthy levels for fine particles.
- Number of times fine particle pollution is measured above a "healthy" level.
- Number of wood stoves replaced with cleaner burning technologies.

Reduce Health and Environmental Threats from Motor Vehicle Emissions

This activity supports the work the agency does to implement Washington's Clean Car standards and provide grants to incentivize cleaner motor vehicles and fuels.

Expected Results

- New vehicles sold in Washington meet the state's emission standards.
- An increasing percentage of vehicles sold in Washington State are zero emission vehicles.
- Diesel engines are replaced with cleaner options or upgraded with better exhaust controls and idle reduction devices.
- Exposure to toxic diesel emissions is reduced in high exposure areas.
- Public health and the environment are protected from motor vehicle emissions.

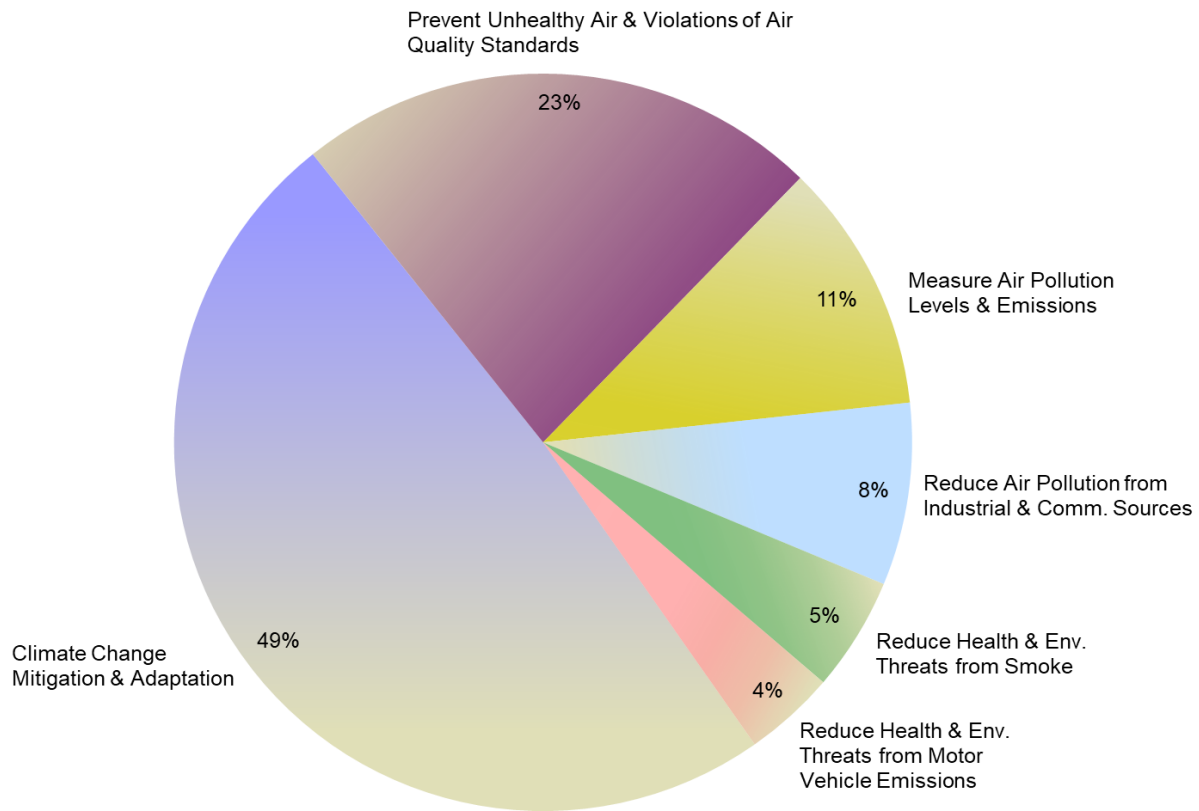
Performance Measures

- Amount of diesel particulate (soot) emissions produced statewide (in tons).
- Number of diesel engines replaced or retrofitted with pollution control equipment.
- Tons of motor vehicle emissions produced statewide.

Air Quality Program

Air Quality Program 2021-23 Biennium Budget by Activities

Operating = \$71.5 Million | Capital = \$63.0 Million | Total \$134.5 Million | FTEs = 192.8

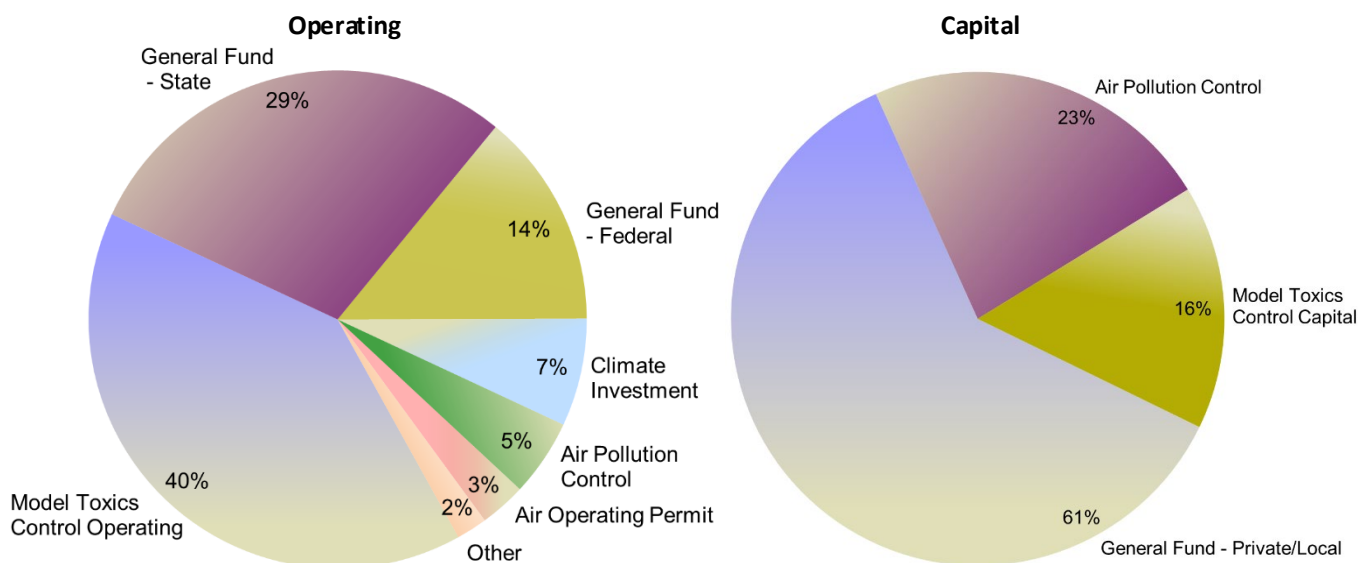


Activities	Amount	%	FTEs
Climate Change Mitigation & Adaptation (A063)	\$34,568,000	49%	91.2
Prevent Unhealthy Air & Violations of Air Quality Standards (A034)	16,596,000	23%	32.9
Measure Air Pollution Levels & Emissions (A025)	8,092,000	11%	24.7
Reduce Air Pollution from Industrial & Commercial Sources (A045)	5,357,000	8%	19.8
Reduce Health & Environmental Threats from Smoke (A048)	3,817,000	5%	15.9
Reduce Health & Environmental Threats from Motor Vehicle Emissions (A047)	3,074,000	4%	8.3
Air Quality Operating Budget Total	\$71,504,000	100%	192.8

Air Quality Program

Air Quality Program 2021-23 Biennium Budget by Fund Source

Operating = \$71.5 Million | Capital = \$63.0 Million | Total \$134.5 Million | FTEs = 192.8



Operating Fund Sources	Amount	%	Uses
Model Toxics Control Operating (23P)	\$28,621,000	40%	Developing strategies to respond to and prevent violations of national ambient air quality standards (nonattainment) in Washington communities. Ambient air monitoring, grants to local air authorities, new source permitting, modeling and meteorology, outdoor and agricultural burning permitting. Climate change policy analysis and implementation, and greenhouse gas emission inventory. Technical assistance for and enforcement of hydrofluorocarbon restrictions and reporting requirements. Implementation of the Clean Energy Transformation Act.
General Fund – State (001)	21,099,000	29%	Implementation of the Clean Fuel Standard, Fluorinated Gases and the Carbon Cap and Invest Program.
General Fund – Federal (001)	10,102,000	14%	State and local air authority grants for ambient air monitoring, emission inventory, modeling, meteorology, grants to support diesel emissions reduction, and other air quality activities.
Climate Investment (26B)	4,765,000	7%	Allowance Auction proceeds used to fund Climate Commitment Act-related costs. This portion represents the amount currently appropriated in the 2021-23 Operating budget for Ecology’s implementation of the carbon cap and invest program. Initial revenue is expected to become available at the end of FY23.
Air Pollution Control (216)	3,670,000	5%	Minor source and new source permitting, agricultural burning permitting, agricultural burning alternatives research, greenhouse gas reporting, and rulemaking for Hydrofluorocarbon reporting requirements.
Air Operating Permit (219)	2,028,000	3%	Permitting of major air pollution sources, and related small business technical assistance.
Other:			
Wood Stove Education & Enforcement (160)	548,000	<1%	Enforcement of and education regarding proper wood stove use, grants to local air authorities.

Air Quality Program

Operating Fund Sources	Amount	%	Uses
Clean Fuels Program (25Q)	348,000	<1%	Fee-supported funding beginning FY23 to implement the Clean Fuel Standard, including staff costs for initial rulemaking, collecting reporting information, and coordinating implementation including tracking and monitoring compliance. Additionally may be used to fund a contract for outside expertise to update carbon intensity modeling tools and a contract for an independent consultant to determine fuel costs or cost savings.
General Fund – Private/Local (001)	323,000	<1%	Private/local agreements associated with ambient air monitoring and telemetry systems.
Operating Budget Total	\$71,504,000	100%	
Capital Fund Sources	Amount	%	Uses
General Fund – Private/Local (001)	\$38,464,872	61%	Statewide grants, funded through the Volkswagen (VW) federal settlement, which are managed by a private trust. Grants follow the state of Washington VW Beneficiary Mitigation Plan to reduce Nitrogen Oxide emissions in disproportionately impacted communities, achieve public health and other positive air quality outcomes, and promote electric transportation technologies.
Air Pollution Control (216)	14,391,632	23%	Use three large one-time penalty payments for the following: (1) legislatively directed grant programs using Volkswagen penalty funds. (2) Clean Diesel Grants to support diesel engine retrofits and replacements, installment of idle reduction technologies, and other diesel emissions reduction projects. (3) Woodsmoke Reduction Grants to support installation of cleaner home-heating alternatives in homes that use uncertified wood stoves as their primary source of heat, and buyback programs for uncertified wood stoves.
Model Toxics Control Capital (23N)	10,143,589	16%	Reappropriated capital project funding for reducing harmful emissions from wood stove burning and heavy-duty diesel engines.
Capital Budget Total	\$63,000,093	100%	
Air Quality Operating & Capital Budget Total	\$134,504,093		

Environmental Assessment Program



Jenifer Parsons with the Environmental Assessment Program removes invasive plants from a lake during a monitoring visit.

Environmental Assessment Program

Program Mission

The mission of the Environmental Assessment Program is to measure, assess, and communicate environmental conditions in Washington State.

Environmental Threats

The focus of the Environmental Assessment Program is to provide credible science and interpretation for Ecology. We conduct monitoring for action. Our monitoring programs, scientific studies, and models are designed to measure and evaluate marine, ground, and freshwater quality; stream flow; aquatic habitat; and contaminants in sediments, marine benthic communities, and fish tissue across the state. We also conduct science around consumer products. We use

data to evaluate threats ranging from conventional pollutants, such as bacteria, nutrients, and temperature, to toxic contaminants and invasive aquatic plants. Our wide range of scientific expertise provides for efficient responses and creative solutions when new threats and complex questions arise.

Based on our monitoring data, Ecology identifies exceedances of water and sediment quality criteria and assesses the condition of aquatic habitat and biological communities. We focus on impacts from individual sources and evaluate the combined impacts from multiple sources. Many of our monitoring programs and scientific studies support Ecology's environmental programs. Some of our projects are conducted in partnership with other agencies and entities.

Authorizing Laws

- *Federal Clean Water Act*
- *Federal Safe Drinking Water Act*
- *RCW 43.21A.230, Certification of Environmental Laboratories*
- *RCW 43.21A.735, Cannabis Science Task Force*
- *RCW 43.21A.736, Cannabis Product Testing*
- *RCW 70A.125.080, Drinking Water Program*
- *Chapter 70A.305 RCW, Hazardous Waste Cleanup – Model Toxics Control Act*
- *Chapter 70A.350 RCW, Pollution Prevention for Healthy People and Puget Sound Act*
- *Chapter 70A.430 RCW, Children's Safe Products*
- *Chapter 90.48 RCW, Water Pollution Control*
- *Chapter 90.54 RCW, Water Resources Act*
- *Chapter 90.71 RCW, Puget Sound Water Quality Protection*

Environmental Assessment Program

Constituents/Interested Parties

- *Federal, Tribal, and local governments.*
- *State agencies.*
- *Businesses.*
- *Environmental organizations.*
- *General public.*
- *Internal clients.*

Focus Areas

Puget Sound Water Quality

Puget Sound is vulnerable to impacts from climate change, excess nutrient inputs, and ocean acidification. In the 2019-21 Biennium, Ecology received funding to enhance water quality monitoring of Puget Sound and the freshwater rivers flowing into Puget Sound. Ocean acidification parameter monitoring has been added to a subset of 20 existing long-term marine stations across the larger Puget Sound region. These data will support scientific research and aid in understanding pollution control measures needed to address ocean acidification and nutrient loading.

Ecology is in the process of installing new continuous monitoring equipment in seven Puget Sound tributaries. Data collection is expected to begin in 2022. These data will be included in modeling assessments of nutrient and carbon loading to Puget Sound to understand the impact of these parameters on the ecosystem.

Toxic Threats in the Environment

Toxic chemicals are widespread in the environment. There is growing interest in learning more about toxic chemicals that cause harm to human health and aquatic life.

Compounds in Rubber Tires

A chemical found in tire rubber, 6PPD-quinone, was recently linked to Coho salmon mortality. Ecology received a budget add for the 2021-23 Biennium to collaborate with several organizations to prioritize locations

with likely concentrations of 6PPD-quinone and to develop an accredited lab method to analyze the compound in water. This information will be summarized in a report to the Legislature in fall 2022.

Juvenile Chinook and Steelhead

With funding received in the 2019 legislative session, Ecology is working to identify contaminant sources along the migratory pathway of juvenile Chinook salmon in the Puget Sound Basin. We are using advanced sampling techniques and methods to measure toxic chemicals in water, sediments, and biota. Toxics monitoring will assist in identifying and resolving sources and pathways of chemicals. This informs the source control and remediation actions needed to improve juvenile Chinook survival and help support the Southern Resident Killer Whale population. Work started in Snohomish River in 2019. In summer 2021, work expanded into the Nisqually River Watershed in coordination with the Washington Department of Fish and Wildlife and the Nisqually Indian Tribe. This work focuses on toxic impacts to steelhead. Coordinated monitoring will also occur at partner wastewater treatment plant outfalls in the watershed.

PFAS in Lake Washington

Per- and polyfluoroalkyl substances (PFAS) are used in many different products because of their water, stain, and grease resistant properties. However, these chemicals are known to persist in the environment and cause reproductive and developmental issues. Ecology initiated a study in 2020 to monitor PFAS in Lake Washington. The goal of this work is to understand how these chemicals enter the lake and the types of sources they come from. We are evaluating the monitoring data to understand where the highest levels of PFAS are found and will follow up with additional monitoring in 2022 to target potential sources. This project

supports Ecology's PFAS Chemical Action Plan, which recommends actions to prevent and reduce PFAS in the environment.

PCBs in Puget Sound

The recent settlement from the State of Washington v. Monsanto Company lawsuit for damages and cleanup costs caused by polychlorinated biphenyls (PCBs) provided funding for monitoring and characterization of PCBs in major Washington rivers. The PCB monitoring program will establish stations in seven rivers draining into Puget Sound. PCBs in these rivers impact early life stages of juvenile Chinook in the nearshore environment and enter the marine food web, impacting adult salmon and the Southern Resident Killer Whale population. This program will provide regular monitoring of PCB loads from the major Puget Sound rivers. Long-term PCB data generated through this project will be used to prioritize cleanup efforts and measure the effectiveness of those cleanups.

Laboratory Method Research and Development

Ecology's Manchester Environmental Lab (MEL) is the state's primary environmental and consumer product testing laboratory. MEL is the preferred laboratory for Ecology scientists and has the expertise to assist with groundbreaking projects.

MEL added new instrumentation with funding from the Legislature in the 2019-21 Biennium. The new instrument is used for the analysis of PFAS samples and developing methods for new PFAS compounds. MEL has analyzed solid samples for the last two years and recently added a new method for analyzing PFAS in water. New funding received in 2021 added two new, nonpermanent lab positions to support several high-profile projects for toxic chemicals. As part of the Monsanto settlement, MEL hired a project chemist to develop methods for analyzing environmental and consumer product

samples for PCBs using new analytical techniques. In response to the recent interest in 6PPD-quinone, MEL hired a project chemist to develop methods for analyzing 6PPD-quinone in water and wastewater. The result of the 6PPD-quinone work will be included in a legislative report due November 2022.

Water Quality Cleanup Plans (Total Maximum Daily Loads)

Section 303(d) of the Federal Clean Water Act requires the state to develop water quality cleanup plans, also known as Total Maximum Daily Loads (TMDLs), for water bodies that don't meet water quality standards. We conduct a variety of field monitoring work and perform modeling analyses to develop these plans. In the 2021 legislative session, Ecology received funding to develop more complex water cleanup plans. We expect to nearly double the number of water impairments addressed by cleanup plans annually. Ecology is currently prioritizing the highest-need cleanup plans and will begin to hire staff to work on those projects.

Beach Monitoring

Local health agencies use bacteria monitoring data to determine when public beaches must be closed to protect swimmers from unsafe contamination. Using BEACH Act grant funds from the U.S. Environmental Protection Agency (EPA), Ecology works with the Washington Department of Health and local health agencies to monitor bacterial contamination at many marine swimming beaches in Washington. Federal funding for this long-standing program has been threatened in the past, but was recently extended through 2022. If EPA does end the grant, Ecology will likely submit a budget request for state funding to continue the program after federal funding ends.

Environmental Assessment Program

Nitrate in Groundwater

Groundwater in the Lower Yakima Valley aquifer is contaminated with elevated concentrations of nitrate. Nitrate contamination can impact infants, pregnant women, and people with compromised immune systems. The Lower Yakima Valley was designated by EPA as an Environmental Justice Showcase Community; its aquifer is the principal drinking water source for over 56,000 area residents. Ecology has played a vital role in implementing recommendations to reduce groundwater nitrate contamination. With funding received during the 2019-21 Biennium and the 2021 legislative session, Ecology has established an extensive groundwater monitoring network to measure the nitrate levels over time and has successfully completed the first round of baseline sampling.

We are seeking additional funding and resources to build on the successful groundwater monitoring work, to include analyzing soil samples for nitrate, conducting pilot projects to study land use best management practices, and providing outreach and education to area residents on the changes needed to reduce nitrates. Ecology expects to provide its scientific expertise in this collaborative work with the Washington Department of Agriculture and the South Yakima Conservation District.

Product Testing

There are toxic chemicals in everyday products, such as metals in children's jewelry and chemicals in packaging, that are not known to consumers. Ecology's product testing team uses cutting edge science to test for toxics in consumer products available for retail or online sale. This science helps support regulatory actions against products and manufacturers not in compliance with state laws. Ecology received funding in the 2021 legislative session to expand testing

capacity for toxics in children's products and other consumer goods.

In addition to increasing our staff, Ecology needs to expand the Product Testing Lab space at our Lacey headquarters building to handle the lab analysis work. Consumer products tend to contain high levels of toxic chemicals. There is concern that analyzing these samples at MEL could lead to cross-contamination with environmental samples. With funding received in the 2021 legislative session, a feasibility study is underway to determine how to configure the space at Ecology headquarters to handle all of the lab analysis for consumer products.

Drinking Water Laboratory Accreditation Audits

There is a backlog of drinking water laboratories that have not been audited in compliance with the federal Safe Drinking Water Act. Ecology accredits and audits drinking water laboratories through a memorandum of agreement with the Washington Department of Health. Ecology does not have sufficient funding to hire the number of staff needed to conduct audits within the required three-year timeframe.

The accreditation program has been impacted by the hiring freeze during the COVID-19 pandemic and the increasing amount of technical assistance the staff provides for emerging issues. To bring the drinking water accreditation program up to date on audits, Ecology is seeking funding for a stopgap solution to hire audit staff for one year. The long-term solution includes rulemaking to adjust the accreditation fees to align staff resources with the number of laboratories seeking accreditation.

Cannabis Laboratory Accreditation

The cannabis industry needs lab quality standards to improve the accuracy and consistency of product information, both of which will help inform consumer decisions. In 2019, the Legislature passed HB 2052,

Environmental Assessment Program

establishing a Cannabis Science Task Force (CSTF) and transferring the authority for cannabis lab accreditation from the Liquor and Cannabis Board to Ecology in 2024.

Ecology leads the CSTF, which is a partnership between several state agencies and cannabis industry scientists tasked with recommending lab quality standards. The CSTF prepared two reports to the Legislature with recommendations for lab quality standards, and their work revealed the critical collaboration needed to implement their recommendations. Transferring accreditation to Ecology successfully depends on 1) forming an interagency coordination team; 2) adopting lab quality standards in rule; and 3) availability of proficiency tests that mirror the regularly tested cannabis products.

Activities, Results, and Performance Measures

Conduct Environmental Studies for Pollution Source Identification and Control

Ecology conducts pollution identification studies to address known or suspected problems at specific sites and across regional areas. These studies support our efforts under the Federal Clean Water Act, as well as the state Water Pollution Control and Model Toxics Control Acts. Studies range from simple water quality sampling for bacteria or dissolved oxygen to very complex projects assessing the amount of nutrients in large watersheds. Many projects support development of water quality cleanup plans or Total Maximum Daily Load (TMDLs) to assess how much of a pollutant a waterbody can absorb without exceeding water quality standards.

Expected Results

- Polluted waters are studied to identify pollution sources or cleanup success so resource managers have credible

scientific information to make decisions to protect the environment and public health.

- All study reports are peer reviewed, completed on schedule, and published to the Internet so that the information is shared with the public and can be used to make regulatory and policy development decisions.

Performance Measure

- Number of polluted waters assessed to identify pollution sources or cleanup success.

Monitor the Quality of State Waters and Measure Stream Flows Statewide

Ecology operates a statewide environmental monitoring network to:

- Assess the status of major waterbodies.
- Identify threatened or impaired waters.
- Evaluate changes and trends in water quality over time.

This network includes sampling stations in rivers, streams, and marine waters (Puget Sound and the major coastal estuaries). Ecology measures statewide biological, chemical, and habitat conditions to provide information on the health of watersheds on a regional scale. Ecology also measures stream flows in salmon-critical basins and key watersheds statewide.

Expected Results

- Trends, conditions, and changes in water quality of major freshwater rivers, Puget Sound, and the largest coastal estuaries are tracked so Ecology staff and the public are alerted to emerging water quality problems.
- Credible environmental monitoring data are produced so Ecology, other agencies, and the public can make better informed decisions.

Environmental Assessment Program

Performance Measures

- Percentage of monitored stream flows below critical flow levels.
- Statewide river and stream water quality index score.
- Percentage of individual sample data collected annually that are reliable and valid for use by other programs, agencies, and the public.
- Percentage of continuous monitoring data collected annually that are reliable and valid for use by other programs, agencies, and the public.

Measure Contaminants in the Environment by Performing Laboratory Analyses

The Manchester Environmental Laboratory is a full service environmental laboratory. The lab provides technical, analytical, and sampling support for chemistry and microbiology for multiple Ecology programs and supports work conducted under the Federal Clean Water Act, as well as the state Water Pollution Control, Puget Sound Water Quality Protection, Children's Safe Products, and Model Toxics Control Acts.

Expected Results

The Manchester Environmental Laboratory provides accurate and defensible analytical support so that clients can make environmental and enforcement decisions.

Performance Measures

- Percentage of acceptable proficiency testing analyses completed by Ecology's Manchester Environmental Laboratory.
- Number of chemical analyses completed for clients by Ecology's Manchester Environmental Laboratory.

Ensure Environmental Laboratories Provide Quality Data

Ecology accredits environmental laboratories that submit data to the agency and to the Department of Health. The accreditation

program covers analyses in all typical environmental matrices (air, water, soil, sediment, tissue) and drinking water. Accreditation ensures environmental laboratories have the demonstrated capability to provide accurate and defensible data. Ecology's laboratory accreditation program is the primary method of performance monitoring for over 400 laboratories in the accreditation program. Ecology will start accrediting cannabis laboratories in 2024. To prepare for this role, Ecology is leading the Cannabis Science Task Force to recommend lab quality standards for cannabis laboratories.

Expected Results

Laboratories accredited by Ecology maintain successful, quality programs so that accurate and defensible analytical data are available for environmental and public health decisions.

Performance Measure

- Percentage of acceptable proficiency testing analyses completed by accredited laboratories.

Improve the Quality of Data Used for Environmental Decision-making

To ensure the reliability and integrity of data Ecology generates, agency staff:

- Provide guidance and training on developing quality assurance project plans.
- Review project proposals.
- Consult on sampling design requirements and interpretation of results.

This quality assurance work is required by the Environmental Protection Agency for entities (including Ecology) that receive funding for work involving environmental data. In addition, Ecology scientists, modelers, statisticians, chemists, and other specialists:

- Interpret technical data.

Environmental Assessment Program

- Review grantee monitoring plans.
- Supply information for policy decisions to support agency mandates.

Expected Results

- Standard operating procedures are up-to-date and approved for quality assurance so that environmental policy and agency decisions are based on accurate, reliable, and timely data.
- Quality assurance project plans are completed for all scientific studies before sampling begins so that the quality and credibility of data generated for decision-making is documented.
- Entities receiving funding for work involving environmental data can continue to receive EPA funds.

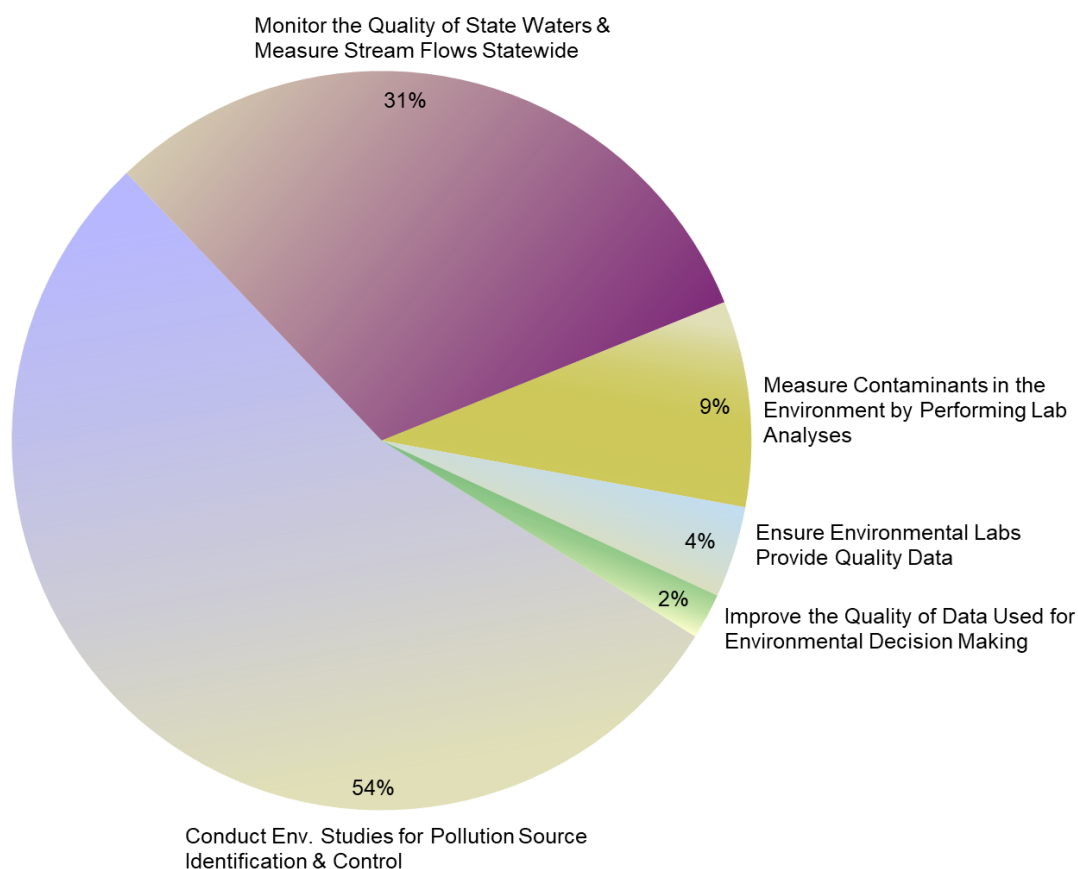
Performance Measure

- Percentage of technical standard operating procedures that are up to date and approved for quality assurance.

Environmental Assessment Program

Environmental Assessment Program 2021-23 Biennium Budget by Activities

Operating = \$52.4 Million | Capital = \$0.3 Million | Total \$52.7 Million | FTEs = 181.2

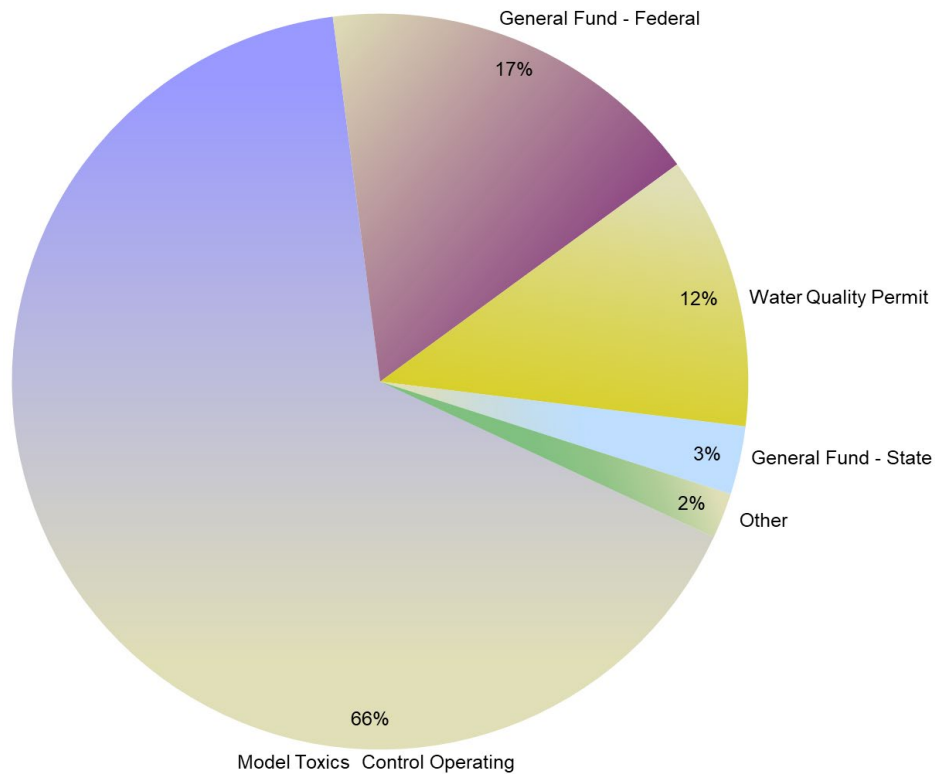


Activities	Amount	%	FTEs
Conduct Environmental Studies for Pollution Source Identification & Control (A007)	\$28,305,000	54%	83.9
Monitor the Quality of State Waters & Measure Stream Flows Statewide (A027)	16,135,000	31%	54.6
Measure Contaminants in the Environment by Performing Laboratory Analyses (A026)	4,559,000	9%	30.6
Ensure Environmental Laboratories Provide Quality Data (A012)	2,224,000	4%	7.5
Improve the Quality of Data Used for Environmental Decision-making (A020)	1,214,000	2%	4.6
Environmental Assessment Operating Budget Total	\$52,437,000	100%	181.2

Environmental Assessment Program

Environmental Assessment Program 2021-23 Biennium Budget by Fund Source

Operating = \$52.4 Million | Capital = \$0.3 Million⁸ | Total \$52.7 Million | FTEs = 181.2



Operating Fund Sources	Amount	%	Uses
Model Toxics Control Operating (23P)	\$34,468,000	66%	Water quality monitoring, toxics monitoring, marine sediment monitoring, groundwater investigations, water cleanup studies.
General Fund – Federal (001)	9,196,000	17%	Water quality monitoring, marine sediment monitoring, groundwater investigations, water cleanup studies, effectiveness monitoring.
Water Quality Permit (176)	6,239,000	12%	Water cleanup studies, groundwater investigations, technical assistance, compliance monitoring.
General Fund – State (001)	1,670,000	3%	Monitoring for polychlorinated biphenyls, laboratory method development.
Other:			
Dedicated Marijuana (315)	530,000	1%	Cannabis Science Task Force.
General Fund – Private/Local (001)	334,000	<1%	Stream flow monitoring, laboratory analytical work.
Operating Budget Total	\$52,437,000	100%	

⁸ Funded entirely by Freshwater Aquatic Weeds Account (222).

Environmental Assessment Program

Capital Fund Sources	Amount	%	Uses
Freshwater Aquatic Weeds (222)	270,120	100%	Technical assistance, monitoring.
Capital Budget Total	\$270,120	100%	
Environmental Assessment Operating & Capital Budget Total	\$52,707,120		

Hazardous Waste & Toxics Reduction Program



Engineer Jason Landskron inspects hazardous waste tanks at a business in Tacoma, WA.

Hazardous Waste & Toxics Reduction Program

Program Mission

The mission of the Hazardous Waste and Toxics Reduction (HWTR) Program is to protect Washington's residents and environment by reducing the use of toxic chemicals, safely managing dangerous waste, preventing new contaminated sites, and overseeing cleanups of previously contaminated sites.

⁹ Washington law uses the term dangerous waste. Federal law uses the term hazardous waste. While these terms are often used interchangeably,

Environmental Threats

Preventing and reducing toxic threats and pollution is one of Ecology's five strategic goals, including a focus on health equity and environmental justice. There are risks in using and storing – not just disposing of – hazardous substances. Some chemicals (such as cleaning products or yard chemicals) can pose an immediate health threat during use. Others pose a risk as they break down or when they are discarded. Some chemicals – like persistent, bio-accumulative toxics (PBTs) and heavy metals – gradually build up in our bodies and the environment.

The risk from hazardous substances is not only from leaking drums at an industrial site. Each of us affects the environment, our own health, and the health of others when we buy and use products that contain toxic chemicals. We find hazardous chemicals in our air, water, soil, and in our bodies; in part because they are ingredients found in the products we use in our homes, yards, and businesses. Whether the risk is from toxics in products or dangerous waste from industry, HWTR's focus is on helping the public and businesses make informed choices about the use of hazardous substances and their eventual safe disposal.

When hazardous substances are no longer usable, they become hazardous wastes, or "dangerous wastes," as they are known in Washington.⁹ Washington's regulation of dangerous waste provides additional environmental protection not included in the federal hazardous waste rules. Our more protective standards help reduce spills, protect workers, and safeguard businesses that rely on a clean environment for their livelihood. They also create recycling opportunities for Washington businesses. For more details, see *Focus on State Dangerous*

Washington's definition includes some substances that are not included in the federal definition.

Hazardous Waste & Toxics Reduction Program

Waste Regulations Protect Human Health and the Environment

(<https://fortress.wa.gov/ecy/publications/SummaryPages/1304004.html>).

HWTR addresses the problems associated with dangerous wastes and other hazardous substances using a variety of strategies. We conduct inspections and provide compliance and pollution prevention technical assistance around the state. Approximately 1,000 businesses and facilities statewide produce most of the state's dangerous waste, totaling about 100 million pounds of recurrent dangerous waste each year. These recurrent wastes are planned, predictable by-products of industrial processes.

The rest of the dangerous waste produced in Washington comes from thousands of smaller businesses that each produce less than 220 pounds of dangerous waste per month. These businesses are known as Small Quantity Generators. HWTR partners with local jurisdictions and leads efforts to provide technical assistance to these small businesses to help them adopt safer practices and avoid environmental contamination.

When dangerous wastes are mismanaged, they get into water and soil where they can harm human health and the environment or create costly cleanup sites. HWTR works with responsible parties and affected communities to ensure contamination is cleaned up at more than 40 legacy cleanup sites, allowing these locations to be restored to productive use.

Safely managing dangerous waste is essential to protect human health and the environment, but avoiding the use of hazardous chemicals in the first place is the smartest, cheapest, and healthiest approach. HWTR leads Ecology's efforts to find safer options for chemicals in consumer products and business practices. These efforts help protect Washington's land, water, and air from the dangers associated with toxic substances and other hazardous chemicals.

Authorizing Laws

- *Federal Emergency Planning and Community Right-to-Know Act (SARA Title III)*
- *Federal Pollution Prevention Act*
- *Federal Resource Conservation and Recovery Act*
- *Federal Toxic Substances Control Act*
- *Chapter 15.54 RCW, Fertilizer Regulation Act (Ecology's review authority over waste-derived fertilizers)*
- *Chapter 49.70 RCW, Worker and Community Right to Know Act*
- *Chapter 70A.205 RCW, Solid Waste Management – Reduction and Recycling*
- *Chapter 70A.214 RCW, Waste Reduction*
- *Chapter 70A.218 RCW, Hazardous Waste Fees*
- *Chapter 70A.222 RCW, Packages Containing Metals and Toxic Chemicals*
- *Chapter 70A.230 RCW, Mercury*
- *Chapter 70A.300 RCW, Hazardous Waste Management*
- *Chapter 70A.305 RCW, Hazardous Waste Cleanup – Model Toxics Control Act*
- *Chapter 70A.335 RCW, Bisphenol A – Restrictions on Sale*
- *Chapter 70A.340 RCW, Brake Friction Material*
- *Chapter 70A.350 RCW, Pollution Prevention for Healthy People and Puget Sound Act*
- *Chapter 70A.400 RCW, Firefighting Agents and Equipment – Toxic Chemical Use*
- *Chapter 70A.415 RCW, Hazardous Substance Information*
- *Chapter 70A.405 RCW, Polybrominated Diphenyl Ethers – Flame Retardants*
- *Chapter 70A.430 RCW, Children's Safe Products*
- *Chapter 70A.435 RCW, Replacement of Lead Wheel Weights*
- *Chapter 70A.440 RCW, Stormwater Pollution – Coal Tar*
- *Chapter 70A.445 RCW, Recreational Water Vessels – Antifouling Paints*

Hazardous Waste & Toxics Reduction Program

Constituents/Interested Parties

- *General public.*
- *State and local governments and other agencies.*
- *Business groups and associations.*
- *Regulated businesses and agencies.*
- *Tribes.*
- *Environmental groups.*
- *Federal agencies, such as the U.S. Environmental Protection Agency (EPA).*

Focus Areas

The State Solid and Hazardous Waste Plan: Moving Washington Beyond Waste and Toxics

The state of Washington is required by law to have a Solid and Hazardous Waste Plan and to update it regularly. The plan's purpose is to guide waste and toxics reduction and safe waste management in the state. It focuses on sustainable materials management: looking at the full life cycle of materials from the design and manufacturing phase, through the use phase, to the end-of-life phase when the material is either discarded or recycled.

Looking at production and use can help businesses identify more sustainable ways to design products that use less energy, water, and toxics, as well as create less waste and pollution over a product's life cycle. This is important because the adverse environmental impacts of extraction, production, and use can be far greater than those associated with disposal when a material becomes a waste. Ecology is completing an update to this plan, incorporating new laws and associated work, changes in the industry, and other clarifications. With these changes, the updated plan will provide a good path forward for the state.

Preventing Pollution by Reducing Impacts of Materials and Products

Reducing Toxic Threats: Safer Products for Washington Program

In 2019, the Legislature passed the Pollution Prevention for Healthy People and Puget Sound Act, authorizing Ecology, in consultation with the Washington Department of Health, to regulate classes of chemicals in consumer products. The law establishes a process for Ecology and Health to designate priority chemicals, identify products that contain these chemicals, determine regulatory actions (notice requirements or chemical restrictions), and adopt rules to implement regulatory actions starting in 2023. Chemical restrictions require safer alternatives be feasible and available.

Reducing Toxic Threats: Implementing Specific Safer Chemical Laws and Other Toxic Substance Activities

Public concern about toxic chemicals in everyday consumer products has increased during the last several years. Consumers are more aware of potential health issues associated with toxic chemicals, including cancer, hormone disruption, and harm to normal development. The public wants to know if these types of chemicals are in the products they use.

A growing body of research shows that commonly used household products can be a majority source of exposure to chemicals of concern, to both humans and the environment. For example, polychlorinated biphenyl (PCB) contamination in the Spokane River is not from just a few industrial dischargers, but also from using consumer products like motor oil, hydraulic fluid, soaps, inks, and caulk. All of these products contain legal levels of PCBs.

The effects of toxic chemical exposure on human health, the environment, and the economy are enormous – and largely preventable. A number of HWTR's projects

Hazardous Waste & Toxics Reduction Program

support various state, national, and international efforts to transition to safer chemicals and alternatives, including:

- Assuring compliance with the Children’s Safe Products Act and other laws that limit toxic chemicals in consumer products.
- Researching potential safer alternatives to per- and polyfluoroalkyl substances (PFAS) in food packaging and implementing restrictions when safer alternatives are identified.
- Implementing restrictions on firefighting foams that contain PFAS and working with fire departments to safely dispose of any PFAS foam they still have.
- Provide Washington airports with equipment to test their firefighting capabilities without dispersing toxic PFAS firefighting foam into the environment.
- Working with the Toxics in Packaging Clearinghouse, a consortium of states working to keep regulated toxic metals out of consumer products packaging.
- Developing and implementing Chemical Action Plans to reduce uses and releases of persistent, bioaccumulative, and toxic chemicals.
- Replacing dry cleaning machines that use toxic perchloroethylene (PERC) solvents with safer alternatives.
- Certifying manufacturer compliance with the Better Brakes law and assessing availability of alternative auto brake friction materials that eliminate or reduce copper, asbestos fibers, cadmium, lead, and mercury.
- Researching safer alternatives to toxic boat paints and implementing restrictions on boat paints containing the highly toxic substance Irgarol.
- Continuing to oversee the mercury switch bounty program, which helps ensure that switches containing highly toxic liquid mercury are safely removed from

automobiles before they are sent for crushing, disposal, and recycling.

- Working with a multistate effort to monitor EPA’s implementation of the updated federal Toxic Substances Control Act.
- Working to mainstream green chemistry in Washington State, including working with Northwest Green Chemistry and other organizations.
- Participating in collaborations that improve transparency about chemicals in products.
- Working with the State Efficiency and Environmental Performance (SEEP) agencies to identify and implement efforts to reduce toxic chemicals in products and materials purchased through the state.

Reducing Dangerous Waste: Pollution Prevention Planning

Businesses that produce more than 2,640 pounds of dangerous waste each year are required to submit a plan to reduce hazardous substance use and dangerous waste. This requirement also applies to businesses that report toxic releases under Section 313 of the Emergency Planning and Community Right-to-Know Act. These plans are known as Pollution Prevention Plans, or P2 Plans. Implementing these plans can help businesses use fewer toxic chemicals and improve worker safety while reducing risks to the environment.

Reducing Risk through Technical Assistance to Businesses

Face-to-face technical assistance visits result in significantly higher voluntary compliance rates. Hundreds of businesses in Washington have saved money and increased their competitive advantage by reducing their use of hazardous substances, and this helps ensure better compliance with state dangerous waste laws.

Hazardous Waste & Toxics Reduction Program

Two strategies are key to breaking the cycle of ongoing cleanup expenses: first, use fewer toxic chemicals; and second, safely manage those hazardous substances for which there is no safer substitute available. Facilities that produce more dangerous wastes tend to run a higher risk of mismanaging that waste. Mismanaged wastes can contaminate the environment and may eventually require cleanup.

Although the COVID pandemic restricted our efforts, HWTR staff conducted over 350 business assistance visits during the 2019–21 Biennium. During those visits, we provided business-specific recommendations on how to:

- Reduce use of hazardous substances.
- Avoid generating waste.
- Manage dangerous waste safely.
- Achieve energy savings.
- Conserve water.
- Prevent stormwater contamination.

For the 2021–23 Biennium, HWTR staff will continue our technical assistance efforts with a focus on reducing the use of hazardous substances and safely managing those substances. Our post-COVID goals include making at least 420 technical assistance visits and engaging with at least 10 Washington businesses through an in-depth toxics reduction project.

Reducing Risk from Small Businesses: Pollution Prevention Assistance Program

Smaller businesses are less likely to get the attention of regulatory agencies for waste, air, or stormwater issues. But many smaller businesses also generate dangerous wastes; if stored, managed, or disposed of incorrectly, they can cause pollution to the state's land, air, and water.

The Pollution Prevention Assistance Partnership began in 2008 (formerly known as Local Source Control), when Ecology developed interagency agreements with local government agencies in the Puget Sound and

Spokane River watersheds to provide technical assistance to smaller businesses.

In 2015, additional funding for the Columbia River watershed allowed Ecology to add new partners in Clark County. During the 2017–19 and 2019–21 biennia, Ecology had a total of 21 contracts with cities, counties, and local health authorities to help businesses ensure their wastes don't contaminate soil, air, wastewater, or stormwater. This is done by educating businesses and helping them implement best management practices to ensure they comply with environmental laws and regulations.

An important aspect of the technical assistance visits provided by this program is helping the business with spill prevention and cleanup preparedness. In the 2019–21 Biennium, our contracted partners made over 5,000 technical assistance visits to small businesses, helping them to resolve almost 2,400 potential threats to the environment. Ecology estimates that for the 2021–23 Biennium, our contracted partners will provide an additional 7,800 technical assistance visits.

In the 2019–21 Biennium, the Pollution Prevention Assistance Program added a Product Replacement Program to help businesses with the costs associated with switching to safer products and technology. The Partnership's first effort under this program is to help dry cleaners switch from PERC to a safer cleaning technology by reimbursing some of the costs associated with purchasing new, safer equipment. This program has already helped almost half the PERC dry cleaners in the state switch to safer cleaning methods.

For the 2021–23 Biennium, the Product Replacement Program is continuing work with dry cleaners and is expanding program scope to address solvent-based automotive degreasers, PFAS-containing firefighting foams, and recreational foams containing hazardous flame retardants in schools, gyms, and gymnastics facilities.

Hazardous Waste & Toxics Reduction Program

Managing Hazardous Waste and Materials

Compliance Inspections

While much of HWTR's work is focused on preventing tomorrow's toxic threats, we must still manage today's dangerous waste safely.

Formal dangerous waste inspections at larger, regulated businesses and facilities are critical to environmental health. These businesses handle the bulk of the state's dangerous waste. Inspections can be unannounced or scheduled within a several-month period.

Routine inspections are a critical regulatory line of defense between the millions of pounds of dangerous waste produced in Washington and environmental contamination. Mismanaging dangerous waste:

- Allows harmful chemicals to contaminate our water, soil, and air.
- Pollutes stormwater runoff.
- Creates expensive cleanups.

During the 2019–21 Biennium, HWTR's environmental inspectors performed over 188 in-person compliance inspections at facilities that generate or manage dangerous waste. These inspections resolved over 137 serious environmental threats. The inspections also revealed how well facilities complied with state and federal regulations. We found significant environmental violations at 46.1 percent of regulated businesses we inspected in person during the biennium, which is down from 60.6 percent in the previous biennium.

COVID-related restrictions prohibited on-site inspections for much of the biennium. In response, inspectors developed remote inspection processes that did not require physical site visits. In addition to the in-person compliance inspections noted above, HWTR inspectors conducted 119 remote inspections.

For the 2021–23 Biennium, our inspection efforts will continue. While we expect to return to a focus on traditional in-person

inspections, HWTR is continuing our efforts to develop new collaboration tools to support remote inspections and engagement with regulated businesses. We also plan to objectively evaluate performance measure results (such as the length of time it takes a business to return to compliance after a violation) between the traditional and new inspection approaches.

Permitting and Corrective Action

Ecology issues permits to dangerous waste treatment, storage, and disposal (TSD) facilities. Commercial TSDs handle millions of pounds of dangerous waste that is predominantly generated by other businesses or facilities. Ecology also issues permits to some facilities to store their own company's dangerous waste for long periods. Facilities that recycle dangerous waste, such as used solvents or contaminated oil, aren't required to obtain a permit, but they are subject to many of the same rules that TSDs are required to follow.

When a facility moves locations or otherwise closes down a tank or other area where dangerous wastes are handled or stored, Ecology oversees the closure activities and any necessary cleanup. TSD facilities are mostly located near Puget Sound and are often contaminated. Cleanups at TSD facilities are known as corrective action.

Corrective actions are currently occurring at 41 "priority sites" in Washington. Work is progressing at all sites, and we expect to have many of these 41 cleanups finished or in maintenance status by 2030. As sites are cleaned up, those that remain are the most complex and contaminated. The full cleanup process at an average site takes 10–30 years to complete.

Cleanups are expensive. However, owners of corrective action sites are responsible for paying for all cleanup activities. Ecology is often able to recover costs from the property owners. Once clean, these properties provide opportunities for

Hazardous Waste & Toxics Reduction Program

habitat restoration, economic development, and public recreation.

Ensuring Current and Updated Rules

As EPA updates its regulations, Ecology is required to amend the state's Dangerous Waste Regulations to maintain consistency. In the 2019–21 Biennium, Ecology incorporated a number of new federal hazardous waste requirements, including:

- New hazardous waste pharmaceuticals regulations and amendments to rules about nicotine wastes. These new rules makes it easier for businesses to manage waste and expired medications, medical wastes such as used syringes and IV bags, and non-pesticide nicotine wastes like expired gum or vaping liquids.
- Safe management of recalled air bags.
- User fees for the e-manifest system.
- Biological testing methods.

In addition to these new rules, Ecology also made minor corrections and clarifications to various existing rules.

For the 2021–23 Biennium, HWTR expects to start another rulemaking update for the Dangerous Waste Regulations, including updates to eliminate unnecessary gender references, making needed changes to ensure federal consistency, and clarifying additional language throughout the rule.

Providing Outreach and Information

Access to Hazardous Substance and Waste Information

Ecology's data systems gather, maintain, and report a range of information about hazardous substances and dangerous waste. Data sets include hazardous substances stored, toxic chemicals present in children's products, toxic substances released to the environment, dangerous waste generated and managed, and pollution prevention measures taken by businesses. We compile and make the data available to emergency responders, individuals, businesses, and local

government decision makers. Ecology provides information on hazardous substances and dangerous waste to businesses and the public through our website, printed materials, telephone information line, and program newsletter, *Shoptalk*

(<https://www.ecy.wa.gov/Regulations-Permits/Guidance-technical-assistance/Dangerous-waste-guidance/Shoptalk>). We have over 7,000 subscribers to *Shoptalk*. These resources help businesses and the public make informed decisions on using and safely managing hazardous substances to protect human health and the environment.

Emergency Planning and Community Right to Know

Ecology supports multiple sections of the federal Emergency Planning and Community Right-to-Know Act (EPCRA). The work is coordinated with EPA, other state agencies, local emergency planning committees, and Tribes. Ecology manages two basic services through this law and related state rules:

- Tracking bulk storage of hazardous chemicals to facilitate emergency planning and response.
- Tracking and reporting on the release of toxic chemicals into communities across the state.

In 1984, Congress used EPCRA to mandate that all states support the Act's basic community right-to-know needs. There is no federal funding for this work. The core state agencies involved are the Department of the Military's Emergency Management Division, the Washington State Patrol, Ecology, and member agencies of the Washington State Emergency Response Commission.

To comply with the mandate, thousands of businesses annually report chemical inventories to Ecology. Also, hundreds of manufacturers annually report their permitted and other chemical releases into the air, ground, water, sewers, and what is

Hazardous Waste & Toxics Reduction Program

shipped off-site. Ecology collects, updates, manages, uses, and distributes this data.

Activities, Results, and Performance Measures

Increase Safe Hazardous Waste Management, Pollution Prevention, and Compliance with Dangerous Waste Regulations

This activity supports the work the agency does to:

- Conduct dangerous waste compliance inspections, escalating to formal enforcement actions when necessary.
- Amend the Dangerous Waste Regulations to keep our rules current with the federal program and maintain state authorization.
- Provide dangerous waste management and pollution prevention education and technical assistance to businesses, including via local specialists through the Pollution Prevention Assistance partnership.
- Issue permits to facilities that treat, store, or dispose of dangerous waste, and ensure that proper financial assurance requirements are in place.

Expected Results

Dangerous waste generators and facilities that treat, store, or dispose of large volumes of dangerous wastes are in compliance with state and federal rules designed to protect human health and the environment.

Performance Measures

- Number of significant toxics-related environmental threats resolved.
- Percentage chance of finding a significant environmental threat during a compliance inspection.
- Number of site visits to small businesses by local jurisdictions in the Pollution Prevention Assistance partnership.

Prevent the Use of Toxic Chemicals in Products and Promote Safer Alternatives

This activity supports the work the agency does to:

- Work with key organizations and interest groups, especially Department of Health, to identify chemicals of concern, review science, and develop and implement action plans to reduce presence of toxic chemicals in the environment.
- Provide information about safer alternatives and green chemistry to business, education, government, and public sectors.
- Update and enforce statutory reporting requirements and limits in specific products.

Expected Results

- Persistent, bioaccumulative toxic chemicals (PBTs) and other chemicals of concern are reduced or eliminated from Washington's environment, reducing risks to people, wildlife, and Washington's environment.
- Manufacturers, Washington residents, and other sectors use safer alternative chemicals or products.

Performance Measure

- Amount of toxic substances used by Washington businesses and facilities required to submit pollution prevention plans (in millions of pounds).

Reduce the Generation of Hazardous Waste and the Use of Toxic Substances through Technical Assistance

This activity supports the work the agency does to provide pollution prevention and toxics reduction technical assistance to hazardous waste generators.

Hazardous Waste & Toxics Reduction Program

Expected Results

- Hazardous waste generation and the use of toxic chemicals is reduced or safer alternatives are used.
- Businesses spend less on resource use or waste cleanup and disposal.
- Public health and the environment are better protected.

Performance Measures

- Amount of hazardous waste generated each year (in millions of pounds).
- Number of pollution prevention or toxics reduction technical assistance site visits to waste generators.

Support and Engage Our Communities and Provide Hazardous Substance and Waste Information

This activity supports the work the agency does to:

- Provide the public and local governments with information about the type, location, and source of hazardous substances in local communities.
- Provide waste generators with best practices and other helpful information.
- Collect, manage, and report hazardous waste generation data to EPA and provide data for EPA's federal community right to know requirements.
- Engage with various stakeholders and communities to inform environmental justice and hazardous waste and toxics reduction efforts.

Expected Results

- The public, emergency responders, and local governments have the information they need to prepare for chemical hazards in their communities.
- Generators have access to waste management best practices and other helpful information to manage waste properly.

Performance Measure

- Number of visits to Ecology's Hazardous Waste and Toxics Reduction websites.

Remediate Hazardous Waste Pollution and Restore Contaminated Sites to Productive Use

This activity supports the work the agency does to:

- Oversee cleanup of high-priority corrective action sites.
- Provide pollution prevention and toxics reduction technical assistance to hazardous waste generators.

Expected Results

Potentially liable parties manage corrective action sites to meet federal and state cleanup requirements and control and remediate contamination.

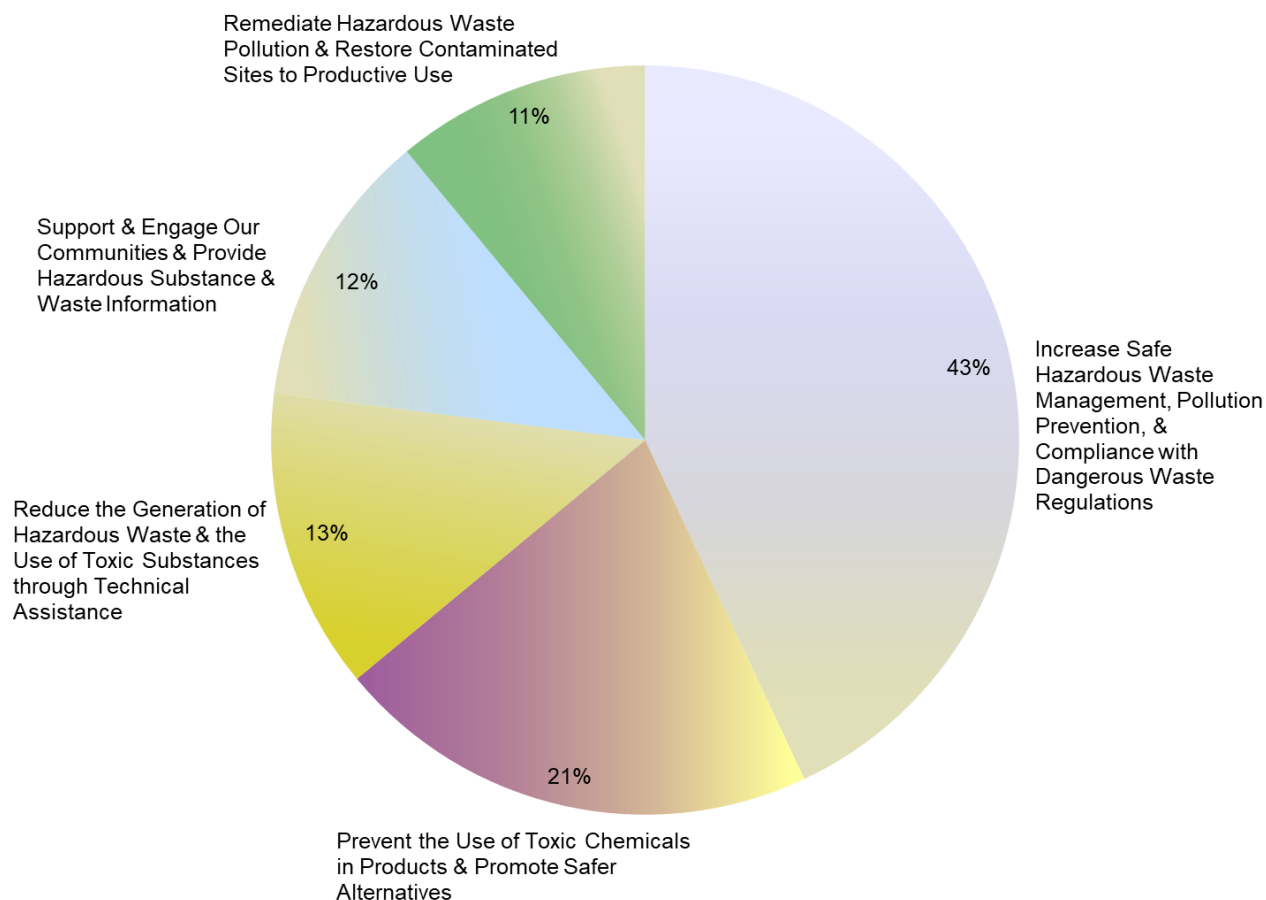
Performance Measure

- Percentage of progress made toward completed corrective actions at priority facilities.

Hazardous Waste & Toxics Reduction Program

Hazardous Waste & Toxics Reduction Program 2021-23 Biennium Budget by Activities

Operating = \$44.8 Million | Capital = \$8.3 Million¹⁰ | Total = \$53.0 Million | FTEs = 140.7



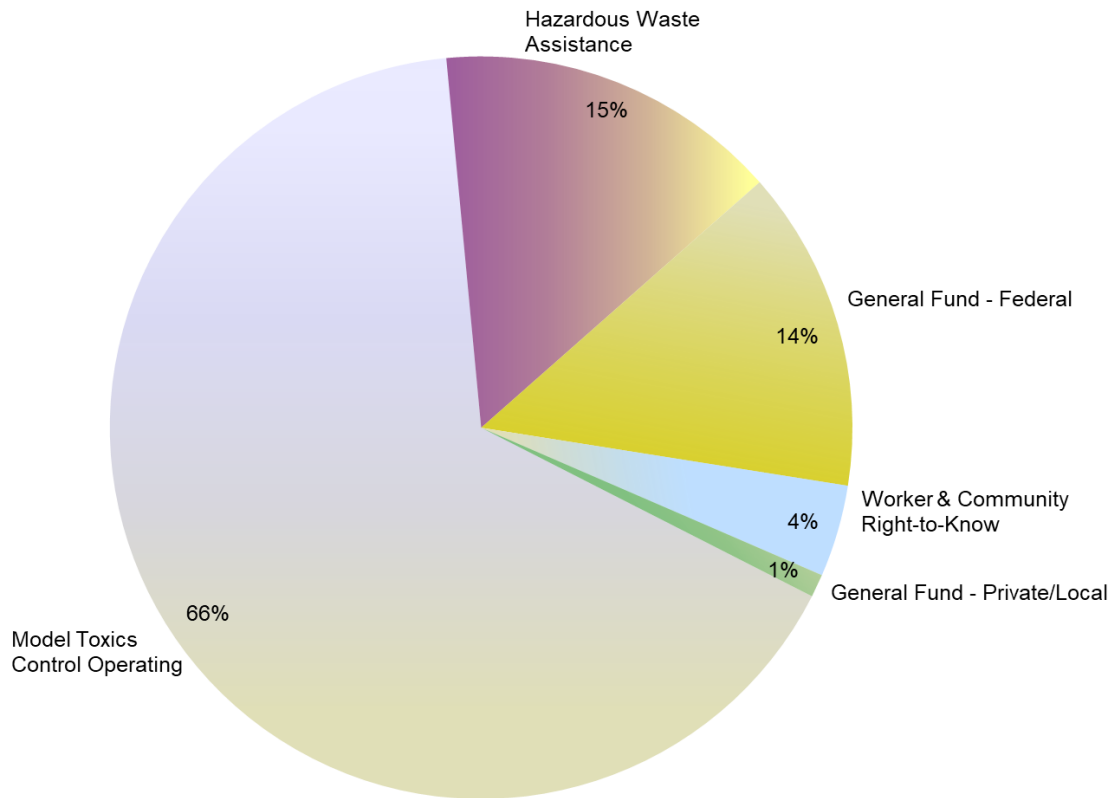
Activities	Amount	%	FTEs
Increase Safe Hazardous Waste Management, Pollution Prevention, and Compliance with Dangerous Waste Regulations (A021)	\$19,152,000	43%	54.0
Prevent the Use of Toxic Chemicals in Products and Promote Safer Alternatives (A065)	9,546,000	21%	25.7
Reduce the Generation of Hazardous Waste and the Use of Toxic Substances through Technical Assistance (A052)	5,957,000	13%	22.2
Support and Engage Our Communities and Provide Hazardous Substance and Waste Information (A019)	5,315,000	12%	23.6
Remediate Hazardous Waste Pollution and Restore Contaminated Sites to Productive Use (A031)	4,812,000	11%	15.2
Hazardous Waste & Toxics Reduction Operating Budget Total	\$44,782,000	100%	140.7

¹⁰ Funded entirely by Model Toxics Control Capital Account (23N).

Hazardous Waste & Toxics Reduction Program

Hazardous Waste & Toxics Reduction Program 2021-23 Biennium Budget by Fund Source

Operating = \$44.8 Million | Capital = \$8.3 Million¹¹ | Total = \$53.0 Million | FTEs = 140.7



Operating Fund Sources	Amount	%	Uses
Model Toxics Control Operating (23P)	\$29,367,000	66%	Conduct agency programs to identify priority hazardous chemicals, identify consumer products that contain those priority chemicals, and determine if regulatory actions are needed to reduce those priority chemicals. Promote reduction of toxic and other hazardous substances in consumer products to reduce production of hazardous wastes. Promote safe waste management, primarily through technical assistance to businesses, inspections of large quantity generators of hazardous waste and permitted treatment, storage and disposal facilities, and hazardous waste cleanups. Conduct criminal investigations and enforcement actions. Review and analyze waste-derived fertilizers as part of the fertilizer registration process. Fund and train local government specialists to provide assistance in waste management and reduction and source control. Manage permits, closures, and cleanups at facilities that treat, store, or dispose of hazardous waste. Compile information on hazardous substance use and make this information available to residents and other public entities.

¹¹ Funded entirely by Model Toxics Control Capital Account (23N).

Hazardous Waste & Toxics Reduction Program

Operating Fund Sources	Amount	%	Uses
Hazardous Waste Assistance (207)	6,825,000	15%	Provide technical assistance to hazardous waste generators and hazardous substance users. Identify safer chemical alternatives for toxic or hazardous chemicals to help businesses, governments and residents make better choices on what to use and buy.
General Fund – Federal (001)	6,475,000	14%	Grant funds received from EPA to implement federal Resource Conservation and Recovery Act (RCRA) and pollution prevention innovations.
Worker & Community Right-to-Know (163)	1,583,000	4%	Provide data systems that compile/gather, maintain, report and make available current hazardous substance and waste information to individuals, businesses, emergency responders, and local government decision makers. Address strategies to best implement environmental justice principles in state agency decision-making, to address environmental health disparities.
General Fund – Private/Local (001)	532,000	1%	Manage cleanups at facilities that treat, store, or dispose of hazardous waste.
Operating Budget Total	\$44,782,000	100%	
Capital Fund Sources	Amount	%	Uses
Model Toxics Control Capital (23N)	\$8,259,884	100%	Remove known toxic components in vehicles and appliances, including switches containing mercury, prior to crushing and shredding. Remove and replace toxic chemicals present in consumer and commercial products, before they get into the environment, through product replacement opportunities, which directly support current and past Corrective Action Plans (CAPs) recommendations.
Capital Budget Total	\$8,259,884	100%	
Haz. Waste & Toxics Reduction Operating & Capital Budget Total	\$53,041,884		

Nuclear Waste Program



Nitya Chandran, a Waste Treatment Plant Facility Engineer for the Nuclear Waste Program, inspects part of the Tank-Side Cesium Removal System (TSCR) at Hanford. Ecology conducts frequent inspections at various Hanford facilities. TSCR is expected to begin treating tank waste in early 2022.

Nuclear Waste Program

Program Mission

The Nuclear Waste Program's mission is to:

- Lead the effective and efficient cleanup of the U.S. Department of Energy's Hanford Site.
- Ensure sound management of mixed hazardous wastes in Washington.
- Protect the state's air, water, and land at and adjacent to the Hanford Site.

Environmental Threats

The Hanford Site covers 586 square miles in Southeast Washington. Hanford's half-century of nuclear materials production created one of the world's most polluted areas. The cleanup challenges include:

- Removing and vitrifying (incorporating into glass) an estimated 56 million gallons of radioactive and chemically hazardous waste in Hanford's 177 underground storage tanks.
- Inspecting radioactive mixed wastes stored in over 10,000 stored containers and approximately 12,000 buried and aging containers that need to be retrieved and properly managed.
- Ensuring the safe management of 1,936 highly radioactive capsules containing concentrated cesium and strontium compounds and spent ion exchange columns used to pretreat tank waste; all stored on above-ground pads.
- Monitoring approximately 190 square miles of contaminated groundwater that flows to and eventually enters the Columbia River. Approximately 58 square miles of contaminated groundwater currently exceed federal and state drinking water standards.
- Permitting the operation and closure of 35 hazardous waste treatment, storage, and disposal sites ranging from small demolition sites to half-mile-long nuclear chemical processing buildings.
- Cleaning up the remaining waste sites and facilities across the site. As cleanup along the Columbia River nears completion, the focus is shifting to 1,500 waste sites in the Central Plateau.

Authorizing Laws

The U.S. Department of Energy (USDOE) operates the Hanford Site. USDOE, the U.S. Environmental Protection Agency (EPA), and the Department of Ecology signed a comprehensive cleanup and compliance agreement on May 15, 1989.

The Hanford Federal Facility Agreement and Consent Order, known as the Tri-Party Agreement (TPA), contains required actions for the Hanford Site cleanup. The TPA reflects a concerted goal of achieving, in an

Nuclear Waste Program

aggressive manner, full regulatory compliance and remediation with enforceable milestones.

Until the late 1980s, USDOE did not fully comply with state hazardous waste, air, or water pollution standards. The TPA includes a consent order requiring USDOE at the Hanford Site to come into compliance with the same hazardous waste rules that regulate private industry.

The laws applied at Hanford include:

- *Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund)*
- *Hazardous and Solid Waste Amendments of 1984*
- *Resource Conservation and Recovery Act (RCRA)*
- *Toxic Substances Control Act*
- *Chapter 70.94 RCW, Clean Air Act*
- *Chapter 70A.300 RCW, Hazardous Waste Management Act*
- *Chapter 70.105D70A.305 RCW, Model Toxics Control Act*
- *Chapter 90.48 RCW, Water Pollution Control Act*

Constituents and Interested Parties

- *Congress, USDOE, EPA, the Defense Nuclear Facilities Safety Board, and the U.S. Fish and Wildlife Service.*
- *Environmental Council of the States, National Governors Association, Western Governors' Association, State and Tribal Government Working Group funded by USDOE, and the Oregon Department of Energy.*
- *Tribal Nations: As the state's lead for natural resource damage assessments at the Hanford Site, Ecology works with the Yakama, Umatilla, and Nez Perce Tribes.*
- *Franklin, Benton, and Grant counties and the cities of Pasco, Richland, Kennewick, Benton City, and West Richland.*
- *Hanford Advisory Board, Heart of America Northwest, Hanford Challenge, Physicians for*

Social Responsibility, Washington League of Women Voters, and Columbia Riverkeeper.

- *Tri-Cities area businesses (TRIDEC), labor groups, and residents.*
- *Washington State Departments of Health and, Fish and Wildlife, and the Northwest Interstate Compact on Low-Level Radioactive Waste.*

Focus Areas

Slowed Progress in Site Cleanup

USDOE's Environmental Management Program is the largest environmental cleanup program in the nation. The Hanford Site cleanup is the largest and most costly effort in this program.

The federal budget continues to be a major concern. It has remained generally flat, even as cleanup costs increase. If that trend continues, it will become virtually impossible for USDOE to meet the cleanup schedule set in the TPA and Tank Waste Consent Decree milestones.

USDOE has missed several major cleanup milestones over the years and has notified Ecology that current tank retrieval and Waste Treatment Plant (WTP) construction milestones are in jeopardy. USDOE put the pretreatment and high-level waste vitrification facilities on hold based on funding and project technical issues.

Also, the partial collapse of the roof over PUREX Tunnel 1 in spring 2017 diverted some funds to ensure that both PUREX Tunnel 1 and 2 were stabilized.

That incident further illustrates rising risks due to aging infrastructure throughout the Hanford Site. Addressing those risks competes with sitewide cleanup priorities within the flat federal cleanup budget.

Tank Waste Cleanup

Cleaning up underground tanks at the Hanford Site will be one of the longest, most

costly public works projects ever performed by the U.S. government.

A key element of the cleanup work is retrieving radioactive wastes from aging, failing, single-shell tanks and placing the waste in newer (although still past their design life) double-shell tanks for eventual treatment and disposal.

Tank waste retrieval has slowed. USDOE will delay retrievals because there is very little double-shell tank space available and will shift resources to focus on meeting Tank Waste Consent Decree milestones.

In April 2021, the U.S. Department of Energy announced that Tank B-109, a single-shell tank that is at least 75 years old, was leaking. This announcement followed a tank leak assessment that began in 2020.

B-109 joins Tank T-111 as known active leakers on the Hanford Site, meaning toxic, radioactive waste is draining into the soil beneath the tanks. Any waste leaked into the soil could eventually make its way into groundwater, and from there into the Columbia River.

In addition, USDOE has stopped construction on some parts of the Waste Treatment Plant due to funding and project technical issues. Instead, they are focusing on completing facilities related to direct-feed, low-activity waste (DFLAW).

The low-activity waste vitrification facility is all but complete, with most systems being turned over to start-up preparations and commissioning. Ecology is also supporting permitting of two new facilities to support DFLAW: the effluent management facility and the tank-side cesium removal facility.

We are working to ensure that USDOE meets its Consent Decree obligation to complete hot commissioning of the DFLAW process by December 2023.

Continuing Hanford Cleanup Progress

Progress has continued on some highly contaminated sites at Hanford. Ecology

continues to oversee USDOE efforts to maintain progress on stabilizing and decommissioning these sites to reduce hazards to workers and the environment.

- Plutonium Finishing Plant (PFP) – In 2020, USDOE completed most of the demolition activities for PFP’s Main Processing Facility. In September 2021, removal of PRF rubble was completed, along with core sampling of the slab. A clean soil cover will be placed in November 2021, and the facility will begin transition to surveillance and maintenance.
- Contaminated groundwater – As of fall 2021, roughly 28 billion gallons of contaminated groundwater had been treated in the central Hanford “200 Area,” removing 792,849 kg of nitrate, 29,034 kg of carbon tetrachloride, 437 kg of chromium, and 1,350 kg of uranium.

Protecting the Columbia River

Work under both interim and final Superfund remedial decisions must continue to clean up existing groundwater contamination before it enters the Columbia River. Highly contaminated soil can add more radioactivity and toxic chemicals to the groundwater contamination that threatens the Columbia River.

Soil excavation at the last of nine nuclear reactor areas will continue for several more years.

The focus is now shifting to investigate and formulate cleanup plans for more than 1,000 sites in central Hanford where waste leaked, spilled, or was intentionally disposed.

Completing the final Superfund investigations in central Hanford has taken more than a decade longer than expected and is planned to continue for several years. The physical cleanup is planned to continue through 2042.

Nuclear Waste Program

Decisions about Additional Waste Storage or Treatment at Hanford

More than 12 years ago, some pending national waste disposal decisions identified Hanford as a potential storage, treatment, and disposal site for not only wastes and materials generated onsite, but also for wastes from many other sites in the country.

Because of a settlement agreement, USDOE cannot import low-level mixed or transuranic wastes from other USDOE sites to Hanford. Settlement of the tank waste lawsuit extends this ban on importing waste until the tank waste treatment facility is operational.

New nuclear waste policy issues are developing as the federal government has proposed changes in the definition of Greater Than Class C waste, transuranic waste, and high-level waste.

Ecology is participating in national forums that deal with these issues to advise state policy makers on potential responses to these cleanup plans. This important cleanup work is severely limited by current federal funding levels.

Activities, Results, and Performance Measures

Treat and Dispose of Hanford's High-Level Radioactive Tank Waste

Ecology protects public health and natural resources by providing regulatory oversight for the treatment and removal of highly radioactive tank waste at the Hanford Site. This activity is focused on the design, permitting, construction, and operation of the Hanford Waste Treatment Plant, the Integrated Disposal Facility (a mixed, low-level waste landfill), and the immobilized high-level waste storage facility.

Expected Results

- 53 million gallons of high-level radioactive mixed waste from Hanford's

interim storage tanks are retrieved and treated.

- Construction of the Hanford Tank Waste Treatment Plant continues at a rate that supports approved milestones.
- Conceptual planning and design of an interim storage facility for immobilized high-level waste starts.

Performance Measure

- Percentage completion of tasks required to construct and operate Hanford's low-activity tank waste treatment plant.

Restore the Air, Soil, and Water Contaminated from Past Activities at Hanford

Ecology protects public health and natural resources by working to restore the public use of air, soil, and water at the Hanford Site through cleanup of contaminated sites from past activities. Radioactive and hazardous contaminants are removed, residual contaminants are contained and monitored, and mitigation of natural resource damage occurs.

Expected Results

- Public use of the air, soil, and water at Hanford is restored.
- Human and environmental risks associated with past Hanford activities is removed or reduced.
- Cleanup of contaminated waste sites adjacent to the Columbia River continues.
- Cleanup on the Hanford Central Plateau begins.

Performance Measures

- Gallons of groundwater contaminated by hexavalent chromium that is remediated at Hanford (in millions of gallons).
- Pounds of chromium removed from contaminated groundwater at Hanford.

Ensure the Safe Management of Radioactive Mixed Waste at Hanford

Ecology provides regulatory oversight for the safe storage, treatment, and disposal of liquid and solid dangerous and radioactive mixed wastes at the Hanford Site, as well as at radioactive mixed waste sites throughout the state.

This activity regulates management of this historic and ongoing waste stream and ensures the retrieval, treatment, and safe disposal of high-risk transuranic and high-activity wastes currently buried in shallow, unlined trenches.

Expected Results

- Transuranic and mixed low-level waste is managed and retrieved, treated and processed, and stored and disposed of in compliance with existing regulations to reduce risks posed to Hanford workers and the environment.
- 15,058 cubic meters (cumulative) of retrievably stored waste retrieved from the burial grounds at Hanford, certified for shipment to the Waste Isolation Pilot Plant in New Mexico, or treated for disposal at Hanford by September 30, 2030.
- The US Ecology commercial low-level radioactive waste site Model Toxics Control Act (MTCA) remediation is completed in coordination with closure activities that are being directed by the Washington Department of Health.

Performance Measure

- Cubic meters of radioactive, dangerous waste certified by USDOE for shipment to the Waste Isolation Pilot Project in New Mexico or treated for disposal at Hanford.

Ensure Safe Tank Operations, Storage of Tank Wastes, and Closure of the Waste Storage Tanks at Hanford

Ecology protects public health and natural resources by ensuring safe storage and management of 53 million gallons of high-level radioactive tank waste at the Hanford Site.

The Hanford Tank Waste Project is focused on permitting the double-shell tank waste storage system, removing liquid wastes from the single-shell tanks, and beginning to close portions of the tank waste storage system. In coordination with the Hanford Tank Waste Disposal Project, the tank waste will be removed and treated, leading to eventual closure of all 177 Hanford tanks by January 31, 2043.

Expected Results

- Public health and environmental risk from the highly toxic, mixed radioactive and hazardous tank waste is reduced and tank wastes are safely managed until treated and properly disposed of.
- Single-shell tanks are emptied and waste is safely stored to meet consent decree requirements.
- A permit is issued for the double-shell tank farms and the 242A evaporator by January 2021.
- A closure plan is issued for the single-shell tank farms by January 2021.

Performance Measure

- Number of single-shell tanks containing radioactive hazardous waste emptied at Hanford.

Clean Up and Remove Large, Complex, Contaminated Facilities throughout Hanford

Ecology oversees decommissioning of the large, complex, and high-risk facilities throughout the Hanford Site, including nuclear reactors and chemical processing facilities used for nuclear weapons material

Nuclear Waste Program

production. Transition of these facilities to safe and stable conditions requires coordinating multiple regulatory and technical requirements.

Ecology is also responsible for regulatory oversight of waste management activities at four facilities (Energy Northwest, Framatome, Perma-Fix Northwest, and the U.S. Navy's Puget Sound Naval Shipyard) not under the management of the USDOE.

Expected Results

- All major facilities on the Hanford Site are decontaminated and decommissioned and either demolished or placed into a long-term, safe storage configuration.
- Removal and remediation actions for the 324 Building and soil contamination are performed.
- Capsules containing cesium and strontium from the Waste Encapsulation Storage Facility are transferred to dry storage at a new permitted interim storage facility at Hanford.
- The Plutonium Uranium Extraction Plant (PUREX) radioactive mixed-waste storage tunnels, one of which collapsed, is structurally stabilized and closed.
- Permitting and compliance oversight at Perma-Fix Northwest, Framatome, Puget Sound Naval Shipyard, and Energy Northwest continues.

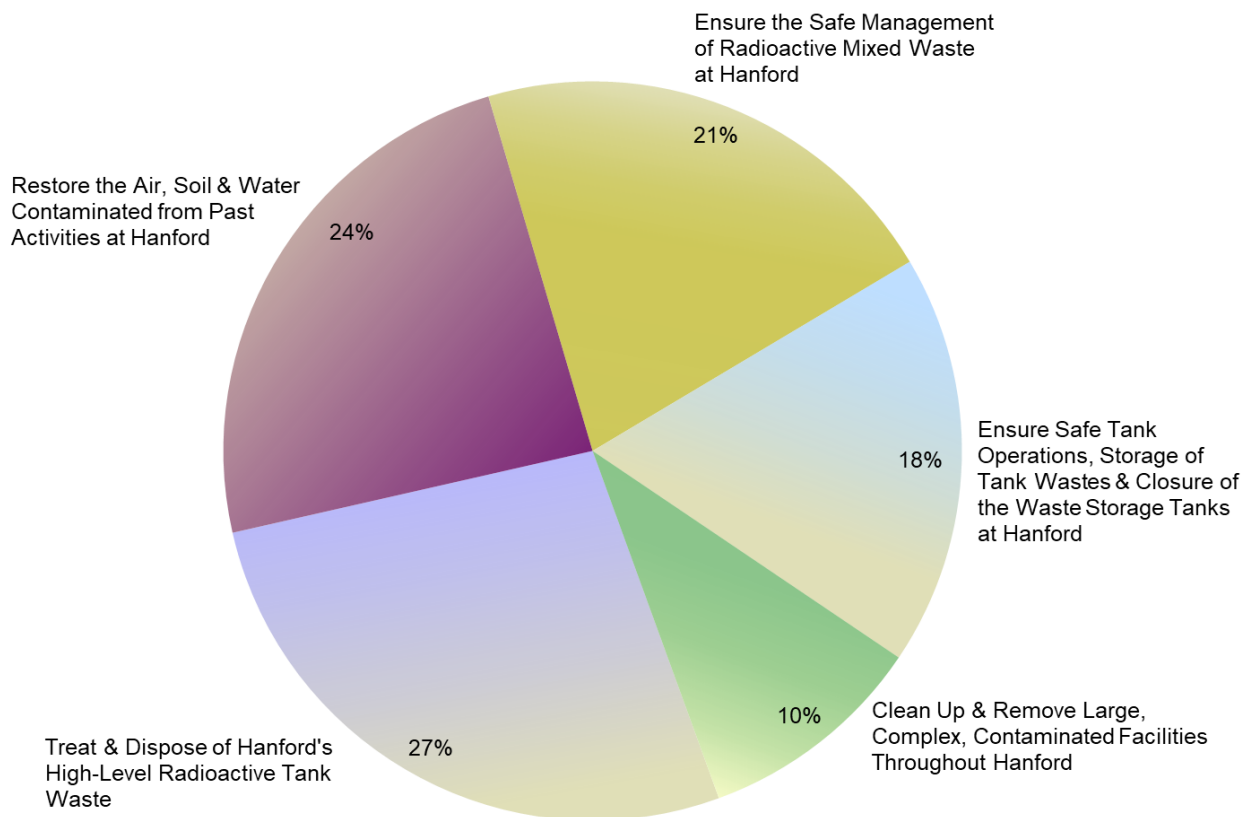
Performance Measure

- Percentage of decontamination or decommission complete at the Hanford plutonium finishing plant.

Nuclear Waste Program

Nuclear Waste Program 2021-23 Biennium Budget by Activities

Operating = \$31.1 Million | Capital = \$1.9 Million¹² | Total = \$33.0 Million | FTEs = 102.8



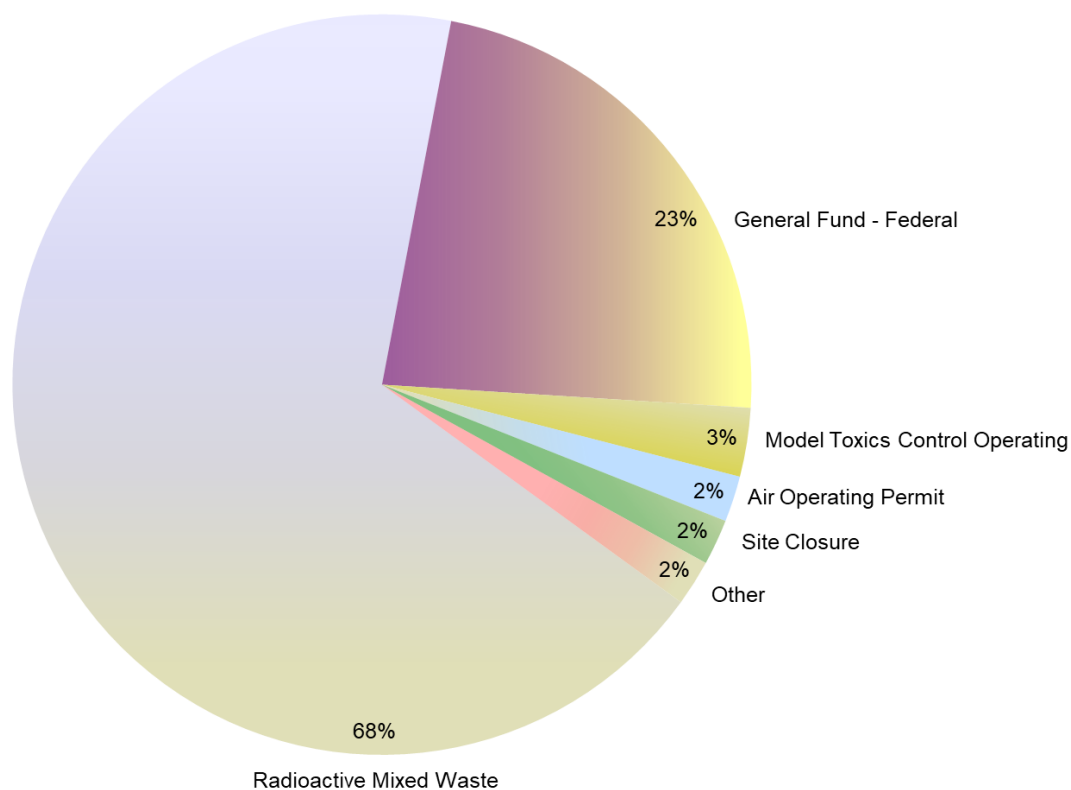
Activities	Amount	%	FTEs
Treat & Dispose of Hanford's High-Level Radioactive Tank Waste (A016)	\$8,439,000	27%	33.4
Restore the Air, Soil & Water Contaminated from Past Activities at Hanford (A014)	7,340,000	24%	16.8
Ensure the Safe Management of Radioactive Mixed Waste at Hanford (A018)	6,574,000	21%	21.4
Ensure Safe Tank Operations, Storage of Tank Wastes & Closure of the Waste Storage Tanks at Hanford (A017)	5,522,000	18%	18.4
Clean Up & Remove Large, Complex, Contaminated Facilities Throughout Hanford (A015)	3,181,000	10%	12.8
Nuclear Waste Operating Budget Total	\$31,056,000	100%	102.8

¹² Funded entirely by Site Closure Account (125).

Nuclear Waste Program

Nuclear Waste Program 2021-23 Biennium Budget by Fund Source

Operating = \$31.1 Million | Capital = \$1.9 Million¹³ | Total = \$33.0 Million | FTEs = 102.8



Operating Fund Sources	Amount	%	Uses
Radioactive Mixed Waste (20R)	\$21,000,000	68%	Fund implementation of the Hazardous Waste Management Act at facilities that manage radioactive mixed wastes. The HWMA provides a comprehensive statewide framework for the planning, regulation, control, and management of hazardous waste, which will prevent land, air, and water pollution and conserve the natural, economic, and energy resources of the state.
General Fund – Federal (001)	7,033,000	23%	Oversee removal of radiological and chemical contaminants at Hanford, provide regulatory assistance to USDOE and EPA and implement the provisions of the Hanford Federal Facility Agreement and Consent Order.
Model Toxics Control Operating (23P)	1,105,000	3%	Oversee remediation of historic hazardous substance releases at the commercial low-level radioactive waste disposal facility (commercially operated disposal site on Hanford).
Air Operating Permit (219)	739,000	2%	Conduct permitting and compliance assurance activities for air emissions sources on the Hanford Site.

¹³ Funded entirely by Site Closure Account (125).

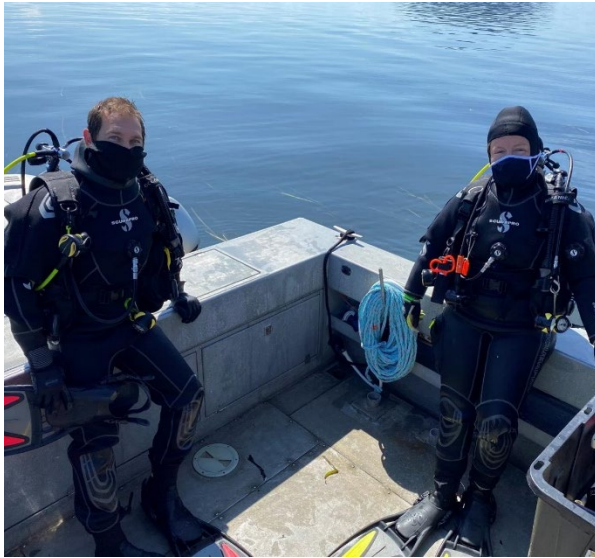
Nuclear Waste Program

Operating Fund Sources	Amount	%	Uses
Site Closure (125)	582,000	2%	Northwest Interstate Compact low-level radioactive waste management policy oversight for commercial low-level radioactive waste disposal within the state (commercially operated disposal site on Hanford).
Other:			
Air Pollution Control (216)	207,000	<1%	Regulation of air pollutants at new or modified Hanford facilities subject to the Clean Air Act.
General Fund – Private/Local (001)	164,000	<1%	All moneys except the \$600 required for Ecology's annual prime lease payment to USDOE are passed through to Benton County.
Water Quality Permit (176)	148,000	<1%	Activities needed to maintain safe facilities for treating wastewater discharges at the Hanford Site.
General Fund – State (001)	78,000	<1%	Initial regulation air pollutant sources not billable under Air Pollution Control (216) and Congressional Liaison activities not funded with GF-Fed or RMWA funds.
Operating Budget Total	\$31,056,000	100%	
Capital Fund Sources	Amount	%	Uses
Site Closure (125)	\$1,925,571	100%	Investigation, closure, and decommissioning of the Hanford low-level radioactive waste disposal facility. (Total Capital appropriation is \$8,472,000. \$6,500,000 is unallotted pending acquisition of soils for cover material.)
Capital Budget Total	\$1,925,571	100%	
Nuclear Waste			
Operating & Capital Budget Total	\$32,981,571		

Nuclear Waste Program

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Shorelands & Environmental Assistance Program



Dive team Heath Bohlmann and Nicole Burnett aboard Ecology research vessel *Edna Breazeale*, preparing to conduct annual surveys of eelgrass meadows at Padilla Bay National Estuarine Research Reserve.

Shorelands & Environmental Assistance Program

Program Mission

The Shorelands and Environmental Assistance Program's mission is to create community conservation partnerships to protect and restore our shorelands, wetlands, and floodplains.

Environmental Threats

Washington's natural environment defines the quality of life for its residents. Our state has an abundance of shorelines, rivers, streams, lakes, wetlands, floodplains, and marine waters. These natural treasures attract people to the state and contribute to our thriving economy and public health. At the same time, poorly managed population growth and development can threaten the very resources that Washingtonians value.

In the last 100 years, many shorelines, floodplains, and wetlands have been damaged or destroyed. The challenge facing our communities is to manage development for the 21st century while protecting and restoring these important assets. As population growth continues to pressure remaining natural habitats, we must find effective means to preserve them and protect their connections to other functioning habitats.

Authorizing Laws

- *Federal Clean Water Act*
- *Federal Coastal Zone Management Act*
- *Chapter 36.70A RCW, Growth Management Act*
- *Chapter 43.143 RCW, Ocean Resource Management Act*
- *RCW 43.21A.730, Office of Chehalis basin*
- *Chapter 43.21C RCW, State Environmental Policy Act (SEPA)*
- *Chapter 43.220 RCW, Washington Conservation Corps (WCC)*
- *Chapter 43.372 RCW, Marine Waters Planning and Management*
- *Chapter 78.56 RCW, Metals, Mining and Milling Act*
- *RCW 86.12.200, Comprehensive Flood Control Management Plans*
- *Chapter 86.16 RCW, Floodplain Management Act*
- *Chapter 86.26 RCW, State Participation in Flood Control Maintenance*
- *RCW 90.03.265 and 43.21a.690, Cost Reimbursement*
- *Chapter 90.48 RCW, Water Pollution Control Act*
- *Chapter 90.58 RCW, Shoreline Management Act*
- *Chapter 90.71 RCW, Puget Sound Water Quality Program*
- *Chapter 90.74 RCW, Aquatic Resources Mitigation*
- *Chapter 90.84 RCW, Wetlands Mitigation Banking*

Shorelands & Environmental Assistance Program

Constituents/Interested Parties

- *Residents.*
- *Property owners.*
- *Local governments.*
- *State and federal resource agencies.*
- *Tribes.*
- *Businesses.*
- *Environmental organizations.*

Focus Areas

Managing and Protecting Shorelines

Shoreline Master Programs (SMPs) are important tools in protecting and restoring shorelines. Local governments and Ecology collaborate to develop SMPs that include goals, policies, and regulations for managing shorelines. SMPs help us protect and restore important habitats, keep water clean, protect homes and property from shoreline hazards, and provide opportunities for public access.

Ecology provides grants and technical guidance to help communities throughout the state update and implement their SMPs. This includes supporting completion of the comprehensive updates required in the Shoreline Management Act (87 percent of the 259 cities and counties have completed their updates). Beginning in the 2017-19 Biennium, and continuing through 2023, this also includes supporting the required periodic review of SMPs.

In the 2021-23 Biennium, Ecology will continue to direct resources toward evaluating permit compliance and providing technical assistance on implementing SMPs to ensure they are efficient and effective.

Sustaining Our Remaining Wetlands

Wetlands provide many benefits to people, fish, and wildlife. They filter pollutants, provide habitat, store floodwaters, recharge aquifers, and maintain water flows during dry periods. Washington State has lost more than one-third of our wetlands.

To stop further loss, laws require mitigation to replace lost wetlands and their functions. Our priorities are:

- Ensuring wetlands are protected and replaced by conditioning projects through water quality certifications.
- Implementing a compliance program to ensure approved mitigation is successful.
- Supporting alternative mitigation approaches (e.g., wetland banking and advance mitigation) and providing templates, guidance, and training on these approaches.
- Assisting local governments in managing wetlands through technical assistance on updated critical areas ordinances, training on wetland tools and topics, and voluntary stewardship programs in agricultural areas.
- Protecting important coastal wetlands through acquisition grant programs.

Building Resilient Coastal Communities

Coastal communities in Washington State are experiencing the impacts of hazards such as erosion, landslides, and flooding. Experts predict climate change will exacerbate these stressors and increase risk to vital human and natural systems.

Ecology works to improve resilience by helping communities prepare for impacts from current and future hazards. Priorities include:

- Collaborating with key partners to provide communities with better data and information about hazards.
- Providing shoreline planning assistance to help shape where and how development occurs.
- Coordinating across programs and levels of government to provide practical support for communities.

In the 2021-23 Biennium, Ecology will partner with coastal communities and state agencies (including Washington Sea Grant, Emergency Management Division, and Washington State

Shorelands & Environmental Assistance Program

University Extension) to identify and document coastal resilience projects and begin developing strategies for bringing those projects to fruition.

Ocean and Coastal Health

Washington's spectacular Pacific Coast and ocean waters face their own set of challenges and opportunities. Aquatic invasive species, toxic algal blooms, hypoxic events, warming ocean temperatures, and ocean acidification threaten the health of our ecosystems and our coastal economies. Shoreline erosion is already a threat to infrastructure and property and will be even more problematic as sea levels rise. The potential for new renewable ocean energy facilities and other new use proposals, in an already busy ocean, heightens the need for more thoughtful planning.

Ecology works in partnership with the interagency State Ocean Caucus, Washington Coastal Marine Advisory Council, Olympic Coast Intergovernmental Policy Council, and other local, regional, Tribal, federal, and international partnerships to improve coastal and ocean resource management by:

- Helping to implement the marine spatial plan for Washington's Pacific Coast to reduce potential impacts of ocean uses and establish appropriate strategies to manage these activities.
- Improving research, monitoring, and understanding of our ocean resources and uses.
- Addressing erosion and sediment management issues.
- Supporting development of sustainable coastal communities by supporting local and regional planning processes.
- Advancing ocean policy and management priorities and needs.

Protecting Floodplain Resources

Ecology is the lead state agency for floodplain management in Washington. We support approaches that:

- Improve public safety.
- Prevent damage to property and public infrastructure.
- Protect flood storage, groundwater recharge, and habitat for aquatic and terrestrial species.

Ecology assists local governments and residents with awareness, planning, and project funding for flood hazard reduction and floodplain management. In addition to our ongoing assistance to local governments to meet the state-adopted National Flood Insurance Program (NFIP), Ecology is collaborating on a relatively new approach, Floodplains by Design (FbD).

FbD is a public-private partnership working for better coordination of investments in flood risk management and ecosystem recovery in Washington. This framework approaches floodplain management holistically – moving beyond disjointed, single-focus approaches – to projects that both reduce flood risk to people and improve ecological functions of our floodplains. In the 2021-23 Biennium, Ecology will administer the FbD grant program, funded at \$50.9 million. We will continue to work with The Nature Conservancy and other partners to engage with Tribes, local governments, and the agricultural community in leading and sustaining the FbD partnership.

Developing the Next Generation of Leaders While Providing Environmental and Disaster Assistance

A year of service in the Washington Conservation Corps (WCC) provides a living allowance for 300 young adults and military veterans and offers opportunities for career exploration, professional development, and job placement assistance. The WCC consists

Shorelands & Environmental Assistance Program

of three sub-programs; our original Corps Program, Veteran Conservation Corps, and Puget Sound Corps.

During their year of service, WCC members complete environmental and disaster service projects while serving on crews stationed throughout Washington State. These crews provide assistance to local, state, and federal natural resource agencies through the following activities:

- Installing native trees and shrubs to restore or enhance habitat for fish and wildlife.
- Monitoring restoration sites and controlling invasive species.
- Increasing public access and safety through constructing or improving trails and boardwalks.
- Reducing the risk of floods and wildfires through environmental restoration and forest health management.

Efforts to reduce fires and floods cannot eliminate these risks entirely, so Ecology prepares WCC members and staff to respond to natural disasters when they occur. In recent years, Ecology's WCC responded to wildfires, floods, drought, landslides, spills, and debris removal. Assistance includes logistical support and direct service.

Protecting Puget Sound Habitat

Habitat protection is a priority for Puget Sound restoration. Bulkheads, rip rap, and concrete walls have altered one-third of Puget Sound's shoreline. Many wetlands and floodplains have been lost to cutting, grading, and filling for homes, businesses, and transportation.

In the 2021-2023 Biennium, Ecology will help counties and cities implement SMPs and critical area ordinances that protect shorelines and other important habitats. Ecology will continue efforts to improve the effectiveness of wetland mitigation and floodplain management, provide training and technical assistance, complete habitat

restoration projects through the WCC/Puget Sound Corps, and create partnerships to promote appropriate development.

Reducing Flood Damage and Restoring Aquatic Habitat in the Chehalis River Basin

In 2016, the Legislature established the Office of Chehalis Basin in Ecology. The office is created to aggressively pursue implementation of an integrated strategy for long-term flood damage reduction and aquatic species restoration in the basin, and to administer funding provided by the Legislature to implement the strategy. The Chehalis Basin Strategy is an ambitious collection of potential actions to address these challenges. The Strategy includes near-term and long-term actions, as well as small- and large-scale projects.

The Chehalis Basin fishery is in decline, and major floods have been getting bigger. Not taking action could cost \$3.5 billion in damage to families and communities over the next 100 years – more with climate change. Today, the Chehalis Basin has no salmon species listed under the Endangered Species Act. But if the decline continues, listings could occur.

The Office of Chehalis Basin will collaborate with federal and other state agencies and Tribal and local leaders to use ongoing capital appropriations to:

- Implement a comprehensive, basin-wide Aquatic Species Restoration Plan.
- Conduct environmental review for raising the Chehalis/Centralia airport levee and the dam being considered on the main stem Chehalis River.
- Support construction of the Aberdeen/Hoquiam North Shore Levee project.
- Continue evaluating forest practices with regard to hydrology in the basin.
- Design and implement local-scale flood damage reduction projects to protect

Shorelands & Environmental Assistance Program

infrastructure (Chehalis River Basin Flood Authority projects).

- Developing and implementing flood-proofing programs.
- Support the Chehalis Basin Board.
- Complete a long-term strategy assessment for public review, which will articulate the Chehalis Basin Board's preferred long-term strategy (including an implementation schedule and quantified measures for evaluating the success of implementation).
- Continue the public involvement and outreach strategy for all the actions and activities associated with the Chehalis Basin Strategy.

Activities, Results, and Performance Measures

Restore Watersheds by Supporting Community-Based Projects with the Washington Conservation Corps

The Washington Conservation Corps (WCC) was established in 1983. WCC's mission is to conserve, rehabilitate, and enhance the state's natural and environmental resources, while providing educational opportunities and meaningful work experiences for young adults (ages 18-25).

The WCC creates partnerships with federal, state, and local agencies, private entities, and nonprofit groups to complete a variety of conservation-related projects. These include stream and riparian restoration, wetlands restoration and enhancement, soil stabilization, and other forest restoration activities, fencing, and trail work. The WCC also provides emergency response and hazard mitigation services to local communities.

Expected Results

- Local communities get help from Washington Conservation Corps crews to

carry out conservation and emergency response projects.

Performance Measures

- Number of native trees and shrubs planted by WCC crew members.
- Acres of habitat created or improved for fish and wildlife by WCC crew members.
- Miles of trails improved or created on public lands by WCC crew members.

Protect, Restore, and Manage Wetlands

The Department of Ecology is the lead agency responsible for implementing the state Water Pollution Control Act, which requires protection of wetlands. Ecology provides leadership on wetlands issues, coordinates statewide policy issues, and develops new approaches for managing and restoring wetlands. We provide technical assistance to local governments, helping them implement requirements in the Shoreline Management and Growth Management acts. We also provide technical assistance to nongovernment entities on wetlands conservation and stewardship programs.

Expected Results

- Wetlands are protected, restored, and managed consistent with state and local permits and laws.
- Wetlands function properly to protect water quality, reduce flooding, recharge aquifers for drinking water and other uses, and provide critical habitat for fish and wildlife.
- Local governments and other parties get technical assistance to carry out local wetland protection efforts.
- Approved mitigation achieves compliance through monitoring project performance and meeting performance standards.

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Performance Measures

- Percentage of mitigation sites inspected within 18 months after receiving as-built reports.
- Percentage of wetland banking certification documents reviewed within 30 days of receipt.

Protect and Manage Shorelines in Partnership with Local Governments

The Shoreline Management Act establishes a cooperative program between local and state governments, where local governments develop and administer local Shoreline Master Programs, and Ecology provides support and oversight. We are involved in shoreline management in four primary ways:

- Developing guidelines for local shoreline programs.
- Providing technical assistance to local governments and applicants on shoreline planning and permitting activities.
- Reviewing and approving amendments to local Shoreline Master Programs.
- Reviewing permits to ensure resource protection and implementation of the law.

Ecology works with local governments on permit compliance by responding to public inquiries and complaints, making field visits, providing compliance-related technical assistance, and issuing notices of correction, orders, and penalties. Properly managed shorelines provide habitat for fish and wildlife, minimize flooding and property damage, and provide land use certainty to local landowners.

Expected Results

- Shorelines of the state are protected, restored, and managed consistent with state and local laws.
- Local governments get technical and financial assistance to update their Shoreline Master Programs.

- Permits approved by local governments are consistent with their Shoreline Master Programs.

Performance Measure

- Number of communities (cities and counties) that have submitted updated Shoreline Master Programs.

Provide Technical Training, Education, and Research through Padilla Bay Estuarine Reserve

The Padilla Bay National Estuarine Research Reserve in Skagit County is part of a national network of reserves established to protect estuaries for research and education. The Padilla Bay Reserve conducts a broad array of public education programs, technical and professional training, coastal restoration, and scientific research and monitoring. Managed in partnership with the National Oceanic and Atmospheric Administration (NOAA), the reserve includes over 11,000 acres of tidelands and uplands, the Breazeale Interpretive Center with aquaria and touch pool, a research laboratory, residential quarters, trails, and support facilities. The reserve also provides funds and technical support to local Marine Resource Committees as part of the Northwest Straits Initiative, and administers the Northwest Straits Marine Commission.

Expected Results

- Efficiently manage and maintain Padilla Bay Reserve to provide training and education for current and future coastal decision makers by increasing their technical expertise and level of knowledge.
- Coastal and land use managers and planners are trained to implement environmental policies and rules and gain a better understanding of issues, science, and innovative methods for managing Washington's coasts.
- Teachers and students of all ages increase their knowledge of the health and

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restoration of Puget Sound, climate change, ocean acidification, and sea level rise.

- Ecosystem research is carried out and results shared with government and academic organizations.
- Volunteers and professionals carry out restoration activities to improve Puget Sound.

Performance Measures

- Number of teachers, students, adults, and professionals participating in Puget Sound education and training programs at the Padilla Bay Reserve.
- Percentage of Puget Sound and coastal training workshop participants who said they intend to apply what they learned in their work.

Protect Water Quality by Reviewing and Conditioning Construction Projects

The Department of Ecology issues water quality certifications and Coastal Zone Management Act consistency determinations for water-related construction projects. Staff provide early review on projects whenever possible (e.g., through State Environmental Policy Act review and pre-application meetings) and provide project guidance and technical assistance through phone calls, e-mails, site visits, and workshops. Projects are approved, denied, or conditioned to protect water quality, sediment quality, and fish and shellfish habitat. This activity allows the state to actively participate in federal permitting activities to ensure that state interests are adequately represented and considered.

Expected Results

- Water quality, habitat, and aquatic life are protected and managed consistent with federal, state, and local laws.
- Applicants get technical help on reducing impacts and permit issues.
- Decisions are timely, thorough, and consistent.

- The average number of days it takes to make a 401 permit certification decision is reduced.
- Projects comply with permit conditions.

Performance Measure

- The number of days it takes to make a final decision on 401 water quality certifications.
- Percentage of reviews and decisions made within agreed-upon timeframes for Washington State Department of Transportation permit documents.

Provide Technical and Financial Assistance to Local Governments to Reduce Flood Hazards

The Department of Ecology administers the Flood Control Assistance Account Program, providing grants and technical assistance to local governments for flood damage reduction projects and comprehensive flood hazard management planning. Our staff review and approve local Comprehensive Flood Hazard Management Plans and inspect construction of flood damage reduction projects.

Ecology is also the state's coordinating agency for the National Flood Insurance Program (NFIP) and receives an annual Community Assistance Program grant to provide technical assistance and support to 286 communities enrolled in the NFIP. In this role, staff make regularly scheduled technical assistance visits to communities, assess local regulatory programs for compliance with state and federal requirements, and provide workshops and other outreach on flood hazard recognition and reduction. Proper flood control planning and projects protect both private and public property, as well as natural resources and fish and wildlife habitat.

Expected Results

- Local flood hazard management plans and flood control projects reduce flood damage to property and the environment.

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- Local governments get technical and financial help to maintain flood management programs and respond to flooding.
- Flood-prone communities are better prepared for responding to flooding emergencies.

Performance Measure

- Number of flood-prone communities that receive support on flood hazard reduction and regulations.

Provide Technical Assistance on State Environmental Policy Act (SEPA) Review

SEPA was adopted in 1971 to ensure that state and local decision makers consider the environmental impacts of their actions. The SEPA law provides an opportunity for local resident involvement in the environmental review process and provides developers an opportunity to identify mitigation opportunities that facilitate overall project approval and minimize development costs. Ecology provides training and assistance to local governments and the public and manages the SEPA register.

Expected Results

- The public has input into projects that may have environmental impact.
- Local governments and state agencies get technical assistance on how to apply SEPA in their communities.
- Local and state decision makers use the SEPA process to analyze and mitigate environmental impacts of proposals.

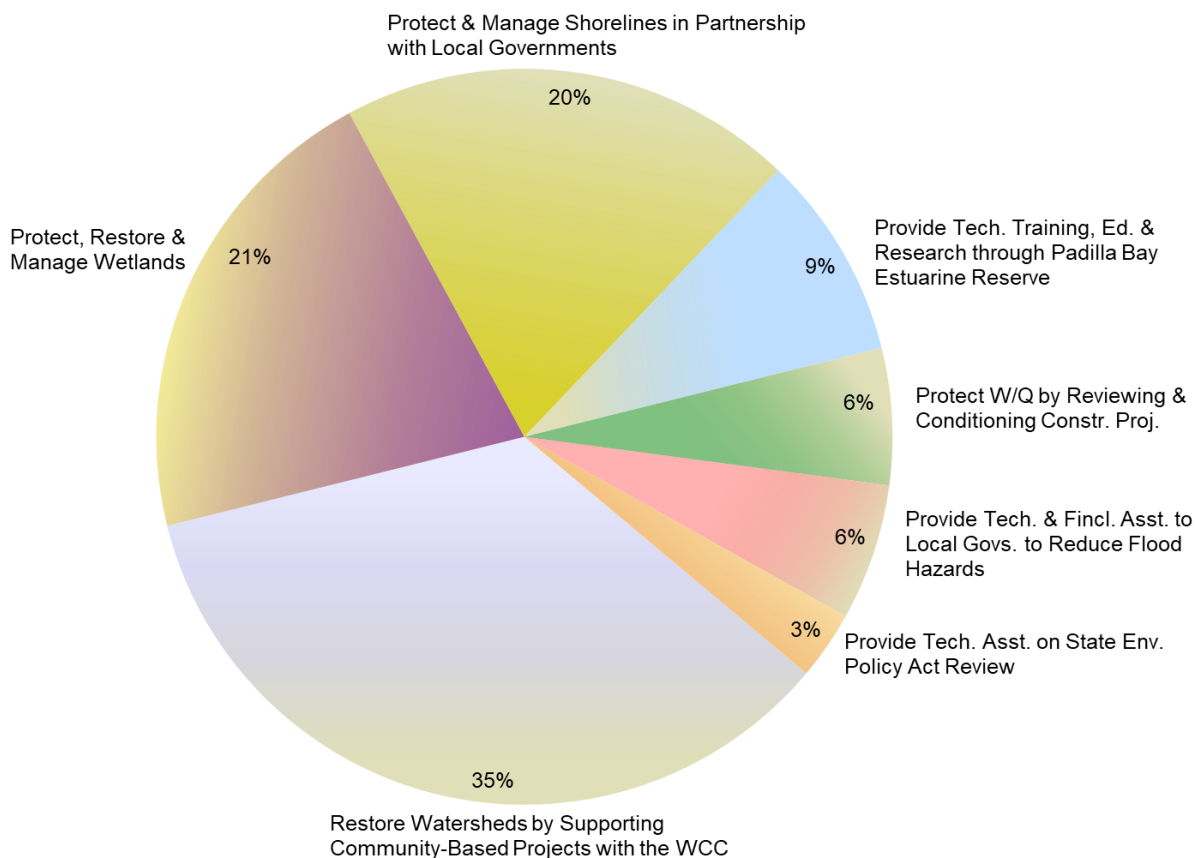
Performance Measures

- Number of SEPA workshops provided.
- Percentage of SEPA workshop participants who said they intend to apply what they learned in their work.

Shorelands & Environmental Assistance Program

Shorelands & Environmental Assistance Program 2021-23 Biennium Budget by Activities

Operating = \$71.5 Million | Capital = \$188.3 Million | Total = \$259.9 Million | FTEs = 189.2

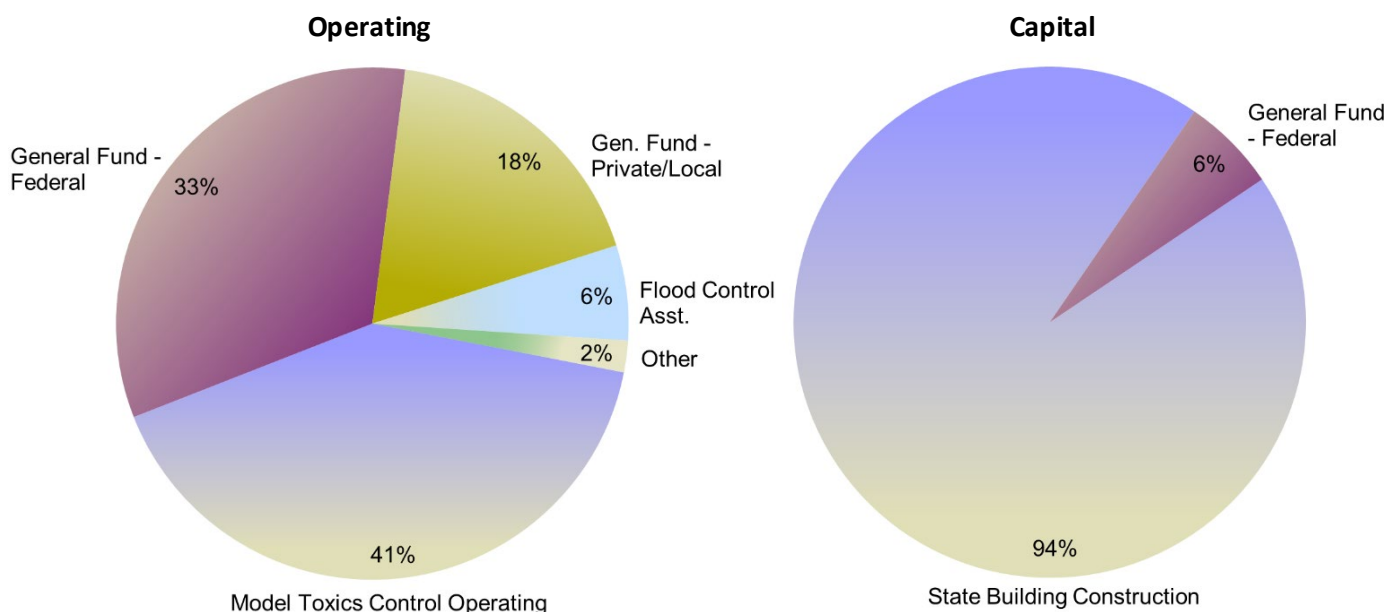


Activities	Amount	%	FTEs
Restore Watersheds by Supporting Community-Based Projects with the Washington Conservation Corps (A056)	\$25,431,000	35%	64.8
Protect, Restore & Manage Wetlands (A038)	14,821,000	21%	31.8
Protect & Manage Shorelines in Partnership with Local Governments (A036)	14,063,000	20%	38.7
Provide Technical Training, Education & Research through Padilla Bay Estuarine Reserve (A042)	6,280,000	9%	17.5
Protect Water Quality by Reviewing & Conditioning Construction Projects (A037)	4,457,000	6%	21.7
Provide Technical & Financial Assistance to Local Governments to Reduce Flood Hazards (A040)	4,319,000	6%	8.0
Provide Technical Assistance on State Environmental Policy Act (SEPA) Review (A041)	2,163,000	3%	6.7
Shorelands & Environmental Assistance Operating Budget Total	\$71,534,000	100%	189.2

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Shorelands & Environmental Assistance Program 2021-23 Biennium Budget by Fund Source

Operating = \$71.5 Million | Capital = \$188.3 Million | Total = \$259.9 Million | FTEs = 189.2



Operating Fund Sources	Amount	%	Uses
Model Toxics Control Operating (23P)	\$29,476,000	41%	Partial match for Washington Conservation Corps crews performing natural resource restoration projects with federal, state, and local agency sponsors. Match for federal Coastal Zone Management. Washington State Department of Transportation permitting. Water quality 401/Clean Water Act certifications for water-related construction projects, including dredging and aquaculture. Ocean policy review. Wetlands banking and environmental mitigation. Wetlands technical assistance. Local government financial assistance to update their Shoreline Master Programs. Staff to provide technical assistance to local governments updating local master shoreline programs and updating wetland protection standards in local critical area ordinances. Shoreline management planning, implementation, enforcement. Wetlands protection and Puget Sound Agenda implementation requirements. Northwest Straits commission grants to marine resource committees. Salmon Recovery.
General Fund – Federal (001)	23,305,000	33%	Primary grant: National Oceanic and Atmospheric Administration Coastal Zone Management (Padilla Bay operations, Shoreline planning, implementation, enforcement, water quality certifications, and technical/financial assistance to local governments). U.S. EPA grants for wetlands and Puget Sound. Federal grant for coastal erosion. Washington Conservation Corp activities. FEMA flood management federal grant. EPA Performance Partnership Grant for water quality certifications. FEMA Floodplain Map Modernization Grant.
General Fund – Private/Local (001)	13,189,000	18%	Coastal erosion. Permit and project reviews. Padilla Bay. Washington Conservation Corps.

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Operating Fund Sources	Amount	%	Uses
Flood Control Assistance (02P)	3,923,000	6%	Administer Flood Control Assistance Program including state review of local flood hazard management plans, flood management and control grants, and emergency flood response assistance through grants to local governments and through Washington Conservation Corps.
Other:			
General Fund – State (001)	1,491,000	2%	Minimum wage increases for WCC members. Transportation Fuel/Carbon Siting Study. Kelp Conservation and Recovery at Padilla Bay.
Aquatic Lands Enhancement (02R)	150,000	<1%	Washington coastal marine advisory council facilitator.
Operating Budget Total	\$71,534,000	100%	
Capital Fund Sources	Amount	%	Uses
State Building Construction (057)	\$176,408,144	94%	Floodplain by Design. Office of Chehalis Basin.
General Fund – Federal (001)	11,936,687	6%	Padilla Bay federal capital improvement projects. Federal grant awards for coastal wetland acquisitions (funds passed through to local entities).
Capital Budget Total	\$188,344,831	100%	
Shorelands & Env. Assistance			
Operating & Capital Budget Total	\$259,878,831		

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Solid Waste Management Program



Engineer Liem Nguyen doing a Dangerous Waste inspection at Phillips 66 Ferndale refinery. Ecology's Industrial Section staff conduct Dangerous Waste inspections at the refineries (large quantity generator) every two years.

Solid Waste Management Program

Program Mission

The mission of the Solid Waste Management Program is to reduce waste through prevention and reuse; keep toxics out of the environment; and safely manage what remains.

Environmental Threats

Solid waste management in Washington State is based on partnerships. Local governments have primary responsibility for assuring services and facilities are available to safely manage waste within their jurisdictions. State government provides regulations, permit approval, and technical assistance for safe waste handling to ensure contaminants do not reach the environment through groundwater, surface water, or discharges to

the air. The state also provides planning guidance and approval and financial assistance. The private sector provides waste and recycling services and owns and operates many of the waste handling, recycling, and disposal facilities.

Chapter 70A.205 RCW, Solid Waste Management – Reduction and Recycling, is the primary state law for solid waste management. It establishes waste reduction as the highest priority, followed by recycling, and then safe disposal. Preventing waste in the first place is the smartest, cheapest, and healthiest approach to waste management.

The amount of waste continues to grow, even faster than Washington's population, with the character of the waste stream changing over time. New products containing toxic materials or valuable resources continue to enter the waste stream. These products burden local and state abilities to manage them properly, and it is best to keep them out of landfills. This has led to product stewardship or take-back laws in Washington for a growing number of products.

Recycling is a popular and long-promoted method of reducing impacts of waste. Recycling reduces the need for raw materials, which conserves energy, reduces greenhouse gas emissions, and creates jobs. Beginning in 2018, export market shutdowns for many recyclables upended the recycling system we relied on. Efforts to address the problems continue and include trying to build new domestic markets, clean up our recycling stream, and educate the public to "recycle right."

Plastics continue to be a focus of concern. Most plastics are not readily recycled, which is increasingly evident from export market shutdowns. Plastics are increasingly prevalent in our environments – from the micro-plastics found at the tops of mountains to the plastic marine debris filling our oceans. This is leading to a wide variety of legislative

Solid Waste Management Program

bills and policies to try to address the problems.

Organic materials compose 22.8 percent of the waste generated in Washington, according to our 2021 waste characterization study. Of this, 13.8 percent is food waste, with more than half (8.5 percent) of that estimated to be edible when thrown away. Food waste is a huge problem nationwide. It not only wastes food, but also wastes the water, fertilizers, labor, and fossil fuels used to produce that food; and all of these have significant greenhouse gas impacts.

Composting food waste is not enough – we must not waste so much food to begin with.

Composting or anaerobically digesting inedible food and other organic materials such as yard waste, compostable paper, and clean wood, is still an important waste management strategy. Turning organics into compost or biochar – instead of landfilling them – creates valuable soil amendments that provide nutrients to plants, hold moisture in soils, and sequester carbon. Creating bioenergy and biofuels promotes economic vitality in growing industries.

It is estimated that more than 12 million pounds of litter is tossed and blown onto roadways every year in Washington. Another six million pounds ends up in parks and recreation areas. We cannot address the litter problem through pick-up programs alone.

Washingtonians understand that litter has a strong negative impact on their communities. Litter negatively affects the environment, waterways, wildlife, property taxes, home values, tourism and businesses, quality of life, and health and safety in their communities.

Biosolids, the end-result of the wastewater treatment process, are also a valuable resource. They contain important nutrients for plant growth and soil fertility, improve soil structure and moisture-holding capacity, and can substitute for chemical fertilizers. Ecology oversees the state's biosolids program. We develop standards

and permit wastewater treatment plants, beneficial use facilities, septage management facilities, and compost facilities that use biosolids as feedstocks. Ecology enforces requirements for proper handling, quality standards, and rates at which biosolids are applied to the land.

Major industries in the state, such as pulp and paper, aluminum smelting, and oil refineries, have the potential to significantly affect the environment. Washington's industries want a level playing field, clear permit conditions, and reliable communication with regulators. Ecology's Industrial Section provides industries with a single point of contact for improved environmental permitting, compliance, and technical assistance to help industries minimize their impacts to our air, land, and water.

Authorizing Laws

- *Chapter 49.70 RCW, Worker and Community Right to Know Act*
- *Chapter 70A.15 RCW, Washington Clean Air Act*
- *Chapter 70A.200 RCW, Waste Reduction, Recycling, and Model Litter Control Act*
- *Chapter 70A.205 RCW, Solid Waste Management – Reduction and Recycling*
- *Chapter 70A.214 RCW, Waste Reduction*
- *Chapter 70A.216 RCW, Solid Waste Incinerator and Landfill Operators*
- *Chapter 70A.220 RCW, Labeling of Plastics*
- *Chapter 70A.224 RCW, Used Oil Recycling*
- *Chapter 70A.226 RCW, Municipal Sewage Sludge – Biosolids*
- *Chapter 70A.230 RCW, Mercury*
- *Chapter 70A.235 RCW, Beverage Containers*
- *Chapter 70A.240 RCW, Recycling Development Center*
- *Chapter 70A.245 RCW, Recycling, Waste, and Litter Reduction*
- *Chapter 70A.300 RCW, Hazardous Waste Management*

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- *Chapter 70A.305 RCW, Hazardous Waste Cleanup – Model Toxics Control Act*
- *Chapter 70A.315 RCW, Incinerator Ash Residue*
- *Chapter 70A.455 RCW, Plastic Product Degradability*
- *Chapter 70A.500 RCW, Electronic Product Recycling*
- *Chapter 70A.505 RCW, Mercury-containing Lights – Proper Disposal*
- *Chapter 70A.510 RCW, Photovoltaic Module Stewardship and Takeback Program*
- *Chapter 70A.515 RCW, Architectural Paint Stewardship Program*
- *Chapter 70A.520 RCW, Plastic Packaging – Evaluation and Assessment*
- *Chapter 70A.530 RCW, Carryout Bags*
- *Chapter 90.48 RCW, Water Pollution Control Act*
- *Chapter 90.52 RCW, Pollution Disclosure Act of 1971*

Constituents/Interested Parties

- *Federal, state, and local governments.*
- *Environmental organizations.*
- *Businesses, including consumer goods companies and packagers.*
- *General public.*
- *Solid waste and recycling companies.*

Focus Areas

Waste Reduction, Recycling, and Litter Control Account Funding Restored

Funding in the Waste Reduction, Recycling, and Litter Control Account (WRRLCA) was restored in the 2019-21 Biennium, after a decade of reductions which began with the economic recession in 2008. However, we could not fully use the funding due to contracting and hiring freezes enacted in response to the pandemic.

With this restored funding, we continue to increase our work on litter prevention and pick-up, recycling, composting, waste

reduction, and providing grants as specified in Chapter 70A.200 RCW. This law allocates 40 percent for litter prevention and pick-up using youth crews and state agencies, 20 percent to local governments for litter pickup and competitive grants, and 40 percent to Ecology for waste reduction, recycling, and composting programs, including the new Recycling Development Center.

Preventing and Cleaning Up Litter with Restored Funding

With restored funding from the 2019-21 Biennium, Ecology created a new, bilingual, multifaceted, litter prevention campaign, “We Keep Washington Litter Free” (Por Un Washington Impecable). This was the first litter prevention campaign since the program was cut in 2008. The social marketing campaign was developed in partnership with the Washington State Patrol (WSP), Washington Traffic Safety Commission, and the Washington State Department of Transportation (WSDOT). A comprehensive Litter Prevention Partner Toolkit was also developed and made available online.

The first effort under this campaign focused on secured vehicle loads. “Secure Your Load for Safer Roads” (Cargas Bien Sujetadas, Caminos Mas Seguros) launched in May 2021 as a behavior-change campaign to help ensure Washington motorists secure vehicle and trailer loads before driving, to prevent litter and improve road safety. This will be an annual spring campaign to include collaborating with local governments to host free cargo net giveaway events, retail partnerships, public relations, advertising, messages on WSDOT highway signs, emphasis patrols by the WSP, and toolkit resources.

The litter prevention campaign will expand and continue throughout the 2021-23 Biennium. The next priority is addressing littering of food packaging and beverage containers. We are developing new

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messaging, advertising, and outreach strategies.

Senate Bill 5040 (Welcome to Washington Act), now codified in Chapter 70A.200 RCW, directs us to work with WSDOT on litter prevention messaging and coordinate litter emphasis patrols with WSP. In addition, local governments can apply to Ecology for reimbursement for litter cleanup activities on state highway ramps located within their jurisdiction.

Restored funding will allow us to perform a litter survey for the first since 2004. The litter survey provides baseline information about the distribution, types, and amount of litter in the state. This data allows us to plan effective programs, measure success, and identify the type and amount of items littered on Washington's highways.

Litter pick-up will also see increased effort. We will hire approximately 160 Ecology Youth Corps members and increase efforts with adult crews. We are also providing funding to state agency partners, including the departments of Natural Resources, Fish and Wildlife, Parks, and WSDOT, for litter and illegal dump pick-up efforts. We provided increased funding to 37 local government partners in the Community Litter Cleanup Program for litter and illegal dump pick-up and tools and trucks where needed. Ecology will continue to increase funding for the competitive grant program authorized by the Legislature in 2015. This program provides grants to local governments and nongovernmental organizations for education on litter prevention, waste reduction and recycling, and food waste reduction and reducing contamination in recycling.

Waste Reduction and Recycling Work with Restored and New Funding

After a decade of absence, we brought back the school awards program, now called the Waste Not Washington School Awards. In the 2019-21 Biennium, Ecology provided 20

grant awards to schools across the state to help build and improve waste reduction, recycling, and other sustainability programs and curricula in schools. These awards will continue in the 2021-23 Biennium.

We will also use restored funding to implement new laws on recycling, plastics, and food waste, and provide technical assistance on a variety of waste issues.

Recycling: Markets, Contamination, and More

In 2018, China shut off most markets for recyclable materials and set strict new contamination requirements of 0.5 percent for the few materials they would continue to take. This level is nearly impossible for current recycling systems to meet. Other export markets followed, leading to a re-evaluation of the entire recycling system in the Northwest and beyond.

Ecology's 2019 agency-request legislation (House Bill 1543) helps address this situation. Ecology staff, in coordination with the Department of Commerce, run the Recycling Development Center (Chapter 70A.240 RCW) to research, incentivize, and develop new markets and expand existing markets for recycled commodities. An advisory board helps guide their work. Funds are used to research and provide grants for market development projects.

The state and local governments with more than 25,000 in population are required to develop and implement Contamination Reduction and Outreach Plans (CROPs). The state CROP, which can be used by local governments, was completed in the summer of 2020. Most local governments completed their CROPs in the summer of 2021. Implementation is underway.

One aspect of CROP implementation is the statewide "Recycle Right" campaign to bring attention to common recycling contamination sources. This campaign was paused during the contract freeze last biennium due to the pandemic. Ecology

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plans to reinstate this campaign in the 2021-23 Biennium.

Plastics

The concerns about plastics are growing – almost as fast as the amount of plastics in our environment. This concern is illustrated by the many bills introduced in recent legislative sessions.

Chapter 70A.520 RCW, passed in 2019, required Ecology to hire an independent contractor to perform a plastic packaging evaluation and assessment and make recommendations to reduce plastic packaging, including producer involvement.

A statewide ban on plastic carryout bags was passed in 2020. Due to the pandemic, the start of the ban was delayed from January 2021 to October 2021. Outreach materials are available in 17 languages.

In 2021, the Legislature passed the multifaceted E2SSB 5022, now Chapter 70A.245 RCW. This law bans certain polystyrene products and requires food service businesses to provide disposable food serviceware only upon customer affirmation. It also establishes post-consumer recycled content requirements for certain plastic packaging. Producers who make this packaging must register with Ecology, annually pay a fee to cover Ecology's administration costs, and report on their efforts to meet the recycled content requirements.

Food Waste

National organizations estimate that 30 to 40 percent of all food grown is wasted. If food waste were a country, it would be the third largest greenhouse gas emitter in the world. To help reduce food waste, RCW 70A.205.715 set a goal to reduce food waste 50 percent by 2030. It also requires a food waste reduction plan to help meet this goal. Ecology, working with Departments of Health, Agriculture, Commerce, and the Office of Public

Instruction, created the "Use Food Well Washington" Plan, which contains 30 recommendations that focus on building a more resilient food system through food waste prevention, rescue, and recovery.

Ecology is now moving from planning into action. Implementation steps for the 2021-23 Biennium include developing a food waste reduction education campaign, creating the Center for Sustainable Food Management, and dedicating funding for food waste reduction statewide.

Our work with the Pacific Coast Collaborative to reduce wasted food by using voluntary agreements with food retailers and manufacturers across the entire west coast will also help us reach the goal.

Compost Emissions and other Challenges

Composting organic materials, such as yard debris, wood waste, and inedible food, continues to be an important management strategy for this large portion of our waste stream. This alternative to disposal has challenges, which include odor issues and controlling air emissions at compost facilities. Ecology is working with Washington State University to study and address this issue. We also continue to provide technical assistance to jurisdictional health districts (JHDs) and compost facility owners and operators on other challenges, including contamination in compost and concerns about spreading the apple maggot into pest-free areas when transporting raw organic materials.

Legislation (Senate Bill 5286) was introduced in the 2021 session to establish a statewide organics waste management goal to increase diversion of organic materials from landfills. While the bill did not pass, it led to creation of a stakeholder committee to work on legislation for the 2022 session. The bill also encouraged better organics waste management to mitigate climate change, an area that may get increased focus with passage of the Climate Commitment Act in

Solid Waste Management Program

2021. This pending 2022 legislation may also include elements to implement the Use Food Well Washington Plan.

Local Solid Waste Financial Assistance for Local Governments

These pass-through grants to local governments support essential programs that implement local solid and hazardous waste plans and regulatory programs. Local solid and hazardous waste plans are required under Chapters 70A.205 RCW and 70A.300 RCW to provide guidance for local responsibility in safely managing solid and hazardous waste to protect human health and the environment. Financial assistance is used for planning, regulating solid waste facilities, reducing human exposure to toxics by providing safe collection of household hazardous wastes, and supporting resource conservation through recycling and reuse programs.

The availability and amount of funding for Local Solid Waste Financial Assistance (LSWFA) grants depends on legislative appropriations. For the past three biennia, funding for this grant program was reduced by more than half of the 2013-15 Biennium amount of \$28 million. For the 2021-23 Biennium, funding was almost fully restored to \$24 million.

The financial assistance is used for planning, regulating solid waste facilities, reducing human exposure to toxics by providing safe collection of household hazardous wastes, and supporting resource conservation through recycling and reuse programs.

Funding reductions led to reduced or suspended local programs and enforcement activities. The restored funding will enable local governments to restore many of these efforts and more fully and safely manage solid and hazardous waste.

Technical Assistance at Solid Waste Facilities

Ecology engineers, hydrogeologists, and facility specialists are funded through the Model Toxics Control Act (MTCA) Operating Account. These positions provide technical assistance to local jurisdictional health departments and solid waste facility owners and operators. Many local governments do not have staff expertise and rely on Ecology for technical review assistance for facility designs, operations, permits, and regulatory interpretation. Ecology also manages MTCA cleanup at solid waste landfills in several counties throughout the state.

Implementing New and Existing Product Stewardship Programs

Product stewardship or extended producer responsibility (EPR) programs require manufacturers who make products to take some degree of responsibility for managing them at end-of-life. This helps reduce the financial burdens on local governments to manage hard-to-handle products and provides more convenient collection options for the public.

Ecology is responsible for overseeing four product stewardship laws for paint, photovoltaic modules, mercury-containing lights, and certain electronics (computers and TVs).

Paint

PaintCare, which collects and recycles architectural paint, is the newest product stewardship program. The law passed in 2019, and the program began operations in April of 2021. Paint is one of the most common materials brought to local government household hazardous waste facilities. Many stopped taking latex paint, due to the expense of disposal and recycling, and the fact that it is not toxic. Under the new program, paint retailers accept unwanted paint, so the public has more convenient options for recycling.

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Photovoltaic Modules

The Legislature created the producer responsibility program for photovoltaic modules (solar panels) in 2017. The initial timeline to start producer-funded collection and recycling program operations was January 2021. However, two laws in the 2020 and 2021 legislative sessions delayed this start date – first to July 2023, and most recently to July 2025.

Mercury-containing Lights

LightRecycle Washington, for mercury-containing lights, helps keep toxic mercury out of the environment. The program began operations in January 2015 from a law that passed in 2010 and has collected more than 7.2 million lights for recycling. The program is funded by an environmental handling charge (EHC) for each mercury-containing light sold, which started at 25 cents, was raised to 50 cents, and is now at 95 cents. The EHC increase is because sales of compact fluorescent lights (CFLs) are declining, and LED lights, which have become the preferred alternative, do not carry the surcharge. The program is set to sunset in July 2025. Stakeholder work is expected before this time to determine if the sunset date is appropriate. Many compact fluorescent lights and other mercury-containing lights will still be in use and need to be recycled and processed when they burn out in the future.

Electronics Recycling

E-Cycle Washington, the product stewardship program for computers, monitors, and TVs, was the first product stewardship law in the state. The law passed in 2006, began operations in 2009, and has collected more than 435 million pounds of covered products. In 2015, Ecology worked with stakeholders to consider adding additional items to the law such as printers, keyboards, gaming systems, and other peripherals. No agreement has been reached, but requests from the public continue.

Packaging and Printed Paper

For the past few years, bills to create an extended producer responsibility system for packaging and printed paper (referred to as EPR for PPP) – which includes the items collected in curbside and drop-off recycling programs – were introduced in many states, including Washington. Bills were also introduced at the federal level.

There are existing and long-standing EPR for PPP programs in place in many other countries. In 2021, Oregon and Maine passed the first two laws to bring this program to the U.S. We expect more states will follow suit, and given stakeholder interest and work in this area, Washington may well be one of them.

Responding to Increasing Legislative Activity

Since the recycling export market shut down in 2018, the amount of legislative activity to address recycling has increased dramatically. This increase has not just focused on traditional recyclable materials, but also on plastics, food and other organic wastes, alternative energy waste products, and more. In the past four years, Ecology has served on numerous stakeholder committees and responded to more than 80 bills, 16 of which are now laws. Ecology is tasked with major roles in implementing eight of these new laws; two from the 2021 session alone.

The focus on recycling-related legislation is also evident at the federal level. There is a Federal Senate Recycling Caucus and several bills have been introduced. One of these passed in late 2020, and another was added to the Federal Infrastructure bill in late 2021.

The State Solid and Hazardous Waste Plan: Moving Washington Beyond Waste and Toxics

The state of Washington is required by law to have a solid and hazardous waste plan and to update it regularly. The plan's purpose is to guide waste and toxics reduction and safe waste management in Washington.

Solid Waste Management Program

The plan focuses on sustainable materials management and looks at the full lifecycle of materials from the design and manufacturing phase, through the use phase, to the end-of-life phase, when the material is either disposed of or recycled. Looking at the production and use phases can help identify more sustainable ways to design products that use less energy, water, and toxics, and create less waste and pollution. This is important because the adverse environmental impacts of extraction, production, and use can be far greater than those associated with disposal when a material becomes a waste.

Ecology is completing an update to this plan, incorporating new laws and associated work, changes in the industry, and other clarifications. With these changes, the plan update will provide a good path forward for the state.

Biosolids and Septage

Wastewater treatment facilities in Washington have beneficially used biosolids for more than 40 years. Ecology issues a five-year general permit for biosolids management across the state. Ecology is in the process of reissuing the statewide general permit for biosolids management.

For this permit cycle, Ecology made significant changes to the structure, separating the general permit into three main sections based on facility operations (Baseline, Active Septage Management, and Active Biosolids Management). All facilities are required to comply with the Baseline section of the permit. The other sections apply only to facilities with active management programs (they sell, give away, or directly apply their biosolids to the land). This new structure reduces the permitting burden on facilities that do not have active management programs and speeds final approval of coverage for applicants. The new permit also calls for increased communication between Ecology and biosolids facilities.

PFAS (per- and poly-fluoroalkyl substances)

PFAS are synthetic chemicals used in many products such as food wrappers, clothing, carpets, and cosmetics, to make these products resistant to water, oil, grease, stains, heat, and more easy to apply. They are also used in industrial applications. PFAS are of concern because they are water-soluble, highly mobile, do not break down in the environment, and can bio-accumulate. Some are linked to health impacts in animals and people.

Ecology's draft PFAS Chemical Action Plan includes recommendations to evaluate PFAS in biosolids and in landfill gas, leachate, and groundwater, to better understand and manage these materials.

Ecology is working on a phased effort to sample for PFAS in leachate, groundwater, and gas emissions at selected landfills across the state. We will also continue to research the makeup of PFAS waste entering landfills.

Since PFAS are present in a broad range of products used in our daily lives, they make their way into the sewage collection systems from manufacturers and homes. Biosolids contain low levels of PFAS, but there are significant information gaps, including fundamental PFAS concentration data in Washington biosolids. We need realistic models to assess potential PFAS transfer from biosolids to soil, groundwater, or plants, before we can determine whether additional biosolids regulation is merited.

The Solid Waste Management Program designated a senior regional staff person to lead our work in the area of PFAS and sample for PFAS in biosolids as resources allow.

Industrial Redevelopment

Ecology works with Washington's largest refineries, pulp and paper mills, and aluminum smelters. When industries close after decades of operation, there are often residual chemical contamination issues that

Solid Waste Management Program

must be addressed. Since these facilities are usually in prime locations with access to water, transportation, rail, and power transmission infrastructure, they are in demand for redevelopment.

One example is the former Reynolds Metals aluminum smelter in Longview. This facility produced high-purity aluminum for almost 60 years and left behind residual soil and groundwater contamination.

Ecology is working with the landowner, Northwest Alloys (Alcoa), to clean up contamination from the former smelter. Northwest Alloys completed a sediment cleanup in 2016 and signed the Consent Decree in December 2018 to implement the final cleanup action plan. Industrial wastes on the site will be consolidated and capped to optimize the area available for redevelopment, and groundwater contamination will be addressed. Comprehensive monitoring, together with a robust financial assurance program, will ensure the cleanup actions remain effective over the long term.

The project is currently in the permitting process. Construction will take two years to complete once permits are in hand. When complete, this site will again be positioned to play a key role in the local economy and ensure that human health and the environment are protected.

Another example of redevelopment of a former industrial site is a proposed hydropower project on the Columbia River near Goldendale. The Free Flow Power Project 101, LLC is proposing to build a “pumped storage” system to store energy produced by renewable sources during periods of low demand and provide that energy during high-demand times. The project would be a closed-loop system consisting of two reservoirs and a connecting tunnel fitted with a reversible turbine. It would store energy by pumping water up hill, and generate energy by letting it flow back down to the lower reservoir through a

turbine. This proposal is located at the site of the former Columbia Gorge Aluminum smelter and is currently under environmental review, with the final environmental impact statement expected in late 2022.

Activities, Results, and Performance Measures

Provide Planning and Financial Assistance to Manage and Reduce Waste

The Department of Ecology provides planning assistance to local governments and financial assistance through three grant programs:

- Local Solid Waste Financial Assistance (LSWFA) grants to local governments for solid waste planning, waste reduction (including food waste), recycling (including contamination reduction), household hazardous waste, and enforcement.
- Public Participation Grants (PPG) to interest groups for informing residents about cleanups in their local area and educating the public about waste reduction efforts.
- Waste Reduction and Recycling Education (WRRED) grants to local governments and non-profit organizations to educate the public about litter control, waste reduction (including food waste), recycling (including contamination reduction), and composting.

Expected Results

Ecology’s solid waste grants and planning assistance help ensure that:

- Use of recycling and composting increases.
- Use of toxic products and generation of waste declines.
- Moderate-risk waste is collected and handled safely.

Solid Waste Management Program

- Solid waste facilities in Washington State comply with regulatory standards.
- Illegal dumps are reduced.
- Groundwater is protected from improperly disposed waste.
- Cleanup investigations have support and input from affected residents.
- The public is provided information on environmental issues and proposed solutions to help reduce litter and waste and increase quality recycling and composting.
- The amount of solid waste generated is decreased.
- The percentage of materials recovered for recycling and composting is increased.
- The amount of moderate-risk waste recycled or properly disposed is increased.

Performance Measures

- Millions of tons of solid waste generated annually.
- Percentage of materials recycled and recovered for energy annually.
- Pounds of household and small quantity generator hazardous wastes that are recycled or properly disposed (in millions).
- Tons of organic material recovered for composting and other uses.

Eliminate Waste and Promote Material Reuse

The Department of Ecology:

- Provides technical assistance to local governments for waste reduction and recycling, including focus on reducing contamination, addressing plastic packaging, and developing marketing programs for recycled commodities.
- Reduces wasted food through a state food waste reduction and diversion plan.
- Provides technical assistance to promote reuse of organic materials.
- Ensures an environmentally compliant biosolids program in the state.

- Advises state and local governments on how to promote environmentally preferred purchasing.
- Oversees producer managed recycling programs.

Expected Results

- The amount of solid waste generated and disposed of by businesses and residents decreases so that air, water, and greenhouse gas pollution are reduced and resources are conserved.
- The amount of materials recovered for recycling, composting, and other uses increases so fewer valuable materials enter the waste stream; there is less waste for disposal; and greenhouse gas emissions are reduced. Materials include recyclables, organic matter, compost, biosolids, electronics, and mercury-containing lights.

Performance Measures

- Pounds of solid waste disposed annually per person by residents and businesses.
- Tons of electronics collected for recycling through E-Cycle Washington.
- Pounds of solid waste generated per dollar (State GDP).
- Tons of organic material recovered for composting and other uses.
- Tons of mercury-containing lights collected for recycling through LightRecycle Washington.
- Percentage of biosolids beneficially used annually.
- Percentage of materials recycled and recovered for energy annually.

Prevent and Pick Up Litter

The Department of Ecology collaborates with residents, businesses, local governments, and state agency partners to maximize efforts to prevent and pick up litter to keep Washington clean for residents and visitors. Ecology also sponsors youth employment programs for litter pickup.

Solid Waste Management Program

Expected Results

- Littered roadways and illegal dumps are cleaned up in coordination with local government and state agency partners and the Ecology Youth Corps.
- Litter prevention efforts contribute to less litter created.
- Washington is clean for residents and visitors.
- Use of available resources is maximized by all partners.

Performance Measures

- Pounds of litter picked up annually.
- Miles of roadway cleared of litter using Ecology-funded crews.

Manage Solid Waste Safely

To ensure that solid waste handling and disposal facilities are in compliance with environmental requirements, Ecology:

- Sets standards for the proper handling and disposal of solid waste.
- Negotiates and implements cleanup orders under the Model Toxics Control Act and oversees cleanup actions at solid waste facilities.
- Provides technical assistance; permit review; and regulatory, engineering, and hydrogeology expertise to local health departments who permit solid waste handling and disposal facilities.

Expected Results

- Solid waste is managed and disposed of in facilities that comply with federal, state, and local requirements.
- Solid waste handling and disposal practices minimize contamination to the state's groundwater, surface water, and air.
- Technical assistance is provided to health departments responsible for ensuring facilities comply with environmental rules.

Performance Measures

- Percentage of landfills in compliance with applicable state regulations.
- Millions of tons of solid waste generated annually.
- Pounds of household and small quantity generator hazardous wastes that are recycled or properly disposed (in millions).
- Percentage of regulated solid waste facilities completing annual reports.

Improve Environmental Compliance at the State's Largest Industrial Facilities

The Department of Ecology provides a single point of contact for compliance reviews and technical assistance for petroleum refineries, pulp and paper mills, and aluminum smelters so they have consistent regulatory oversight.

Expected Results

- Pulp and paper mills, oil refineries, and aluminum smelters improve compliance rates through one stop environmental permitting, compliance review, technical assistance, and timely issuance of environmental permits.
- Updated permits ensure that industries are meeting new state and federal requirements in a timely way.

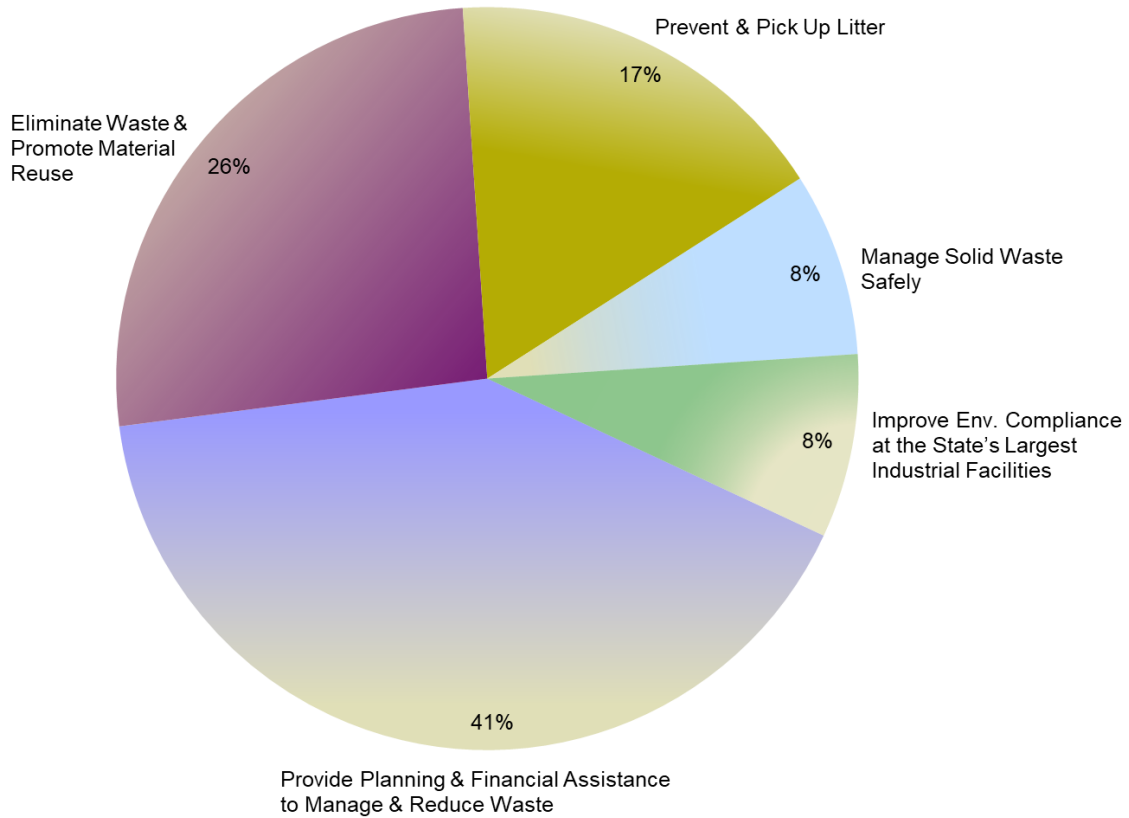
Performance Measure

- Percentage of industrial section permits that meet timeliness goals.

Solid Waste Management Program

Solid Waste Management Program 2021-23 Biennium Budget by Activities

Operating = \$74.3 Million | Capital = \$4.9 Million | Total = \$79.2 Million | FTEs = 126.4

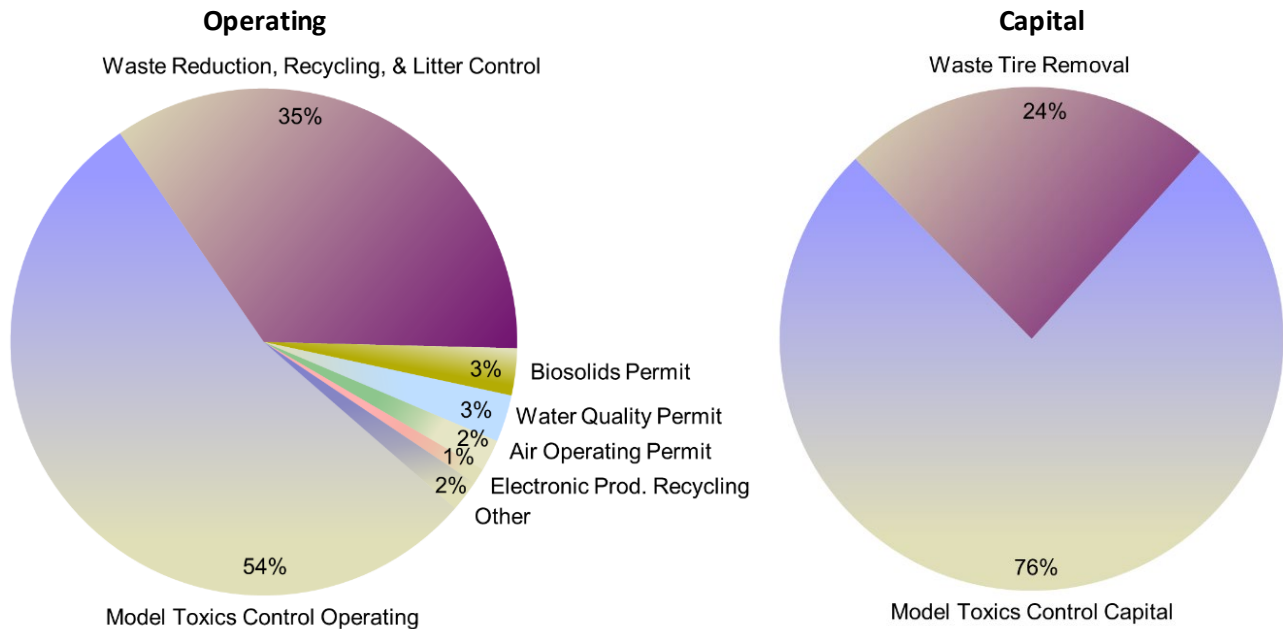


Activities	Amount	%	FTEs
Provide Planning and Financial Assistance to Manage and Reduce Waste (A013)	\$30,690,000	41%	10.9
Eliminate Waste & Promote Material Reuse (A009)	19,301,000	26%	45.7
Prevent & Pick Up Litter (A010)	12,486,000	17%	24.7
Manage Solid Waste Safely (A064)	6,190,000	8%	24.0
Improve Environmental Compliance at the State's Largest Industrial Facilities (A028)	5,629,000	8%	21.1
Solid Waste Management Operating Budget Total	\$74,296,000	100%	126.4

Solid Waste Management Program

Solid Waste Management Program 2021-23 Biennium Budget by Fund Source

Operating = \$74.3 Million | Capital = \$4.9 Million | Total = \$79.2 Million | FTEs = 126.4



Operating Fund Sources	Amount	%	Uses
Model Toxics Control Operating (23P)	\$40,405,000	54%	<p>Provide engineering and hydrogeological support to local health departments; regulatory compliance assistance; industrial dangerous waste and cleanup activities.</p> <p>Provide planning and technical assistance to local governments related to solid waste implementation and enforcement. Provide technical assistance to local government to implement and regulate local hazardous waste facilities and to implement the state's solid and hazardous waste management priorities.</p> <p>Support the implementation of Chapter 70A.245 RCW, including rulemaking, expanded polystyrene ban, and opt-in serveware restriction.</p> <p>Provide solid waste financial assistance grants to local governments to implement local solid and hazardous waste plans and regulatory programs. Provide public participation grants to resident groups and non-profit public interest organizations to facilitate public participation in the investigation and remediation of contaminated sites.</p>
Waste Reduction, Recycling, & Litter Control (044)	25,565,000	35%	<p>Support the Ecology Youth Corps, litter prevention, and other state agencies for litter pickup activities (40%); technical assistance in waste reduction and recycling, and recycling development center (40%); pass-through grants for litter pickup and waste reduction and recycling education to local governments and nonprofit organizations, including funding to support the Welcome to Washington Act, SB 5040 (20%).</p>

Solid Waste Management Program

Operating Fund Sources	Amount	%	Uses
Biosolids Permit (199)	2,453,000	3%	Administer permit applications, review related plans and documents, monitor, evaluate, conduct inspections, oversee performance of delegated program elements, provide technical assistance, and support overhead expenses that are directly related to these activities.
Water Quality Permit (176)	2,406,000	3%	Industrial water quality permitting, inspections, and sediment source control. Data management and public involvement related to water quality at regulated industries.
Air Operating Permit (219)	1,743,000	2%	Industrial air quality permitting, inspections, and enforcement of Title 5 permits.
Electronic Products Recycling (11J)	787,000	1%	Administer manufacturer registration fee collections, as well as monitor, evaluate, and implement the regulations adopted for the EPR program.
Other:			
Recycled Content (25R)	438,000	<1%	Implement post-consumer recycled content requirements for plastic beverage containers, trash bags, and household cleaning and personal care products plastic containers, including but not limited to rulemaking, technical assistance, enforcement, workload analysis, petition requests and annual reports (Chapter 70A.245 RCW)
Product Stewardship Programs (16T)	243,000	<1%	Administer mercury-containing lights collection and recovery program; review and approve plans and plan revisions; monitor and evaluate program operations and implement the regulations.
Paint Product Stewardship (23W)	130,000	<1%	Administer paint collection and recycling program; review and approve plans.
Photovoltaic Module Recycling (22G)	76,000	<1%	Administer manufacturer-funded photovoltaic module recycling program; review and approve plans.
General Fund – Private/Local (001)	50,000	<1%	Appropriation authority for potential projects with local communities.
Operating Budget Total	\$74,296,000	100%	
Capital Fund Sources	Amount	%	Uses
Model Toxics Control Capital (23N)	\$3,683,693	76%	Appropriation authority for the Lilyblad site cleanup project.
Waste Tire Removal (08R)	1,184,790	24%	Appropriation authority for statewide waste tire pile cleanup and prevention activities.
Capital Budget Total	\$4,868,483	100%	
Solid Waste Management Operating & Capital Budget Total	\$79,164,483		

Spill Prevention, Preparedness, and Response Program



Natural Resource Damage Assessment (NRDA) Lead Geoff Baran, center, and two attendees at an equipment drill. The drill was held June 14, 2018, at Confluence State Park in Wenatchee, WA.

Spill Prevention, Preparedness & Response Program

Program Mission

The mission of the Spill Prevention, Preparedness, and Response Program (Spills Program) is to protect, preserve, and restore Washington’s environment. The program focuses on preventing oil spills to Washington’s waters and land, and planning for and delivering a rapid, aggressive, and well-coordinated response to oil and hazardous substance spills wherever they occur.

Environmental Threats

More than 20 billion gallons of oil and hazardous materials are transported through Washington State each year by vessel, pipeline, and rail. Human error, equipment

failure, and natural disasters can lead to releases of these materials with potentially disastrous consequences. Oil and chemical spills threaten Washington’s valuable natural resources.

Over the years, the nature of these threats has changed due to changes in oil markets and technological innovations. These threats – whether on land or water – endanger public health, safety, and the environment and can damage the state’s economy and quality of life.

Authorizing Laws

The harm caused by major oil spills and other toxic releases in the 1980s and early 1990s sparked public concern and resulted in passage of state and federal legislation, including:

- *Northwest Area Contingency Plan (NWACP), Pursuant to Federal Oil Pollution Act of 1990*
- *Ports and Tanker Safety Act of 1978 and its Amendments to the Ports and Waterways Safety Act of 1972*
- *Chapter 70A.305D RCW, Hazardous Waste Cleanup – Model Toxics Control Act*
- *Chapter 82.23B RCW, Oil Spill Response Tax*
- *Chapter 88.40 RCW, Transport of Petroleum Products – Financial Responsibility*
- *Chapter 88.46 RCW, Vessel Oil Spill Prevention and Response*
- *Chapter 90.48 RCW, Water Pollution Control*
- *Chapter 90.56 RCW, Oil and Hazardous Substance Spill Prevention and Response*

Constituents/Interested Parties

Ecology works closely with organizations and people interested in environmental protection and emergency response, including:

- *Federal, state, local, and Tribal governments, including the U.S. Coast Guard, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, and local emergency management agencies.*

Spill Prevention, Preparedness, and Response Program

- *City, county, and regional fire, police, health, and planning departments.*
- *The governments of British Columbia, Oregon, Idaho, and other West Coast states.*
- *Commercial vessel owners and operators worldwide, marine transportation trade associations, public ports, and maritime trade unions.*
- *Oil refineries, marine oil terminals, oil pipelines, rail companies, and oil trucking companies.*
- *Spill response cooperatives and contractors.*
- *Advisory councils, environmental organizations, and the general public.*

Focus Areas

The Spills Program takes pride in adapting to shifting economic trends, legislative direction, and public demands. Our core services include vessel and facility inspections, oil transfer monitoring, risk modeling, prevention and contingency plan review and approvals, contingency plan drills, environmental restoration, and 24/7 response to oil and hazardous materials spills. Through these services, the Spills Program minimizes the long-term release of toxics into the environment and protects the water, soil, air, and public health of the state.

In addition to our core services, the Spills Program has identified tasks we plan to accomplish in the next two years to address the challenges associated with changing spill risks in Washington State. A comprehensive list of tasks is described in the Spills Program's 2021-23 Program Plan. These tasks include the following:

Support and Engage the Public

Our program's goal is to keep the public and other key stakeholders informed of our work. We want to ensure there are relevant and timely educational materials produced and made available for our staff to use in their engagement with the public and key

stakeholders. We are planning to take several key actions this biennium:

- Develop a program outreach plan, including universal materials.
- Establish a program workgroup to identify and address environmental justice (EJ) issues in our work.

Build Strong External Partnerships

The Spills Program is committed to building strong external partnerships through innovative collaboration, effective communication, and transparency. By setting metrics for engagement, Spills demonstrates our commitment to building trust, credibility, and familiarity with the state's oil spill planning efforts among Tribes and the other communities we serve.

The 2021-23 Transportation Budget contains a proviso directing the Utilities and Transportation Commission (UTC) to prepare an inventory of rail safety oversight conducted by state agencies in other states. In preparing this inventory, UTC must hold a workshop with interested parties, including Ecology.

Spills will identify and implement ways to enhance our engagement, outreach, and coordination with Local Emergency Planning Committees (LEPCs). LEPCs provide their communities with emergency response resources and information. By identifying the capacity, challenges, and interests of each LEPC, our program can improve engagement and outreach with them. Streamlining our coordination will allow us to assist LEPCs in understanding the hazardous materials in their community and the resources available to them. Enhancing the capacity of LEPCs helps Washington State better prepare for potential spill incidents, pushing us closer to our goal of zero spills.

Improve Safety and Risk Analysis

The Spills Program is dedicated to maintaining a clear understanding of spill

Spill Prevention, Preparedness, and Response Program

risks related to changes in cargo commodities transported in Washington and changes in marine fuels. Key actions include:

- Synopsis of changing vessel trends to help determine whether vessel traffic patterns changed following the implementation of the tug escort requirements in Rosario Strait and connected waters east of Rosario Strait.
- Finishing our work to develop an oil spill risk model to be used in evaluating the risks associated with transporting oil in Washington waters (consistent with ESHB 1578). The work began in the 2019-21 Biennium and was planned to be complete by the end of 2021. Outreach challenges due to the pandemic and technology issues have delayed progress, but we are on track to complete the model sometime in the spring of 2022.
- Modeling inner Salish Sea emergency response options and reporting to the Legislature on whether an emergency response towing vessel serving Haro Strait, Boundary Pass, Rosario Strait, and connected navigable waterways will reduce oil spill risk.
- Modeling tug escort options for waters east of New Dungeness Lighthouse/Discovery Island Lighthouse for their potential to reduce oil spill risk from covered vessels and reporting to the Legislature.

Improving Training and Methodology

The Spills Program is committed to continually improving our training and methodology to protect both the people and environment of Washington State. This biennium's actions include:

- Developing drills for spills of all sizes and incorporating wildlife impacts and responses.
- Working with other agencies and response partners to design and deliver

Environmental Unit (EU) training to responders in the Columbia River region.

- Recruiting, training, and organizing a robust group of volunteers and Vessels of Opportunity (VOO) to assist before, during, and after oil spills, including orca deterrence operations (consistent with Executive Order 18-02 for Southern Killer Whale Recovery).

Activities, Results, and Performance Measures

Rapidly Respond to and Clean Up Oil and Hazardous Material Spills

This activity ensures Ecology and its partners respond to spills in a rapid, aggressive, and well-coordinated manner to ensure impacts to the environment are minimized.

Spill response capability is maintained 24 hours a day and seven days a week, statewide. This includes ensuring the safety of the public and emergency responders, performing cleanup and oversight of cleanup activities, coordinating wildlife rescue and rehabilitation activities, providing timely information to the public and stakeholders about response activities, and implementing protection strategies to minimize impacts to Washington's environmental, cultural, and economic resources.

Enforcement actions are issued based on results of incident investigations.

Expected Results

- Oil spills, hazardous material spills, and clandestine labs are responded to and cleaned up rapidly to protect public health, natural resources, and property.
- All oil spills are responded to within 24 hours from the time they are reported.
- Approximately 4,000 annual spill reports are managed.
- Environmental, cultural, and economic damages resulting from spills are minimized.

Spill Prevention, Preparedness, and Response Program

Performance Measure

- Percentage of reported incidents that receive field responses.

Prevent Oil Spills from Vessels and Oil Handling Facilities

Ecology works with communities and regulated entities to prevent spills from vessels and oil handling facilities through inspections, review and approval of plans and manuals, technical assistance, incident investigation, and risk assessment work.

Expected Results

- Oil spills from regulated vessels and oil handling facilities are reduced or prevented.
- Oil spills impacting surface waters are reduced or prevented.
- Enrollment in the Exceptional Compliance Program (ECOPRO) is increased.
- Washington's environment, public health, and safety are protected.

Performance Measures

- Number of spills to surface water from all sources.
- Total volume of oil spilled to surface waters from all sources.
- Percentage of potential unique, high-risk vessels inspected.
- Gallons of oil spilled to surface water during an oil transfer for every 100 millions of gallons transferred.
- Percentage of unique, regulated, over-water oil operations inspected.
- Total volume of oil spilled to water from regulated facilities and vessels.

Prepare for Aggressive Response to Oil and Hazardous Material Incidents

This activity ensures large commercial vessels, oil handling facilities, and railroad operators that transport oil by rail maintain state-approved oil spill contingency plans so

they can rapidly and effectively respond to major oil spills. State planning standards ensure response equipment and personnel are strategically staged throughout the state. This work is carried out through staff review and approval of contingency plans, drills that test contingency plans, development of geographic response plans, and maintenance of a regional contingency plan in partnership with other agencies.

Expected Results

- Ecology and the regulated community are fully prepared to promptly respond to oil spills, and damage from spills are minimized.
- Contingency plans are in compliance with regulations and are tested through drills.
- Geographic Response Plans (GRPs) are developed for areas that do not have plans, and existing GRPs are updated and kept current.
- Maintenance of response equipment is documented by industry and records verified by Ecology.
- Washington's environment, public health, and safety are protected.

Performance Measures

- Number of Geographic Response Plans (GRPs) completed.
- Percentage of vessel emergencies reported to Ecology.

Restore Public Natural Resources Damaged by Oil Spills

When spills occur, Ecology provides incident notification to natural resource trustees and responds to the incident to assess impacts, collect samples, and determine the extent of injury to state publicly owned resources. Ecology then leads the interagency Resource Damage Assessment (RDA) Committee to assess damages and seek fair compensation for damages to Washington resources. Ecology works with the RDA Committee and responsible parties in funding, planning, and

Spill Prevention, Preparedness, and Response Program

implementing effective restoration projects to restore impacted resources. Ecology manages the Coastal Protection Fund grant process for restoration work and performs follow-up restoration site visits to ensure they were effective.

Expected Results

- Environmental impacts to publicly owned natural resources from oil spills are partially mitigated (compensated for) using damage assessment funding.
- Natural resource damage assessment is done on 100 percent of oil spills where 25 or more gallons reach surface waters.
- Priority wildlife habitat is restored and protected.

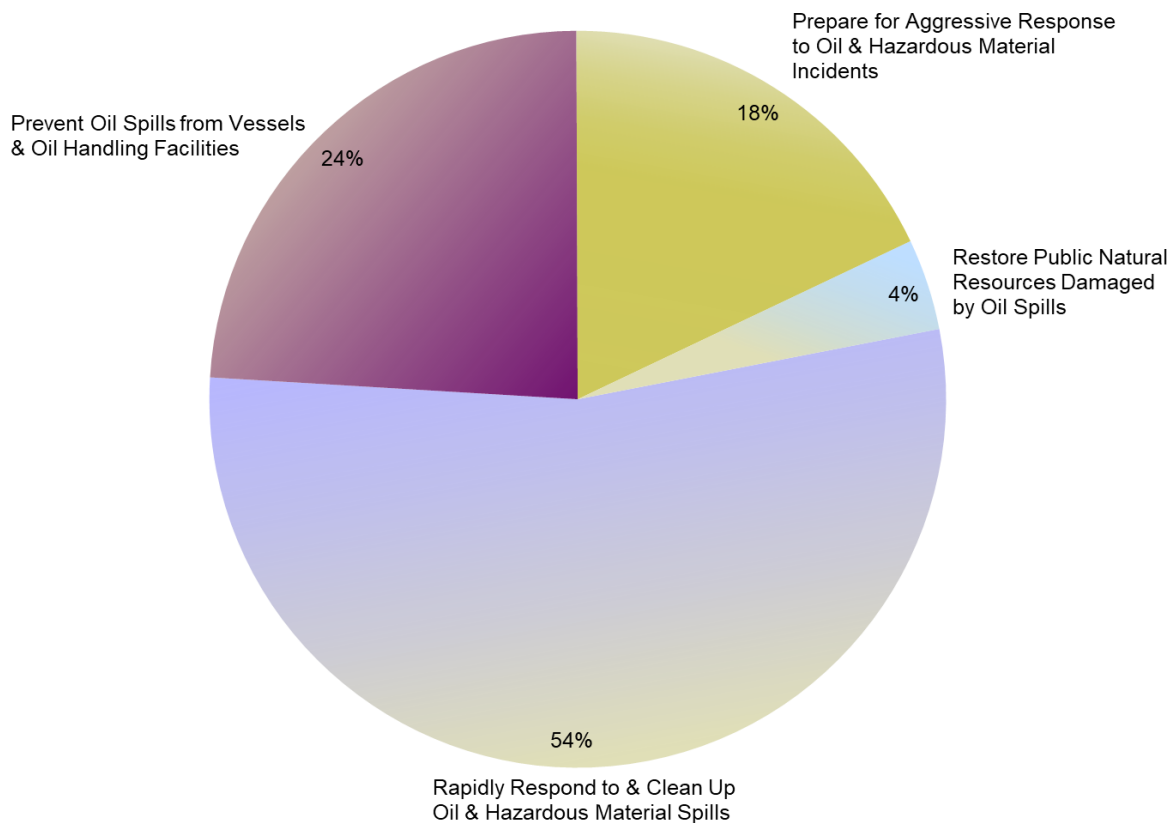
Performance Measure

- Percentage of completed restoration projects that meet plan specifications.

Spill Prevention, Preparedness, and Response Program

Spill Prevention, Preparedness & Response Program 2021-23 Biennium Budget by Activities

Operating = \$39.0 Million | No Capital | Total = \$39.0 Million | FTEs = 91.1

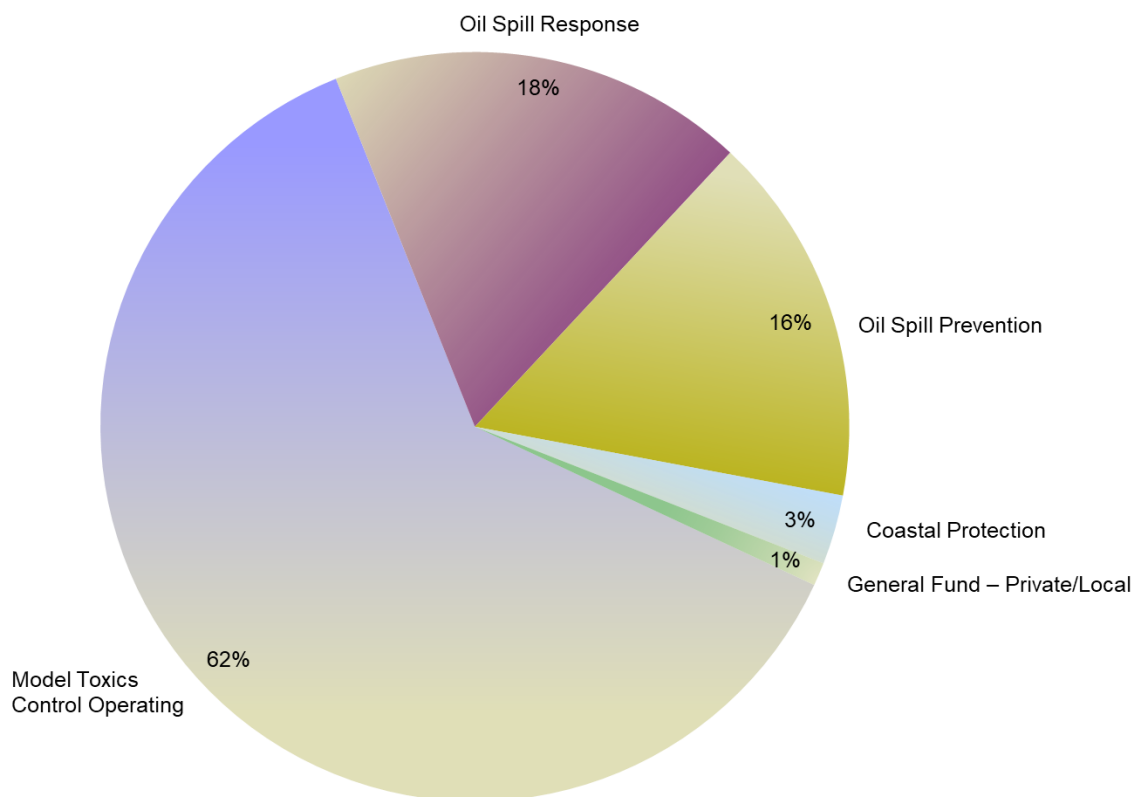


Activities	Amount	%	FTEs
Rapidly Respond to & Clean Up Oil & Hazardous Material Spills (A054)	\$20,896,000	54%	39.6
Prevent Oil Spills from Vessels & Oil Handling Facilities (A033)	9,308,000	24%	25.8
Prepare for Aggressive Response to Oil & Hazardous Material Incidents (A030)	7,097,000	18%	22.9
Restore Public Natural Resources Damaged by Oil Spills (A055)	1,651,000	4%	2.8
Spill Prevention, Preparedness & Response Operating Budget Total	\$38,952,000	100%	91.1

Spill Prevention, Preparedness, and Response Program

Spill Prevention, Preparedness & Response Program 2021-23 Biennium Budget by Fund Source

Operating = \$39.0 Million | No Capital | Total = \$39.0 Million | FTEs = 91.1



Operating Fund Sources	Amount	%	Uses
Model Toxics Control Operating (23P)	\$24,295,000	62%	Oil spill prevention, preparedness, and hazardous material and oil spill response work, including drug lab cleanup.
Oil Spill Response (223)	7,076,000	18%	Oil spill cleanup where state response costs are expected to exceed \$1,000. Amount is based on appropriation. Actual spending varies depending on qualifying expenditures for oil spill response.
Oil Spill Prevention (217)	6,179,000	16%	Oil spill prevention and preparedness work.
Coastal Protection (408)	1,064,000	3%	Restoration of natural resources damaged by oil spills and nonpersonnel-related oil projects, research, and studies.
General Fund - Private/Local (001)	338,000	1%	British Columbia & Pacific States oil spill task force.
Operating Budget Total	\$38,952,000	100%	
Spill Prev., Prep. & Resp. Operating & Capital Budget Total	\$38,952,000		

Spill Prevention, Preparedness, and Response Program

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Sam Meng, an engineer and cleanup site manager, is collecting a sediment sample for chemical analysis at a former lumber and shingle mill in Everett. This is one of the last remnant shingle mills in Everett, and Ecology is conducting its own initial investigation. The site is not currently listed under our hazardous sites list, so this is an initial investigation to see if concentrations of chemicals in sediment exceed Ecology's cleanup criteria identified in the Sediment Management Standards.

Toxics Cleanup Program

Program Mission

The mission of the Toxics Cleanup Program is to protect Washington's human health and environment by preventing and cleaning up pollution, supporting sustainable communities, and protecting natural resources for the benefit of current and future generations. We do this by preventing, reducing, or eliminating exposure to contamination, which supports the development of environmentally and economically sustainable communities.

Environmental Threats

Ecology has identified over 13,700 toxics contaminated sites since the mid-1980s. We regulate roughly 9,000 underground storage tanks at more than 3,400 facilities across the state. There are over 2,600 known contaminated sites resulting from underground storage tanks leaking contents into the environment and contaminating the soil or groundwater. Of the 13,700 contaminated sites, 54 percent (about 7,400) require no further cleanup action, and 30 percent are in the process of being cleaned up.

Contamination at each site is unique and can pose a different type and level of risk to public health and the environment. For example:

- Soils contaminated by arsenic and covering several miles have been discovered in school playgrounds, parks, backyards, and at industrial facilities.
- Fish and shellfish living near chemically contaminated sediments can retain toxins in their systems and expose people to toxins when eaten. Contaminated sediments can also contribute to declining fish populations.
- Contamination can expose people to chemicals in the water they drink and use at home.

We clean up contaminated sites to protect human health and the environment. It's also important to note that restoring contaminated property and putting it back into productive use preserves undeveloped lands, enhances redevelopment, and reduces further declines in state resources, such as fish and shellfish habitat.

Toxics Cleanup Program

Authorizing Laws

- *Chapter 70A.305 RCW, Hazardous Waste Cleanup - Model Toxics Control Act*
- *Chapter 70A.355 RCW, Underground Storage Tanks*
- *Chapter 90.48 RCW, Water Pollution Control Act*
- *Chapter 90.71 RCW, Puget Sound Water Quality Protection*

Constituents/Interested Parties

An important element of the Model Toxics Control Act (MTCA) is including the public and other interested parties throughout the process of cleaning up contaminated sites and developing new initiatives. We continue to build partnerships among government, industry, and residents. Constituents interested in cleaning up contaminated sites include:

- *The Legislature.*
- *State, federal, and local governments.*
- *Conservation and environmental groups.*
- *Businesses and individuals engaged in contaminated site cleanup.*
- *Ports.*
- *Insurance and petroleum companies.*
- *Tribes.*
- *Lenders, developers, and realtors.*
- *Contaminated site owners.*
- *Water purveyors.*
- *Residents interested in, living near, or affected by contaminated sites.*
- *Tank owners and operators.*
- *Homes and businesses affected by leaking underground storage tanks.*
- *Underground storage tank service providers.*

Focus Areas

Voluntary Cleanup

The Voluntary Cleanup Program is designed for sites with routine cleanups. Under the program, customers can perform a cleanup

independently and request technical assistance and written opinions from Ecology on the sufficiency of their cleanup.

Customers drive the VCP demand as they request advice and technical assistance. With today's strong real estate market, demand is greater than ever before. As of June 2021, there were more than 7,000 contaminated sites enrolled in the VCP, and about 112 of those sites are on waiting lists.

Over the past several years, Ecology has shifted some VCP work on petroleum-contaminated sites to the Pollution Liability Insurance Agency (PLIA) and implemented changes to make the VCP review process more efficient. This includes developing cleanup guidelines, model remedies, submittal checklists, and templates. These changes have helped reduce, but not eliminate, the backlog of VCP projects.

The 2019 Legislature passed SHB 1290, which authorized Ecology to:

- Establish a self-funding, expedited process for reviewing independent cleanups.
- Waive the costs of reviewing independent cleanups when affordable housing is built on the cleaned-up properties.

Ecology developed the new expedited review process and implemented on July 1, 2020. This process allows us to be more responsive to the needs of customers working under tight timelines and reduce VCP dependence on tax revenue.

Per- and Polyfluoroalkyl Substances (PFAS)

PFAS are a class of synthetic compounds originally manufactured in the 1940s and which contain thousands of individual chemicals. They are extremely persistent in the environment and have been linked to immune system toxicity, high cholesterol, reproductive and developmental issues, certain cancers, and other health related problems.

Ecology has been working closely with the Washington Department of Health (DOH) for approximately five years to address concerns about PFAS. In October 2021, Ecology concluded that PFAS compounds are hazardous substances under the Model Toxics Control Act (MTCA) law and rule. DOH is completing a rulemaking to set SALs (state action levels – the level requiring clean up in Washington State) for five PFAS compounds in drinking water, which is anticipated to be effective in early 2022. Shortly after that, Ecology will announce soil and groundwater cleanup levels for the same five compounds. Ecology is also developing guidance to help potentially liable parties (PLPs), engineering consultants, and Ecology staff better address sites with PFAS contamination.

MTCA cleanup rule update

The MTCA cleanup rule sets standards and procedures for cleaning up contaminated sites under MTCA. Both the law and the rule help us remove contamination that can pose risks to human health and the environment. The cleanup rule has not been fully updated since 2001 so, in 2018, we started the process of updating this important regulation. During this rulemaking, Ecology will focus on:

- How we investigate, rank, and list new sites.
- How we clean up leaking underground storage tanks.
- Clarifying important procedural aspects of the rule, including how we consider resilience to climate change and provide equity for vulnerable populations.

In 2019, Ecology established a Stakeholder and Tribal Advisory group to advise us on the rule update. Ecology expects to complete the current rulemaking effort in early 2023, before turning our attention on updating the cleanup standards portion of the rule in subsequent years.

Supporting Affordable Housing

Across the state, Washington is in critical need of affordable housing. Contamination, or even the suspicion of contamination, drives up the costs of housing development and leaves little incentive for developers to build affordable housing.

To jumpstart affordable housing, Ecology is providing financial and technical assistance to make it easier to redevelop once-contaminated properties into housing that communities can afford. These investments help reduce the gentrification and displacement of low-income communities that often follows site cleanup and redevelopment.

This initiative took hold in 2018, when the Legislature directed Ecology and the Department of Commerce to develop a competitive process to fund recipients who will use their cleaned up property to build affordable housing. In 2022, under the new Affordable Housing Cleanup Grant Program, Ecology plans to solicit affordable housing cleanup project proposals for potential grant funding for the 2023–25 Biennium (affordable housing cleanup grants). Ecology also plans to request dedicated planning funding for affordable housing funds during the 2023-25 Biennium (affordable housing planning grants).

Integrating Cleanup and Water Quality Authorities

Using regulatory tools effectively to address long-term environmental objectives is a significant challenge facing Ecology at two sites that bookend the state; the Lower Duwamish Waterway in Seattle and the Spokane River in Spokane. Both have polychlorinated biphenyl (PCB) contamination, and both have widespread contamination that involves multiple government and private partnerships.

Resolving regulatory differences and integrating their respective requirements is

Toxics Cleanup Program

critical. Success in this arena will ensure the longevity of cleanup action as well as achieve water quality objectives in the Lower Duwamish and Spokane rivers.

Ecology, Tribes, other agencies, stakeholders, and the general public continue to work together to find effective solutions to improve and preserve the Spokane River. The Toxics Cleanup Program participates in the Spokane River Regional Toxics Task Force, comprised of regulatory entities, state and local governments, environmental groups, and dischargers. The group has developed a comprehensive plan to bring the Spokane River into compliance with applicable water quality standards for PCBs. We work closely with Ecology's Water Quality Program to ensure that work performed by the Task Force aligns with cleanup work occurring at sites along the river.

Water quality in the Lower Duwamish Waterway and the Spokane River causes concern for human and environmental health due to their active use. Both of the rivers:

- Are used for recreation.
- Are used for fishing, including Tribal use.
- Have contaminants in the sediments that can be carried through the food chain to fish and people.
- Receive discharges from industrial and municipal sources that contain PCBs.
- Flow through varied land uses, including industrial, residential, and recreational areas.
- Are adjacent to active industrial areas that are continued pollution sources.

Collaboration between the Toxics Cleanup and Water Quality programs at Ecology are critical and ongoing. When challenges arise due to competing regulations, these programs work together as One Ecology to ensure contaminated site cleanup is in agreement with water quality permits and vice versa.

Lower Duwamish Waterway

The Lower Duwamish Waterway is one of two projects in the nation where Ecology and the U.S. Environmental Protection Agency (EPA) are bringing their cleanup and water quality staff together to solve very complex cleanup issues in an active industrialized area.

The Lower Duwamish Waterway is a Superfund site located in Seattle. The site is approximately five miles long, and there are nearly 275 confirmed or suspected contaminated sites within the Superfund site. With 32 square miles of stormwater and combined sewer overflow (CSO) drainage, contaminants can be picked up by runoff in the drainage area or deposited in the river and settle into the sediments. These contaminants include PCBs, polycyclic aromatic hydrocarbons, dioxins and furans, phthalates, arsenic, mercury, and other contaminants. These pose a threat to people, fish, and wildlife.

Managing this combination of site-specific and diffused sources of pollutants is called source control. Source control efforts are a critical part of reducing contaminants to the Waterway so the in-water sediment cleanup led by EPA is effective and long lasting. Without an effective source control strategy in place, the in-water cleanup will be impacted by this continuing pollutant input and become recontaminated. Ecology's near-term goal is to work with local government, businesses, and industries in the Lower Duwamish Waterway to sufficiently control contaminant sources before EPA's active sediment remediation work begins. Source control will reduce the potential for recontamination, which will preserve the in-water remediation and is a critical step in ultimately achieving water quality standards.

Spokane River

The Spokane River begins in Idaho and flows for 112 miles through the cities of Post Falls and Spokane, eventually discharging into the Lake Roosevelt stretch of the Columbia River. Its drainage area encompasses over 6,500 square miles in Washington and Idaho.

Testing has shown high PCB levels in the river. PCBs get into the Spokane River through industrial discharges, wastewater treatment plants, and stormwater. These PCBs, along with PCBs found in sediments from historical discharges, are found in the river's fish.

Supporting Brownfields Cleanup and Redevelopment

There are over 13,700 sites on Ecology's Confirmed and Suspected Contaminated Sites List, and about 6,000 of these are awaiting further investigation and cleanup. Many of these sites can be considered brownfields, which are abandoned or underutilized properties where redevelopment is inhibited by known or suspected environmental contamination.

The Washington Brownfields Program helps communities throughout Washington investigate, clean up, and redevelop brownfields across the state. Led by Ecology, and comprised of staff from the Washington State Department of Commerce and EPA, the state's Brownfields Team works closely with local governments, non-profits, Tribes, and community stakeholders who are interested in cleaning up these sites for redevelopment. As a result, Ecology's brownfields staff are uniquely attuned to the challenges communities face with these sites.

Private property owners may be reluctant to conduct an environmental investigation, or they may have potential liability concerns. Prospective purchasers and developers are often wary of buying a property with suspected environmental contamination. Others might own property contaminated by

historical uses that has been transferred to family trusts; and other owners might be out of state, with limited ties to the community, and little incentive to clean it up.

Roadblocks such as these mean that many publicly and privately owned properties remain vacant or underutilized, which results in:

- Loss of redevelopment and reinvestment.
- Loss in potential local tax revenue.
- Risk to development on pristine land, which reduces greenspace, requires investment in additional infrastructure, and leaves blighted spaces in place.
- Potential threat to public health and the environment.

Ecology is seeing increased demand for funding to help communities assess, clean up, and redevelop these contaminated properties.

While thousands of contaminated sites are located throughout Washington, it is often the small and rural communities and the overburdened or underserved communities in urban areas that are acutely affected. A smaller local tax base, coupled with the loss of revenue from vacant or underutilized properties, limit the local public funding available to clean up these properties. Over the past several months, we have increasingly heard from smaller local governments that they are even more challenged to fund small assessment and cleanup projects on these properties due to the economic and social impacts of the COVID-19 pandemic.

The reason we are seeing a high demand for this type of funding is because people know it works and, over the last two years, Ecology developed a "pipeline" of projects so we can identify the need for this kind of funding. In fall 2019, we began tracking inquiries received by the Washington Brownfields Program asking for assistance with potential brownfield redevelopment projects. Each week we receive an average of

Toxics Cleanup Program

two to three new inquiries about projects that need funding - many of which are local governments with projects that are ready to move forward as soon as possible.

Brownfield projects are usually time-sensitive and can't move forward in the more typical market-based approach we see in other cleanup projects. Once local governments or community stakeholders identify a property for redevelopment, they often must move quickly to assess and acquire it so the interest of potential developers is not lost. We've found that early funding for assessment and cleanup helps stimulate brownfield redevelopment, but consistent funding has been cyclical at best, often with gaps that create uncertainty for local governments and community stakeholders that need stable assistance.

The Toxics Cleanup Program's Brownfields staff work with communities to provide information, funding resources, technical assistance, and outreach opportunities. In addition to providing technical assistance and oversight, we guide communities through all stages of site assessment and cleanup.

The budget for the 2021-23 Biennium includes over \$1 million for Integrated Planning Grants (IPG). IPGs provide \$200,000-\$300,000 to support planning, investigation, and public involvement related to a potential cleanup. This early funding for planning can produce a much bigger return on investment later in the project. Whether that planning is for site assessment or other innovative uses that benefit the public, the key is setting the stage early, which gives projects a strong foundation for later success. In addition to IPGs, the Brownfields Program will continue to facilitate a limited number of site assessments each year using funding from the EPA State Response Program grant. Local governments, Tribes, and non-profits can request assessments for properties they own or plan to purchase. Successful redevelopment of brownfield sites

demonstrates significant and enduring economic, environmental, and social benefits, including:

- Job retention and creation.
- Local economic growth and investment.
- Revitalization of tax base/tax revenue.
- Leveraging private investment.
- Efficient use of existing infrastructure.
- Affordable housing creation.
- Neighborhood revitalization.
- Reuse of existing commercial properties.
- Increased property values.
- Reduced threats to public health.
- Air and water quality improvements.
- Reduced sprawl.

Evidence from past Brownfields Program projects shows that early investment in environmental assessment spurs cleanup and redevelopment. Ecology recognizes that a small public investment can be the catalyst for local economic development and community improvement.

Activities, Results, and Performance Measures

Clean Up the Most Contaminated Sites First (Upland and Aquatic)

Ecology protects public health and natural resources by cleaning up and managing contaminated upland sites and contaminated sediments in the aquatic environment.

Resources are first focused on cleaning up contaminated sites that pose the greatest risk to public health and the environment. These include sites where contamination threatens drinking water, exists in a large quantity, is very toxic, may affect a waterbody or the environmental health of sediments, or may affect people that are living, working, or recreating near the site. Contamination may be in the soil, sediments, underground water, air, drinking water, or surface water. Ecology also manages multi-agency upland and sediment cleanup projects. Cleaning up these

sites protects public health, safeguards the environment, and promotes local economic development by making land available for new industries and other beneficial uses.

Expected Results

- The number of highly contaminated sites cleaned up increases by three percent each year.
- Public and environmental health is protected.
- Toxic contamination in food fish is reduced, and the aquatic environment is protected.
- Cleaned sites are ready for redevelopment and job creation.
- The number of sites with cleanup actions in progress increases.

Performance Measure

- Number of known toxics-contaminated sites with cleanup actions completed statewide.

Services to Site Owners that Volunteer to Clean Up Their Contaminated Sites

Ecology provides services to site owners or operators who initiate cleanup of their contaminated sites. Voluntary cleanups can be done in a variety of ways; completely independent of Ecology, independently with some Ecology assistance or review, or with Ecology oversight under a signed legal agreement (an agreed order or consent decree). They may be done through consultations, prepayment agreements, prospective purchaser agreements, and brownfields redevelopment. The Voluntary Cleanup Program minimizes the need for public funding used for cleanup and promotes local economic development through new industries and other beneficial uses of cleaned properties.

Expected Results

- Three percent increase in the number of contaminated sites that are voluntarily

cleaned up by site owners and prospective buyers using private funding.

- Public and environmental health is protected.
- Cleaned sites are ready for redevelopment and job creation.
- Increased number of sites with cleanup actions in progress.
- Decreased response time from Ecology to site owners and prospective buyers.
- Increased number of determinations made on final cleanup reports submitted by parties that voluntarily cleaned up sites.

Performance Measures

- Percentage of the Voluntary Cleanup Program applicants who receive an assessment of their plan or report within 90 days.
- Average number of days to provide an assessment of a plan or report received from a Voluntary Cleanup Program applicant.

Manage Underground Storage Tanks to Minimize Releases

Ecology currently regulates over 9,000 active tanks on over 3,300 different properties, including gas stations, industries, commercial properties, and governmental entities. We ensure tanks are installed, managed, and monitored according to federal standards and in a way that prevents releases into the environment. This is done through compliance inspections and providing technical assistance to tank owners and operators. Properly managing tanks saves millions of dollars in cleanup costs and prevents contamination of limited drinking water and other groundwater resources.

Expected Results

- Underground storage tanks are properly installed, monitored, or decommissioned to minimize the release of oil, gas, and

Toxics Cleanup Program

other toxic materials into drinking water and other underground water sources.

- Decreased number of reported releases from underground storage tanks over time.
- Increased number of leaking underground storage sites where cleanup actions are completed.
- Increased percentage of underground storage tanks inspected that pass compliance for leak detection.

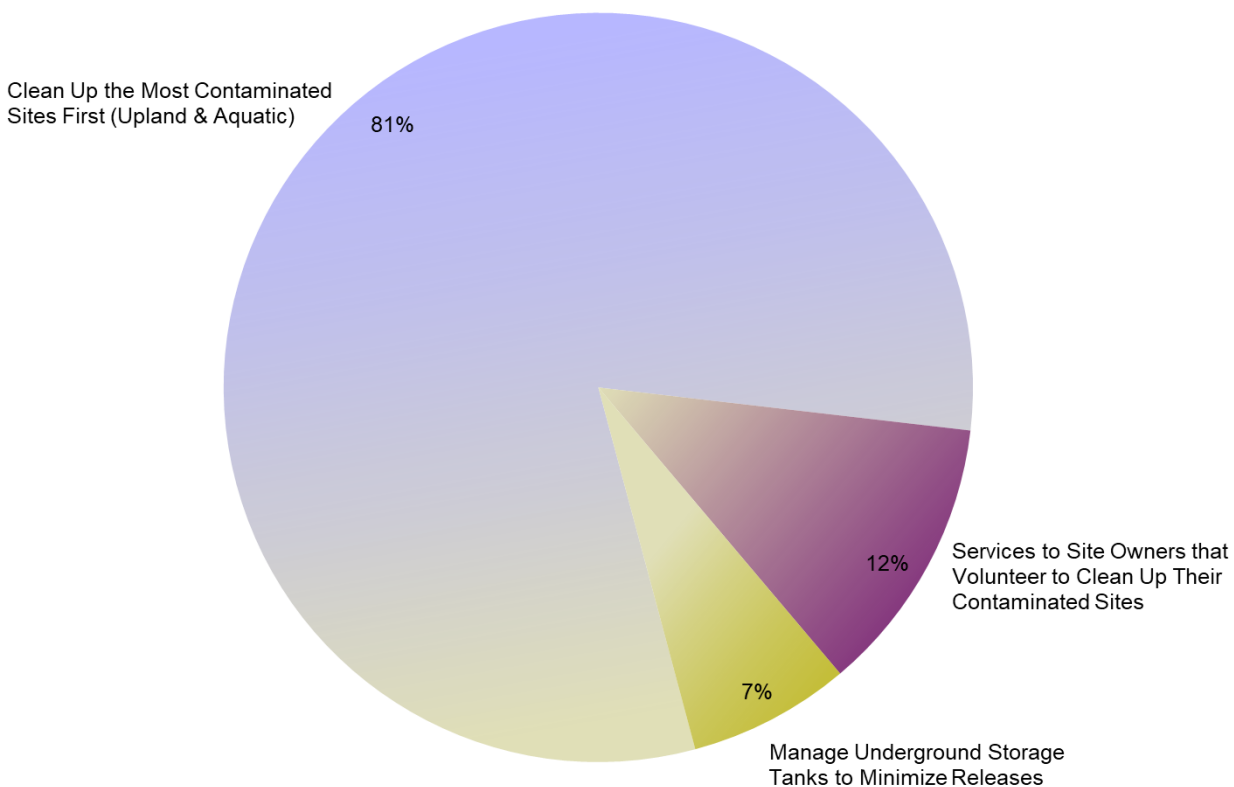
Performance Measure

- Percentage of underground storage tank sites inspected within three years.

Toxics Cleanup Program

Toxics Cleanup Program 2021-23 Biennium Budget by Activities

Operating = \$66.8 Million | Capital = \$282.2 Million | Total = \$348.9 Million | FTEs = 214.9

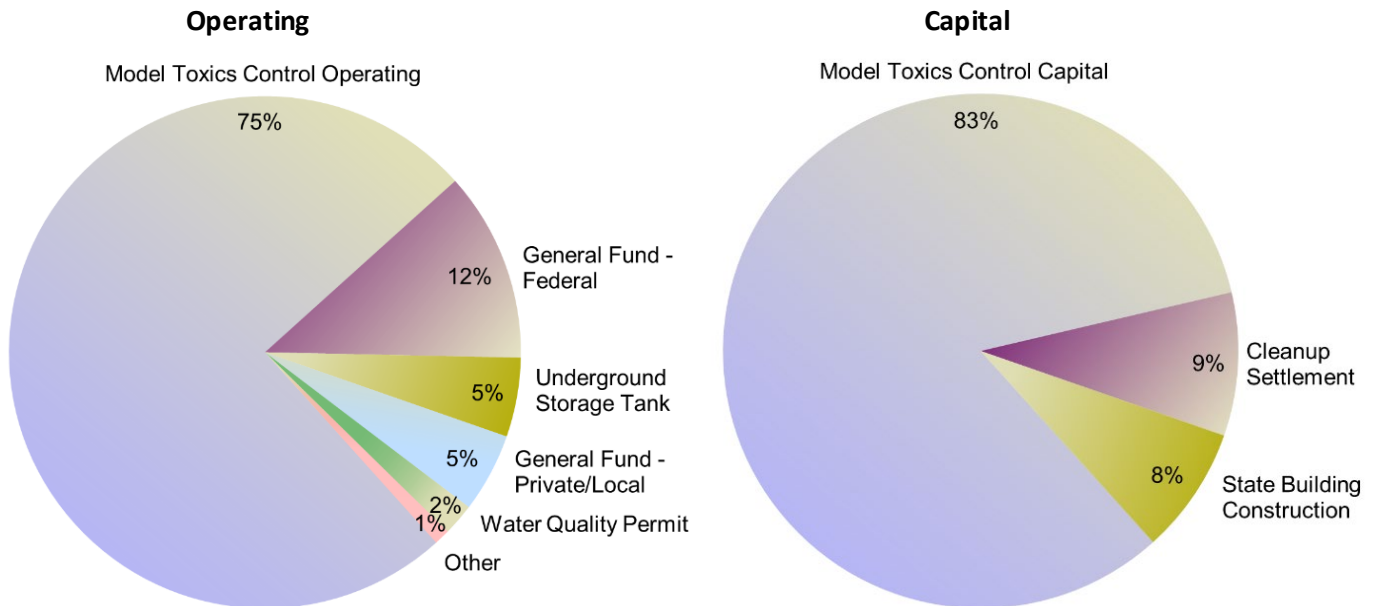


Activities	Amount	%	FTEs
Clean Up the Most Contaminated Sites First (Upland & Aquatic) (A005)	\$53,806,000	81%	164.7
Services to Site Owners that Volunteer to Clean Up Their Contaminated Sites (A057)	8,112,000	12%	26.6
Manage Underground Storage Tanks to Minimize Releases (A023)	4,868,000	7%	23.6
Toxics Cleanup Operating Budget Total	\$66,786,000	100%	214.9

Toxics Cleanup Program

Toxics Cleanup Program 2021-23 Biennium Budget by Fund Source

Operating = \$66.8 Million | Capital = \$282.2 Million | Total = \$348.9 Million | FTEs = 214.9



Operating Fund Sources	Amount	%	Uses
Model Toxics Control Operating (23P)	\$49,800,000	75%	Cleanup activities include overseeing cleanups conducted under an order or decree, providing advice and assistance to persons independently conducting cleanups, leading emergency actions and cleanups where sites are abandoned or have non-compliant owners, and supporting contaminated site cleanup with public information, policy, and rule development, and other Toxic Cleanup Program support tasks. Includes cleanup project manager oversight of local government Remedial Action Grants.
General Fund – Federal (001)	7,944,000	12%	Federal cooperative agreements support the following: program activities and funding assistance for cleanup at Brownfield sites, national priorities list sites, federal superfund sites at military facilities, technical assistance, and cleanup related to leaking underground storage tanks, and pollution prevention, inspection, and permitting activities related to underground storage tanks.
Underground Storage Tank (182)	3,613,000	5%	Pollution prevention, inspection, and permitting activities related to underground storage tanks.
General Fund – Private/Local (001)	3,004,000	5%	Ongoing appropriations allow cleanup work at sites where there are multiple potentially liable parties. Funds allow Ecology to act as contracting agent and pass payment money to a cleanup contractor.
Water Quality Permit (176)	1,582,000	2%	Review NPDES permits to ensure discharges are not contaminating sediments above sediment management standards.

Toxics Cleanup Program

Operating Fund Sources	Amount	%	Uses
Other:			
Model Toxics Control Operating – Private/Local (23P)	499,000	<1%	Activities related to the cleanup of leaking underground storage tanks.
Voluntary Cleanup (23V)	344,000	<1%	Providing advice and technical assistance to persons independently conducting cleanups through the Voluntary Cleanup Program’s expedited process.
Operating Budget Total	\$66,786,000	100%	
Capital Fund Sources	Amount	%	Uses
Model Toxics Control Capital (23N)	\$235,218,100	83%	Remedial Action Grant Program funding local government grants. Administration of the Remedial Action Grants, which provides fiscal oversight of the program. Investigate and clean up toxic sites. Includes appropriations for Cleanup Toxic Sites – Puget Sound and the Eastern Washington Clean Sites Initiative to clean up orphaned or abandoned sites, clean up sites with non-compliant owners, fund emergency removals, and invest where state funding can advance cleanups and build partnerships. Development, implementation and evaluation of model remedies. Clean up contaminated properties to support redevelopment for affordable housing.
Cleanup Settlement (15H)	25,364,485	9%	Continued remediation activities for the Asarco Tacoma smelter plume, Everett smelter site, and mine sites.
State Building Construction (057)	21,568,794	8%	Remedial Action Grant Program funding local government grants. Investigate and clean up toxic sites. Includes appropriations for Cleanup Toxic Sites – Puget Sound and the Eastern Washington Clean Sites Initiative to clean up orphaned or abandoned sites, clean up sites with non-compliant owners, fund emergency removals, and invest where state funding can advance cleanups and build partnerships.
Capital Budget Total	\$282,151,379	100%	
Toxics Cleanup Operating & Capital Budget Total	\$348,937,379		

Toxics Cleanup Program

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Water quality scientist Lea Shields collecting samples from the Nooksack River to be analyzed for bacteria.

Water Quality Program

Program Mission

The mission of the Water Quality Program is to protect and restore Washington's waters to sustain healthy watersheds and communities. Our work ensures state waters support beneficial uses, including recreational and business activities, supplies for clean drinking water, and the protection of fish, shellfish, wildlife, and public health.

Environmental Threats

Water pollution threatens lakes, estuaries, streams, and groundwater across Washington State. Fish, shellfish, and other aquatic animals require clean water to survive. Water quality impacts to rivers and streams include high water temperature, low dissolved oxygen, low pH, toxics, and bacteria. In spite of our efforts to date, Washington already has a significant number of waterbodies, marine sediments, and

groundwater polluted by an array of contaminants.

Several sources contribute to poor water quality, and stormwater is foremost among them. Stormwater is rain and snowmelt 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. From here, the water might flow into a local waterway. And the large impervious surfaces in urban areas increase the quantity of peak flow runoff. Untreated stormwater can make water and shellfish unsafe for humans and animals and can harm fish and wildlife habitat.

Federal law requires states to identify sources of pollution in waters that fail to meet state water quality standards and to develop water quality cleanup plans (TMDLs) to address those pollutants. The TMDL establishes limits on pollutants that can be discharged to the waterbody and still allow state standards to be met.

Toxic pollution is a growing concern threatening water quality. Ecology is studying sources of toxic pollution and developing action strategies to clean up and protect water quality. As Washington's population continues to increase, so will these potential sources of water pollution.

Authorizing Laws

- *Federal Clean Water Act*
- *Federal Safe Drinking Water Act*
- *RCW 43.21A.650, Freshwater Aquatic Weeds Account*
- *Chapter 70A.305, Hazardous Waste Cleanup – Model Toxics Control Act*
- *Chapter 70A.135 RCW, Water Pollution Control Facilities Financing Act*
- *Chapter 76.09 RCW, Forest Practices Act*
- *Chapter 90.42 RCW, Water Resource Management Act*
- *Chapter 90.46 RCW, Reclaimed Water Use*

Water Quality Program

- *Chapter 90.48 RCW, Water Pollution Control Act*
- *Chapter 90.50A RCW, Water Pollution Control Facilities - Federal Capitalization Grants*
- *Chapter 90.54 RCW, Water Resources Act of 1971*
- *Chapter 90.64 RCW, Dairy Nutrient Management Act*
- *Chapter 90.71 RCW, Puget Sound Water Quality Protection*

Constituents/Interested Parties

- *Tribes and Tribal governments.*
- *Residents and special interest groups.*
- *Local governments, cities, and counties.*
- *Businesses and industries.*
- *Environmental organizations.*
- *State and federal governments and agencies.*
- *Conservation districts.*

Focus Areas

New Puget Sound Nutrient General Permit

Humans are causing nutrient pollution in Puget Sound, which results in more acidic waters with less oxygen. This disrupts the food chain and exacerbates risks of fish kills, threatening salmon and the orca that depend on them. The new nutrient permit will initiate a long-term effort to update the municipal wastewater facilities that discharge into Puget Sound with nutrient control technology. Currently, these facilities contribute nearly 70 percent of the excess nutrients going into the sound. Starting in early 2022, Ecology will require facilities to focus on monitoring actual discharges, optimizing facility operations, and planning for facility upgrades. This permit is part of Ecology's strategy to reduce all human sources of nutrients going into Puget Sound.

Improving Assistance to Wastewater Treatment Plants

We face a statewide issue with the facility-specific wastewater permits for municipal wastewater treatment facilities. Due to funding and staffing shortfalls, over 70 percent of wastewater permits have expired, meaning they are not keeping up with changes in technology, regulations, or the physical plant itself. Ecology is working to remove the outdated cap in statute on wastewater fees that can be charged to municipalities for water quality permits. This will allow us to create an equitable and self-funding program, similar to how all other water quality permits are funded. With adequate funding, we will be able to support communities with their wastewater permitting needs and ensure we are protecting Washington's waters.

Point Source Water Pollution

Ecology regulates pollutant discharges to surface and ground waters by writing and managing wastewater discharge permits for sewage treatment plants, industrial facilities, and other general categories of wastewater dischargers. Ecology:

- Helps dischargers comply with existing permits.
- Makes permits understandable and effective in protecting water quality.
- Works to increase the use of reclaimed water.

Clean Up Polluted Waters

Ecology helps local communities and businesses clean up polluted waters to meet water quality standards. Ecology:

- Assesses state waters and updates the list of polluted waterbodies.
- Works with communities to clean up nonpoint source pollution.
- Collaborates with partners using the latest science to find solutions to reduce human sources of nutrients.

- Identifies Best Management Practices (BMPs) for nonpoint pollution sources.

Nonpoint Source Water Pollution

Nonpoint pollution is Washington’s most serious pollution problem, and the most difficult one to solve. This pollution comes from diffused sources, is generated by every kind of land use, and has no specific regulatory tool (like a permit) to deal with it. Solving the nonpoint pollution problem will require behavior changes, as well as better land management and structural management practices. Ecology:

- Secures federal funding to support nonpoint source work.
- Makes sure forest practices are on a path to meet water quality standards.

Stormwater

Ecology helps local governments build stormwater programs in cities and counties. Our stormwater permits cover municipalities, industries, and construction projects.

Ecology:

- Helps dischargers improve compliance with existing stormwater permits.
- Works to ensure that having a permit is not a competitive disadvantage.
- Helps dischargers reduce contaminated stormwater runoff from their sites.

Financial Assistance

In the 2021-23 Biennium, Ecology will award new water quality grants and loans and continue to manage existing grants and loans to protect public health and the environment through water quality protection and improvement. Ecology will:

- Provide effective and efficient financial and technical assistance to manage water quality projects with the highest benefit to human health and the environment.
- Capture environmental data and demonstrate the environmental benefits of the grant and loan program.

- Help grant and loan recipients properly manage public funds with a high level of integrity and accountability.
- Continue to develop an ongoing, comprehensive, statewide stormwater financial assistance program for local governments.
- Coordinate with other state and federal programs to provide technical assistance to communities planning water quality improvement projects.

Activities, Results, and Performance Measures

Provide Water Quality Financial Assistance

Ecology provides grants, low-interest loans, and technical assistance to local governments, state agencies, and Tribes to enable them to build, upgrade, repair, or replace facilities to improve and protect water quality. This includes meeting the state's obligation to manage the Water Pollution Control Revolving Fund in perpetuity. Ecology also funds nonpoint source control projects, such as watershed planning, stormwater management, freshwater aquatic weed management, education, and agricultural best management practices. Grants are targeted to nonpoint source problems and communities where needed wastewater facilities projects would be a financial hardship for taxpayers. Local governments use loans for both point and nonpoint source water pollution prevention and correction projects. Ecology coordinates grant and loan assistance with other state and federal funding agencies.

Expected Results

- Public funds dedicated to improving water quality are managed responsibly to protect public health and the environment.

Water Quality Program

- Improve water quality by awarding close to \$220 million in water quality grants and loans per year to local communities.
- About 60 new grants and loans are awarded each year for projects under existing and ongoing financial assistance programs that demonstrate clear benefits for the environment.
- Additional grants are awarded each year for stormwater projects, based on newly appropriated funds.
- Approximately 350 existing grants and loans are managed each year.
- Local governments get support through implementing revised grant and loan program rules that address updated water quality needs, the State Revolving Fund loan program perpetuity, balanced funding allocations, and design-build alternative contracting options.
- Environmental benefits are documented and illustrated through data generated from grants and loans.

Performance Measure

- Number of funded on-site sewage system repairs or replacements completed in Puget Sound counties.

Prevent Point Source Water Pollution

Ecology protects Washington's water by regulating point-source discharges of pollutants to surface and ground waters. This is done with a wastewater permit program for sewage treatment plants and an industrial discharge program for other industries. A permit is a rigorous set of limits, monitoring requirements, or management practices, usually specific to a discharge, designed to ensure a facility can meet treatment standards and water quality limits. The permit is followed by regular inspections and site visits. Technical assistance and follow-up on permit violations also are provided through various means.

Expected Results

- Fewer wastewater discharges and lower toxicity through administering the permit program for 2,000 permit holders.
- 100 National Pollution Discharge Elimination System wastewater discharge permits are issued or renewed each year.
- Active permits are up to date.
- New permit applicants get responses within 60 days.
- General permits are developed and managed on schedule for 1,500 dischargers.
- 700 site visits are done each year.
- Approximately 2,000 wastewater plant operators get certification.
- Communities get help increasing the production and use of reclaimed wastewater.
- Ecology responds to permit violations in a timely manner (within three months for minor violations).

Performance Measure

- Percentage of active water quality discharge permits (National Pollutant Discharge Elimination System permits) that are up to date.

Control Stormwater Pollution

Ecology prepares tools, provides assistance, and offers compliance strategies to control the quantity and quality of stormwater runoff from development and industrial activities. We currently provide training and assistance to communities and industries on stormwater manuals and the Western Washington hydrology model. Ecology works with local governments and other stakeholders to implement a municipal stormwater program and permitting system.

Expected Results

- Reduced contamination of streams, rivers, estuaries, lakes, and groundwater due to

stormwater runoff from roads and other impervious surfaces.

- Approximately 3,000 construction and industrial stormwater dischargers that require permits are managed.
- New permit applicants get a response within 60 days of application receipt.
- Approximately 120 municipal stormwater permits are managed.
- Permittees get web-based information and support for low-impact development, emerging treatment technologies, and permit technical assistance.

Performance Measures

- Average number of days it takes to make final decisions on construction stormwater permits.
- Percentage of city and county Phase II Municipal Stormwater permittees in substantial compliance with their permit.
- Number of industrial stormwater inspections conducted.
- Number of construction stormwater inspections conducted.
- Percentage of industrial stormwater facilities submitting discharge monitoring reports as required by permit.
- Percentage of construction stormwater facilities submitting discharge monitoring reports as required by permit.

Clean Up Polluted Waters

The Federal Clean Water Act requires Ecology to develop water quality standards and identify water bodies that fail to meet those standards. We do this by reviewing thousands of water quality data samples and publishing an integrated water quality assessment report. This report lists the water bodies that do not meet standards. Ecology then works with local interests to prepare water quality improvement reports to reduce pollution, establish conditions in discharge permits and nonpoint source management

plans, and monitor the effectiveness of the improvement report.

Expected Results

- Water quality improvement reports are in place to protect public health and the environment.
- 1,500 contaminated water body segments are managed on 650 water bodies (Washington's legal commitments specified in a Memorandum of Agreement prompted by a lawsuit).
- Fifty water improvement reports and associated technical reports are submitted each year to the Environmental Protection Agency.
- Local communities get help implementing water quality improvement reports.
- An updated list of marine water bodies failing to meet water quality standards is developed.

Performance Measure

- Number of water quality cleanup plans submitted to the Environmental Protection Agency.

Reduce Nonpoint Source Water Pollution

Nonpoint source pollution (polluted runoff) is the leading cause of water pollution and poses a major health and economic threat. Types of nonpoint pollution include fecal coliform bacteria, elevated water temperature, pesticides, sediments, and nutrients. Sources of pollution include agriculture, forestry, urban and rural runoff, recreation, hydrologic modification, and loss of aquatic ecosystems. Ecology addresses these problems through raising awareness, encouraging community action, providing funding, and supporting local decision makers. We also coordinate with other stakeholders through the Washington State Nonpoint Workgroup, the Forest Practices Technical Assistance group, and the Agricultural Technical Assistance group.

Water Quality Program

Expected Results

- Protection of surface and groundwater is improved through community implementation of the state's Water Quality Management Plan to Control Nonpoint Pollution and water quality improvement reports.
- Local communities and groups get help from Ecology to implement water quality improvement projects and other strategies to clean up polluted waters.
- The Department of Natural Resources and the forestry industry get help to manage 12 million acres of state-owned and privately owned forests.
- The Department of Agriculture gets help to manage water quality problems generated by agricultural uses.
- Best management practices necessary to address nonpoint pollution problems are implemented.
- State and federal grants are available to, and used efficiently by, local governments.
- The number of stream miles restored or protected is increased through work with local communities and other agencies.

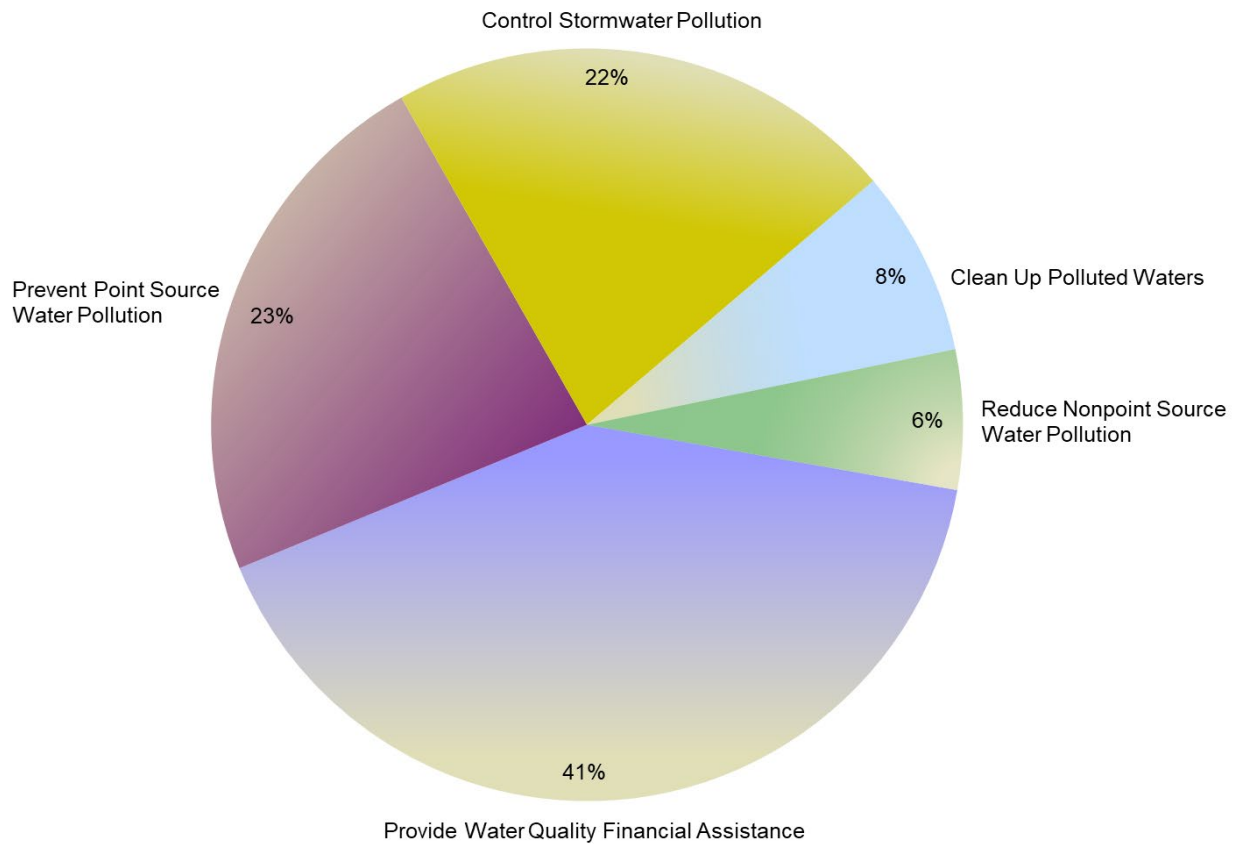
Performance Measure

- Number of funded on-site sewage system repairs or replacements completed in Puget Sound counties.

Water Quality Program

Water Quality Program 2021-23 Biennium Budget by Activities

Operating = \$106.9 Million | Capital = \$468.5 Million | Total = \$575.4 Million | FTEs = 265.6

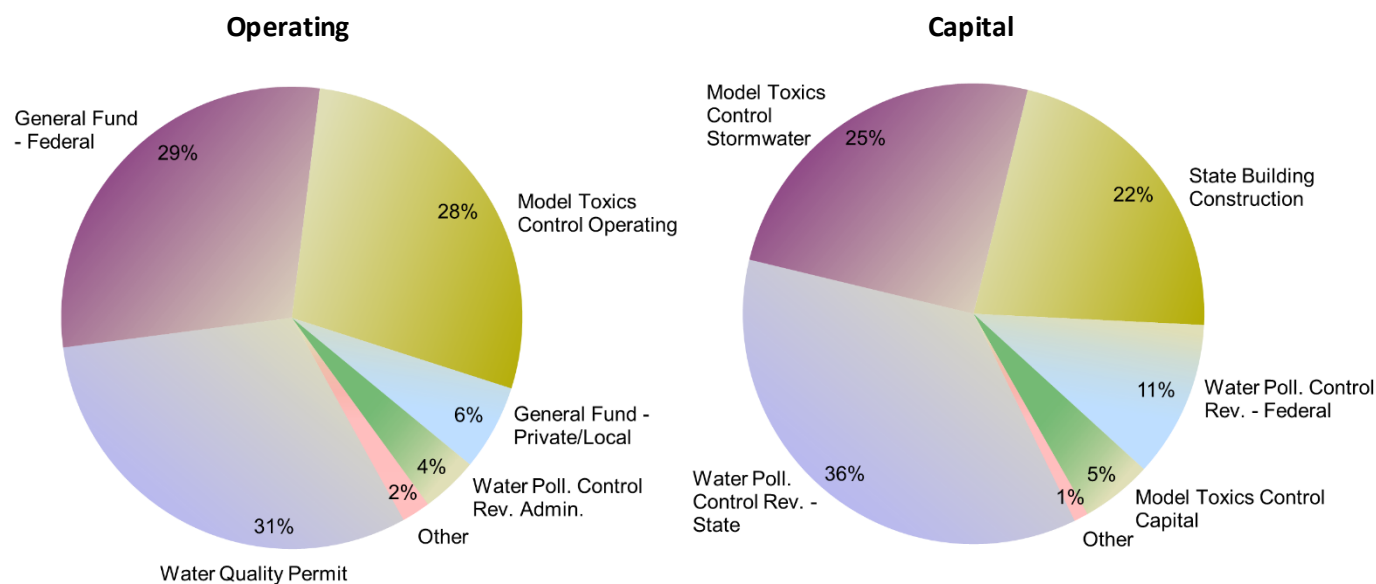


Activities	Amount	%	FTEs
Provide Water Quality Financial Assistance (A043)	\$43,721,000	41%	52.7
Prevent Point Source Water Pollution (A032)	24,062,000	23%	100.1
Control Stormwater Pollution (A008)	23,410,000	22%	49.7
Clean Up Polluted Waters (A006)	9,031,000	8%	27.2
Reduce Nonpoint Source Water Pollution (A049)	6,688,000	6%	35.9
Water Quality Operating Budget Total	\$106,912,000	100%	265.6

Water Quality Program

Water Quality Program 2021-23 Biennium Budget by Fund Source

Operating = \$106.9 Million | Capital = \$468.5 Million | Total = \$575.4 Million | FTEs = 265.6



Operating Fund Sources	Amount	%	Uses
Water Quality Permit (176)	\$32,807,000	31%	Issue and manage federal and state wastewater/stormwater discharge permits.
General Fund – Federal (001)	30,677,000	29%	Numerous U.S. Environmental Protection Agency grants for point and nonpoint source control; water cleanup plans; management of water quality grants and loans to local governments; and groundwater protection.
Model Toxics Control Operating (23P)	30,567,000	28%	Stormwater management and local government stormwater capacity grants; water quality standards; aquatic pesticides management; water quality financial assistance; enforcement of permit requirements; Puget Sound Plan activities, such as nonpoint source watershed management; forest practices compliance; water cleanup plans; data and aquatic plant management. This funding also provides state match needed to secure federal funding.
General Fund – Private/ Local (001)	6,139,000	6%	Administer the Stormwater Action Monitoring (SAM) Program and provide technical expertise to local government water quality projects such as King County's Brightwater Wastewater Treatment Plant.
Water Pollution Control Revolving Administration (564)	4,261,000	4%	Funding will provide the Water Quality Program with stable financial resource to provide engineering oversight, financial management, and administration for the SRF loan program based on Clean Water Act requirements.

Water Quality Program

Operating Fund Sources	Amount	%	Uses
Other:			
Reclamation (027)	1,240,000	<2%	Funding provided to Ecology and the Department of Fish and Wildlife to license, relicense, and monitor the effects of hydroelectric projects on water, fish and wildlife.
General Fund – State (001)	709,000	<1%	Funding is passed through to the Spokane River Regional Toxics Task Force in order to identify and remove sources of PCBs in the Spokane River.
Wastewater Treatment Plant Operator Certification (21H)	512,000	<1%	This account funds our work to administer and oversee the certification process for plant operators.
Operating Budget Total	\$106,912,000	100%	
Capital Fund Sources	Amount	%	Uses
Water Pollution Control Revolving – State (727)	\$167,778,374	36%	State funds for loans for constructing or replacing water pollution control facilities, nonpoint source control activities, and estuary management.
Model Toxics Control Stormwater (23R)	115,709,359	25%	Grants for statewide stormwater projects to local governments for plan, design, and construct stormwater retrofit or low-impact development projects.
State Building Construction (057)	104,642,103	22%	New appropriations and reappropriations for the Centennial Clean Water Program provide grants for water pollution control facilities and nonpoint source control. New appropriations for Nutrient Reduction Grant Program provide grants for wastewater nutrient reduction planning and optimization to Puget Sound municipalities. Reappropriations provide grants for the Stormwater Financial Assistance Program.
Water Pollution Control Revolving – Federal (727)	53,568,531	11%	Federal funds for loans for constructing or replacing water pollution control facilities, nonpoint source control activities, and estuary management.
Model Toxics Control Capital (23N)	25,546,973	5%	Reappropriations for the Centennial Clean Water Program provide grants for water pollution control facilities and nonpoint source control.
Other:			
Freshwater Aquatic Weeds (222)	774,046	<1%	Grants to local governments to prevent, remove, or manage invasive freshwater aquatic weeds.
Aquatic Algae Control (10A)	448,126	<1%	Grants to local governments to prevent, remove, or manage freshwater and saltwater aquatic blue-green algae.
Capital Budget Total	\$468,467,512	100%	
Water Quality Operating & Capital Budget Total			
	\$575,379,512		

Water Quality Program

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John Pearch, Southwest Regional Well Construction Inspector, measures the static water level in a well. This activity is part of the Well Drilling Management Program.

Water Resources Program

Program Mission

The mission of the Water Resources Program is to manage water resources to meet the needs of people and the natural environment, in partnership with Washington communities.

Environmental Threats

Historically, Washington residents have enjoyed an abundance of clean and inexpensive water. Now, water managers are facing increasing challenges in ensuring adequate water supplies are available to meet current and future needs.

Washington increasingly lacks water where and when it is needed for fish, farms, and communities. Decreasing snowpack,

earlier spring thaws, and hotter summers are exacerbating problems with threatened and endangered fish and wildlife species already stressed by the state's growing population. Climate change is likely to further increase the frequency and severity of droughts, resulting in dry or over-heated streams, withered crops, rampant wildfires, and reduced hydropower production.

Lack of water for further allocation puts senior water rights and instream flows at risk of impairment in water-short basins. Legal uncertainty related to the validity and extent of water rights and claims, including federal and Indian rights and claims, are putting more water allocation decisions in the hands of judges and attorneys.

Authorizing Laws

- *Chapter 18.104 RCW, Water Well Construction Act*
- *RCW 19.27.097, Building permit application, evidence of adequate water supply*
- *Chapter 43.21A RCW, Department of Ecology*
- *Chapter 43.27A RCW, Water Resources*
- *Chapter 43.83B RCW, Water Supply Facilities*
- *Chapter 43.99E RCW, Water Supply Facilities – 1980 Bond Issue (Referendum 38)*
- *Chapter 77.57 RCW, Fishways, Flow and Screening*
- *RCW 86.16.035, Department of Ecology Control of Dams and Obstructions*
- *Chapter 90.03 RCW, Water Code*
- *Chapter 90.08 RCW, Stream Patrolmen*
- *Chapter 90.14 RCW, Water Rights Claims Registration and Relinquishment*
- *Chapter 90.16 RCW, Appropriation of Water for Public and Industrial Purposes*
- *Chapter 90.22 RCW, Minimum Water Flows and Levels*
- *Chapter 90.24 RCW, Regulation of Outflow of Lakes*
- *Chapter 90.28 RCW, Miscellaneous Rights and Duties*

Water Resources Program

- *Chapter 90.36 RCW, Artesian Wells*
- *Chapter 90.38 RCW, Yakima River Basin Water Rights (Trust Water)*
- *Chapter 90.40 RCW, Water Rights of United States*
- *Chapter 90.42 RCW, Water Resource Management (Trust Water)*
- *Chapter 90.44 RCW, Regulation of Public Groundwaters*
- *Chapter 90.46 RCW, Reclaimed Water Use*
- *Chapter 90.54 RCW, Water Resources Act of 1971*
- *Chapter 90.66 RCW, Family Farm Water Act*
- *Chapter 90.80 RCW, Water Conservancy Boards*
- *Chapter 90.82 RCW, Watershed Planning*
- *Chapter 90.86 RCW, Joint Legislative Committee on Water Supply During Drought*
- *Chapter 90.90 RCW, Columbia River Basin Water Supply*
- *Chapter 90.92 RCW, Pilot Local Water Management Program (Walla Walla)*
- *Chapter 90.94 RCW, Streamflow Restoration*

Constituents/Interested Parties

- *Agricultural groups.*
- *Environmental organizations, local watershed planning and management groups.*
- *Business and industry.*
- *Local governments: cities, counties, utilities, irrigation districts, and conservation districts.*
- *State and federal agencies.*
- *Tribes.*
- *People living near dams and dam owners.*
- *Real estate developers, realtors, and builders.*
- *Recreational water users and sport and commercial fishers.*
- *Water and power utilities.*
- *Water-right holders and well drillers.*

Focus Areas

Water Management Challenges and Successes

Washington has seen increased demand for water supplies to accommodate population

growth and economic development. Demand has also been coupled with concern for how climate change will impact water supplies and the environment.

These issues highlight the need for improving water management in water-short basins. More than ever before, Ecology recognizes the importance of working with our water management partners and the Legislature to update water management policies and provide additional funding to address increased demand and competition for water.

Ecology is focusing on more efficient decision-making on new water rights applications. We have revised our application forms and guidance to ensure we have the information we need to efficiently process new incoming applications and to help facilitate sales, transfers, and changes in water use to better manage water supply. The current pending application backlog is 4,692 applications (as of June 2021), which is down from 7,018 applications in 2011. In the two-year period from July 1, 2019 to June 6, 2021, Ecology made 851 water right decisions.

Legislative support has brought funding to several water management initiatives. These initiatives are discussed in more detail on the following pages.

Streamflow Restoration Act Implementation

The 2018 Washington Legislature passed ESSB 6091 (Chapter 90.94 RCW), an act that substantially altered the state's historic approach to managing permit-exempt groundwater withdrawals for domestic purposes. This legislation imposes reduced limits on daily water withdrawals, requires fees for the right to withdraw water for domestic purposes, and mandates plans and actions to offset the impacts of those withdrawals on instream flows. Ecology is working with Tribes, local governments, and other state agencies to implement this chapter in water resources law and management. The law requires:

- Updates to watershed plans in 15 Water Resource Inventory Areas (WRIAs).
- Creation of a grant funding program to support the watershed plan updates.
- Establishment of two metering pilots.
- A joint legislative task force to look at mitigation for up to five pilot projects.

To date, Ecology has adopted 10 of the 15 watershed plans by the statutory deadline and will be submitting the following draft plans to the Salmon Recovery Funding Board for technical review and recommendations prior to adoption:

- WRIA 7 – Snohomish
- WRIA 8 – Cedar-Sammamish
- WRIA 13 – Deschutes
- WRIA 14 – Kennedy-Goldsborough
- WRIA 15 – Kitsap

Ecology has supported implementation of 37 projects in 19 watersheds in the first two competitive grant rounds and initiated the third round of competitive grants, with up to \$40 million available.

The two metering pilots are providing Ecology with data on permit-exempt domestic withdrawals in Kittitas County and the Dungeness rule area. The purpose of these pilots is to examine the overall feasibility of measuring water use for all new groundwater withdrawals. The pilots will continue for a total of 10 years.

The five mitigation projects identified in the Streamflow Restoration Act are still in the preliminary stage. Ecology will continue to coordinate with local entities, jurisdictions, and planning units to complete the permitting process. The five pilot projects are:

- WRIA 1 – Bertrand Creek Watershed Improvement District
- WRIA 10 – City of Sumner
- WRIA 11 – City of Yelm
- WRIA 12 – Spanaway Water System
- WRIA 15 – City of Port Orchard

Water Banking and Trust

The Legislature provided \$15 million for the 2021-23 Biennium for Ecology to establish a grant program for funding local water banks and to continue with stakeholder engagement to evaluate concerns around water banking and trust and water right transfers during this biennium. Ecology will initiate the grant funding solicitation in the fall of 2021, and we anticipate selecting applicants to initiate development of water banks soon thereafter. In addition, Ecology may begin the process for developing request legislation beginning in spring 2022 if we are required to implement specific policy recommendations.

Adjudication

A water rights adjudication is the process of determining whether each water right on a water source is legal, how much water can be used, and the priority of rights from oldest to newest. The process occurs in the county Superior Court where the water source is located.

The Legislature provided funding for Ecology to assess the needs and benefits of future adjudications. The Water Resources Adjudication Assessment came out in September 2021. Ecology is conducting pre-adjudication planning in the Nooksack Watershed, and Lake Roosevelt and middle tributaries. In July 2021, the Water Resources Program formed the Adjudications Section, where we will continue with our pre-adjudication work to prepare for court filings in 2023.

Yakima Basin Integrated Plan

Since the 2013-15 Biennium, the Legislature has invested over \$285 million to implement the Yakima River Basin Integrated Water Resource Management Plan (YBIP). Ecology will request additional funding in the 2023-25 capital budget to continue implementing the YBIP. The Plan is a 30-year effort to address

Water Resources Program

current water availability problems and meet impending climate change challenges by increasing water supply for both instream and out-of-stream uses. YBIP projects fall into seven categories:

- Fish passage.
- Structural and operational changes.
- Surface water storage.
- Groundwater storage.
- Market reallocation.
- Enhanced water conservation.
- Habitat protection and enhancement.

Initial projects include:

- The Teanaway acquisition.
- The Manastash Creek Conservation and Tributary Enhancement Project.
- The design and environmental review work needed to bring the Cle Elum Pool Raise and Kachess Drought Relief Pumping Plant projects to a decision point on beginning construction.

In addition to the seven YBIP elements listed above, the Plan also includes implementing the Yakima River Basin Water Enhancement Project (YRBWEP), which is a water conservation program in the Yakima Basin.

Office of Columbia River

In 2006, with great foresight, the Washington Legislature created the Office of Columbia River in state law (Chapter 90.90 RCW). The mission for the new Office of Columbia River (OCR) was succinct: to aggressively pursue the development of water supplies in the Columbia River Basin by recognizing the fundamental need for a program focused on development of water supplies for families, farms, and fish. The initial \$200 million budget to implement the program in 2006 has grown to approximately \$300 million in recent years.

The ability to use the \$300 million in general obligation bonds appropriated by the Legislature has driven the success of OCR's water supply development projects and

programs. By the end of the 2017-2019 Biennium, these funds were fully allocated.

Since 2019, OCR has relied on the Legislature to provide funding each biennium to implement projects. Having a pre-authorized, long-term budget authority, like the initial \$200 million provided in 2006, would provide long-term reliability for future projects, rather than relying on a reoccurring approval of funds every two years. Some projects can be completed within a biennium, and those would not be affected by this. But larger projects that span across multiple biennia face the risk of losing funding before the project can be completed.

Columbia River Basin Water Supply Development funding for the 2021-23 Biennium includes \$45 million for general support, \$42 million for continued implementation of the Yakima Basin Integrated Water Resources Management Plan, and \$4.7 million for continued implementation of Yakima River Basin Water Enhancement Project.

The Office of Columbia River's aggressive pursuit in the development of water supplies has yielded 476,007 acre-feet of sustainable and reliable water supplies to date. This water benefits both instream flows and out-of-stream demands throughout Eastern Washington. Columbia River projects create infrastructure to mitigate drought and climate change conditions by securing a water supply for families, farms, and fish.

Significant projects include:

- The Lake Roosevelt incremental storage releases.
- Sullivan Lake water supply.
- Odessa sub-area groundwater replacement projects.

To maintain a high standard of performance in implementing the growing number of water supply development projects and programs, OCR restructured into three complementary teams: a permitting team, a project team, and a financial team. With the

\$45 million provided for 2021-23 Biennium, OCR is now able to bring on additional full time staff members, bringing the total number of OCR staff to 20 FTEs. These FTEs include management, support staff, project management, and permitting staff. As the state emerges from a hiring freeze and continues to deal with the pandemic, the funding provided by the Legislature to support these additional FTEs is testament to OCRs highly successful management of multiple water supply projects.

Many of OCR's water supply development projects parallel other local and regional water supply goals. This allows OCR to tap into smaller funding sources, grants managed by Ecology, and other competitive funding opportunities. This same adaptive management collaboration is working in other watersheds around the state.

Future Focus Areas

Ongoing challenges for the Water Resources Program include:

Drought Funding.

Drought can cause agricultural losses, drinking water shortages, and severe environmental harm. Drought is difficult to forecast, so it is critical to be prepared when it occurs. Preparation depends on having assurance that funding will be available to mitigate impacts. The lack of stable drought contingency funding causes uncertainty and limits the ability of the state to plan, communicate, and deliver on drought response.

Finding innovative water supply solutions.

As traditional water supplies become increasingly scarce, and acquiring new water rights is more difficult, water users are turning to innovative water supply solutions. Ecology is working with stakeholders on water supply solutions that include developing awareness of readily usable water limits and providing incentives and

institutional capacity for new water efficiency technologies, water storage, reclaimed water, and stormwater management projects.

Improving water use accountability.

We are increasing water use metering and reporting, maintaining the stream gauging network, responding to local watershed requests for compliance service, and taking actions on water law violations within resource constraints.

Providing clarity on water rights and claims.

We are preparing to file adjudications in watersheds in the northwest and northcentral parts of the state, which will bring clarity and certainty regarding the validity and extent of surface water rights and claims in the basin.

Improving the availability of water resource data and information.

We are developing, maintaining, and enhancing our water management data systems. This includes mapping and keeping pace with increased demands of modern water management, public service expectations, and technology.

Activities, Results, and Performance Measures

Implementing Integrated Solutions to Protect Instream Resources

Ecology staff seek to support water supply solutions that address increasing water demands from population growth, while protecting limited instream resources and adapting to climate change. Actions include:

- **Instream flow rules:** Work with local stakeholders to implement and update, as needed, instream flow rules for fish and wildlife, recreation, and other instream resources. Evaluate regions of the state that are experiencing conflict over water as potential areas for adjudication.
- **Streamflow Restoration:** Work with watershed groups to establish or revise a

Water Resources Program

streamflow restoration plan to mitigate the impacts of new domestic water use.

- Section 401 federal licensing of dams: Collaborate with local governments, Tribes, and other stakeholders to develop permit conditions for hydropower facilities that ensure minimum instream flows are met and stream flows are adjusted to adapt to water supply conditions during the 50-year license period.
- Water acquisition:
 - Acquire senior water rights to restore and protect stream flows.
 - Review municipal and industrial reclaimed water projects and water system plans to ensure new uses of water do not impair senior rights.
 - Monitor water supply conditions that may impact water rights and the environment and respond when water supplies are impacted by drought.

Expected Results

- Water will be available to meet the needs, today and into the future, for communities, agriculture, industry, and fish.
- Permanent instream flow protections are in place, agricultural irrigation is efficient, and Washington communities manage their water resources sustainably.
- Impacts from new water uses are offset by streamflow restoration projects.

Performance Measures

- Volume of water acquired for instream flow in acre-feet.
- Number of technical assistance visits, calls, or emails to local organizations.
- Number of funded local water supply projects completed in Washington State counties.
- Percentage of watersheds in the implementation of Chapter 90.94 RCW, Streamflow Restoration.

Manage Water Rights

The agency allocates surface and groundwater to meet the state's many water supply needs. Ecology staff make decisions on applications for new water rights, changes to existing water rights, and participates in water rights adjudications in areas where additional certainty is needed.

Expected Results

- Improved allocation of new water rights and changes to existing rights through sound and timely permit decision-making.
- Water needs are met and existing water users and the environment are protected.

Performance Measure

- Number of water right decisions completed.

Provide Water Resources Data and Information

Ecology collects, manages, and shares water availability and water use data with local watershed groups, conservancy boards, businesses, local governments, nonprofit groups, the Legislature, other agencies, and the media to communicate information about water allocation, dam safety, well construction, metering, and instream flows.

This data supports daily agency operations, including:

- Making water allocation decisions.
- Setting and achieving stream flows.
- Identifying the location and characteristics of wells, dams, and water diversions using Geographic Information System (GIS) tools.
- Supporting compliance actions.
- Collecting water usage and groundwater data.
- Supporting well construction and licensing activities and the Dam Safety Program.

Expected Results

- Sound water management is supported.
- Improved agreement and more informed water resources decisions are based on increasingly timely and accurate data and improved public access to information.
- Data and information systems are developed and maintained by increasing the numbers of external users (watershed groups, conservancy boards, businesses, etc.).
- Improved collection, preservation, and availability of data and information for water allocation, dam safety, well construction, instream flows, and communication.

Performance Measure

- Percentage of water rights mapping completed statewide.

Promote Compliance with Water Laws

Ecology is responsible for compliance and enforcement of Washington's water laws. Compliance staff (including program compliance officers, water masters, and metering coordinators) provide technical assistance to the public, government officials, and Tribes. In addition to ensuring compliance with well drilling regulations and dam safety requirements, compliance staff also respond to and investigate complaints related to water rights and claims. Compliance efforts are prioritized in the 16 fish-critical basins.

Expected Results

- Increased awareness of, and compliance with, the state's water laws so that legal water users and applicants for water rights are not impaired, water use remains sustainable, and the environment is protected.
- Water right holders receive compliance information, assistance, and strategic enforcement action.

- Water use on streams with flows set is regulated during periods of low flows.

Performance Measures

- Percentage of metered water users in the 16 fish critical basins submitting an annual report.
- Number of formal enforcement actions (penalties, orders, and notices) taken to achieve compliance for water management.

Ensure Dam Safety

This activity protects life, property, and the environment by overseeing the safety of Washington's dams. This includes inspecting the structural integrity and flood and earthquake safety of existing state dams not managed by the federal government, approving and inspecting new dam construction and repairs, and taking compliance and emergency actions.

Expected Results

- Public and environmental health and safety is protected.
- Reduced risk of potentially catastrophic dam failures for the safety of people and property located below dams.

Performance Measures

- Number of high-hazard dams inspected.
- Number of significant-hazard dams inspected.

Regulate Well Construction

Ecology issues licenses and provides continuing education to well drillers; investigates complaints; approves variances from construction standards; and provides technical assistance to homeowners, well drillers, Tribes, and local governments. The work is accomplished in partnership with delegated counties.

Water Resources Program

Expected Results

- Public and environmental health and safety is protected.
- Improved protection of consumers, well drillers, and the environment.
- Well drillers get licensing and training services.
- Well drilling is regulated.

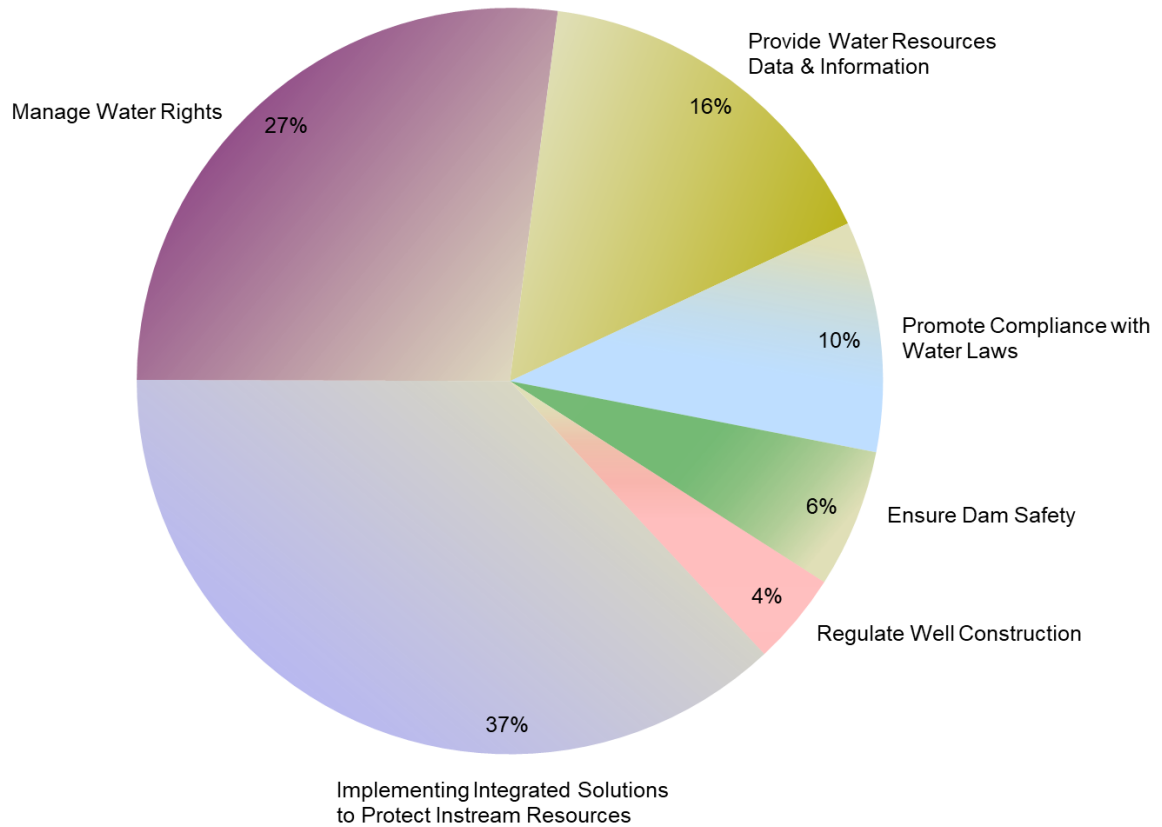
Performance Measure

- Percentage of water supply wells inspected in delegated counties.

Water Resources Program

Water Resources Program 2021-23 Biennium Budget by Activities

Operating = \$63.6 Million | Capital = \$269.8 Million | Total = \$333.4 Million | FTEs = 164.8

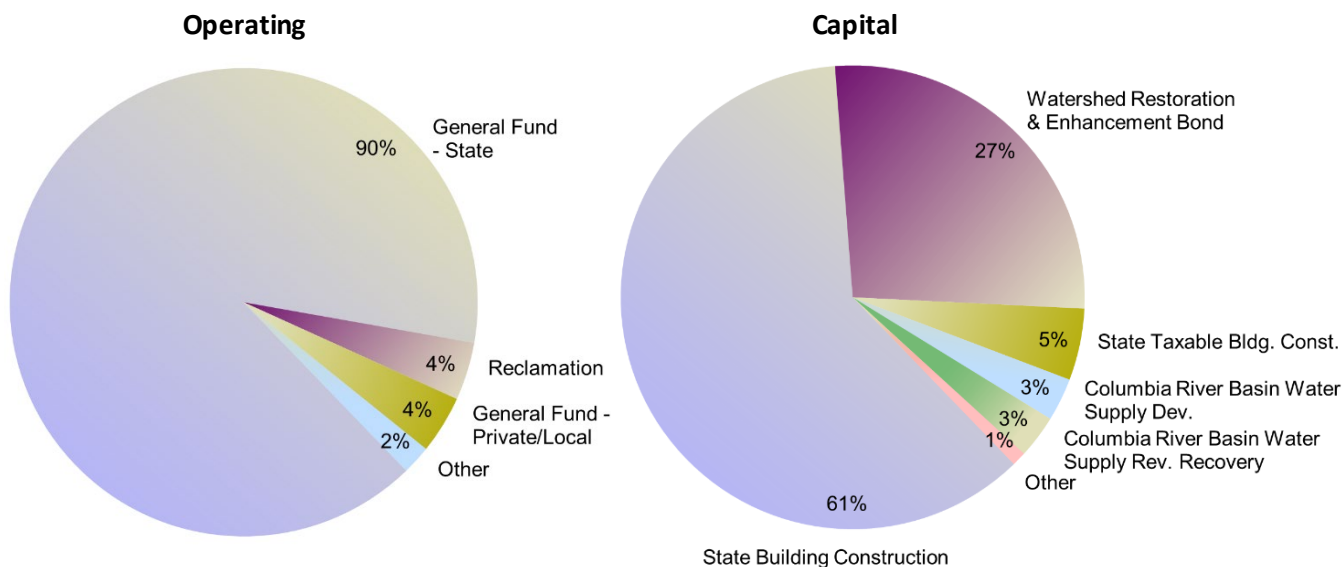


Activities	Amount	%	FTEs
Implementing Integrated Solutions to Protect Instream Resources (A003)	\$23,814,000	37%	37.6
Manage Water Rights (A024)	17,443,000	27%	59.5
Provide Water Resources Data & Information (A044)	9,865,000	16%	32.9
Promote Compliance with Water Laws (A035)	6,136,000	10%	14.5
Ensure Dam Safety (A011)	4,045,000	6%	13.5
Regulate Well Construction (A053)	2,251,000	4%	6.8
Water Resources Operating Budget Total	\$63,554,000	100%	164.8

Water Resources Program

Water Resources Program 2021-23 Biennium Budget by Fund Source

Operating = \$63.6 Million | Capital = \$269.8 Million | Total = \$333.4 Million | FTEs = 164.8



Operating Fund Sources	Amount	%	Uses
General Fund – State (001)	\$57,139,000	90%	Water rights decision-making, county water conservancy board assistance, illegal dam compliance, dam safety, data management, public information, water use efficiency, watershed support, instream flows, Yakima River adjudication, Columbia River activities, Spokane area water rights, Kittitas County groundwater support. Funding support for Chamokane Basin ground/surface water technical study by the U.S. Geological Survey.
Reclamation (027)	2,839,000	4%	Administration of the well construction oversight program, including revenue transfers to delegated counties with well construction management authority, compliance, well information systems. Hydropower dam licensing and contract with the U.S. Geological Survey for stream gauging data collection and studies.
General Fund – Private/Local (001)	2,405,000	4%	Instream flow projects, water acquisition, and cost reimbursement contracts for water rights processing.
Other:			
General Fund – Federal (001)	484,000	<1%	Dam safety scanning project and guidelines, Yakima River Enhancement liaison, Spokane Valley Rathdrum Prairie Aquifer Study.
State Drought Preparedness and Response (05W)	204,000	<1%	Grants/loans for drought-related agricultural and municipal water supply facilities projects. Purchase and lease of water rights to improve stream flows in fish critical streams.
State & Local Improvements Revolving – Water Supply Facilities, Referendum 38 (072)	186,000	<1%	Staff support for grants and loans for the improvement and/or construction of agricultural water supply facilities. Technical assistance to irrigation districts. Operation and maintenance of Zosel Dam (Lake Osoyoos in Okanogan County).

Water Resources Program

Operating Fund Sources	Amount	%	Uses
Basic Data (116)	170,000	<1%	Pass-through to the U.S. Geological Survey for stream gauging data collection and studies.
Water Rights Tracking System (10G)	48,000	<1%	Continued development, implementation, and management of a water rights tracking system, including a mapping system and database. Enhancements increase public access to water right data.
State Emergency Water Projects Revolving (032)	40,000	<1%	Grants/loans to alleviate emergency water supply conditions for municipal, industrial, and agricultural water users. Funds supply and distribution system improvements.
Water Rights Processing (16V)	39,000	<1%	Funds (via contract with applicant) the processing of water right applications for a new appropriation, change, transfer, or amendment of a water right, or for the examination, certification, and renewal of certification of water right examiners.
Operating Budget Total	\$63,554,000	100%	
Capital Fund Sources	Amount	%	Uses
State Building Construction (057)	\$165,303,348	61%	New appropriations and reappropriations for installation of water measuring devices, on-farm irrigation efficiencies, water conveyance improvements or equipment replacement, water storage investigations, water acquisition, watershed councils, agriculture water supply, Comprehensive Irrigation District Management Plans, Columbia River feasibility studies and implementation, Sunnyside Valley Irrigation District conservation projects, and the Yakima River Basin Water Storage Feasibility Study.
Watershed Restoration & Enhancement Bond (366)	73,440,235	27%	Capital new appropriations and reappropriations to support grants that assess, plan, and develop projects that include acquiring senior water rights, water conservation, water reuse, stream gaging, groundwater monitoring, and developing natural and constructed infrastructure designed to provide access to new water supplies.
State Taxable Building Construction Account (355)	14,055,918	5%	Capital new appropriations and reappropriations support grants for feasibility studies and construction of storage and water conservation projects, along with purchase or leases of water rights.
Columbia River Basin Water Supply Development (10P)	8,196,037	3%	Capital new appropriations and reappropriations support grants for feasibility studies and construction of storage and water conservation projects, along with purchase or leases of water rights.
Columbia River Basin Water Supply Revenue Recovery (296)	6,662,090	3%	Capital new appropriations and reappropriations support grants for feasibility studies and construction of storage and water conservation projects, along with purchase or leases of water rights.
Other:			
State Drought Preparedness and Response (05W)	1,878,959	<1%	Capital new appropriations and reappropriations to provide grants and the purchase or lease of water rights to mitigate impacts to statewide agricultural, municipal, and environmental (fishery) sectors suffering from drought conditions.

Water Resources Program

Capital Fund Sources	Amount	%	Uses
State & Local Improvements Revolving - Water Supply Facilities (Referendum 38) (072)	294,784	<1%	Capital new appropriations and reappropriations support grants for feasibility studies and construction of storage and water conservation projects, along with purchase or leases of water rights.
Capital Budget Total	\$269,831,371	100%	
Water Resources			
Operating & Capital Budget Total	\$333,385,371		



Derek Hobkirk (left) and Darrell Roberts (right) from Administrative Services, Staff Services, put the final touches on a new “hoteling workstation.” This workstation is an example of the new modern work environment being created in the lobby of the Lacey headquarters building.

Agency Administration Program

Program Mission

The mission of Ecology’s Administration Program is to direct and sustain Ecology’s effort to accomplish its mission – to protect, preserve, and enhance Washington’s environment for current and future generations.

Environmental Threats

Agency Administration helps Ecology’s environmental programs meet the mission of Ecology to protect Washington’s environment by:

- Providing information to residents about environmental threats.
- Promoting good working relationships with members of the Legislature and Tribes.
- Managing financial systems and issues.
- Providing human resource, employment, and labor relations services.
- Providing high-quality information technology services.
- Providing safe and secure workplaces.
- Managing Ecology records and ensuring appropriate public access to those records.
- Developing policies and programs that help the state achieve its greenhouse gas limits and prepare for and respond to climate impacts.

Authorizing Laws

- *Chapter 41.06 RCW, State Civil Service Law*
- *Chapter 41.80 RCW, State Collective Bargaining Law.*
- *Chapter 43.21A RCW, Department of Ecology (1970)*

Constituents/Interested Parties

- *Internal management and staff.*
- *Issues that affect other government agencies or private interests often require Agency Administration to work closely with a full range of groups interested in environmental issues.*

Focus Areas

Modern Work Environment

Ecology will be speeding up the transition to a Modern Work Environment (MWE) during this biennium. Ecology’s Modern Work Environment Strategy will use technology and workspaces to maximize productivity; assure consistent service delivery; promote employee well-being; and support teamwork and collaboration.

Agency Administration Program

Staff Services and Facilities

Ecology's Staff Services and Facility Management sections provide expertise and services related to risk and emergency management, environmental performance, fleet, and facilities. Significant activities for the 2021-23 Biennium include:

- Updating Ecology's Continuity of Operations Plan (COOP) and establishing an Emergency Operations Plan. This will help Ecology quickly respond to emergencies that impact our business and Washington residents.
- Replacing the roof and associated insulation at our headquarters building in Lacey. This project is anticipated to be complete by December 2021 and will increase the building's energy efficiency. This will be done by adding additional insulation and using a white roofing material, which will reflect heat from the sun.

Information Governance

Ecology is implementing a holistic information governance program to better align records management, public records disclosure, litigation discovery, and information technology (IT) services. This will improve transparency, compliance with laws and rules, and organizational efficiency.

Environmental Justice

In 2021, the Legislature passed the Healthy Environment for All (HEAL) Act. This is a historic step toward eliminating environmental and health disparities in communities of color and low-income populations. The 2021-23 budget provided money to staff the new state Office of Equity that was created in 2020. The budget also provided new money and staff for Ecology under the Act. This biennium, Ecology is creating the Office of Equity and Environmental Justice to provide leadership on environmental justice, HEAL

implementation, Title VI compliance, equity analysis, and diversity and inclusion.

Human Resource Management

The Human Resources (HR) team will continue to carry out its strategic operating plan with the vision of powering the nation's leading environmental workforce by:

- Expanding our interagency and private industry partnerships for recruiting, selecting, and hiring highly qualified candidates. This includes a special emphasis on the goal for Ecology's diversity to reflect the people we serve. We will do this through efforts to increase the percentage of Ecology's workforce who self-identify as a person living with a disability and/or a veteran.
- Promoting a culture of respect, engagement, performance, and recognition by continuing to update our leadership development program and succession planning efforts. This includes continuing to enhance and modernize our supervisory and management training to meet the challenges of a dynamic employment environment.
- Continuing to promote a safe and healthy work environment by engaging workers in identifying and reducing hazards in the workplace, strengthening our employees' connection to wellness, and maintaining the high percentage of employees who are accident free.

Information Technology Services

Information technology (IT) is critical to protecting, preserving, enhancing, and transforming Ecology's data-driven decision-making, digital business processes, and technical service delivery. Increasing security, privacy, accessibility, and public records management requirements create both opportunities and challenges. Ecology's digital transformation and preservation strategy focuses on the following:

- Preserving and protecting Ecology’s data and information assets by enhancing our security practices and technologies.
- Transforming from paper-based to digital-based processes and records management.
- Developing improved data management business analytics and reporting capabilities to increase the public’s access to information.
- Providing technical solutions that support an increasingly collaborative and mobile workforce.

Ecology’s Journey to Microsoft M365

As a part of Ecology’s ongoing journey to provide secure and modern technology solutions, we have started to plan, implement, and migrate to the M365 platform. Establishing a solid foundation with M365 will allow Ecology to ensure data security; use specific features to support business needs, including OneDrive, SharePoint Online, and Teams; and build a robust compliance management infrastructure for records management and retention.

Using Customer Feedback and Performance Measures for Process Improvements

Ecology uses results from our survey of permitted and inspected customers, along with other customer feedback, to identify opportunities for improvement. We combine the feedback provided with data from our performance measures to strategically focus where we work on improvements.

Strategic Coordination

Strategic alignment between our agency and program priorities and Results WA goals helps guide Ecology’s work. Strategic coordination provides opportunities to collaborate across Ecology programs and partner with state agencies and other organizations to share knowledge, data, and

align processes. We will continue to look for opportunities to collaborate and identify more possibilities for partnerships to support environmental and public health.

Communications

Communication’s mission is to provide clear, accurate, and timely communications to explain the work Ecology does, why it matters, and the science behind it.

Communications supports Ecology leadership, programs, and regions to help address some of the toughest environmental challenges of our time. They also lead proactive, strategic communications to explain, educate, and engage diverse audiences through the web, social media, news media, and public events.

Our website is our greatest communications and business channel. It’s how we conduct business, provide services, and share news, information, and stories online. People rely on our website to get information about state environmental laws and permits, public meetings, comment periods, scientific findings, interactive modeling, databases and maps, and more.

We seek to reach underserved communities that have been disproportionately impacted by pollution, and help foster equitable opportunities to participate and provide input. We want our work to reflect and respect communities across Washington, to be inclusive, and to speak to diverse audiences.

We strive to stay current with emerging technologies and trends and lean into digital and visual communications. We share environmental stories and news on our Twitter, Facebook, Instagram, YouTube, and blog channels. These tools allow us to provide timely, accurate, compelling, and visual information about the hard work our employees do to protect Washington’s land, air, and water.

We pride ourselves in being timely and responsive to reporters’ needs and being

Agency Administration Program

accountable and transparent to our partners, policy leaders, and the public. We provide round-the-clock communications and outreach support for oil and hazardous chemical spills and staff multi-jurisdiction incident response teams.

Financial Oversight and Management

Around 70 percent of Ecology's total budget is passed through to local partners for work in communities throughout the state. Ecology uses over 70 different accounts, and we are the administrator of 63 of those accounts. It is an imperative and high priority at Ecology to properly manage and provide oversight of these environmental, economic, and public health investments.

Financial Management System Updates

This biennium, Financial Services will continue working with our Information Technology Services Office to replace a custom-built system used to track expenses and revenue for the Toxics Cleanup Program with a modern, supportable, integrated financial management system. This will continue to leverage our investment in the integrated financial management system.

Financial Services is also working closely with the Office of Financial Management on the One Washington project. One Washington is an enterprise-wide transformation program focused on replacing 1960s-era technology with a cloud-based solution for finance, procurement, budget, HR, and payroll processes.

Phase 1a of the program includes replacing the Agency Financial Reporting System (AFRS) with a new, cloud-based enterprise resource planning (ERP) system.

Activities, Results, and Performance Measures

Consolidated Activities

These activities share results with Ecology's environmental programs across the agency.

The administration activity supports Ecology functions by providing leadership, across-program support, and staff presence throughout the state. Administration manages Ecology's long-term financial health and provides information to support sound decision making and resource management by managers. Communication, education, and outreach tools play a major role in protecting and improving the environment. Administration staff serve as liaisons to Congress, the state Legislature, local governments, businesses, Indian tribes, and environmental and resident groups. Administration helps managers and employees create a safe, supportive, and diverse work environment by providing comprehensive human resource services. It also oversees information management (desktop and network services, application development, and data administration) and facility and vehicle management; maintains Ecology's centralized records and library resources; responds to public records requests; and provides mail services.

Expected Results

- Ecology managers, the governor, the State Auditor, the Office of Financial Management (OFM), and the Legislature have confidence in our financial information and can use it to make decisions affecting the environment.
- The public is educated about Ecology's work and role in environmental protection and understands the policies we are developing and the opportunities available to influence decisions.

- Washington's environmental laws and rules are improved through Ecology's relationships with legislators, local governments, businesses, Indian tribes, and environmental and resident groups.
- Ecology managers and supervisors possess the highest-quality communication, performance management, hiring, and leadership skills.
- The Ecology work environment reflects the diversity of the community it serves.
- Agency staff receive reliable, secure, and high-quality desktop support and network services.
- Customers have easy access to information.
- Facilities and vehicles are well-maintained, safe, and efficient.

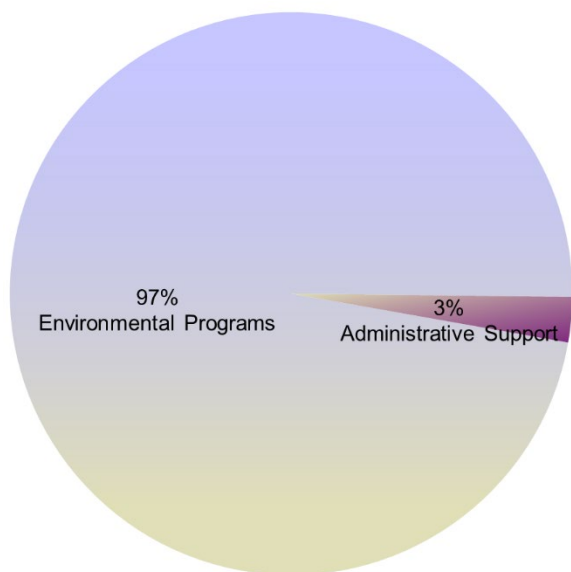
Performance Measures

- Percentage of Ecology-administered dedicated accounts with a positive cash balance at the end of each quarter, excluding accounts that receive bond proceeds.
- Percentage of employees who are accident-free.
- Percentage of Ecology's workforce who self-identify as a person living with a disability.
- Percentage of Ecology's workforce who self-identify as a veteran.
- Percentage of current employees who have completed performance development plans.
- Percentage of employees indicating they are usually or always satisfied with their jobs.
- Percentage of Ecology employees taking the annual employee survey

Agency Administration Program

Administration Program as a Percentage of Ecology's 2021-23 Biennium Budget

Operating & Capital Budget



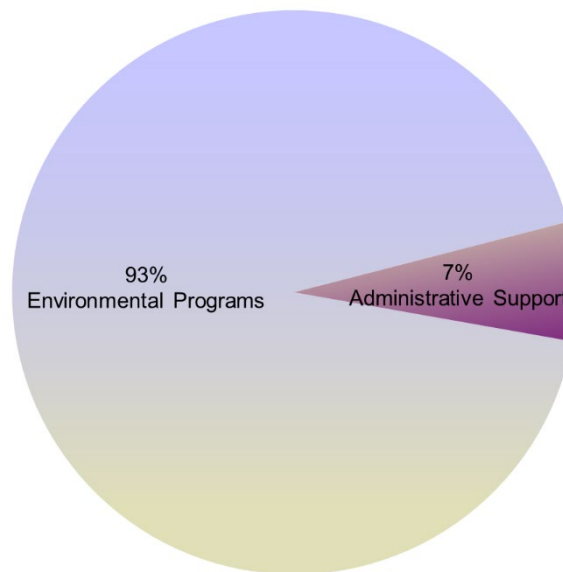
Environmental Programs:

Operating & Capital Budget = 97%

Operating Budget Only = 93%

- Water Quality
- Toxics Cleanup
- Water Resources
- Shorelands & Environmental Assistance
- Air Quality
- Solid Waste Management
- Hazardous Waste & Toxics Reduction
- Environmental Assessment
- Spill Prevention, Preparedness, and Response
- Nuclear Waste

Operating Budget Only



Program A:

Operating & Capital Budget = 3%

Operating Budget Only = 7%

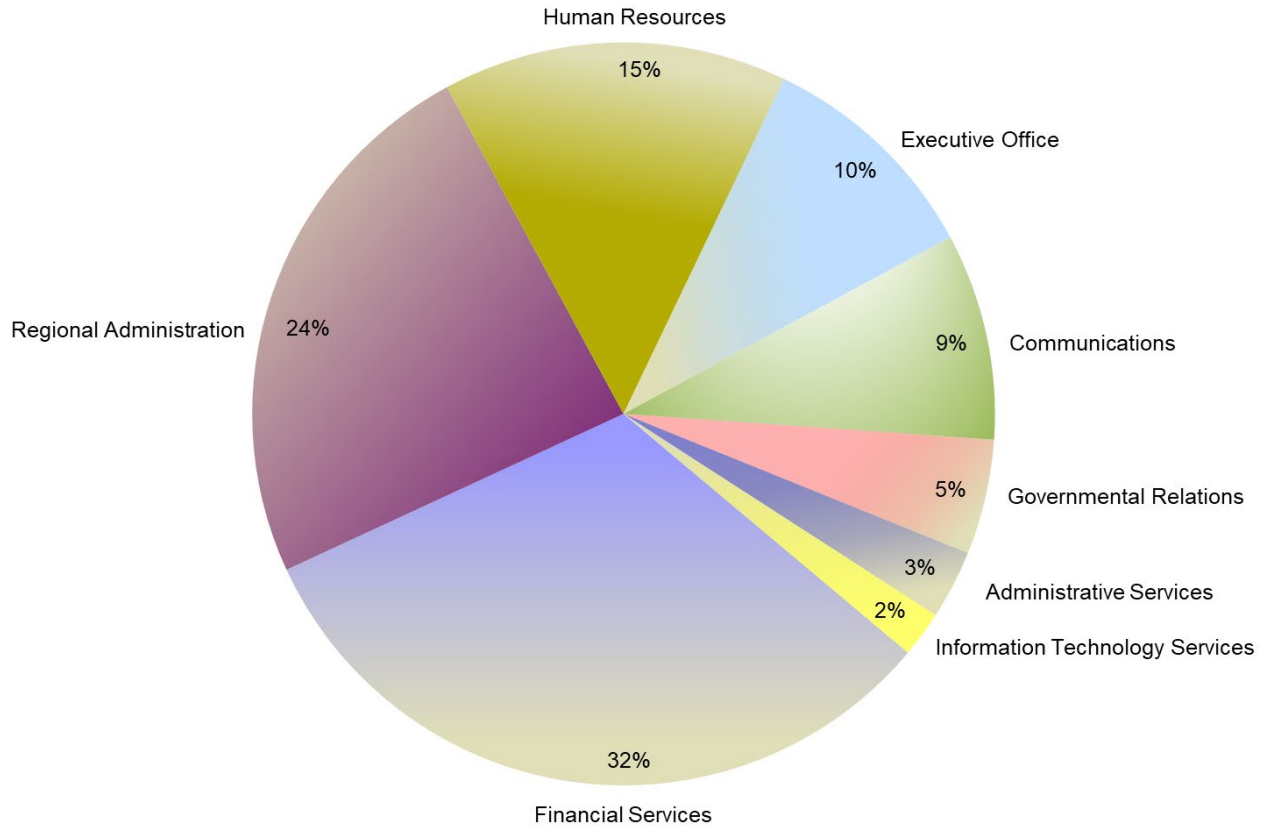
- Financial Services (Budget, Fiscal, Contracts, Payroll, Accounting, and Purchasing)
- Regional Directors & Support
- Human Resources
- Executive (Director, Special Assistants, Tribal Relations, Equity and Environmental Justice)
- Communications
- Governmental Relations
- Administrative Services
- Information Technology Services

Note: Includes Central Business Services

Agency Administration Program

Administration Program 2021-23 Biennium Operating Budget by Activities

Operating = \$45.3 Million | Capital = \$5.4 Million | Total = \$50.7 Million | FTEs = 187.2

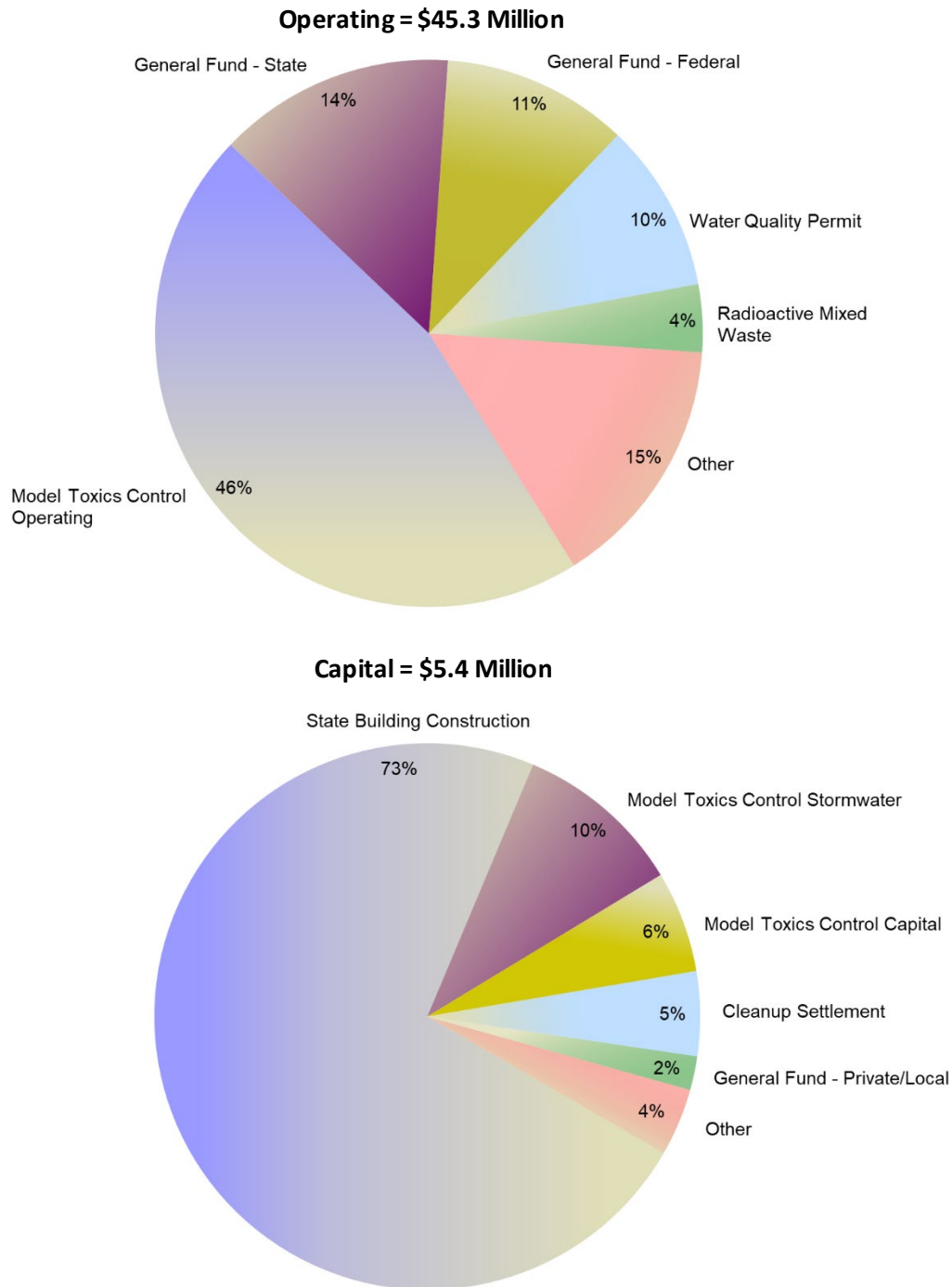


Activities	Amount	%	FTEs
Financial Services	\$14,616,342	32%	63.8
Regional Administration	10,926,202	24%	52.9
Human Resources	6,996,992	15%	28.6
Executive Office	4,498,852	10%	12.8
Communications	4,166,910	9%	14.5
Governmental Relations	2,152,013	5%	7.0
Administrative Services	1,128,266	3%	4.6
Information Technology Services	851,423	2%	3.0
Agency Administration Operating Budget Total	\$45,337,000	100%	187.2

Agency Administration Program

Administration¹⁴ Program 2021-23 Biennium Budget by Fund Source

Operating = \$45.3 Million | Capital = \$5.4 Million | Total = \$50.7 Million | FTEs = 187.2



¹⁴ The agency *Administration Program* is supported by each fund source available to the Department of Ecology. Each fund contributes to the agency *Administration Program* in the same percentage that each fund contributes to the total of the environmental programs' salaries and benefits.

Agency Administration Program

Operating Fund Sources	Amount	%
Model Toxics Control Operating (23P)	\$20,598,000	46%
General Fund – State (001)	6,395,000	14%
General Fund – Federal (001)	5,001,000	11%
Water Quality Permit (176)	4,692,000	10%
Radioactive Mixed Waste (20R)	1,877,000	4%
Other:		
Waste Reduction, Recycling & Litter Control (044)	1,356,000	<3%
General Fund – Private/Local (001)	814,000	<2%
Hazardous Waste Assistance (207)	745,000	<2%
Oil Spill Prevention (217)	516,000	<2%
Water Pollution Control Revolving Administration (564)	427,000	<1%
Worker & Community Right-to-Know (163)	425,000	<1%
Air Operating Permit (219)	399,000	<1%
Air Pollution Control (216)	382,000	<1%
Underground Storage Tank (182)	379,000	<1%
Climate Investment (26B)	374,000	<1%
Reclamation (027)	291,000	<1%
Biosolids Permit (199)	215,000	<1%
Flood Control Assistance (02P)	205,000	<1%
Recycled Content (25R)	44,000	<1%
Dedicated Marijuana (315)	44,000	<1%
Electronic Products Recycling (11J)	42,000	<1%
Wastewater Treatment Plant Operator Certification (21H)	40,000	<1%
Clean Fuels Program (25Q)	34,000	<1%
Wood Stove Education & Enforcement (160)	27,000	<1%

Operating Fund Sources	Amount	%
Paint Product Stewardship (23W)	10,000	<1%
Product Stewardship Programs (16T)	5,000	<1%
Operating Budget Total	\$45,337,000	
Capital Fund Sources	Amount	%
State Building Construction (057)	\$3,937,540	73%
Model Toxics Control Stormwater (23R)	549,770	10%
Model Toxics Control Capital (23N)	330,986	6%
Cleanup Settlement (15H)	277,619	5%
General Fund – Private/Local (001)	120,596	2%
Other:		
Columbia River Basin Water Supply Development (10P)	45,161	<1%
Freshwater Aquatic Weeds (222)	42,063	<1%
Columbia River Basin Water Supply Revenue Recovery (296)	35,356	<1%
Air Pollution Control (216)	21,230	<1%
Waste Tire Removal (08R)	21,225	<1%
General Fund – Federal (001)	13,319	<1%
Aquatic Algae Control (10A)	9,242	<1%
Capital Budget Total	\$5,404,107	
Administration Program Operating & Capital Budget Total	\$50,741,107	

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Ecology's Data – Where It Comes From

This publication relies on financial data for tables and graphs. Operating data is based on initial appropriations from the enacted 2021-23 Biennial Operating Budget. Capital data is based on agency allotments from the initial enacted 2021-23 Biennial Capital Budget. Following are the specific data sources.

Agency Level – Operating

Operating funds by account and program are based on the enacted biennial operating budget appropriations, which match Ecology's initial approved allotments (spending plans) and unallotted funds from the Office of Financial Management (OFM).

Operating funds pass through are based on allotments for grants and other pass-through functions from initial approved allotments.

Agency Level – Capital

Capital funds by account and program are based on OFM-approved allotments for the initial enacted 2021-23 Biennial Capital Budget. They include new appropriations and reappropriations. They do not include unallotted or reserve funds. Unallotted funds are primarily appropriations for future project expenditures that will not be expended in the current biennium.

Capital funds pass-through are based on allotments for grants and contracts as approved by OFM. They include new appropriations and reappropriations. They do not include unallotted funds.

Program Level – Operating

Operating funds by activity are based on activity inventory funding amounts for the enacted biennial budget as approved by OFM.

Operating funds by account are based on initial biennial OFM-approved allotments.

Program Level – Capital

Capital funds by account are based upon OFM-approved allotments for the enacted 2021-23 Biennial Capital Budget. It includes new appropriations and reappropriations. It does not include unallotted or reserve funds.

2021-23 Operating Pass-through Detail by Program

The operating pass-through amount was determined based on total operating initial allotments that were identified as pass-through grants or Washington Conservation Corp and Ecology Youth Corp staff costs that are placed in local communities throughout the state via contractual agreements. This total was divided by the operating total appropriation to determine the pass-through percentage.

Purpose/Grants	Programs	Operating
Local Solid Waste Financial Assistance (MTCA-Op)	Solid Waste Management	\$24,000,000
WCC Crews Salaries	Shorelands & Environmental Assistance	13,415,374
NEP Stormwater Strategic Initiative EPA (GF-Federal)	Water Quality	11,912,920
Stormwater Grants (MTCA-Op)	Water Quality	7,145,654
Nonpoint Source Grants EPA 319 (GF-Federal)	Water Quality	6,316,159
Local Partner Core Operations Grants to Local Air Authorities (GF-Federal & MTCA-Op)	Air Quality	6,185,095
Climate Commitment Act Program for Offset Projects on Tribal Lands (GF-State & Climate Investment)	Air Quality	5,000,000
Water Bank Pilot Major Waterhead (GF-State)	Water Resources	4,500,000
Local Source Control (LSC) (MTCA-Op)	Hazardous Waste & Toxics Reduction	3,942,556
Public Participation Grants (MTCA-Op)	Solid Waste Management	3,700,000
Community Litter Cleanup Program (WRRLLCA)	Solid Waste Management	3,600,000
Oil Spill Response Equipment Caches (MTCA-Op)	Spill Prevention, Preparedness & Response	3,137,000
Shoreline Master Program Grants (MTCA-Op)	Shorelands & Environmental Assistance	3,000,000
Prevent Nonattainment Grants (MTCA-Op)	Air Quality	2,000,000
Drought Grants (GF-State)	Water Resources	1,753,916
Flood Control Assistance Emergency Grants (FCAA)	Shorelands & Environmental Assistance	1,629,000
EYC Crews Salaries (WRRLLCA)	Solid Waste Management	1,329,334
Environmental Restoration Projects (Coastal Protection)	Spill Prevention, Preparedness & Response	1,064,000
Padilla Bay NWS MRC Grants (MTCA-Op)	Shorelands & Environmental Assistance	910,000
DERA Clean Diesel Grant Program Grants (GF-Federal)	Air Quality	874,787
Padilla Bay Kelp Conservation/Recovery Grants (GF-State)	Shorelands & Environmental Assistance	825,390
Pollution Prevention (P2) Grant Program (GF-Federal)	Hazardous Waste & Toxics Reduction	635,104

Purpose/Grants	Programs	Operating
NEP Watershed Grants EPA (GF-Federal)	Shorelands & Environmental Assistance	600,000
Waste Reduction & Recycling Edu. Grants (WRRLCA)	Solid Waste Management	500,000
Litter Cleanup on State Highway Ramps (WRRLCA)	Solid Waste Management	500,000
Wood Stove Education & Enforcement Grants to Local Air Authorities (Wood Stove Ed. & Enforce.)	Air Quality	347,920
Local Partner PM2.5 Grants to Local Air Authorities (GF-Federal)	Air Quality	315,950
Lower Columbia Estuary Partnership (MTCA-Op)	Water Quality	264,000
Whatcom Collaboration Process (GF-State)	Water Resources	250,000
Agriculture Water Supply & Conservation (REF-38)	Water Resources	186,000
Waste Not WA School Awards (WRRLCA)	Solid Waste Management	100,000
San Juan County Water Resources Study (GF-State)	Water Resources	92,000
Total		\$110,032,159

Ecology-Administered Accounts

The Department of Ecology uses up to 72 accounts and is the administering agency for 63 of these accounts. Each account description includes the RCW authority, fund manager, account purpose, authorized uses, and revenue source. Following is a numeric listing of the accounts Ecology administers. For a more detailed description of each account, see the *Administered Accounts – Detail* section of this document.

In the 2019-21 biennium, the Legislature created ten new accounts administered by Ecology and one account was eliminated. On July 1, 2020, the Vessel Response Account (07C) was sunset. In 2020, SHB 1154 created the Chehalis Basin Taxable Account (367). In 2021, ESSB 5022 created the Recycled Content Account (25R) and Recycling Enhancement Account (25S); E2SHB 1050 created the Refrigerant Emission Management Account (25T); E3SHB 1091 created the Clean Fuels Program Account (25Q); and E2SSB 5126 created the Carbon Emissions Reduction Account (26A), Climate Investment Account (26B), Climate Commitment Account (26C), Natural Climate Solutions Account (26D), and Air Quality and Health Disparities Improvement Account (26E).

027 – Reclamation	19N – Diesel Idle Reduction
02P – Flood Control Assistance	207 – Hazardous Waste Assistance
032 – State Emergency Water Projects Revolving	20B – Brownfield Redevelopment Trust Fund
044 – Waste Reduction, Recycling, & Litter Control	20C – Yakima Integrated Plan Implementation Taxable Bond
051 – State and Local Improvements Revolving – Waste Disposal Facilities (Ref. 26)	20R – Radioactive Mixed Waste
055 – State and Local Improvements Revolving – Waste Disposal Facilities (Ref. 39)	216 – Air Pollution Control
05W – State Drought Preparedness and Response	217 – Oil Spill Prevention
072 – State and Local Improvements Revolving – Water Supply Facilities (Ref. 38)	219 – Air Operating Permit
08R – Waste Tire Removal	21B – Chehalis Basin
10A – Aquatic Algae Control	21H – Water Treatment Plant Operator Certification
10G – Water Rights Tracking System	222 – Freshwater Aquatic Weeds
10P – Columbia River Basin Water Supply Development	223 – Oil Spill Response
116 – Basic Data	22G – Photovoltaic Module Recycling
11J – Electronic Products Recycling	22K – Watershed Restoration and Enhancement
11W – Water Quality Capital	23N – Model Toxics Control Capital Account
125 – Site Closure	23P – Model Toxics Control Operating Account
15H – Cleanup Settlement	23R – Model Toxics Control Stormwater Account
15K – Columbia River Water Delivery	23V – Voluntary Cleanup Account
160 – Wood Stove Education and Enforcement	23W – Paint Product Stewardship Account
16T – Product Stewardship Programs	25Q – Clean Fuels Program Account
16V – Water Rights Processing	25R – Recycled Content Account
176 – Water Quality Permit	25S – Recycling Enhancement Account
182 – Underground Storage Tank	25T – Refrigerant Emission Management Account
18B – Columbia River Basin Taxable Bond Water Supply Development	26A – Carbon Emissions Reduction Account
199 – Biosolids Permit	26B – Climate Investment Account
19K – Yakima Integrated Plan Implementation	26C – Climate Commitment Account
	26D – Natural Climate Solutions Account
	26E – Air Quality and Health Disparities Improvement Account

296 – Columbia River Basin Water Supply Revenue Recovery	500 – Perpetual Surveillance and Maintenance
366 – Watershed Restoration and Enhancement Bond	564 – Water Pollution Control Revolving Administration
367 – Chehalis Basin Taxable	565 – Yakima Integrated Plan Implementation Revenue Recovery
377 – Watershed Restoration and Enhancement Taxable Bond	727 – Water Pollution Control Revolving
408 – Coastal Protection	

Ecology uses the following accounts, but is not the administering agency:

001 – General Fund	277 – State Agency Parking
02R – Aquatic Lands Enhancement	355 – State Taxable Building Construction
03K – Industrial Insurance Premium Refund	466 – Statewide Information Technology System Development Revolving
057 – State Building Construction	746 – Hanford Area Economic Investment
163 – Worker and Community Right-to-Know	

Administered Accounts – Detail

Alphabetical Listing

Air Operating Permit Account Fund #219.....RCW 70A.15.1010

Fund Manager: Air Quality Program. Contact Pete Siefer, 360-407-6646

Purpose: To reduce air pollution from large industrial sources.

Authorized Use: To issue permits to major air pollution sources and for small business technical assistance as it relates to the air operating permit program.

Revenue Source: Permit fees are collected from large industrial air pollution sources. These annual fees are set based on source emissions and complexity.

Air Pollution Control Account Fund #216.....RCW 70A.15.1010

Fund Manager: Air Quality Program. Contact Pete Siefer, 360-407-6646

Purpose: To reduce air pollution from agricultural burning, small industrial sources (for example, dry cleaners, rock crushers, coffee roasters), and greenhouse gas emitters.

Authorized Use: To issue permits for agricultural burning and small industrial air pollution sources, to fund agricultural burning alternatives research, and to fund a greenhouse gas reporting program.

Revenue Source: Permit fees are collected for burning (charged on a per-acre basis) and initial or modified industrial air pollution sources (charged on a per-hour basis). In addition, annual fees are charged for small industrial air pollution sources and greenhouse gas emission sources.

Air Quality and Health Disparities

Improvement Account Fund #26E..... RCW 70A.65.280

Fund Manager: Air Quality Program. Contact Pete Siefer, 360-407-6646

Purpose: To reduce criteria pollutants and health disparities in overburdened communities.

Authorized Use: To fund expansion of the air monitoring network and to reduce health disparities in overburdened communities. All funding is subject to Legislative appropriation.

Revenue Source: Auction receipts collected under the Climate Commitment Act.

Aquatic Algae Control Account Fund #10A..... RCW 43.21A.667

Fund Manager: Water Quality Program. Contact Kim Wagar, 360-407-6614

Purpose: To prevent, remove, or manage freshwater and saltwater aquatic blue-green algae.

Authorized Use: To provide grants, grant management, and technical assistance to local governments for the prevention, removal, and management of freshwater and saltwater aquatic blue-green algae.

Revenue Source: This fee is charged in conjunction with annual boat license fees collected by the Department of Licensing. The charge is \$1 per license. Fee set by statute.

Alphabetical Listing

Basic Data Account Fund #116..... RCW 43.21A.067

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To gather stream flow, groundwater, and water quality data or other hydrographic information.

Authorized Use: The fund shall be expended on a matching basis with the U.S. Geological Survey for the purpose of obtaining additional basic information needed for an intelligent inventory of water resources in the state.

Revenue Source: Special purpose account for private individuals to receive stream flow, groundwater, and water quality data, or other hydrographic information. Ecology is required to contract for the information with the U.S. Geological Survey.

Biosolids Permit Account..... Fund #199.....RCW 70A.226.030

Fund Manager: Solid Waste Management Program. Contact My-Hanh Mai, 360-742-6931

Purpose: To maximize the beneficial use of biosolids while at the same time protecting human health and the environment from pollutants and microorganisms that can be found in the material.

Authorized Use: Administer permit applications, review related plans and documents, monitor, evaluate, conduct inspections, oversee performance of delegated program elements, and provide technical assistance.

Revenue Source: Facilities that handle and manage biosolids in the state of Washington, including, but not limited to, wastewater treatment facilities, receiving-only facilities, and septage management facilities are required to pay an annual biosolids permit fee. There is an annual fee of \$956.09 plus an additional fee for each residential equivalent. The fee for each residential equivalent ranges from \$0.086 to \$0.362, depending on the type and size. New biosolids facilities also pay a one-time review fee of \$3,034.35.

Brownfield Redevelopment Trust

Fund Account..... Fund #20BRCW 70A.305.140

Fund Manager: Toxics Cleanup Program. Contact Toxics Cleanup Budget Manager, 360-688-3214

Purpose: For remediation and cleanup activities at the specific redevelopment opportunity zones or specific brownfield renewal authority for which moneys were deposited in the account.

Authorized Use: The moneys may be used only by local governments for remedial actions approved by Ecology under the Model Toxics Control Act, Chapter 70A.305 RCW. To receive moneys from the account, local governments must meet the eligibility and other requirements governing the Remedial Action Grant Program, which are codified in Chapter 173-322A WAC.

Revenue Source: Money deposited voluntarily or appropriated by the Legislature for redevelopment opportunity zones or brownfield renewal authorities, and receipts from settlements or court orders directing payment to the account for a specific redevelopment opportunity zone to resolve liability under the Model Toxics Control Act. (This account retains interest.)

Carbon Emissions Reduction

Account Fund #26A..... RCW 70A.65.240

Fund Manager: Air Quality Program. Contact Pete Siefer, 360-407-6646

Purpose: To fund carbon emissions reduction in the Transportation sector.

Authorized Use: To reduce transportation emissions, invest in alternatives and reductions to single occupancy passenger vehicles, and invest in emissions reduction programs for freight, ferries, and ports. All funding is subject to Legislative appropriation.

Revenue Source: Auction receipts collected under the Climate Commitment Act.

Alphabetical Listing

Chehalis Basin Account Fund #21B RCW 43.21A.733

Fund Manager: Shorelands and Environmental Assistance Program. Contact Jessica S. Moore, 360-407-6994

Purpose: For the operation of the office of Chehalis Basin and Chehalis river basin-related flood hazard reduction and habitat recovery activities per RCW 43.21A.731.

Authorized Use: Ecology administers the Office of Chehalis Basin, in order to aggressively pursue the implementation of an integrated strategy including funding for long-term flood damage reduction and aquatic species restoration in the Chehalis river basin.

Revenue Source: Receipts from direct appropriations from the Legislature, including the proceeds of tax exempt bonds, or moneys directed to the account as required by RCW 43.21A.733. No revenue is estimated at this time. (This account retains interest.)

Chehalis Basin Taxable Account Fund #367 RCW 43.21A.734

Fund Manager: Shorelands and Environmental Assistance Program. Contact Jessica S. Moore, 360-407-6994

Purpose: For the operation of the Office of Chehalis Basin and Chehalis river basin-related flood hazard reduction and habitat recovery activities.

Authorized Use: Ecology administers the Office of Chehalis Basin, in order to aggressively pursue the implementation of an integrated strategy including funding for long-term flood damage reduction and aquatic species restoration in the Chehalis river basin.

Revenue Source: Receipts from the proceeds of taxable bonds for the Office of Chehalis Basin. No bonds have been authorized for this account. (This account retains interest.)

Clean Fuels Program Account Fund #25Q RCW 70A.535.130

Fund Manager: Air Quality Program. Contact Pete Siefer, 360-407-6646

Purpose: To fund the Clean Fuels Program.

Authorized Use: To fund the Clean Fuels Program and reduce the carbon intensity in transportation fuels used in Washington.

Revenue Source: Subject to appropriation by the Legislature, fees and penalties received by the Clean Fuels Program, authorized in RCW and to be established in rule, will be deposited in this account based on a biennial workload analysis prepared by Ecology and the Department of Commerce.

Cleanup Settlement Account Fund #15H RCW 70A.305.130

Fund Manager: Toxics Cleanup Program. Contact Toxics Cleanup Budget Manager, 360-688-3214

Purpose: To conduct remedial actions at a specific facility or to assess or address the injury to natural resources caused by the release of hazardous substances from a specific facility.

Authorized Use: Expenditures may only be used to conduct remedial actions at the specific facility or to assess or address the injury to natural resources caused by the release of hazardous substances from that facility for which the moneys were deposited in the account.

Revenue Source: Receipts from settlements or court orders that resolve a person's liability or potential liability. (This account retains interest.)

Alphabetical Listing

Climate Commitment Account Fund #26C RCW 70A.65.260

Fund Manager: Air Quality Program. Contact Pete Siefer, 360-407-6646

Purpose: To support the transition to a clean energy economy.

Authorized Use: To reduce greenhouse gas emissions in overburdened communities, strengthen the air quality monitoring network, support projects that: promote renewable energy technology and infrastructure; invest in energy efficiency in industry and agriculture; invest in energy efficiency and decarbonization for buildings; and assist affected workers during the transition to a clean energy economy.

Revenue Source: After funding administration of the Climate Commitment Act, 75% of the funds remaining from the Climate Investment Account will be redistributed by the Washington State Treasurer to the Climate Commitment Account.

Climate Investment Account Fund #26B RCW 70A.65.250

Fund Manager: Air Quality Program. Contact Pete Siefer, 360-407-6646

Purpose: To fund projects that support the transition to clean energy, build ecosystem resilience, and support carbon sequestration. Funds in this account may also be used for cap and invest program administrative costs for agencies, up to 5% of auction revenue.

Authorized Use: Subject to appropriation by the Legislature, this account funds administration of the carbon cap and invest program, and provides funds to be transferred to the Climate Commitment Account and Natural Climate Solutions Account per RCW.

Revenue Source: Auction receipts collected under the Climate Commitment Act

Coastal Protection Account Fund #408 RCW 90.48.390

Fund Manager: Spill, Prevention, Preparedness, and Response Program. Contact Lyndsay Gordon, 360-407-7454

Purpose: To provide funds for the restoration of natural resources and the enhancement of prevention, preparedness, and response activities related to oil and hazardous material spills.

Authorized Use: These funds are used for environmental restoration and enhancement projects, investigations of the long-term effects of oil spills, and the development and implementation of aquatic land geographic information systems.

Revenue Source: Penalty payments and payments from oil spill damage assessments received from parties responsible for oil spills and water pollution.

Columbia River Basin Taxable Bond Water Supply Development

Account Fund #18B RCW 90.90.090

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To fund projects or activities that resolve water conflicts in the Columbia River Basin through taxable bond sales and investment in storage, conservation, or access to water supplies.

Authorized Use: Authorized through 2SHB 1803 in the 2011 Legislative Session. Intended to fund projects owned or used by the federal government, nonprofit corporations, or private entities. Two-thirds of the authorized funds are for the development of new storage opportunities; one-third of the authorized funds are for projects that conserve water.

Revenue Source: Direct appropriations from the Legislature and up to \$200 million of state bonds (in combination with the Columbia River Basin Water Supply Development Account) have been authorized for grants to local jurisdictions for new storage and conservation projects. The initial \$200 million authorized in 2006 has been fully obligated to existing projects. (This account retains interest.)

Alphabetical Listing

Columbia River Basin Water Supply

Development Account.....Fund #10P..... RCW 90.90.010

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To fund projects or activities that resolve water conflicts in the Columbia River Basin through non-taxable bond sales and investment in storage, conservation, or access to water supplies.

Authorized Use: Authorized in 2006. Intended to fund projects owned or used by state or local governments.

Two-thirds of the authorized funds are for the development of new storage opportunities; one-third of the authorized funds are for projects that conserve water.

Revenue Source: Direct appropriations from the Legislature and up to \$200 million of state bonds (in combination with the Columbia River Basin Taxable Bond Water Supply Development Account) have been authorized for grants to local jurisdictions for new storage and conservation projects. The initial \$200 million authorized in 2006 has been fully obligated to existing projects. (This account retains interest.)

Columbia River Basin Water Supply

Revenue Recovery AccountFund #296..... RCW 90.90.100

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To resolve water conflicts in the Columbia River Basin through recovery of certain costs for water service contracts or other water supply projects, which may be reinvested in storage, conservation, or access to water supplies.

Authorized Use: Authorized through 2SHB 1803 in the 2011 Legislative Session. May be used to assess, plan, and develop new storage, improve or alter operations of existing storage facilities, implement conservation projects, develop pump exchanges, or any other actions designed to provide access to new water supplies within the Columbia River Basin for both instream and out-of-stream uses.

Revenue Source: Water service contracts, permitting new water supply and/or loans related to the cost to develop new water supplies. Specific repayment terms depend on each individual agreement. (This account retains interest.)

Columbia River Water Delivery

AccountFund #15K..... RCW 90.90.070

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To resolve water conflicts in the Columbia River Basin through new releases of Lake Roosevelt water of approximately eighty-two thousand five hundred acre feet of water, increasing to no more than one hundred thirty-two thousand five hundred acre feet of water in drought years, will bolster the state economy. Intended purposes include new surface water supplies for farmers to replace the use of diminishing groundwater in the Odessa aquifer; new water supplies for municipalities with pending water right applications; enhanced certainty for agricultural water users with water rights that are interruptible during times of drought; and water to increase flows in the river when salmon need it most.

Authorized Use: Authorized through E2SSB 6874 in the 2008 Legislative Session. May be used to implement the agreement between the governor, the Legislature, the Confederated Tribes of the Colville Reservation and the Spokane Tribe of Indians to support additional releases of water from Lake Roosevelt. Because the sovereign and proprietary interests of these Tribal governments are directly affected by water levels in Lake Roosevelt, the state intends to share a portion of the benefits derived from Lake Roosevelt water releases and to mitigate for any impacts such releases may have upon the Tribes.

Revenue Source: The account consists of all moneys transferred or appropriated to the account by law.

Alphabetical Listing

Diesel Idle Reduction Account Fund #19N..... RCW 70A.55.040

Fund Manager: Air Quality Program. Contact Pete Siefer, 360-407-6646

Purpose: To provide loans with low or no interest to loan recipients for the purpose of reducing exposure to diesel emissions and improving public health by investing in diesel idle emission reduction technologies and infrastructure.

Authorized Use: Low or no interest loans to local and state governments to fund projects that reduce exposure to diesel emissions and the associated administration costs of that loan program.

Revenue Source: To date there has been no revenue or appropriation to this account. After an initial appropriation, the remittances from loan recipients (principal and interest) would be deposited into the account to fund future loans.

Electronic Products Recycling

Account Fund #11JRCW 70A.500.130

Fund Manager: Solid Waste Management Program. Contact My-Hanh Mai, 360-742-6931

Purpose: To provide the public with free collection, transportation, and recycling of covered electronic products, including televisions, computers, monitors, and e-readers.

Authorized Use: Oversight of the electronic products recycling program (E-Cycle WA), review and approve plans and plan revisions, monitor, evaluate, and implement the regulations set for the E-Cycle WA program in rule.

Revenue Source: Manufacturers of televisions, computers, monitors, and e-readers who sell their products within or into (as with internet sales) the state of Washington pay a tier-structured fee based on their percentage of the total weight market share in the state of Washington. Depending on the market for the time period in question, manufacturers may move from one tier to another. Ecology is required to adjust the fee rates annually to provide equity to manufacturers based on their market shares. The seven-tiered structure fee ranges from \$0 in tier-7 to \$31,205 in tier-1 (final rates for calendar year 2022).

Flood Control Assistance Account Fund #02P..... RCW 86.26.007

Fund Manager: Shorelands and Environmental Assistance Program. Contact Jessica S. Moore, 360-407-6994

Purpose: To provide grants and technical assistance to local governments for flood damage reduction projects and comprehensive flood hazard management planning.

Authorized Use: Ecology administers the Flood Control Assistance Account Program (FCAAP), providing grants and technical assistance to local governments for flood damage reduction projects and comprehensive flood hazard management planning. Ecology staff assists in the development and approval of local Comprehensive Flood Hazard Management Plans, feasibility studies, public awareness programs, and flood hazard warning programs. Ecology also inspects construction of flood damage reduction projects. Ecology is the state's coordinating agency for the National Flood Insurance Program (NFIP) and provides assistance and support to the 289 communities enrolled in the NFIP. Many of the projects funded through FCAAP grants require detailed hydrologic and engineering studies. Ecology staff must verify that these studies are properly done and meet standard practices.

Revenue Source: \$4 million per biennium transfer from State General Fund as required by RCW 86.26.007.

Alphabetical Listing

Freshwater Aquatic Weeds Account..... Fund #222..... RCW 43.21A.650

Fund Manager: Water Quality Program. Contact Kim Wagar, 360-407-6614

Purpose: To prevent and control or manage invasive freshwater aquatic weeds.

Authorized Use: Funds are used for grants, grant management, and technical assistance to local governments for the prevention, removal, and management of invasive freshwater aquatic weeds.

Revenue Source: This fee is charged in conjunction with annual boat trailer license fees collected by the Department of Licensing. The charge is \$3 per license. Fee set by statute.

Hazardous Waste Assistance Account... Fund #207.....RCW 70A.218.060

Fund Manager: Hazardous Waste and Toxics Reduction Program. Contact Vince Chavez, 360-338-5034
Purpose: To provide technical assistance and compliance education assistance to hazardous substance users and waste generators.

Authorized Use: Assist businesses with the development and implementation of plans for reducing the use of toxic substances and generation of hazardous waste. Develop and distribute educational information on waste reduction to all businesses that use toxic substances or generate hazardous waste.

Revenue Source: Annual fees charged to businesses that generate hazardous waste (RCW 70A.218.020) and businesses required to prepare waste reduction plans under RCW 70A.214.110 and 70A.214.040 (RCW 70A.218.030).

Model Toxics Control Capital

Account Fund #23N.....RCW 70A.305.190

Fund Manager: Toxics Cleanup Program. Contact Toxics Cleanup Budget Manager, 360-688-3214

Purpose: Cleanup toxic sites and address other toxic pollution and contamination issues qualifying for funding under the Model Toxics Control Act.

Authorized Use: Funding is used for capital expenditures to carry out the Model Toxics Control Act, including remedial actions, solid waste plans and programs, toxic air pollutant reduction programs, hazardous waste plans and programs, and plastic or polystyrene foam debris cleanup activities.

Revenue Source: Revenue comes from the hazardous substance tax (HST). A volume-based HST is applied to all petroleum products that can be measured on a per-barrel basis on the first possession in the state of Washington. After first depositing \$50 million per biennium into the Motor Vehicle Fund, revenue collected by the Department of Revenue from this tax is deposited 60 percent to the MTCA Operating Account, 25% to the MTCA Capital Account, and 15% to the MTCA Stormwater Account. The tax rate increases annually by the implicit price deflator for nonresidential structures beginning July 1, 2020. A value-based HST of seven-tenths of one percent of the wholesale value is applied to other petroleum products that cannot be measured by volume on the first possession in the state of Washington. The revenue from this tax is collected by the Department of Revenue and deposited to the MTCA Capital Account. This account also earns revenue through Cost Recovery and the Voluntary Cleanup Program (VCP). Cost Recovery is when Ecology recovers its expenditures from potentially liable parties for the cost of providing cleanup oversight at properties under an order or decree. The Voluntary Cleanup Program (VCP) offers a service to customers who request review of a planned or completed cleanup to determine whether there should be any further action taken. Other revenues include certain fines and penalties issued against persons or businesses, which have not complied with environmental contamination and cleanup laws.

Alphabetical Listing

Model Toxics Control Operating

Account **Fund #23P**..... **RCW 70A.305.180**

Fund Manager: Central Budget Office. Contact Lars Andreassen, 360-407-7049

Purpose: Address toxic pollution and contamination issues qualifying for funding under the Model Toxics Control Act.

Authorized Use: Funding is used for operating expenditures to carry out the Model Toxics Control Act, including toxic cleanup, toxic pollution prevention, hazardous and solid waste management, public participation grants, oil spill prevention and response, air quality programs, and other water and environmental health protection programs.

Revenue Source: Revenue comes from the volume-based hazardous substance tax (HST). This tax is applied to all petroleum products that can be measured on a per-barrel basis on the first possession in the state of Washington. After first depositing \$50 million per biennium into the Motor Vehicle Fund, revenue collected by the Department of Revenue from this tax is deposited 60 percent to the MTCA Operating Account, 25% to the MTCA Capital Account, and 15% to the MTCA Stormwater Account. The tax rate increases annually by the implicit price deflator for nonresidential structures beginning July 1, 2020. Other revenues include penalties issued against persons or businesses that have not complied with environmental contamination laws.

Model Toxics Control Stormwater

Account **Fund #23R**..... **RCW 70A.305.200**

Fund Manager: Water Quality Program. Contact Kim Wagar, 360-407-6614

Purpose: Stormwater pollution control under the Model Toxics Control Act.

Authorized Use: Funding is used to carry out programs directly relating to stormwater pollution control.

Revenue Source: Revenue comes from the volume-based hazardous substance tax (HST). This tax is applied to all petroleum products that can be measured on a per-barrel basis on the first possession in the state of Washington. After first depositing \$50 million per biennium into the Motor Vehicle Fund, revenue collected by the Department of Revenue from this tax is deposited 60 percent to the MTCA Operating Account, 25% to the MTCA Capital Account, and 15% to the MTCA Stormwater Account. The tax rate increases annually by the implicit price deflator for nonresidential structures beginning July 1, 2020.

Natural Climate Solutions Account Fund #26D..... RCW 70A.65.270

Fund Manager: Air Quality Program. Contact Pete Siefer, 360-407-6646

Purpose: To support climate resilience.

Authorized Use: To support projects including but not limited to restoring and protecting estuaries, fisheries, and marine shoreline habitats; increasing carbon sequestration; and supporting remediation and adaptation to the impacts of ocean acidification.

Revenue Source: After funding administration of the Climate Commitment Act, 25% of the funds remaining from the Climate Investment Account will be redistributed by the Washington State Treasurer to the Natural Climate Solutions Account.

Alphabetical Listing

Oil Spill Prevention Account.....Fund #217..... RCW 90.56.510

Fund Manager: Spill, Prevention, Preparedness, and Response Program. Contact Lyndsay Gordon, 360-407-7454

Purpose: To provide funding for oil spill prevention, preparedness, and response activities.

Authorized Use: These funds are used for: routine responses to spills (currently funded from MTCA); development of rules and policies; facility and vessel plan review and approval; contingency plan review and approval, oil spill drills; oil transfer inspections; vessel and rail traffic risk assessment, investigations; enforcement; interagency coordination; and public outreach and education.

Revenue Source: A four-cent tax on the first possession of each barrel of crude oil or petroleum products imported into and consumed in Washington State from vessel or rail and subject to an export tax credit.

Oil Spill Response AccountFund #223..... RCW 90.56.500

Fund Manager: Spill, Prevention, Preparedness, and Response Program. Contact Lyndsay Gordon, 360-407-7454

Purpose: To provide funds for responding to and cleaning up oil spills when state response costs are expected to exceed \$1,000.

Authorized Use: These funds are used for: oil spill response, containment, wildlife rescue, oil cleanup and disposal, and associated costs; natural resource damage assessments and related activities; interagency coordination and public information related to a response; appropriate travel, goods and services, contracts, and equipment related to a response.

Revenue Source: A one-cent tax on the first possession of each barrel of crude oil or petroleum products imported into and consumed in Washington State from vessel or rail and subject to an export tax credit.

Paint Product Stewardship Account.....Fund #23WRCW 70A.515.100

Fund Manager: Solid Waste Management Program. Contact My-Hanh Mai, 360-742-6931

Purpose: To provide a convenient and environmentally sound collection and recycling program for architectural paint in Washington state.

Authorized Use: Administration, oversight, and enforcement of the paint stewardship program.

Revenue Source: A paint stewardship organization representing producers of architectural paint sold in Washington state is required to pay an annual fee for the purposes of funding Ecology's costs to implement and enforce the paint stewardship program.

Perpetual Surveillance and Maintenance Account.....Fund #500..... RCW 43.200.080

Fund Manager: Nuclear Waste Program. Contact Spencer Good, 360-407-7212

Purpose: To fund surveillance and maintenance of the Commercial Low-Level Radioactive Waste Disposal site at Hanford after closure.

Authorized Use: Funds will be transferred to the Federal Government unless the state purchases the land at lease termination.

Revenue Source: Disposal fee of \$1.75 per cubic foot of disposed commercial low-level radioactive waste. (This account retains interest.)

Alphabetical Listing

Photovoltaic Module Recycling

Account **Fund #22G** **RCW 70A.510.010**

Fund Manager: Solid Waste Management Program. Contact My-Hanh Mai, 360-742-6931

Purpose: To provide a convenient, safe, and environmentally sound system for recycling photovoltaic modules, minimizing hazardous waste, and recovering commercially valuable materials.

Authorized Use: Oversight of the photovoltaic module recycling program including guidance development, plan review and approval, enforcement, and rulemaking.

Revenue Source: A one-time flat fee is required from participating manufacturers to recover costs associated with the plan guidance, review, and approval process. In addition to the flat fee, an annual fee may be charged based on the manufacturer's pro rata share of sales in Washington to cover Ecology's annual program implementation costs.

Product Stewardship Programs

Account **Fund #16T** **RCW 70A.505.120**

Fund Manager: Solid Waste Management Program. Contact My-Hanh Mai, 360-742-6931

Purpose: To provide a convenient and environmentally sound collection and recycling program for mercury-containing lights.

Authorized Use: Oversight of the mercury containing lights collection and recovery program, including review and approve plans and plan revisions, monitor and evaluate program operations, and implement the regulations.

Revenue Source: Producers of mercury-containing lights are required to pay an annual fee of \$3,000 per manufacturer.

Radioactive Mixed Waste Account..... Fund #20R.....RCW 70A.300.480

Fund Manager: Nuclear Waste Program. Contact Spencer Good, 360-407-7212

Purpose: To fund implementation of the Hazardous Waste Management Act at facilities that manage radioactive mixed wastes. The HWMA provides a comprehensive statewide framework for the planning, regulation, control, and management of hazardous waste which will prevent land, air, and water pollution and conserve the natural, economic, and energy resources of the state.

Authorized Use: State costs to carry out the duties of the HWMA at radioactive mixed waste facilities, including permitting, compliance, and necessary office, staff and support functions.

Revenue Source: Annual billing to Radioactive Mixed Waste Facility operators. Hanford (USDOE), and two non-Hanford facilities.

Reclamation Account Fund #027 RCW 89.16.020

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To provide for the reclamation and development of such lands in the state of Washington as shall be determined to be suitable and economically available for reclamation and development as agricultural lands.

Authorized Use: To conduct a regulatory program for well construction as provided in Chapter 18.104 RCW. Also, to independently (or in cooperation with the federal government) initiate stream gauging activities, adjudications and conduct investigations and natural resource hydrographic, topographic, river, underground water, mineral and geological surveys for potential hydro power projects as provided in RCW 90.16.060. In addition, funds are used to support staff work at the Departments of Ecology and Fish and Wildlife on Federal Energy Regulatory Commission hydro facility relicensing.

Revenue Source: Fees for well drilling and well driller's license (RCW 18.104.055) and for power licensing (RCWs 90.16.050 and RCW 90.16.060).

Alphabetical Listing

Recycled Content AccountFund #25R.....RCW 70A.245.110

Fund Manager: Solid Waste Management Program. Contact My-Hanh Mai, 360-742-6931

Purpose: To implement post-consumer recycled contents requirements for plastic beverage containers, trash bags, and household cleaning and personal care products plastic containers.

Authorized Use: Implementation, administration, and enforcement of recycled content requirements, including but not limited to rulemaking, registration of producers, technical assistance, prepare workload analysis, review of annual reports and petition requests, assess penalties and enforcement of non-compliance as needed.

Revenue Source: Producers of covered products or their third-party representatives are required to pay an annual fee for the purposes of funding Ecology's costs to implement, administer, and enforce the recycled content requirements.

Recycling Enhancement AccountFund #25S.....RCW 70A.245.100

Fund Manager: Solid Waste Management Program. Contact My-Hanh Mai, 360-742-6931

Purpose: To implement post-consumer recycled contents requirements for plastic beverage containers, trash bags, and household cleaning and personal care products plastic containers.

Authorized Use: For providing grants to local governments for the purpose of supporting local solid waste and financial assistance programs.

Revenue Source: Producers of covered products not meeting the minimum postconsumer recycled content requirements or out of compliance with the registration, reporting, or labeling requirements are subject to an annual penalty as prescribed in the law.

Refrigerant Emission Management

AccountFund #25T RCW 70A.60.050

Fund Manager: Air Quality Program. Contact Pete Siefer, 360-407-6646

Purpose: To fund the Refrigerant Management Program.

Authorized Use: Subject to appropriation by the Legislature, funds may only be used to develop and implement the provisions of RCW 70A.60.030.

Revenue Source: All receipts received by the state from the fees imposed under RCW 70A.60.030.

Site Closure Account.....Fund #125.....RCW 70A.384.050

Fund Manager: Nuclear Waste Program. Contact Spencer Good, 360-407-7212

Purpose: To fund final closure and decommissioning the Commercial Low-Level Radioactive Waste Disposal site at Hanford.

Authorized Use: Funds have been used for an environmental impact study, a site investigation, design of a cover for filled trenches, and will be used for final closure activities.

Revenue Source: Users of the facility and site pay permit fees based on disposal volumes. Revenue also comes from repayment of a \$13.8 million fund transfer from the Site Closure Account to the State General Fund, which started in July 2008. Payment amounts are increased annually by the Implicit Price Deflator. (This account retains interest.)

Alphabetical Listing

State & Local Improvements

Revolving Account – Waste

Disposal Facilities, 1980 (Ref. 39)..... Fund #055..... RCW 43.83.350

Fund Manager: Water Quality Program. Contact Kim Wagar, 360-407-6614

Purpose: Authorizes the Department of Ecology to provide grants and loans for state and local improvements to wastewater treatment facilities, agricultural pollution abatement facilities, and lake restoration projects.

Authorized Use: Grants and loans to local governments.

Revenue Source: Revenue from the State and Local Improvements Revolving Account comes from the sale of bonds and principal and interest payments from loans awarded to local governments for construction of water pollution control facilities and projects that reduce pollution in Washington’s waterways.

State & Local Improvements

Revolving Account – Waste

Disposal Facilities (Ref. 26) Fund #051..... RCW 43.83.330

Fund Manager: Water Quality Program. Contact Kim Wagar, 360-407-6614

Purpose: Authorizes the Department of Ecology to provide grants and loans for state and local facilities and systems for the collection, treatment, control, or disposal of solid or liquid waste materials.

Authorized Use: Grants and loans to local governments.

Revenue Source: Revenue from the State and Local Improvements Revolving Account comes from the sale of bonds and principal and interest payments from loans awarded to local governments for construction of water pollution control facilities and projects that reduce pollution in Washington’s waterways.

State & Local Improvements

Revolving Account – Water

Supply Facilities (Ref. 38)..... Fund #072..... RCW 43.83.340

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To provide grants and loans to agricultural users for water supply facilities.

Authorized Use: Provides grants and loans to applicants for water supply facilities for agricultural use alone or in combination with fishery, recreational, or other beneficial uses of water to assist those entities in improving their efficiency of water use beyond current levels.

Revenue Source: The Legislature authorized \$75 million of general obligation bonds for loans for water supply facilities. The entire \$75 million authorized has been expended. The revenue deposited to this account includes proceeds from the sale of bonds plus payment of principal and interest on loans made to agricultural users.

Alphabetical Listing

State Drought Preparedness and Response Account Fund #05W RCW 43.83B.430

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To provide assistance for drought preparedness activities and projects.

Authorized Use: To provide grants and loans to public entities to alleviate drought conditions.

Revenue Source: Funds are only transferred to this account when there is a state-declared drought. Recent state drought declarations were in 2001, 2005, 2015 and 2019. In 2001, funds were transferred into the account from the State General Fund. In 2005, funds were transferred from the State Taxable Building Construction Account. In 2015, funds were transferred into the account from the State General Fund. Revenues also include payments of principal and interest on loans. In 2019, the account was not used as funding was appropriated to the agency directly from the State General Fund.

State Emergency Water Projects Revolving Account Fund #032 RCW 43.83B.360

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To provide for emergency action during a drought declaration.

Authorized Use: To provide emergency powers to the Department of Ecology to enable it to take actions in a timely and expeditious manner to alleviate hardships and reduce burdens on various water users and uses arising from drought conditions. As used in this chapter, "drought condition" means that the water supply for a geographical area or for a significant portion of a geographical area is 75 percent below normal and the water shortage is likely to create undue hardships for various water uses and users.

Revenue Source: The initial \$18 million general obligation bonds established for projects funded from this account have been expended. In 2001 and 2005, there were transfers from the State General Fund to this account for drought projects. Interest and principal paid on loans to local jurisdictions for drought relief are also deposited into this account.

Underground Storage Tank Account.... Fund #182 RCW 70A.355.090

Fund Manager: Toxics Cleanup Program. Contact Toxics Cleanup Budget Manager, 360-688-3214

Purpose: To conduct inspections and provide technical assistance aimed to prevent leaks that cause underground storage tank contamination into soil and groundwater.

Authorized Use: To adopt and enforce rules establishing requirements for all underground storage tanks regulated under the federal Resource Conservation and Recovery Act.

Revenue Source: Tank fees and fines for tank violations.

Voluntary Cleanup Account..... Fund #23V RCW 70A.305.170

Fund Manager: Toxics Cleanup Program. Contact Toxics Cleanup Budget Manager, 360-688-3214

Purpose: Through cost recovery, a fee structure, or both collect all costs associated with Ecology's expedited process for providing advice and assistance related to cleanup of hazardous waste sites under the Voluntary Cleanup Program.

Authorized Use: To support Ecology's expedited process for providing advice and assistance related to cleanup of hazardous waste sites under the Voluntary Cleanup Program.

Revenue Source: Cost recovery or fees collected from customers in the Voluntary Cleanup Program requesting reviews the expedited process.

Alphabetical Listing

Waste Reduction, Recycling, and

Litter Control Account.....Fund #044.....RCW 70A.200.140

Fund Manager: Solid Waste Management Program. Contact My-Hanh Mai, 360-742-6931

Purpose: To control, remove and prevent litter and develop public education programs concerning the litter problem, and to reduce and recycle waste materials, including those related to litter.

Authorized Use: Litter prevention and pickup (through Ecology Youth Corps, contracts and grants with local governments, and other state agencies), litter prevention campaign, litter survey, administration of litter program. Implementation of waste reduction, recycling, and composting efforts, including: providing technical assistance to local governments and commercial businesses to increase markets, and recycling and composting programs; educating residents about waste and litter reduction, and recycling and composting; increasing access to recycling and composting programs, especially for food packaging and plastic bags; and for programs to reduce wasted food and food waste.

Revenue Source: Wholesalers and retailers in Washington State pay a litter tax of \$0.15 per \$1,000 of gross proceeds as set in statute for all sales of food for humans or pets, cigarettes and tobacco products, soft drinks, carbonated water, beer, wine, newspapers, magazines, household paper and paper products, glass containers, metal containers, plastic or fiber containers made of synthetic materials, cleaning agents, and toiletries.

Waste Tire Removal AccountFund #08R.....RCW 70A.205.415

Fund Manager: Solid Waste Management Program. Contact My-Hanh Mai, 360-742-6931

Purpose: To cleanup unauthorized waste tire piles, and prevent future accumulation of unauthorized waste tire piles.

Authorized Use: Administer and manage contracts to clean up and prevent unauthorized tire piles; establish and maintain a website to disseminate information about preventing tire piles; and provide enforcement of waste tire disposal regulations.

Revenue Source: RCW 70A.205.405 authorizes a one dollar per tire fee on the retail sale of new replacement vehicle tires. This fee is collected from consumers making new tire purchases. Only one million dollars of the revenue collection is dedicated towards cleanup and prevention of unauthorized waste tire piles. RCW 70A.205.425 requires that on September 1st of odd-numbered years, any balance in excess of one million dollars from the Waste Tire Removal Account must be transferred to the Motor Vehicle Account for the purposes of road wear-related maintenance on state and local public highways.

Wastewater Treatment Plant

Operator Certification Acct.....Fund #21H.....RCW 70A.212.170

Fund Manager: Water Quality Program. Contact David Giglio, 360-407-6489

Purpose: To fund the certification of wastewater treatment plant operators.

Authorized Use: Fees shall be sufficient to fully recover the costs of the wastewater operator certification program, to include: evaluating applications necessary to verify compliance with certification requirements; maintaining and administering credible examinations; ensuring operators receive necessary training, outreach, and technical assistance; enforcing certification program requirements; providing necessary education and training to program staff; and supporting the overhead expenses related to administering the program.

Revenue Source: Wastewater treatment plant operator certification application and renewal fees.

Alphabetical Listing

Water Pollution Control Revolving

Account Fund #727 RCW 90.50A.020

Fund Manager: Water Quality Program. Contact Kim Wagar, 360-407-6614

Purpose: To provide low interest loans to local governments for construction of water pollution control facilities and related activities that contribute to improved statewide water quality.

Authorized Use: Loans to local governments.

Revenue Source: Revenue for the Water Pollution Control Revolving Account comes primarily from two sources. The first is a yearly federal EPA grant that averages \$25-28 million. The second source of revenue is principal and interest payments from loans awarded to local governments for construction of water pollution control facilities and other projects that reduce pollution in Washington's waterways. (This account retains interest.)

Water Pollution Control Revolving

Administration Account Fund #564 RCW 90.50A.090

Fund Manager: Water Quality Program. Contact Kim Wagar, 360-407-6614

Purpose: Ecology is authorized to assess administration charges as a portion of the debt service for loans issued under the water pollution control revolving fund created in RCW 90.50A.020. The sole purpose of assessing administration charges is to predictably and adequately fund Ecology's costs of administering the water pollution control revolving fund loan program.

Authorized Use: Administration costs associated with conducting application processes, managing contracts, collecting loan repayments, managing the revolving fund, providing technical assistance, and meeting state and federal reporting requirements. Information and data system costs associated with loan tracking and fund management.

Revenue Source: Any administration charges levied by the department in conjunction with administration of the water pollution control revolving fund and any other revenues derived from gifts, grants, or bequests pledged to the state for the purpose of administering the water pollution control revolving fund. (This account retains interest.)

Water Quality Capital Account Fund #11W RCW 70A.135.100

Fund Manager: Water Quality Program. Contact Kim Wagar, 360-407-6614

Purpose: To provide grants to public bodies for financing construction of water pollution control facilities and nonpoint source activities.

Authorized Use: Grants to local governments.

Revenue Source: There is no specific revenue source for this account. It was intended that this account would be supported by a special appropriation from the Water Quality Account (WQA). In the 2009 Legislative Session, the WQA fund balance and statutory distribution from tobacco taxes was transferred to the State General Fund.

Alphabetical Listing

Water Quality Permit Account Fund #176..... RCW 90.48.465

Fund Manager: Water Quality Program. Contact David Giglio, 360-407-6489

Purpose: To fund regulation of the disposal of solid or liquid waste material into waters of the state, including commercial or industrial operators discharging solid or liquid waste material into sewage systems operated by municipalities or public entities.

Authorized Use: Fees are established in amounts to fully recover and not to exceed expenses in: processing permit applications and modifications; monitoring and evaluating compliance with permits; conducting inspections; securing laboratory analysis of samples; reviewing plans and documents directly related to operations of permittees; overseeing performance of delegated pretreatment programs; and supporting the overhead expenses directly related to these activities.

Revenue Source: Annual fees are based on a variety of factors including the complexity of permit issuance and compliance. Fee interval ranges from \$130-176,697 for industries; \$2.07-\$2.16 (per residential equivalent) for municipalities; and \$103-\$41,232 for general permits. Stakeholders review fees each biennium. Ecology must go through formal rulemaking to amend the fees (Chapter 173-224 WAC). This can only occur every two years.

Water Rights Processing Account..... Fund #16V..... RCW 90.03.650

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To provide funds for processing water right applications.

Authorized Use: To support the processing of water right applications for a new water appropriation, as well as a request to change, transfer, or amend an existing water right.

Revenue Source: Fees from applicants seeking to process a water right through expedited processing RCW 90.44.540 or 90.03.655 and Certified Water Rights Examiners per RCW 90.03.665 are deposited to this account.

Water Rights Tracking System

Account Fund #10G..... RCW 90.14.240

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To provide funds for management of a water rights tracking system.

Authorized Use: For the development, implementation, and management of a water rights tracking system, including a water rights mapping system and a water rights database.

Revenue Source: Twenty percent of the water right application or transfer/change/amendment fees collected by the Department of Ecology under RCW 90.03.470 are deposited to this account.

Watershed Restoration and

Enhancement Account..... Fund #22K..... RCW 90.94.060

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To provide funds for administering the water availability act (Streamflow Restoration Program).

Authorized Use: To cover costs of administering the water availability act, including implementing watershed planning projects and watershed restoration and enhancement projects; and collecting data and completing studies necessary to develop, implement, and evaluate watershed restoration and enhancement projects.

Revenue Source: Fees and direct appropriations. Individuals seeking a permit that includes construction of a permit exempt well pays a \$500 fee to the local permitting authority for the purpose of implementing a watershed restoration and enhancement program, and the local governments remit \$350 of each fee to Ecology by August 1st of each year. Fees must be collected and used in the water resource inventory area in which the fee originated.

Alphabetical Listing

Watershed Restoration and

Enhancement Bond Account.....Fund #366..... RCW 90.94.080

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To fund projects using tax exempt bonds for administering the water availability act (Streamflow Restoration Program).

Authorized Use: To fund projects using tax exempt bonds. Projects include acquiring senior water rights, water conservation, water reuse, stream gaging, groundwater monitoring, and developing natural and constructed infrastructure designed to provide access to new water supplies, with priority given to projects in watersheds developing specified plans and watersheds participating in the defined pilot project.

Revenue Source: Up to \$300 million of state bonds (in combination with the Watershed Restoration and Enhancement Taxable Bond Account) have been authorized for projects to achieve the goals of the water availability act until June 30, 2033. (This account retains interest.)

Watershed Restoration and

Enhancement Taxable Bond

AccountFund #377..... RCW 90.94.070

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: To fund projects using taxable bonds for administering the water availability act (Streamflow Restoration Program).

Authorized Use: To fund projects using taxable bonds. Projects include acquiring senior water rights, water conservation, water reuse, stream gaging, groundwater monitoring, and developing natural and constructed infrastructure designed to provide access to new water supplies, with priority given to projects in watersheds developing specified plans and watersheds participating in the defined pilot project.

Revenue Source: Up to \$300 million of state bonds (in combination with the Watershed Restoration and Enhancement Bond Account) have been authorized for projects to achieve the goals of the water availability act until June 30, 2033. (This account retains interest.)

Wood Stove Education &

Enforcement Account.....Fund #160.....RCW 70A.15.3620

Fund Manager: Air Quality Program. Contact Pete Siefer, 360-407-6646

Purpose: To reduce air pollution from indoor wood stove use.

Authorized Use: To support educational programs on proper wood stove use and enforcement of opacity (density of smoke coming out of chimney) regulations as they relate to indoor wood stove burning.

Revenue Source: A \$30 fee is charged to buyers of new wood stoves and fireplaces. Ecology receives \$10 of this fee; the other \$20 is passed through to local air authorities based on population.

Alphabetical Listing

Yakima Integrated Plan

Implementation Account.....Fund #19K..... RCW 90.38.070

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: In cooperation with the United States and local water users, to fund projects or activities that resolve water conflicts in the Yakima River Basin through non-taxable bond sales and investment in storage, conservation, or access to water supplies pursuant to the Yakima Integrated Plan. The program is intended to satisfy both existing rights, and others presently unmet as well as future needs of the basin.

Authorized Use: Authorized in 2013. Intended to fund Yakima Integrated Plan projects owned or used by state or local governments.

Revenue Source: Direct appropriations from the Legislature, moneys directed to the account pursuant to Chapter 90.38 RCW, and any other sources deposited to the account. (This account retains interest.)

Yakima Integrated Plan

Implementation Revenue

Recovery Account.....Fund #565..... RCW 90.38.090

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: In cooperation with the United States and local water users, to fund projects or activities that resolve water conflicts in the Yakima River Basin through bond sales (taxable and non-taxable) and investment in storage, conservation, or access to water supplies pursuant to the Yakima Integrated Plan. The program is intended to satisfy both existing rights, and others presently unmet as well as future needs of the basin.

Authorized Use: Authorized in 2013. Intended to fund assessment, planning and/or development of water supply projects under the Yakima River Basin Integrated Resource Management Plan or for any other actions that provide access to new water supplies within the Yakima River Basin for both instream and out-of-stream uses.

Revenue Source: Water service contracts, permitting new water supply and/or loans related to the cost to develop new water supplies. Specific repayment terms depend on each individual agreement. (This account retains interest.)

Yakima Integrated Plan Implementa-

tion Taxable Bond AccountFund #20C..... RCW 90.38.080

Fund Manager: Water Resources Program. Contact Jim Skalski, 360-407-6617

Purpose: In cooperation with the United States and local water users, to fund projects or activities that resolve water conflicts in the Yakima River Basin through taxable bond sales and investment in storage, conservation, or access to water supplies pursuant to the Yakima Integrated Plan. The program is intended to satisfy both existing rights, and others presently unmet as well as future needs of the basin.

Authorized Use: Authorized in 2013. Intended to fund Yakima Integrated Plan projects owned or used the federal government, non-profit corporations, or private entities.

Revenue Source: Direct appropriations from the Legislature, moneys directed to the account pursuant to Chapter 90.38 RCW, and any other sources deposited to the account. (This account retains interest.)

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