



DEPARTMENT OF
ECOLOGY
State of Washington

2013 – 2015 Strategic Plan

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Department of Ecology



2013 – 2015 Strategic Plan

Washington State Department of Ecology
Olympia, Washington

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Mission

The Mission of the Department of Ecology is to protect, preserve and enhance Washington's environment, and promote the wise management of our air, land and water for the benefit of current and future generations.

Goals

- Prevent pollution.
- Clean up pollution.
- Support sustainable communities, and natural resources.

About Ecology

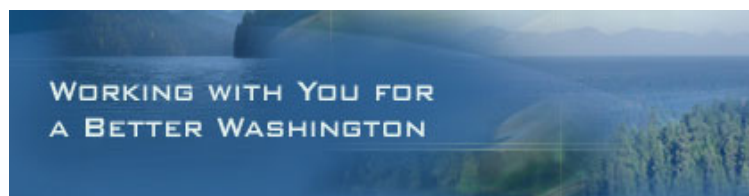
Ecology provides products and services in the areas of:

- Environmental permitting.
- Compliance assistance.
- Inspections and enforcement.
- Contracts, loans, and grants.
- Environmental monitoring and analysis.
- Policy, rule, and technical guidance.
- Education and outreach.

We deliver these services through on-site technical assistance and inspections, field monitoring and sampling, hosting workshops and public meetings, speaking with trade associations, a website, walk-in services in each office, and several toll-free telephone numbers.

The Department of Ecology employs approximately 1,650 people located in communities throughout Washington State. Our headquarters is in Lacey, along with 13 offices located throughout the state to provide convenient service to our customers and stakeholders in those areas. Our major regional offices are in Spokane, Yakima, Lacey, and Bellevue. We have smaller field offices and staff in Bellingham, Vancouver, Manchester, Richland, Walla Walla, Winthrop, and Padilla Bay.

Ecology's executive management team is located in our Lacey Headquarters Office and is primarily responsible for adopting policies, rules, and guidance to support our mission and goals. The regional and field offices provide direct regulatory compliance and technical assistance to customers, stakeholders and citizens. Our environmental laboratory provides scientific analysis of air, land, and water samples.



The Department of Ecology (Ecology) is Washington's principal environmental management agency and was created in 1970 by the Washington State Legislature ([Chapter 43.21A RCW](#)).

The legislature recognizes and declares it to be the policy of this state, that it is a fundamental and inalienable right of the people of the state of Washington to live in a healthful and pleasant environment and to benefit from the proper development and use of its natural resources. The legislature further recognizes that as the population of our state grows, the need to provide for our increasing industrial, agricultural, residential, social, recreational, economic and other needs will place an increasing responsibility on all segments of our society to plan, coordinate, restore and regulate the utilization of our natural resources in a manner that will protect and conserve our clean air, our pure and abundant waters, and the natural beauty of the state.



We are organized into ten environmental programs plus administration. The ten environmental programs are: Water Quality; Water Resources; Shorelands and Environmental Assistance; Waste 2 Resources; Air Quality; Toxics Cleanup; Environmental Assessment; Hazardous Waste and Toxics Reduction; Spill Prevention, Preparedness, and Response; and Nuclear Waste. Our administrative office includes: Executive, Human Resources; Financial Services, Administrative Services, Information Technology Services, Communication and Education; and Governmental Relations.

Ecology Objectives

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Information for each objective includes:

- Environmental threats.
- Authorizing laws.
- Constituents and interested parties.
- Strategic priorities.
- Activities, results, and performance measures.

Strategic Priorities

Washington’s air, land, and water quality have improved dramatically since the Department of Ecology was created in 1970. However, our environment is still under great pressure from rapid urbanization, growing demands on water supplies, and toxic substances used in industrial processes and many consumer products.

Our priorities present significant challenges, but they also offer immense opportunity to make a real difference in protecting and improving human health, the natural environment we depend on, and our quality of life in the Pacific Northwest. We have reaffirmed the following strategic priorities:



- Protect and restore Puget Sound.
- Reduce Toxic Threats.
- Successful Water Management and Healthy Watersheds.

Protect and Restore Puget Sound

Puget Sound, the largest estuary in the western United States, is in trouble:

- Swimming beaches and shellfish beds are closed because of contamination.
- Toxic chemicals are concentrating in urban bays and entering the food chain.
- Many species, such as salmon, orca and shorebirds, are in serious decline.
- The region must accommodate an additional 1.5 million people by 2025.

To help address these and other challenges, we are advancing integrated solutions to protect and restore Puget Sound by 2020.

Goals

We will know whether or not we are on the right path if the following have been achieved by 2015:

- State and/or federal policy to address toxics at the source have been achieved.
- New stormwater requirements for local governments are being implemented.
- Instream flow programs for Puget Sound are being implemented including mitigation and compliance work.
- Shellfish beds are being re-opened due to efforts to better control nonpoint water quality pollution.
- Updated Shoreline Master Programs throughout the basin are being implemented.
- Innovative and watershed-based mitigation programs are demonstrating improved environmental outcomes.
- Public awareness and large-scale citizen engagement in implementing the Puget Sound Action Agenda is evident and growing.

Strategies

Effectively Implement Ecology Strategic Priorities in Puget Sound

Reduce Toxic Threats

- Work with key partners to implement a toxics reduction strategy for Puget Sound, including initiation of Washington's Green Chemistry road map to institute safer approaches to product design.
- Implement priority actions per findings of Puget Sound Toxics Assessment, including initiating a task force to identify safer roofing alternatives.
- Expand the Puget Sound Partnership STORM social marketing effort as foundation for Sound wide education and outreach, including increased emphasis on source control.



Support Successful Water Management and Healthy Watersheds

- Establish instream flows in remaining priority Puget Sound watersheds.
- Adopt and enforce rational permit-exempt well policy.
- Implement mitigation strategies through instream flow rules to provide adequate water for people, farms and fish.

Effectively Implement Other Key Strategic Initiatives in Puget Sound

Stormwater

- Sustain administration of multiple permits that require basic stormwater management responsibilities, focusing increasingly on improved performance and environmental outcomes.
- Complete watershed characterization and basin specific studies to develop an initial retrofit project list to help prioritize funding needs for legacy stormwater problems.
- Work with municipalities that operate treatment plants and have stormwater jurisdiction and land use decision making options to avoid expensive treatment plant upgrades by addressing nonpoint and stormwater.
- Implement the Puget Sound Coordinated Stormwater Monitoring Program to inform stormwater management broadly and implementation of permits specifically.
- Work with Washington Stormwater Center to provide low impact development training for local government and stormwater professionals.

Nutrients

- Collaborate with Washington State Conservation Commission, Natural Resource Conservation Service, Environmental Protection Agency (EPA), Washington Department of Agricultural and Conservation Districts to scale up implementation of clean water best management practices on agricultural lands in priority areas.
- Help institute local Pollution Identification and Correction programs in support of shellfish protection, targeting nutrient hot spots.
- Complete the South Sound Dissolved Oxygen Study and related efforts to determine whether wastewater treatment plants need to upgrade to advanced treatment.
- Implement recommendations from the Ocean Acidification Blue Ribbon Panel.

Shorelines

- Work with local governments to complete updates and begin implementation of all Shoreline Master Programs throughout Puget Sound.
- Work with local governments to implement and account for the *No Net Loss* policy of shoreline functions as required by state law.
- Work with sister agencies to advance green shorelines legislation to encourage environmentally preferable alternatives to shoreline stabilization techniques.
- Implement and ensure innovative, watershed-based mitigation programs are efficient and environmentally successful, including wetland banks and in-lieu-fee programs.



Effectively Implement Ongoing Responsibilities

To improve overall management of Ecology's Puget Sound work, Government Management Accountability and Performance (GMAP) and other accountability systems will continue on a regular basis and include our priorities and initiatives cited above as well as other activities that support Puget Sound recovery.

This accountability work will help us in two primary ways: 1) improve Ecology's overall performance; and, 2) prepare Ecology for Governor and/or Puget Sound Partnership GMAP accountability sessions. Following are some Ecology activities that are likely to be affected by Puget Sound GMAP:

- Wood stoves, diesel retrofits, ozone compliance.
- Status and trends monitoring, effectiveness monitoring, focused science.
- Urban Waters, Local Source Control.
- Mitigation that Works.
- Spills prevention and response.
- Toxic site cleanups.
- Water quality permitting and Total Maximum Daily Loads (TMDLs).
- Instream flow.
- Coordinated pollution prevention grants, green buildings, and Chemical Action Plans.

Sustain and Wisely Invest Significant New Federal Funding

Ecology is the "Lead Organization" for two significant areas of federal investment in Puget Sound: Watershed Protection and Restoration, and Toxics and Nutrients Prevention, Reduction and Control. Through these two cooperative agreements, Ecology works with the EPA, the Puget Sound Partnership and other partners to administer and implement strategies representing more than \$26.4 million as of July 2012. The majority of these expenditures support local partners implementing the Puget Sound Action Agenda.

Reduce Toxic Threats

Washington is a national leader when it comes to enacting and implementing policies to clean up, manage, and prevent problems caused by the ongoing use of, and exposure to, toxics throughout our economy. Yet toxic substances and pollutants continue to pose risks to human health and the environment. They are in our air, water and soil, and in our bodies. Some toxic substances impair development, some affect reproduction, some disrupt our body chemistry, and some cause cancer. Some chemicals have limited impacts on humans but can be devastating to fish or other species. Of the tens of thousands of chemicals in use today, we know about the toxicity of very few. And we know even less about the combined effects of all these chemicals.

Nearly all environmental programs in Ecology are working to reduce toxic threats in one way or another. We have well established and effective programs to clean up and manage toxic substances. However, these programs were not designed to prevent many of the point or nonpoint releases of toxics that we are now finding to be problematic. Nor are we authorized to regulate toxic substances in products before they become wastes.



Ecology is working to integrate and balance three ways of reducing toxic threats:

- Prevent toxic substances from being used in the first place.
- Limit or manage the amount of toxic substances that are put into the environment.
- Clean up after toxic substances have polluted air, land, water or sediment.

We must continue to refine our permitting and compliance work to improve our ability to manage ongoing toxic releases. And we must continue to address the legacy left behind from the use of toxic substances through our cleanup programs. But ultimately, prevention programs are the smartest, cheapest and healthiest approaches to reduce toxic threats.

Goals

While continuing our investments in cleanup and management, Ecology is building its capacity to prevent problems caused by the ongoing generation and use of toxic substances. Our goals are to:

- Improve our ability to protect the most vulnerable human and wildlife populations.
- Avoid preventable future impacts and costs.
- Promote a strong, protective federal chemical policy and preserve the state's ability to innovate in this area.
- Create a systems approach to reducing toxic threats that is effective, fair and economically feasible.

Strategies

Ecology has crafted a strategic framework to accomplish these goals over the next three years:

- Characterize toxic substances, sources of these chemicals, and pathways for them to affect people and the environment.
- Reduce and phase out the worst of these toxic substances, known as PBTs or persistent, bioaccumulative, toxic substances.
- Promote technological innovation and solutions.
- Increase compliance and enforcement of laws to limit or manage the use of toxic substances.
- Pursue innovative cleanup.
- Educate the public.

Characterize Toxic Substances, Sources and Pathways

- Continue to implement the Children's Safe Products Act reporting requirement and use of the reported data to improve our understanding of chemicals of concern in children's products.
- Coordinate multiple Ecology program information technology projects aimed at collecting and managing data on toxic chemicals in products.
- Work with key partners to develop a strategy to address emerging chemicals and nanotechnology based materials.
- Identify key contaminants in Puget Sound based on the completed toxics loading study and other work to identify chemicals of concern.



- Characterize chemicals of concern in runoff from roofing materials.
- Work with key stakeholders to develop and implement a survey to provide an overview of pesticide use in urban areas.

Phase Out Persistent, Bioaccumulative, Toxic Chemicals

Implement key recommendations from the polycyclic aromatic hydrocarbon (PAH) Chemical Action Plan including:

- Enhance existing programs to reduce PAHs in air, particularly from wood stoves and diesel engines.
- Increase efforts to remove creosote-treated wood, a significant source of PAH, from Puget Sound.
- Complete a Chemical Action Plan on perfluorinated compounds (PFCs).

Promote Technological Innovation and Solutions

- Work with other member states of the Interstate Chemicals Clearinghouse to develop a guidance document on how to conduct safer chemical alternatives assessments.
- Work with volunteer businesses to provide technical assistance to demonstrate application of GreenScreen 2.0 as a tool for identifying less toxic alternatives. Based on these efforts, develop case studies to demonstrate the business case for switching to less toxic alternatives.
- Work with key stakeholders to develop the business case for adoption of green chemistry and green engineering practices in Washington.
- Create a sustainable land care accreditation program for landscape professionals in the Puget Sound watershed.
- Promote stormwater retrofit projects.
- Provide Low Impact Development training.
- Revise surface water quality standards and sediment standards to address overlapping issues.
- Continue to develop and implement strategies to reduce petroleum releases, particularly chronic spills, drips and leaks from cars and trucks as well as recreational boats and small commercial vessels.
- Rethink roofing materials to reduce this significant source of metals and possibly phthalates.
- Continue to push for much-needed federal chemical policy reform.

Increase Compliance and Enforcement

- Continue to provide multi-program stormwater technical assistance as part of inspections and the work of Local Source Control Specialists.
- Integrate GreenScreen 2.0 into pollution prevention work focused on target metals.
- Conduct product testing to enforce the reporting requirement for the Children's Safe Products Act.
- Implement and enforce existing bans on polybrominated diphenyl ethers (PBDEs), Bisphenol A, coal tar sealants, copper in brake pads, copper in boat paint and lead in wheel weights.
- Revise the Surface Water Quality Standards to improve regulatory tools to help permittees comply.

Pursue Innovative Cleanup

- Implement revised Sediment Management Standards to expedite sediment cleanup by providing clear, workable and predictable requirements for such actions.



Public Education

- Continue to develop outreach materials to educate consumers and businesses about priority chemicals in the environment, sources of these chemicals and how they can help prevent releases and avoid exposure.
- Share information on the presence of toxic chemicals in children's products.

Support Successful Water Management and Healthy Watersheds

Washington residents have commonly enjoyed an abundance of clean and cheap water in what is typically viewed as a water-rich state. This is changing. In many areas, our state lacks water where and when it is needed by people, communities, and the environment. Dramatic population and economic growth, combined with environmental factors and climate change, are creating water scarcity in Washington and other western states.

Ecology is advancing integrated solutions to water management and water supply problems throughout the state.

Goals

- **Active Water Management.** Improve the state's capacity to effectively manage limited water resources across competing and increasing needs to make the most of the water we have.
- **Effective Water Supply Development.** Pursue cost-effective water supply solutions that provide clean and sufficient water for our streams, water users, and economy.

Strategies

Sustain Limited Water Sources

- **Efficient Water Rights Processing.** Tailor new decision timeliness requirements and cost-recovery fees to promote jobs, spur economic recovery, and eliminate at least 6000 applications (the number of applications pending at the end of the FY2012) by the end of FY 2020.
- **Flow Achievement.** Establish instream flow restoration targets that will be achieved in normal water years, and employ surface and groundwater monitoring networks to protect water resources.
- **Water Management Reform.** Encourage conservation, promote more effective environmental outcomes, and improve the effectiveness and efficiency of water management tools and data systems.
- **Water Management Investment.** Invest in active water management to prevent water conflicts, protect water rights and the water resources they depend upon, and reduce general fund impacts.
- **Build on Successful Watershed Partnerships.** Deliver reliable science and funding to promote state and local watershed partnerships.
- **Foster common ground on tough issues.** Account and plan for permit-exempt well uses, encourage water supply development, and water conservation, especially in areas with water budget deficits.



- In many rural areas permit-exempt wells are the only readily available and affordable option for new water supplies, and permit-exempt wells will continue to provide a reliable source of water for domestic and other small water uses. Some areas of the state have experienced a relatively rapid rate of new well construction. Although most individual wells consume relatively small amounts of water, the cumulative impact of 100's or 1000's of new wells in a basin can result in serious consequences, especially in areas where all of the water is needed to satisfy senior water rights and there is a lack of water in dry years. In those areas, we need to account and plan for the number of existing and anticipated future uses and find ways to mitigate impacts, so that new wells can continue to be used while senior water rights, instream resources, and the environment are protected.

Secure Supplies in Water-Short Basins

- **Water Supply Development Reform.** Authorize Ecology to pursue coordinated and cost-effective water supply solutions for streams, water users, and local economies in river basins across the state.
- **Science-based Water Budgets.** Illustrate instream and out-of-stream water availability deficits and/or surpluses by season and source, building on existing plans, water resource information, and water supply and demand forecasts.
- **Regional Water Supply Advisory Groups.** Promote the broad, diverse, and strategic partnerships necessary to prioritize regional water supply solutions that meet instream and out-of-stream needs.
- **Water Supply Investments.** Employ multiple water supply tools and reliable funding to help aquatic ecosystems, farms, and communities across the state get the clean water they need, when they need it.
- **Watershed Restoration Strategies.** Identify strategies, benchmarks, and timeframes to restore water to critical basins or sources, and to align local, state, and federal funding behind water supply projects with broad support.
- **Water management, supply and habitat enhancement actions.** Use these as tools to promote community, economic, and environmental vitality.

Protect and Restore Healthy Watersheds

Stormwater

- Complete watershed characterization and basin specific studies to develop an initial retrofit project list to help prioritize funding needs for legacy stormwater problems.
- Work with municipalities that operate treatment plants and have stormwater jurisdiction and land use decision making options to avoid expensive treatment plant upgrades by addressing nonpoint and stormwater pollution.

Nutrients

- Collaborate with Washington State Conservation Commission, Natural Resource Conservation Service, Environmental Protection Agency (EPA), Washington Department of Agricultural and Conservation Districts to scale up implementation of clean water best management practices on agricultural lands in priority areas.
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Facing the Impacts of Greenhouse Gas Emissions

Rising levels of carbon dioxide and other heat-trapping gases have warmed the earth and change the chemistry of the oceans, causing wide-ranging impacts to human health, our forests, agriculture, coastlines, shellfish and other marine organisms, and other resources vital to our economy and the environment. For example, increasing temperature has already altered and will continue to alter the snowpack and streamflows in the state, affecting where, when, and how much water is available for all uses; melting of the glaciers and the expansion of warming ocean waters are causing the sea level to rise; and increasing ocean acidity caused the death of billions of Pacific Northwest oyster larvae in hatcheries.

Washington has been a leader in enacting policies to reduce emissions of greenhouse gases. We have adopted statutory greenhouse gas reduction requirements, calling for the state to:

- Return to 1990 GHG emission levels by 2020;
- Reduce emissions 25 percent below 1990 levels by 2035; and
- Reduce emissions 50 percent below 1990 levels by 2050.

We have also adopted a renewable energy portfolio standard, clean car standards, green building and energy efficiency requirements, a greenhouse gas performance standard for power plants, and a schedule to transition to natural resources for the state's only coal plant (TansAlta coal-fired plant in Centralia).

Goal

Provide leadership and assistance in reducing greenhouse gas emissions and preparing for the impacts caused by these emissions.

Strategies

Identify and quantify sources of greenhouse gas emissions in Washington.

- Collect, and analyze data to understand the sources, types and amount of greenhouse gases. A report summarizing the information will be submitted in December 2012 and every other year after that.
- Report GHG emissions from certain sources that are mandated to report their emissions to Ecology beginning in 2013 for 2012 emissions.
- Prepare annual emissions inventory for Ecology's buildings and fleet and a progress report toward meeting 2020 and 2035 mandatory reductions levels.



- Assist state agencies, universities and community colleges in quantifying, reporting and reducing their greenhouse gas emissions.
- Submit to the Governor and the Legislature a consolidated biennial report on all state agencies' emissions and actions; first report was submitted in 2010.
- Provide public education and engagement opportunities to reduce emissions.

With regional, state and local partners, develop reduction strategies and tools to assure the state's statutory emissions reductions targets are met.

- Provide expertise on emissions from vehicles and motor fuels. Emissions from the transportation sector are the largest single source of greenhouse gases in Washington. Support statewide efforts to evaluate emissions from alternative fuels, such as ethanol and biodiesel, as well as emissions from different types of vehicles, such as electric vehicles, gasoline/electric hybrids, and hydrogen fuel cell vehicles.
- Implement state legislation that reduces emissions from the TransAlta coal-fired power plant.
- Incorporate greenhouse gas emission limits in large new industrial facility permits as required under federal law; and ensuring new power plants mitigate 20 percent of their CO² emissions and meet a greenhouse gas emission performance standard established in state law.
- Meet the Governor's challenge to become carbon neutral by 2020.

Implement strategies outlined in the State's integrated climate response strategy, "Preparing for a Changing Climate."

- Work with key agencies to integrate impacts of climate change and adaptation strategies and actions into agency policies, programs, and funding programs.
- Provide local governments' guidance, information, and funding when available to prepare for the impacts of sea level rise and storm surges on coastal resources and communities. Organize workshops to share science and decision tools with local, state and tribal planners and decision makers.
- Keep the central clearinghouse up-to-date to facilitate the access to relevant scientific and technological information about the impacts of climate change on the state's ecology, economy and society; and about relevant adaptation strategies.
- Act as the central convener for the development of vital programs and necessary policies to help the state adapt to a rapidly changing climate.
- Work with the Climate Impacts Group at the University of Washington, the Northwest Climate Science Center, and other federal and non-governmental organization to ensure research priorities consider Washington's needs.
- In consultation with the Climate Impacts Group at the University of Washington provide a report to the Legislature summarizing the national assessment of climate change science (due in 2013) and the Intergovernmental Panel on Climate Change (IPCC) fourth report (due in 2014) and make recommendations regarding whether the statutory emission reductions should be updated.
- Continue to provide public education and engagement opportunities on impacts.



Implement early actions outlined in the Governor's Blue Ribbon Panel on Ocean Acidification

- Coordinate with research, monitoring, and modeling of ocean acidification with scientists from the University of Washington, National Oceanic and Atmospheric Administration (NOAA), United States Geological Survey (USGS), tribes and other organizations.
- Implement, in collaboration with state and local organizations, actions to quantify nutrients and carbon from human activities and natural processes contributing to acidification.
- Seek and leverage funding to advance the reduction of local sources exacerbating the impacts of ocean acidification.
- Build public awareness and engagement to advance the public understanding of the problem and solutions to address ocean acidification.

Participate in various regional organizations, e.g., Pacific Coast collaborative, Western Governors Association, and West Coast Governors Alliance on Ocean Health.

- Support/ represent the Governor's Office on issues ranging from GHG emissions reduction, ocean acidification, climate change adaptation, and ocean health.

Key Business Strategies

Ecology's business strategies are:

- Work ***With*** Communities
 - Develop connections within the community.
 - Use leverage with others in the community – where it makes sense, step back and let locals run with a program.
 - Shared governance – and shared decision-making.
- Establish ***Relationships***
 - Communicate frequently with stakeholders and individuals– create an atmosphere that creates open dialogue.
 - Instill trust and credibility.
 - Be helpful, friendly, and available.
 - Establish common ground.
- Broker our ***Information and Data***
 - Make our information easy to understand to others.
 - Put our data “out there” and let others come to their own conclusions – use our science to inform.
 - Be factual.



- Leverage with ***Other Agencies***
 - Build relationships with other agencies around common goals.
 - Leverage the state’s capacity.
- Build Small ***Coalitions***
 - Listen to and build upon like interests.
 - Use coalitions to champion support.
- Be ***Innovative***
 - Bounce ideas around with others.
 - Create a new approach or solution.
 - Focus more on results, less on process.
- Be a ***Leader***
 - Be visible and accountable.
 - Communicate clearly.
 - Take and allow risk with solutions and approaches.
- Assemble the ***Right Team***
 - The right mix of skills, knowledge, and abilities to get the job done.
 - Find talented and motivated people.
- ***Respect*** Different Values
 - Be open to listening to the perspectives of others.
 - Take time to learn and understand differing interests.
- Leverage our ***Cash***
 - Use our grants and loans to leverage environmental protection.
 - Make strategic capital investments through grants and loans to locals.

Appraisal of Our External Environment

Many outside influences can and do have a role in the policies and decisions made at Ecology:

- Population growth.
- Our partners.
- Customer needs and expectations.

Population Growth

Washington is a state rich in natural beauty and diverse economic opportunities. Many people choose to live here because they value a high quality of life: meaningful work, vibrant communities, and a healthy and clean environment. However, our population is projected to grow by almost two million people by



2030 (from 6.8 million people in 2010 to 8.2 million in 2030: Office of Financial Management). Ensuring the quality of life we value continues for future generations is one of the defining challenges of our time.

More people leads to more water use, more sewage, more garbage, more cars, more oil spills and more land being converted to urban areas. The challenge we all face together is to manage a sustainable economy and environment and to support thriving communities. Our strategic priorities to protect and restore Puget Sound, reduce toxic threats and support successful water management and healthy watersheds directly help us meet this challenge head on; but we can't do it alone. Building strong partnerships with local governments, citizens, special interest groups, and businesses is the key to success in keeping Washington's economy strong and our environment healthy.

Our Partners

Finding long-term solutions to our environmental problems is not government's job alone. Ecology does not, and cannot, operate independently from its partners. We consider our partners to include:

- Current and future citizens.
- Federal, state, tribal, and local governments.
- Businesses and industries.
- Environmental and public interest groups.
- The Legislature.

Customer Expectations

In the early 2000's, Ecology was at the center of a highly critical review of both how we deliver service and our permitting processes for our regulated customers. A report prepared by the Governor's Competitiveness Council in 2002 stated, "The Department of Ecology must adopt a greater service ethic to improve employee's attitude in dealings with business and to improve the agency's accountability to those it serves."

To understand the needs of our customers, we have surveyed our permit applicants and inspected every other year since 2002. The 2012 survey is being conducted in late summer through early fall 2012. The surveys asks our regulated customers about their level of satisfaction with our customer service and the clarity and timeliness of our permitting and inspection processes and decisions. The results of our surveys can be found at:

<http://www.ecy.wa.gov/quality/survey/customerurvey.html#PermitApplicantsSurvey>.

Lean at Ecology

Lean is a business philosophy that identifies what is valuable to the customer and eliminates unnecessary steps and processes that get in the way of efficient outcomes or service delivery. For several years, Ecology has helped Washington businesses use Lean to improve manufacturing, profits and customer satisfaction while reducing the amount of chemicals used and waste created.



For example, Accra-Fab in Liberty Lake is saving nearly \$180,000 each year because of Lean ([see the video](#)). Now it's Ecology's turn to apply Lean to its own work.

Although Lean has its roots in manufacturing, its tools and strategies have been successfully applied in government. Ecology sees Lean as a way to:

- Provide improved, valuable services and products to our customers and stakeholders
- Create an internal culture which values continuous improvement and learning
- Empower employees to lead the continuous improvement process

Since 2007, Ecology has tackled a number of Lean projects. Ecology has chosen projects based on staff suggestions and feedback from our customers. See the [progress reports](#) from our most recent projects.

Capacity Assessment

Financial Capacity Assessment

Economic Recession and Slow Recovery

Ecology's operating and capital budgets are funded by 42 different fund sources going into the 2013- 15 biennium. While this diversity of fund sources has helped us better manage the overall economic downturn, the national economic recession that began in 2008 has significantly impacted our budget. Here are some of the ways the recession and slow paced recovery have impacted our suite of funding:

- Our dedicated funds that are tied to construction, economic growth, and environmental permits have generally been flat or declined.
- The near State General-Fund (GF-S) support for Ecology has been significantly reduced during this time period, and we have increased permit fees where possible in program areas that are subsidized by GF-S.
 - Since the start of the 2007 – 09 biennium, near GF-S funding for Ecology has been reduced by \$40.8 million, or nearly 31 percent.
- These reductions have been partially off-set by increased federal funding related to the Puget Sound National Estuary Program.
- Our budget has benefitted from significant increased revenue from the Hazardous Substance Tax (HST), which is a tax tied to the value of petroleum and other hazardous substances. As oil prices have risen in the past several years, the HST revenue collected by the Department of Revenue has also significantly increased. Since the 2003 – 05 biennium, the State Toxics Control Account (STCA) base operating budget appropriations (excluding mixed waste fee revenue related to the Hanford Nuclear Reservation) has doubled from \$49.4 million to \$99.6 million.
- Since 2009, nearly a quarter-billion dollars in dedicated environmental funds Ecology manages has been transferred directly to the GF-S. An additional \$35 million in base work has “shifted” from GF-S to other dedicated environmental funds.



Fund Summary – Diverse Set of Dedicated Environmental Funds Supports Our Work

While Ecology had 42 different fund sources supporting our work in the 2011 - 13 biennium, only eight funds provided over 90 percent of the base resources for Ecology’s operating budget. In the base 2011 – 13 biennium capital budget, the top eight funds provided 96 percent of the total resources for this work. We have one of the most diverse sets of fund sources in state government. However, only a handful of these accounts fund the vast majority of the environmental and public health protection work we and our local partners carry out.

The majority of these smaller dedicated environmental accounts were created by the Legislature to provide resources for specific permitting functions, or base environmental laws in focused areas. For example, the Freshwater Aquatic Weeds Account receives revenue from the boat trailer license fee and is dedicated to preventing and controlling invasive freshwater aquatic weeds. The Woodstove Education and Enforcement Account receives revenue from a fee charged to buyers of new woodstoves and fireplaces and is dedicated to reducing air pollution from indoor wood stoves.

An example of a dedicated tax-based account is the Oil Spill Response Account. This account receives revenue from a one-cent tax on the first possession of each barrel of petroleum imported into and consumed in Washington. This revenue is used for responding to and cleaning up oil spills.

These diverse funds link permit, fee, and tax revenue to specific program functions and client services as directed by the Legislature. These links are important to fee and tax payers, and often were a cornerstone part of the legislative agreement that authorized these revenue streams.

Between the operating and capital budget appropriations in the base 2011 – 13 biennium budget, approximately 68 percent of the total dollars provided to Ecology were passed through to local communities to support:

- Clean water projects and programs.
- Toxic site cleanup.
- Water supply development.
- Hazardous waste management.
- Solid waste management and recycling.
- Flood control projects.
- Shoreline protection.
- Air quality improvements.
- Local stormwater projects and programs.
- Other environmental and public health based projects.

These pass-through funds promote local economic development (e.g. wastewater treatment plants, cleaning up contaminated sites for re-development, and developing water supplies for diverse uses); create jobs; address local environmental and public health priorities; provide financial incentives for compliance with state-laws; and provide core funding for many local government programs.



State General Fund (GF-S) Resources

Since the 2007 – 09 biennium, near GF-S funding for Ecology has been reduced by 31 percent, or \$40.8 million dollars. Specifically, at the start of the 2007 – 09 biennium, the Ecology near GF-S appropriation was \$132.4 million. The carry-forward level into the 2013 – 15 biennium appropriation is \$91.6 million. Ecology collects \$10.2 million in GF-S revenue in several program areas that help support some of these GF-S appropriations.

Water resources, watershed plan implementation, litter pickup and recycling programs, air quality, and administration experienced major reductions. To compare Ecology’s GF-S budget with the rest of the state, our GF-S appropriation is about 3/10th of one percent (0.003) of the total biennial GF-S appropriations.

As another way to help address the statewide shortfall, Ecology has raised fees in several areas that were subsidized by GF-S dollars during this period. We have also attempted – unsuccessfully – to raise water right processing and water management fees. Our Water Resources Program and the work they do are very dependent on GF-S funding to carry out this important work. Examples of the fees raised to save GF-S during this period include the Agricultural Burning Fee, Air Emissions New Source Review Fee, Air Contaminate Source Registration Fee, Laboratory Accreditation Fee, Dam Safety Inspection and Construction Fee, and Expedited Water Right Processing Fee.

In addition to direct GF-S cuts and increased fees to reduce GF-S subsidies, several funds Ecology manages have been transferred directly to the GF-S, or had work historically supported by GF-S “shifted” to these dedicated fund sources. Specifically, since the 2009 legislative session:

- \$233 million in State and Local Toxics fund balance (Model Toxics Control Account - MTCA funds) has been transferred directly to the GF-S.
- \$34.6 million in GF-S funded work at Ecology has been “shifted” to MTCA funds.
 - \$29.6 million of this total was for one-time or/ limited duration shifts (reverts back to GF-S in future biennia).
 - \$5.0 million of this total is an ongoing and permanent shift.
- \$27 million in other dedicated environmental funds managed by Ecology has been transferred directly to the GF-S. This includes:
 - The Waste Reduction, Recycling and Litter Control Account - \$15.7 million
 - Flood Control Assistance Account - \$5 million
 - State Drought Preparedness Account - \$4 million
 - Coastal Protection Account - \$1 million
 - Several other smaller accounts - \$1.3 million

Model Toxics Control Act (MTCA) Accounts

The MTCA which includes the State and Local Toxics Control Accounts (STCA and LTCA) receives revenue from the Hazardous Substance Tax (HST). This revenue source is largely tied to the price of petroleum, which has been on an upward trend for the past several biennia. In an eight-year period, from 2002 to 2010, actual annual revenue collections increased by \$122.9 million (\$45.2 M collected in 2001 and \$168.1 M collected in 2010). This represents a 372 percent increase in revenue during that time period.



At the same time HST revenue was increasing, GF-S revenue was flat or declining. This dynamic has created significant pressure on MTCA funds to help solve the GF-S shortfall, and to be used for expanded purposes. As noted in the GF-S section above, MTCA funds have been used extensively since the 2009 legislative session to help address short and long term GF-S funding issues statewide and within Ecology.

Since the 2003 – 05 biennium, STCA base operating budget appropriations for Ecology have increased from \$49.4 million to \$99.6 million. Legislatively directed use of MTCA funds has helped with short-term GF-S balancing and helped reduce some of the impacts of GF-S reductions in Ecology’s and other state agency budgets.

While the HST revenue has clearly been trending upward, it is important to highlight the volatility related to the MTCA accounts. While the actual collection trend is up, the June 2012 Department of Revenue forecast for annual collections between 2012 and 2015 is projected to drop \$53 million (\$195.2 M projected for 2012 and \$142 M projected for 2015, which represents a 27 percent reduction). In addition to revenue volatility, large and unpredictable taxpayer refunds also occur from these accounts. Since 2007, these refunds have ranged from \$3.6 million in 2007 (represents 3.3 percent of the revenue that year) to \$27.5 million in 2011 (represents 17.4 percent of the revenue that year). Finally, actual cash balances in the two MTCA accounts have also fluctuated significantly. Since 2003, the STCA cash balance has ranged from \$1 million at the low end, to \$86.4 million at the high end; LTCA has ranged from \$9.8 million to \$104.6 million.

To manage this overall fund volatility, Ecology heavily utilizes capital budget funding to absorb the peaks and valleys of this revenue. Since HST revenue has been up during the recession, these capital investments have been very helpful in creating jobs throughout the state related to toxic site cleanup and redevelopment; stormwater infrastructure; and local recycling and solid waste programs. Looking into the future, Ecology will continue to use this strategy to avoid “feast and famine” operating budget increases and cuts. We will work to ensure any new ongoing appropriations are as sustainable as possible and try to avoid any large or ongoing over appropriations of these dollars.

Potential Federal Funding Cuts

Federal funding has remained fairly stable the past several biennia, and increased significantly during the 2011 – 13 biennium due to limited duration Puget Sound National Estuary Program grant funding secured by the state. However, the outlook into future biennia for federal funding is highly uncertain, and may include significant cuts in funding for Ecology activities. As Congress struggles to pass a more sustainable federal budget, the dollars passed through to Ecology from the Environmental Protection Agency and other federal agencies may be in jeopardy. (Ecology’s 2013 – 15 carry-forward level budget includes over \$104 million in federal funding, representing almost 23 percent of our budget.)

Facilities Capacity Assessment

Economic Recession Impacts and Current Outlook

Ecology has seen staffing reductions as a result of the national economic recession that began in 2008. Although these reductions were small and spread across the facilities used by Ecology to conduct business, three small offices were closed during the 2011-13 biennium. The remaining three owned



facilities and 11 leased facilities are adequate in size and location to serve current and projected business needs.

Over time, operations have shifted from headquarters to our regional and field offices to better serve local communities. In addition, smaller teams of staff have been located in communities to bring our services closer to the people we serve. We continually evaluate where to place our staff and resources to best serve our customers.

Much of our work is driven by population and industrial centers. Ecology's four Regional Offices are located in the major population centers of Spokane, Yakima, Lacey, and Bellevue. Nuclear waste staff are located in Richland close to the Hanford Nuclear Reservation. Watershed work requires staff to be located in the watershed near the water sources being regulated. Therefore we maintain small offices in Bellingham, Vancouver, Wenatchee, and Winthrop.

Risks, Uncertainties and Opportunities

We face some challenges when we try to meet Ecology's facility goals and unique business needs in leased facilities.

Our facilities goals are:

- Facilities are located close to workload drivers and the people served to reduce travel time and our carbon footprint, and to provide efficient customer service.
- High quality buildings are in safe locations to aid staff recruitment and retention.
- Green facilities are owned or leased to reduce energy and resource consumption (supports mission).

Our business needs include laboratory and chemical storage; adequate storage for field gear and equipment; high speed data connections; and adequate parking for visitors, employees, and state vehicles, including oversized trucks, boats, and trailers. Leasing facilities often requires expensive tenant improvements that don't fully meet our needs, and leave us at the end of a lease with no assets for our investments.

Ownership allows us to effectively meet business needs while still meeting statewide facility goals. In the next several years, we will be looking for opportunities to move toward ownership for our Northwest Regional Office, currently located in Bellevue.

Two of the buildings we own are reaching an age that will require large preservation investments in the 2013-15 biennium. For the Lacey building, a number of major electrical, mechanical, and plumbing components are at end-of-life and will need to be replaced. For the Spokane building, it will be time to replace landscaping and parking surfaces. The Spokane building also needs a small expansion to provide adequate laboratory and storage space to efficiently support our business needs. These projects are just in the planning phase at this time with the hope that the work can be done in the 2015-17 biennium.

The current leased facility in Yakima has a number of drawbacks, including security and maintenance concerns, and no visitor parking. Ecology will be looking to move to a new leased or owned facility in Yakima when the current lease expires on June 30, 2015.

Historically, Ecology has experienced significant swings in budget and staffing levels. If Ecology shrinks significantly, vacant space will be consolidated within each facility and made available for use by tenant



agencies. Ecology currently has tenants in five facilities, including hosting the Multi-Agency Permitting Team in Bellevue. If Ecology experiences another growth spurt, more field offices may be needed to provide space for staff in strategic locations. These would be leased facilities and co-located with another agency or local government, if possible.

Information Technology Capacity Assessment

Background

For the last 15 years, Ecology has pursued an enterprise approach to information management and technology investments. We have made consistent progress and are well-positioned to support current and emerging business needs and to participate in the state's unprecedented Information Technology (IT) Transformation effort. Ecology's 2008 IT Strategic Plan continues to guide IT investment decisions, along with the February, 2012 [State Technology Strategy](#) published by the Office of the CIO (OCIO).

Information Technology Strategies

Ecology's IT Strategic Plan identifies the following long-term enterprise-level technology initiatives:

Support Ecology's Science-based Decision Making

- Continue Data Integration Strategy.
- Seek Opportunities to Use Location-Based Data and Geographic Information Systems.
- Document Management and Enterprise Search Strategy.
- Continue to Expand Public Access to Information.

Advance Unified Communications

- Voice Over Internet Protocol (VOIP).
- Microsoft Office 365 Communications.
- Desktop Video Conferencing.

Connectivity and Access

- Mature the Wireless Infrastructure.
- Expand Mobile Computing Access to Ecology Data and Services.
- Update Security Infrastructure and Policies to Accommodate Expanded Use of Mobile Computing.

Continue Maturing of IT Infrastructure and BackOffice Functions

- Expand Tiered Storage to Maximize Storage Investments.
- Update Backup and Recovery Technologies to Speed Recovery Times.
- Update SharePoint Infrastructure to Accommodate Growth.
- Expand use of Cloud Technologies for Elastic Applications (like environmental modeling).
- Expand use of virtual desktop & server technologies for appropriate uses.



Support for Ecology's Current & Emerging Business Needs

In the 2013 - 15 biennium, Ecology's Information Technology Services Office (ITSO) will be working with our programs, OCIO, and Department of Enterprise Services (DES) on a number of significant projects including:

Fiscal and Administrative Information

- Time, Leave, and Attendance System – DES led project.
- Grants Management.
- Enterprise Search in support of Public Disclosure.
- E-Mail Archiving and Search.
- Information Technology Cost Accounting – OCIO led project.

Environmental and Geographic Information Systems

- Reduce Toxics Threats reporting and compliance data management.
- Contaminant Source Identification, Tracing, and Control.
- Puget Sound Watershed Characterization and Protection Implementation Support.
- Puget Sound Toxics-Nutrients Data Exchange.
- Expand Environmental Monitoring Data Collection and Analysis Capabilities.
- Updated Environmental Incident Tracking.
- Updated Geographic Response Plans for Spill Response.
- Buildout of the National Hydrography Dataset infrastructure for Washington State.

Agency Content & Document Management

- Document Management Strategy for Storing Different Document Types.
- Enterprise Search and Electronic Discovery Strategy.
- Enterprise Content Management Strategy and Pilot Projects.
- Updated Records Management Processes and Technologies.

Support for the State Information Technology Transformation

Ecology generally has been supportive of state enterprise IT initiatives and continues to participate in many of these initiatives. Most of these initiatives are optional, but Ecology finds participation to be in the best interests of Ecology and our customers. More recently, a more directed approach has emerged within the State with the passing of ESSB 5931, reorganizing and streamlining central service functions, powers and duties of state government, and completion of the [State Technology Strategy](#) in February 2012. Ecology's CIO and other IT staff have been and continue to be actively engaged in this work.

Risks, Uncertainties and Opportunities

The health of Ecology's IT environment is good, and we are well-positioned for the future. However, there continues to be as significant uncertainties in IT now as than at any time in our history.

Governance

ESSB 5931 comes with significant changes in IT governance. As these changes are implemented they will surely affect IT investment decision-making for Ecology and others.



Human Resources Capacity Assessment

Economic Recession Impacts & Workforce Dynamics

Ecology has a dedicated, diverse workforce that is passionate about the protection of Washington's air, land and water. Our workforce ranges from scientists, engineers, environmental specialists and planners to financial managers, educators, information technology specialists, and administrative support staff.

Recruiting, hiring, training, supporting and retaining such a diverse and professional workforce during a sustained economic recession has been extremely challenging. A primary response of the state to the economic recession has been significant budget reductions, which have included layoffs, management salary freezes and a 3% reduction in salaries and wages for all employees.. These circumstances have had a broad range of effects on the recruitment and retention of Ecology's workforce and its work, including:

- Making Ecology less competitive in a limited job market, with lower salaries and benefits and opportunities for advancement,
- Encouraging higher turnover, with both a loss of newer employees trained by Ecology and increased retirements of experienced employees who play critical roles in a variety of key programs and projects,
- Re-evaluating our priorities to determine how to manage increasing workloads, new services, programs, projects and responsibilities with fewer employees.

These factors have caused Ecology to begin a transformation in workforce management.

Workforce Outlook

Anticipating and Adjusting to Change

The continued emphasis on state government compliance with federal employment laws and regulations, streamlining government operations and increasing the efficient use of state resources and personnel has required a wide range of change management initiatives for Ecology's human resource management system. Ecology's Human Resources Office (HRO), in concert with our management teams and the Financial Services Office, completed a number of critical projects during FY 2011-12, including:

- Comprehensive review, evaluation, and revision of overtime designations.
- Implementation and management of the state's temporary layoff legislation.
- Lean event to improve communication and processing of personnel and payroll transactions.

Many of these change initiatives have had significant impacts on employees and the management of Ecology, as well as our culture. We anticipate such changes will continue and are expected to produce additional impacts throughout the 2013-15 biennium and beyond.

Ecology Employment Center

In anticipation of these changes and challenges, HRO designed, developed and deployed a new website, the Ecology Employment Center (EEC) during FY 2012. The EEC is a system that provides information, guidance and instruction about the key activities and processes for workforce and position planning,



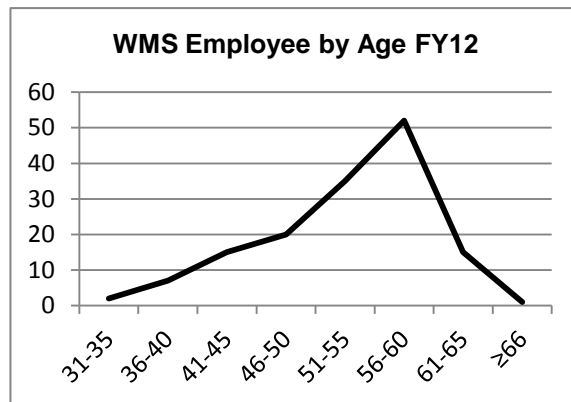
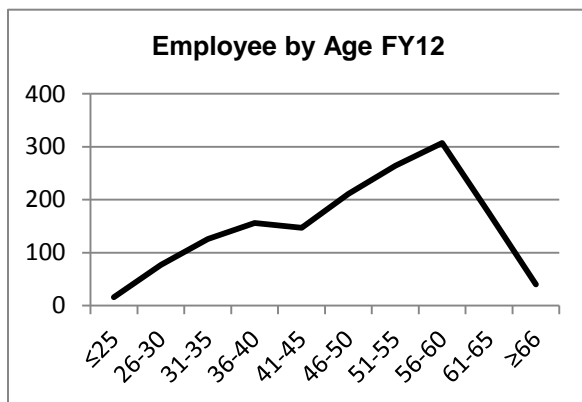
making employment decisions, succession management, and employee retention. The EEC is designed as a centralized information resource for all employees, supervisors and managers in Ecology to support our fundamental goal to recruit, hire and retain a highly qualified, effective, diverse workforce. It will be used as Ecology’s guiding blueprint to address the employment-related challenges and changes during the 2013-15 biennium.

Aging Workforce

While there has been a slight reduction in the size of the Ecology’s workforce, the demographic composition of the employees has continued to age. The average age of Ecology’s workforce is 49. The percent of employees who are over 40 years of age increased to 75% of the total Ecology workforce. The largest age group is 56 to 60 years, with 307 employees or 20% of Ecology’s workforce. With 95% of Ecology’s Washington Management Service employees being over the age of 40, the classified management corps has a significantly higher average age.

The number of retirement eligible employees in FY 2012 is 327, which is 21% of the total workforce. By the year 2015, the number of Ecology employees who will be eligible for retirement will be 641 or 41% of the Ecology’s workforce. Most of these employees are Ecology’s most experienced and knowledgeable, many holding key positions.

Retirements have fluctuated over the past five years, with a high in FY 2005 of 3% and a low in FY 2009 of 1%. However, our previous expectation that retirements would increase as the economy recovers has proven correct. In FY 2011, the number of retirements more than doubled from the previous two fiscal years, at a rate of 35 per year and then a slight decrease to 27 in FY 2012.

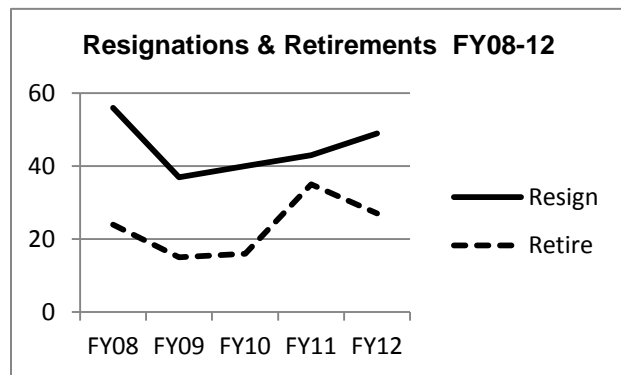
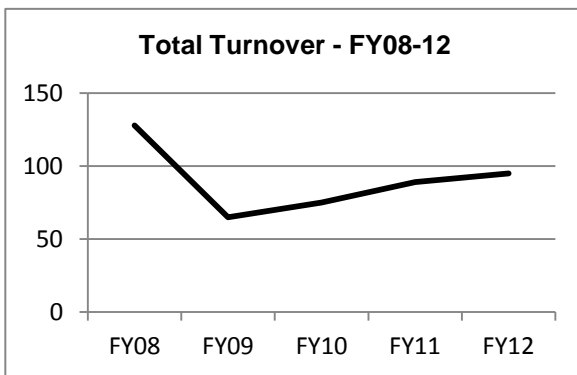
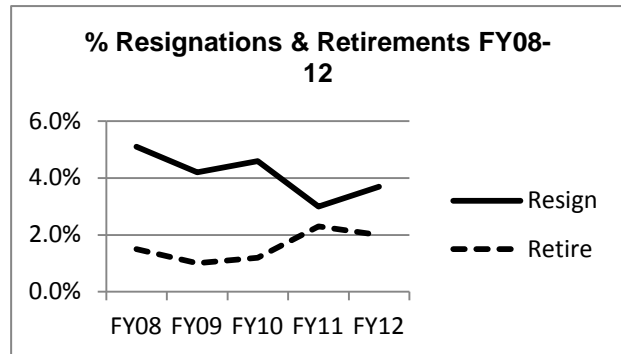
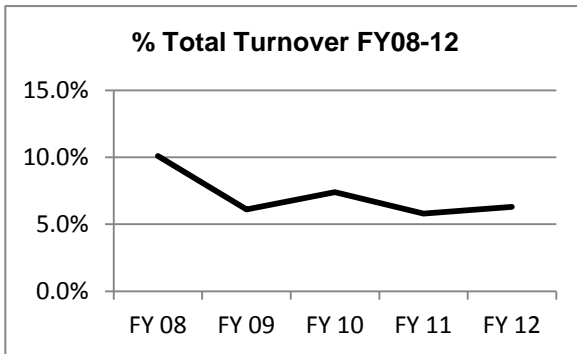


Job Market Competition and Turnover

Although the aging workforce and retirements continue to be concerns, a more critical turnover factor for succession planning, is the number of employees who resign each year, usually to take positions with other employers in both the public and private sectors that have more competitive salaries. While the overall turnover rate as a percentage remained fairly flat at 6.3% in FY 2012, the actual number of resignations continued to climb, to 43 in FY 2011 and 49 in FY 2012, after a decrease in FY 2009 and FY 2010.

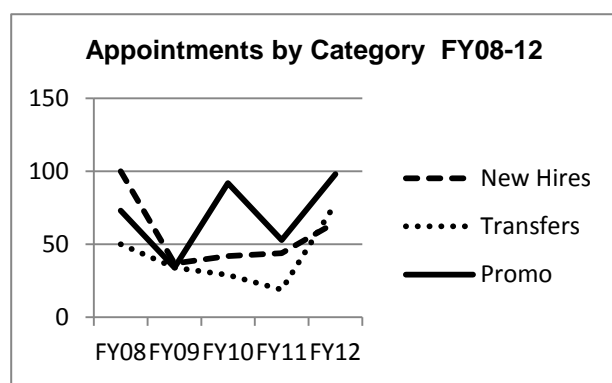
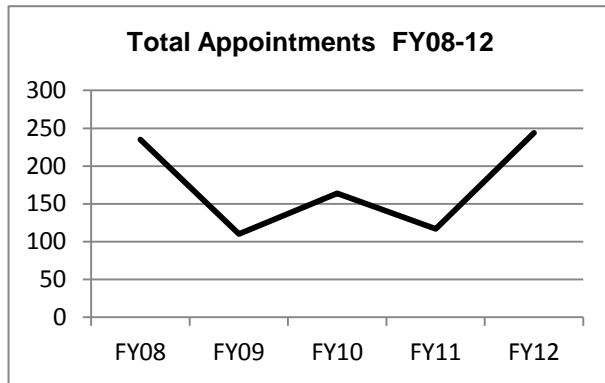


Despite the prolonged, widespread recession, there have been enough public and private employers who have maintained higher average salaries and positions to have a serious impact on Ecology’s ability to recruit and retain experienced, highly qualified employees. In many cases, Ecology has trained new employees and then lost them to local public employers, who pay consistently higher salaries, especially in the Seattle-King County area. The job market compensation survey, conducted by the Office of the State Human Resources Director, and anecdotal examples, indicate that this will be a continuing challenge.



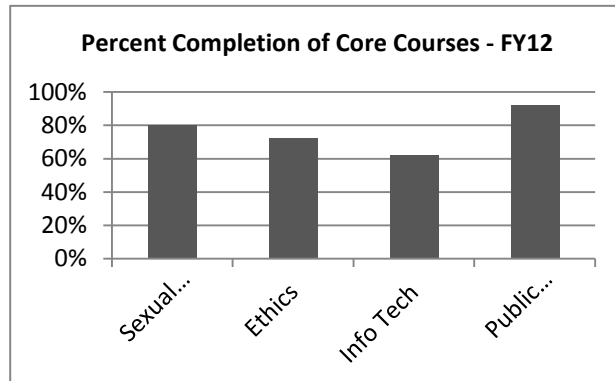
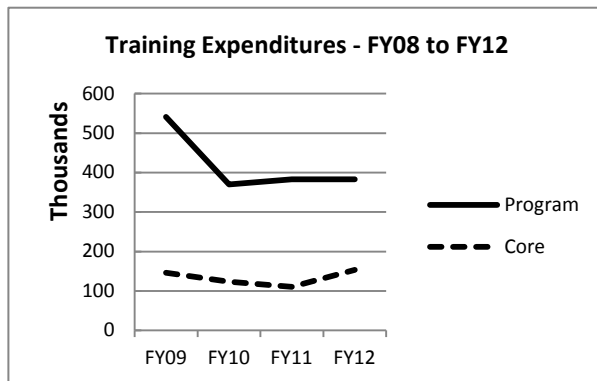
Investment in the Future

While the aging, experienced workforce retires or resigns to take better paying jobs with local government or the private sector, the number of newer, less experienced employees has continued to increase in Ecology. This trend is expected to continue in the 2013-15 biennium. Although the protracted recession has generally resulted in an increase in the number of qualified applicants available to compete for Ecology jobs, the attendant budget reductions severely limited Ecology in replacing experienced employees until late in FY 2012. In addition, the salary freezes and reductions continue to make Ecology less competitive in the job market. While the number of new hires, transfers and promotions have dramatically decreased over the past two fiscal years, Ecology has hired or promoted 255 employees (16% of the total workforce) to replace experienced employees who retired or resigned.



Due to the continued increase in the number of new, inexperienced employees, Ecology has made, and will continue to make, a significant investment in both formal and on-the-job training. An increase in on-the-job training means that supervisors have less time to focus on performing their other duties and responsibilities. With the expected ongoing trend of increasing retirements, this obligation will continue to rise during the 2013-15 biennium, with a drive to capture the cumulative knowledge, experience and key business and stakeholder relationships of departing employees.

Given the budget reductions, the amount of funds expended on training has remained fairly flat since FY 2010. On the other hand, renewed efforts to increase enrollments for required training during the past two years has resulted in an increase in completion rates for four key Ecology core courses. During the next biennium, Ecology will continue to focus on increasing its completion rates for required core training courses to reduce its risk factors for compliance with state and federal employment laws.





Diverse Workforce for a Stronger Ecology

Although the economy has continued to falter and turnover has increased, the diversity of Ecology has remained stable, with a slight increase in employees of color and over 40 years of age. However, Ecology’s representation in certain groups remains below its goals. Achieving our diversity goals, as well as retaining employees that comprise our diverse workforce, remains a high priority for Ecology. As state government emerges from the recession, Ecology will be deploying its redesigned diversity recruitment program to achieve and sustain its diversity goals. Ecology will work with the Department of Enterprise Services to develop new diversity training. Ecology will place a special emphasis on recruiting and employing returning military veterans during the 2013-15 biennium.

Our Diversity Vision and Mission

Ecology recognizes the diversity of employees as a valuable resource that is essential to the success of our mission.

Ecology will foster an agency culture that recognizes, values, and is strengthened by the diversity of all employees. Ecology will build and retain a workforce that reflects and serves Washington’s diverse and unique communities.

Diversity Profile

	No.	Percent	Goal
Female	791	51%	42.80%
Persons with Disabilities	36	2%	6%
Vietnam Era Veterans	59	4%	7.70%
Disabled Veterans	13	1%	1.10%
Persons of Color	188	12%	14%
Persons Age 40 and older	1,200	77%	N/A
African American	27	2%	2%
Hispanic	41	3%	2.60%
Native American	29	2%	2.10%
Asian	92	6%	7.70%

Risk and Opportunities

Despite the expectation that the effects of the economic recession will continue through the 2013-15 biennium, Ecology will continue to prepare for the likelihood that the rate of retirements and resignations will increase. Our work remains as demanding and challenging as ever. Ecology has taken strategic measures to ensure a smoother transition with the remaining workforce and the new staff that it hires with the development and implementation of the new Ecology Employment Center (EEC) website. We will implement plans to improve position planning and management, hiring and promotions, and succession planning and management, as provided for on the EEC.



Human Resources Priorities

Recruitment, Retention & Succession Management

Recruitment and retention of our workforce continues to be a pressing issue. We will be working on the following strategies to improve our hiring and promotion of qualified, diverse employees:

- Renew and expand long-term candidate source relationships with higher education institutions, professional organizations and on-line recruitment systems to improve the quality of recruitment candidate pools.
- Improve the efficiency of Ecology's selection and hiring processes, with a competitive time-to-hire rate, using the new state On-line Recruitment System (OLRS).
- Renew Ecology's recruitment marketing program with intra- and inter-agency collaboration.
- Deploy special "On-Site Action Teams" comprised of human resource recruitment specialists and program line managers to provide job seekers with firsthand information about Ecology programs and conducting informational interviews at career fairs.
- Provide follow-up training for supervisors and managers on the EEC website topics of position planning and management, hiring and promotions, and succession planning and management.

Diversity

Diversity in both traditional and non-traditional employment occupations requires an affirmative action approach to all aspects of employment in Ecology, including recruitment, hiring, and promotions. Affirmative action means that Ecology will take direct steps to seek qualified diverse candidates for employment opportunities throughout Ecology and to provide a work environment that promotes appreciation, understanding and respect for diversity. To succeed, diversity and cultural competency must be woven into the fabric of Ecology's culture through its actions. These actions include:

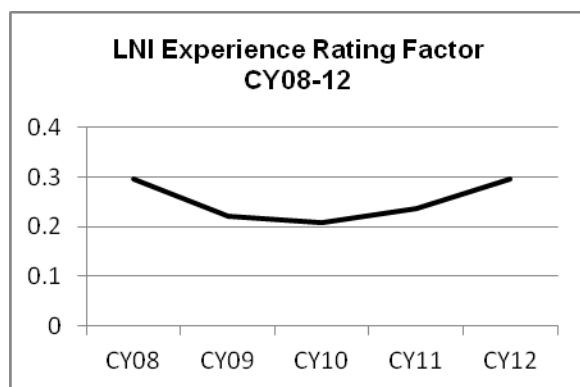
- Develop network of long-term relationships with potential sources of diverse candidates, such as colleges, universities and professional associations,
- Encouraging current diverse employees to recruit other diverse candidates for employment,
- Participate in job and career fairs targeted for diversity and the types of professional and occupational fields found in Ecology.
- Provide career guidance and mentoring opportunities to Ecology employees of diverse backgrounds.
- Ensure equal employment opportunities in hiring, promotions, training, acting appointments, project appointments, temporary assignments to higher-level classifications, and developmental job assignments.
- Train managers and supervisors on methods for fostering a work environment that encourages cultural competency and diversity.
- Organize, produce and participate in special events that increase diversity awareness and cultural competency.
- Encourage participation in diversity-related events and on recruitment teams, interview and discussion panels and the Ecology Diversity Team.



Human Resources Risk Management

Ecology is developing a human resource risk management strategy to identify and assess sources of employment-related risk and develop solutions for reducing or eliminating liability.

- Complete the risk management response plan for high priority sources of human resource management risk.
- Identify and assess human resources risk management issues and develop and implement solutions.
- Implement and sustain human resources risk management best practices..
- Work in collaboration with the Department of Enterprise Services' Office of Risk Management to address systemic risk management issues pertaining to employment practices.
- Increase training of managers and supervisors on key employment-related risk management topics.
- Continue to effectively manage Ecology's excellent employee safety and wellness program and maintain our state-leading Experience Rating Factor with the Department of Labor and Industries (LNI). The Experience Rating Factor is an index of our overall accident and injury rate. The lower the rating the better. Ecology's ERF remains the lowest among state agencies.



Sustainability

Ecology's Sustainability Plan is designed to reduce our environmental impact. We too consume natural resources, dispose of wastes, and generate air and water pollution. We are committed to reducing our use of natural resources and waste generation.

We have adopted the most commonly used definition of "sustainability" and "sustainable development" from the United Nations 1987 publication, *Our Common Future*, known as the *Brundtland Report*:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Our five goals focus on buildings and grounds, employee support services, supporting sustainable communities, regulatory activities, and employee awareness:



Department of Ecology 2013 -15 Strategic Plan

- Provide healthy and safe work environments complementary to host eco-systems.
- Carry out Ecology operations and support services in a sustainable way.
- Support sustainable communities.
- Integrate sustainability principles into our rules, policies, and practices.
- Institutionalize sustainability as a value, and raise employee awareness of sustainable practices in the workplace.

Please visit Ecology's [Web Site](#) for more information.



Mission Statement

The mission of the Air Quality Program is to protect, preserve, and enhance the air quality of Washington; to safeguard public health and the environment; and to support high quality of life for current and future generations.

Environmental Threats

Overall air quality in Washington has greatly improved since 1991 when the Washington State Legislature expanded statewide air quality protection. In the mid-1990s, 13 areas of Washington did not meet national health-based air quality standards for six chemicals known as “criteria” pollutants. More than three million people lived within these areas and were exposed to high pollution levels. By 2005, thanks to federal, state, and local efforts, all 13 of those areas met federal air quality standards.

However, the U.S. Environmental Protection Agency (EPA) adopted tougher air standards for fine particles in 2006. A large area in Pierce County has violated the new federal requirements, and several other communities around the state are at risk of violating the standard also. In coming years, Ecology expects EPA to once again tighten its fine particle and ozone standards. When that happens, several areas in the state could violate the new protective levels.

Meeting federal standards is very important. It reduces the health impacts of air pollution and prevents the risk of substantial financial and economic impacts on the state and local communities. But scientific studies show air pollution harms health, even at levels that don’t violate federal standards. Many communities that meet standards may exceed “healthy” pollution levels several times a year, exposing citizens to significant health risks. Air pollution causes lung disease, worsens existing heart and lung disease, increases chronic breathing problems and cancer risks, and decreases lung function in children—making them more vulnerable to chronic lung disease as adults. Air pollution can hasten death for people with these health problems.

Extremely fine particles in smoke and engine exhaust are the primary air pollution health concern in Washington. Hundreds of other chemicals, known as toxic air pollutants, enter the atmosphere from a wide variety of sources. Regulations require emission controls for most of these toxics, but there are currently no health-based ambient air standards for these chemicals. Studies are increasingly showing they pose significant risks to human health and the environment. The sources of most concern are the toxic particles and chemicals emitted from vehicles, diesel engines, and burning wood and other vegetation.

Air pollutants also damage soil, water, crops, vegetation, man-made materials, property, animals, and wildlife; they impair visibility and affect climate and weather. 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. Preliminary studies show a significant pollution source to water quality and marine and river sediments is coming from pollution in the air that lands directly in water or on land where rain water carries the pollutants to surface water.



Authorizing Laws

- Federal Clean Air Act
- RCW 70.94, Clean Air Act
- RCW 70.120, Motor Vehicle Emission Control
- RCW 70.235, Limiting Greenhouse Gas Emissions
- RCW 80.80, Greenhouse Gas Emissions

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, such as dealers.
- Agricultural businesses.
- General public.

Issues

Mitigating High 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 we used to think. 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 nearly 1,100 premature deaths and more than \$190 million each year in health and societal costs of diseases in Washington. Sharing this health and health care cost information with policymakers and the public is an important first step in Ecology's efforts to identify and implement new strategies to combat air pollution.

Responding to Violations of Federal Standards

In addition to its recent tightening of the fine particle standard, EPA is using the latest health information to make other air quality standards even more protective. EPA has introduced new, tougher air quality standards for several pollutants, including lead, nitrogen dioxide, and sulfur dioxide. Ecology also expects tougher standards for ozone and fine particles soon. Ecology will need new air pollution prevention and control policies, tools, and approaches in Washington to meet these cleaner air levels and limit public exposure to toxic air pollution. Developing federally required clean air plans for new areas that violate standards will significantly increase monitoring, technical analysis, planning, and strategy development work for Ecology. This increased resource need comes at a time when federal grants to the state for air quality protection are expected to decline significantly.

Reducing Diesel Soot

Ecology has determined that soot from diesel engines is the greatest toxic health threat from air pollution in Washington. Through fiscal year 2011, we have completed efforts to install emission control equipment on existing diesel school buses and other publicly-owned diesel fleets. Depending on the age and type of equipment, retrofits result in a 30-100 percent reduction in particle emissions. To date, more than 10,000 retrofits have been completed on 8,100 engines, and exposure to diesel emissions has been



reduced for more than 450,000 school children every day. Retrofits have resulted in reductions of more than 27 tons of toxic diesel soot each year, with significant health care and economic savings in Washington. Work must now shift to address the legacy fleet of private sector engines, especially in areas where lots of these large engines (on ships, trains, and heavy duty trucks) work in close proximity, such as at ports and distribution centers. We are encouraging adoption of anti-idling programs to reduce toxic vehicle exhaust around schools, hospitals, daycare centers, and other places where people can be severely impacted. New funding is being used to install anti-idling equipment on heavy duty public sector vehicles, such as maintenance equipment, fire engines and aid units. Despite all of these efforts, we need ongoing, strengthened efforts to reduce public exposure to and health risks from toxic diesel soot.

Smoke

Ecology has determined that fine particle pollution from smoke is the second greatest toxic threat from air pollution in Washington. The largest source of this pollution is using wood for heating. During winter months, stagnant weather conditions and smoke from wood heating devices contribute to serious air quality problems. Pollution from these sources is a major factor in violations of the federal fine particle standard. Ecology and local air quality agencies are taking steps to reduce this pollution by offering incentives to people in some of the most affected areas to trade out older, more polluting wood stoves with newer, cleaner models or to alternative forms of heat such as gas or electricity.

Burning household trash (illegal in Washington), yard waste, and debris from land clearing, agricultural and forest activities also creates significant amounts of air pollution that harms citizen health. Washington's clean air law restricts what burning is allowed and where. In January 2007, state law banned outdoor burning within all urban growth areas of the state.

The trend toward tighter restrictions on burning creates conflict between the pressure or desire to burn and the demand for clean air. The pressure to burn agricultural and horticultural debris and intentional burning in forests is likely to increase, and land clearing and backyard burning to reduce yard waste are common practice in some communities. There is also increasing pressure to burn biomass for energy, including burning wood and other organic wastes, to offset greenhouse gas emissions associated with burning fossil fuels. At the same time, pressure to reduce burning is also increasing. People understand the health consequences of breathing smoke particles and don't like to be "smoked-out." We expect more changes in burning laws and regulations as state and local agencies struggle to find the balance between clean air, reasonable alternatives to burning, and necessary burning.

Visibility and Regional Haze

Citizens complain when air pollution affects their view of Mt. Rainier, the Olympics, or the Columbia Gorge. Federal law requires the state to eliminate human-caused visibility impairment in our national parks and wilderness areas by 2064. Ecology has reinstated its regional haze program and has completed an evaluation of pollution sources that will be a critical part of the overall plan to achieve and maintain the federally-required visibility goals. The visibility plan containing industrial source controls and other strategies has been submitted to EPA for approval.

Reducing Greenhouse Gas Emissions

To make meaningful reductions in greenhouse gases, citizens and policy makers must know what activities emit those gases, and in what quantities. Ecology has a specific role to create a high-level emissions inventory that catalogues these emissions for the state over time, by industry, and by economic



sector. Statute also requires Ecology to create and operate a greenhouse gas reporting program requiring individual entities that emit certain quantities of greenhouse gases to report those emissions. This information will be used to better inform the emissions inventory. And it will help guide future federal and state climate policy direction and decisions that target emission reductions across Washington.

Ecology provides expertise on emissions from vehicles and motor fuels. Emissions from the transportation sector are the largest single source of greenhouse gases in Washington. We support statewide efforts to evaluate emissions from alternative fuels, such as ethanol and biodiesel, as well as emissions from different types of vehicles, such as electric vehicles, gasoline/electric hybrids and hydrogen fuel cell vehicles.

Activities, Results & Performance Measures

Measure Air Pollution Levels and Emissions

To make sound air quality management decisions, Ecology needs reliable information on the amount and sources of pollution and how it moves in the air. We use three primary activities to collect this data: (1) air quality monitoring (assessing trends; focused compliance; and assessing control strategies, health effects, and environmental damage); (2) emission inventory development (quantifying pollution released by sources of air pollution); and (3) meteorological and dispersion modeling forecasts (movement and concentration of air pollutants, carrying capacity of airsheds, interactions of pollutants, and point of maximum impact of pollution).

Expected Results

Comprehensive, high quality air quality data are gathered, maintained, and evaluated over time to ensure informed policy decisions.

- The federally-required monitoring network review and monitoring site modifications are conducted to meet state and federal air quality needs.
- Adequate data are available to policy makers.
- Improved emissions data and modeling tools are used to predict air quality levels, impacts, and trends.

Performance Measure

- Percent of monitoring data that is valid.

Prevent Unhealthy Air and Violations of Air Quality Standards

Federal law establishes minimum air standards for six air pollutants known as criteria pollutants. Violations of those standards trigger costly regulatory actions for state and local governments, businesses and consumers, result in economic constraints, and create potential for severe financial sanctions against the state if problem areas are not cleaned up in a timely way.

To ensure federal standards are met, Ecology continuously measures air pollution levels and trends, develops and implements area-specific cleanup plans, and designs and implements strategies to prevent violations. Recent compelling research shows the current National Ambient Air Quality Standards for some criteria pollutants do not protect human health, and these standards are under federal review right now.



In light of this new research, Ecology is adjusting its focus to assure the air in Washington is both safe to breathe and meets federal standards. We will work to reduce ambient air pollutant concentrations to levels that ensure air in Washington communities is healthy to breathe, clean up areas that violate standards as quickly as possible, and prevent future violations of National Ambient Air Quality Standards.

Expected Results

Air quality standards in Washington are met throughout the state to minimize public health problems linked to unsafe air.

- Clean air, as classified and officially recognized by the EPA, is attained and maintained, and federal sanctions are avoided.
- Violations of ambient air quality standards are prevented.
- State Implementation Plan strategies are analyzed and evaluated for areas out of compliance with federal air quality standards—Pierce County/Tacoma, Yakima.
- Strategies are evaluated to help prevent areas from violating federal air quality standards in at-risk communities

Performance Measures

- Number of areas in Washington measuring air quality levels that are not in compliance with federal air quality standards (Non-Attainment Areas).
- Number of citizens exposed to levels of pollution that exceed federal air quality standards.

Reduce Air Pollution from Industrial and Commercial Sources

Ecology issues permits to new and existing industrial and commercial facilities that emit significant levels of air pollution. Permit programs are mandated either by federal or state clean air laws and are designed to be self-supporting through fees. Ecology provides technical assistance, permit application and processing guidance, interpretation of rules, pre-application assistance, and permit review. Permits are conditioned and approved to ensure all federal and state laws are met, and that public health, air quality, and the environment are protected.

Ecology develops and modifies industrial source regulations to incorporate federal and state law changes, simplify and streamline permit requirements, and ensure public health protection. We conduct compliance inspections, resolve complaints, and develop technical and policy direction on emerging industrial permit issues.

Expected Results

Air pollution from industrial and commercial sources is managed to protect public health and minimize costs and regulatory burdens.

- 100 percent of permits meet timeliness targets.
- The regulated community is certain about the need, content, and timeframes for permits.
- Ecology and local air pollution control agencies retain delegation and local control of federal permit programs.

Performance Measure

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



Reduce Health and Environmental Threats from Motor Vehicle Emissions

Cars, trucks, construction equipment, locomotives, and marine vessels are responsible for over 60 percent of Washington's air pollution. These emissions adversely affect public health, substantially increase health care costs, and increase cancer and mortality rates. Without significant emission reductions, Ecology cannot ensure future attainment of federal air quality standards, avoid multi-million dollar control costs to businesses and citizens, or reduce or prevent harmful health effects.

To protect public health and the environment from motor vehicle pollution, Ecology implements the Washington Clean Car standards, a vehicle emission check program of nearly two million cars and trucks; promotes transportation alternatives and cleaner motor vehicles and fuels through voluntary, regulatory, and incentive programs; and retrofits school buses and other diesel engines with better emission controls.

Expected Results

Air pollution emissions from motor vehicles are reduced.

- Pollution from on-road motor vehicles is reduced approximately 10 percent per year. Pollution from approximately two million cars is reduced by operating an Emission Check Program in three maintenance areas in the state.
- Diesel school bus and public fleet engine retrofits are completed and appropriate private sector engines are retrofitted with air pollution controls.
- State and Federal Diesel Emission Reduction Act (DERA) and American Recovery and Reinvestment Act (ARRA) funds are managed to reduce highest risk toxic diesel emissions.
- Strategies to reduce engine idling in high exposure areas (near schools and around truck stops) continue being developed and implemented.

Performance Measures

- Tons of motor vehicle emissions produced statewide.
- Tons of diesel soot emissions produced statewide.
- Tons of diesel soot emissions produced in counties contiguous to Puget Sound.

Reduce Health and Environmental Threats from Smoke

Nagging regional smoke pollution plagues many areas in Washington and affects public health and quality of life. To address these continuing problems from outdoor burning, Ecology issues conditioned permits for agricultural, land clearing, fire training, and other outdoor burning, where required by law. We also produce daily burn forecasts; respond to and resolve complaints related to smoke; provide technical assistance to manage and prevent outdoor burning impacts and, through technical assistance, research, and demonstration projects, we promote development and use of practical alternatives to burning.

To address smoke from residential wood heating, Ecology:

- coordinates burn curtailments;
- conducts woodstove change-out programs;
- sets strict emission limits for new stoves and promotes development of cleaner-burning technologies; and
- coordinates with EPA on standards for residential home heating appliances.

Our ongoing goal is to achieve and maintain air quality levels in Washington communities that experts agree is sufficient to protect human health.



Expected Results

Public health threats from smoke are managed and minimized.

- Smoke impacts on communities from agricultural and other outdoor burning are reduced.
- Outdoor burning permit and smoke management systems are improved and streamlined.
- Local burning permit programs are audited to ensure effective and efficient operation.
- Practical alternatives and best management practices for burning are developed and used.
- Woodstove emissions are reduced through creating and implementing a proper burning outreach campaign, effective burning curtailments, change-out of uncertified woodstoves, and working with EPA to develop more stringent certifications for wood burning devices.

Performance Measures

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

Reduce Risk from Toxic Air Pollutants

No outdoor air quality standards, and few emission limits, have been established for the hundreds of toxic chemicals (totaling millions of pounds) emitted into the air each year in Washington. Emerging assessments and toxics risk models indicate the levels and extent of airborne toxics pose significant health and environmental risks, including cancer, other serious health effects, and death. Ecology has identified 16 high risk toxic air pollutants that are prevalent in Washington.

To significantly reduce potential risk to the public, Ecology conducts annual air toxics emission inventories; operates air toxics monitoring sites; limits toxic emissions through permit conditions for commercial facilities, combustion processes, and outdoor burning; and implements programs to reduce emissions from diesel engines and indoor wood heating devices.

Expected Results

The public health threat from toxic air pollutants is minimized.

- Diesel soot emissions are reduced 40 percent by 2015 using a 2005 baseline.
- State and Federal Diesel Emission Reduction Act (DERA) and American Recovery and Reinvestment Act (ARRA) funds are used to reduce diesel emissions near ports and other toxic hot spots.
- Woodstove replacements target high use stoves in high risk communities.
- Emission inventories and understanding of ambient concentrations and sources of priority toxics are improved.
- Appropriate strategies to reduce emissions of priority toxics are evaluated and started.
- Strategies to reduce diesel emissions and engine idling in high exposure areas (near schools, ports, freight distribution centers, and truck stops) continue to be developed and implemented.

Performance Measures

- Number of diesel engines (school buses and public and private sector fleets) retrofitted with pollution control equipment.
- Number of woodstoves replaced with cleaner burning technologies.
- Tons of diesel soot emissions produced statewide.
- Tons of diesel soot emissions produced in counties contiguous to Puget Sound.



Climate Change Mitigation & Adaptation

State law sets greenhouse gas emission reduction targets for Washington and requires the development of strategies to adapt to climate changes that are both projected and already underway. Ecology collects and analyzes data to understand the sources, types, and amount of greenhouse gases in Washington, and implements state and federal laws that establish strategies that reduce greenhouse gas emissions.

To better understand the distribution and volume of greenhouse gases emitted in the state, Ecology is required to develop and maintain a biennial greenhouse gas emissions inventory. In addition, the Legislature directed Ecology to develop a rule and implement a program requiring certain sources to report their greenhouse gas emissions beginning in 2013 for 2012 emissions. We are currently developing the information systems necessary to collect, store and report that information.

To help the state achieve its statutory greenhouse gas reduction targets, Ecology is implementing state legislation that reduces emissions from the TransAlta coal-fired power plant; incorporating greenhouse gas emission limits in large new industrial facility permits as required under federal law; and ensuring new power plants mitigate 20 percent of their CO₂ emissions and meet a greenhouse gas emission performance standard established in state law. In addition to implementing state and federal emission reduction requirements, Ecology is required to regularly report on progress towards meeting the state's statutorily required reduction targets.

Activities associated with adapting to climate change are located in the Climate Policy Group in the Administration section of the strategic plan. Expected results and Performance Measures noted below are intended to be agency-wide.

Expected Results

- Decision makers and the public have better information, knowledge, and understanding of the volume and sources of greenhouse gas emissions in the state.
- Greenhouse gas emissions are being reduced sufficiently to meet the state's statutory reduction targets.
- Citizens, businesses, local governments, and state agencies are aware of existing and projected impacts resulting from a changing climate and are taking steps necessary to preserve and protect assets, resources, and operations.
- State agencies lead by example in reducing greenhouse gases associated with their operations and in helping the state prepare for the impacts of climate change.

Performance Measure

- Tons of greenhouse gas emissions produced statewide.



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Mission Statement

The mission of the Hazardous Waste and Toxics Reduction Program is to foster sustainability, prevent pollution, and promote safe waste management.

Environmental Threats

Reducing toxic threats is one of Ecology's priority initiatives. There are risks in using and storing—not just disposing of—hazardous chemicals. Some chemicals (such as cleaning products or yard chemicals) can pose an immediate health threat, while others pose a risk as products break down, or when they are disposed. Some chemicals build up in our bodies and the environment gradually—for example, persistent, bioaccumulative toxins (PBTs), and heavy metals.

When hazardous chemicals and products are no longer usable, they become hazardous wastes, or dangerous wastes as they are known in Washington. Washington law uses the term *dangerous waste*. Federal law uses the term *hazardous waste*. While these terms are sometimes used interchangeably, Washington's definition includes some substances, such as PBTs, that are not included in the federal definition.

When dangerous or hazardous wastes are mismanaged, they get into water and soil where they may harm human health and the environment, or cause costly cleanup sites. Washington has had over 6,400 toxic sites cleaned up or reported cleaned up in the state. Nearly 300 new sites are reported each year and approximately 200 site cleanups are completed each year. The costs of cleaning up toxic sites range from tens of thousands to millions of dollars per site. When responsible parties aren't able to pay for cleanups, the burden often falls to taxpayers.

Around 1,200 businesses and facilities statewide produce most of the dangerous waste—over 100 million pounds of *recurrent* dangerous waste each year. Recurrent wastes are planned, predictable by-products of industrial processes. We also work with local governments to ensure safe handling of hazardous waste produced by thousands of smaller businesses—known as Small Quantity Generators—in Washington. Safe dangerous waste management is essential to protect human health and the environment, but avoiding the use of toxic chemicals in the first place is the smartest, cheapest, and healthiest approach.

The risk from toxic chemicals is not only from leaking drums at an industrial site. Each of us affects the environment, others, and our own health 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 offices.

While reducing the use of toxic chemicals and ensuring safe management of dangerous waste are our two highest priorities, Ecology recognizes the continuing economic challenges facing the state. Many businesses have had to cut positions focused on environmental issues and need help now more than ever. Similarly, our program has had to cut several positions and streamline our work efforts. Still, our focus



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Reduce the Use of Toxic Chemicals and Manage Hazardous Waste

remains on helping the public and businesses make informed choices about the use of toxic chemicals and their ultimate safe disposal.

Authorizing Laws

- Federal Emergency Planning and Community Right-to-Know Act
- Federal Resource Conservation and Recovery Act (1980)
- RCW 15.54, Fertilizer Regulation Act (Ecology's oversight authority over waste-derived fertilizers)
- RCW 49.70, State Worker and Community Right-to-Know Act
- RCW 70.95, Hazardous Waste Reduction Act
- RCW 70.95C, State Solid Waste Act
- RCW 70.95E, Hazardous Waste Fees
- RCW 70.102.020, Hazardous Substance Information Act
- RCW 70.105 (1976), Washington's Hazardous Waste Management Act
- RCW 70.105D (1989), State Hazardous Waste Clean Up (MTCA)
- WAC 173-303, Dangerous Waste Regulations (2000)
- WAC 173-305, Hazardous Waste Fees (1992)
- WAC 173-307, Pollution Prevention Plans (1991)

Constituents/Interested Parties

- The 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).

Issues

Focus on Compliance

While we work to prevent tomorrow's toxic threats, we strive to manage today's dangerous waste safely. Routine inspections are a critical regulatory line of defense between the millions of pounds of dangerous waste produced in Washington and environmental contamination. Mismanagement of hazardous waste:

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

Formal state dangerous waste inspections at larger, regulated businesses and facilities are critical to public and environmental health. These businesses handle the bulk of the state's toxic chemicals. Inspections can be unannounced or scheduled.



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During the 2009-11 biennium, Ecology staff performed over 500 compliance inspections at facilities that generate or manage dangerous waste. These inspections resolved nearly 500 serious environmental threats. Such threats have the potential to pollute our environment through leaks or spills from unsafe storage methods or containers.

The inspections also revealed how well facilities complied with state and federal regulations. Unfortunately, we found serious environmental violations at almost 60 percent of regulated businesses we inspected in 2009-11. This is one of the highest rates in 20 years.

With a stronger field presence ten years ago, dangerous waste inspectors found serious environmental threats at 27 percent of businesses. Why the increase? An EPA study of Washington businesses showed a 20 percent increase in environmental threats when more than three years passed between inspections. Not surprisingly, our low year for number of inspections was 2007, with a peak in significant violations three years later in 2010. New funding for four Puget Sound-area compliance inspectors should help improve this current trend.

When technical assistance and voluntary compliance isn't enough, Ecology uses formal enforcement to halt significant violations. Ecology officials issued 12 penalties in the 2009-11 biennium. This is slightly higher than the historic average of six to eight penalties issued each year. When monetary penalties are received, they are deposited into the State Toxics Control Account where they fund programs across several state agencies.

Local Source Control Program

Businesses of all types and sizes produce and use a variety of toxic chemicals. Even small amounts of mismanaged toxic chemicals can create contaminated sites and pollute stormwater. Many smaller businesses had never had an environmental inspection or technical assistance visit until Ecology created the Local Source Control Program.

In 2008, Ecology established performance contracts with 12 Puget Sound counties (in addition to Spokane County). These contracts provide for Local Source Control Specialists to conduct technical assistance visits to small businesses. These technical assistance visits help small businesses comply with dangerous waste and stormwater control laws.

By the end of the 2009-11 biennium, Local Source Control Specialists had visited over 6,300 small businesses. This service helped them better manage their stormwater and dangerous wastes. Almost half of these visits found and addressed minor dangerous waste, stormwater, or spill violations. In the 2011-13 biennium, we will add additional local government partners and exceed 10,000 total site visits.

Reducing Risk through Technical Assistance to Businesses

Face-to-face visits result in voluntary compliance rates of 90 percent or higher. Hundreds of businesses in Washington have saved money and increased their competitive advantage by reducing their use of toxic chemicals, ensuring better compliance with state dangerous waste laws.

The key to breaking the cycle of ongoing cleanup expenses is to use fewer toxic chemicals and safely manage those hazardous substances for which no substitute is available. Facilities that produce more



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dangerous wastes tend to run a higher risk of mismanaging that waste. Mismanaged wastes can contaminate human and environmental health, and may eventually require cleanup.

During the 2009-11 biennium, Ecology staff conducted over 1,100 business assistance visits. We provided business-specific advice on how to:

- Reduce the use of hazardous materials.
- Avoid generating waste.
- Manage hazardous waste safely.

We focused on improving operations and maintenance in industries with the highest rates of waste generation and non-compliance. We showed their staff how to:

1. Achieve energy savings.
2. Conserve water.
3. Prevent stormwater contamination.
4. Use fewer toxic chemicals.

For example, Crown Beverage Packaging, Inc., is a can manufacturing facility in Olympia. In 1991, they were a large quantity generator of dangerous waste. By working with Ecology, Crown lowered their use of hazardous substances and generation of hazardous waste. They did this while keeping relatively constant production levels. In their most recent pollution prevention plan, Crown reduced hazardous waste generation by 70 percent and water consumption by 2.5 million gallons per year. A recent energy audit expects to net Crown over \$160,000 per year in savings.

Ecology is also working with businesses to reduce the use of PBT chemicals and heavy metals such as lead, mercury, and cadmium. By the end of the 2011-13 biennium, our Toxic Metals Prevention Project expects to perform 300 site visits resulting in reduction of over 150,000 pounds of lead, mercury, and cadmium from Washington businesses.

Safer Chemicals

There is increasing concern about toxic chemicals in consumer products at the state level. The effects of toxic chemical exposure to human health, the environment, and the economy are enormous—and largely avoidable through pollution prevention. People expect that products sold are safe and will not adversely affect human health or the environment. While a chemical-by-chemical approach is important, Ecology also participates in efforts to advance a more systematic national chemicals policy.

A number of Ecology projects supporting safer chemicals began in 2009-11, including:

- The Toxics in Packaging Clearinghouse focused on regulating toxic metals in packaging. Ecology is working with other states to monitor compliance with restrictions on these substances. The goal is to ensure they do not end up in consumer products packaging.
- Development of the Quick Screen method to conduct safer chemical assessments by businesses and individuals. This helps identify the highest-risk chemicals, supports the Children's Safe Products Act, and enables use by those with less time, resources, and expertise.



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- A multi-state effort to reform federal chemical management law (the 1976 Toxic Substances Control Act). This includes developing states' principles on national chemicals policy reform.
- A roadmap for advancing green chemistry as an economic driver in Washington State.
- Developing rules (Better Brakes Law) resulting in auto brake friction materials that eliminate or reduce copper, asbestiform fibers, cadmium, lead, and mercury. Currently these toxic substances are being washed off roads into streams, rivers, and Puget Sound.

Over the past 20 years, businesses that track their waste generation through pollution prevention planning reduced their waste by more than 50 percent when adjusted for production. We still have much to do to reduce hazardous substances that are incorporated into products and to reduce the costs and risks associated with the remaining generated waste.

Permitting and Corrective Action

Ecology issues permits specially designed for dangerous waste treatment, storage, and disposal (TSD) facilities. The state's three commercial TSD facilities began permit renewals in the 2009-11 biennium. Ecology also oversees closure and necessary cleanup at these facilities. TSD facilities, mostly located near Puget Sound, are often contaminated and require some form of cleanup. This cleanup is known as corrective action.

Corrective actions are proceeding at 39 priority sites because of their significance as designated by EPA. Ecology expects to have these 39 cleanups finished or in maintenance mode by 2020. We completed an overall average of 75 percent of the work at these sites by the close of the 2009-11 biennium. The full cleanup process takes 10-12 years to complete.

Human exposures are under control at 90 percent of these facilities. Contaminated groundwater is under control at 77 percent of the facilities. This exceeds EPA's national goals for 2011 of 65 and 55 percent, respectively. Cleanups are expensive, but we can recover most costs from the property owners. Once clean, these properties provide opportunities for habitat restoration, economic development, and public recreation.

Access to Hazardous Substance and Waste Information

Ecology's data systems gather, maintain, and report hazardous substance and waste information. We retrieve and report the data to individuals and businesses, emergency responders, and local government decision makers. Our website, printed materials, telephone information line, and newsletter, *Shoptalk*, provide the most current hazardous substance and waste information. These resources help businesses and the public make informed decisions on the use and safe management of chemicals in Washington. During 2009-11, we responded to over 700 information requests from citizens and businesses through the Toxic Free Tips information service. Our HWTR program websites logged more than 500,000 visits.

Activities, Results & Performance Measures

Improve Community Access to Hazardous Substance and Waste Information



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Ecology uses automated data systems to track compliance and technical assistance visits; measure pollution prevention and compliance progress; track amounts of dangerous waste generated each year and its proper transport, treatment, and/or disposal; identify toxic chemicals released and stored by businesses; and track information on facilities that prepare pollution prevention plans and pay fees. These data systems provide Ecology, the public, and local governments with accurate information about the type, location, and source of hazardous substances that affect them. According to federal and state community right-to-know laws, Ecology also responds to public inquiries about toxic chemicals and provides a website for this purpose.

Expected Results

Hazardous waste and chemical data (type, location, volume, etc.) is readily available to emergency responders, and local governments. Citizens and decision makers have access to hazardous waste and dangerous chemical data in their communities. This is accomplished through:

- Developing and distributing online the “Chemicals in Washington” report.
- Responding to 100 quarterly information requests from citizens and businesses through the Toxic Free Tips phone line and email.
- Increasing the Shoptalk electronic distribution list to 5,000 by July 1, 2013.
- Creating or updating 30 business publications each year and posting them to the web for electronic distribution.
- Collecting and analyzing annual dangerous waste and “tier two” reports from facilities producing hazardous waste and storing dangerous chemicals.
- Establishing and implementing a marketing strategy for sharing pollution prevention success stories.

Performance Measure

- Number of visits to toxics-related websites.

Increase Compliance and Act on Environmental Threats from Hazardous Waste

Mismanaged hazardous wastes and poor compliance can harm people and contaminate soil and water. Ecology conducts yearly formal compliance enforcement inspections at large and medium quantity generators and hazardous waste management facilities to ensure compliance with state and federal regulations. A credible, formal enforcement capability is essential to preserving the effectiveness of technical assistance and informal enforcement efforts. While staff do formal enforcement infrequently, repeated refusal or inability of a facility to correct violations and come into compliance with the regulations will escalate to formal enforcement actions.

Expected Results

Large and medium quantity generators and hazardous waste management facilities are in compliance with state and federal regulations. This is accomplished through:

- Conducting 345 compliance inspections in fiscal year 2012 and 410 compliance inspections in fiscal year 2013.
- Responding to 100 percent of hazardous waste related complaints (approximately 120-180 complaints per year).
- Utilizing streamlined enforcement and settlement approaches as opportunities arise.



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- Issuing timely enforcement actions resulting in a deterrent to businesses and changed behavior.

Performance Measures

- Number of significant toxics-related environmental threats resolved.
- Percent chance of finding a significant environmental threat during a compliance inspection.

Increase Safe Hazardous Waste Management

Ecology provides education and technical assistance to thousands of businesses on safe hazardous waste management. Even though formal enforcement work is essential to maintaining compliance with hazardous waste regulations, workshops and technical assistance visits can also help bring facilities into regulatory compliance using much fewer resources. Ecology contracts with local governments to hire staff to explain hazardous waste requirements to small businesses that otherwise would go uninspected. Safe management of hazardous waste protects the public and the environment, and allows the state to avoid significant cleanup costs.

Expected Results

Hazardous waste is safely managed, the public is protected, and businesses comply with state hazardous waste laws. This is accomplished through:

- Conducting 520 compliance-related technical assistance visits.
- Helping businesses determine how to safely manage their hazardous wastes and reduce the use of toxic chemicals.
- Creating a web-based dangerous waste workshop module for business technical assistance.
- Developing policy guidance for hospitals, used paint recycling, and auto shred residue.

Performance Measures

- Number of toxics-related technical assistance visits.
- Number of Ecology funded small business technical assistance visits conducted by local government.

Prevent Hazardous Waste Pollution through Permitting, Closure, and Corrective Action

Facilities that treat, store, or dispose of dangerous wastes must obtain a permit to ensure their design, construction, maintenance, and operating procedures protect public health and the environment. Washington currently has 14 active facilities that are either in “interim status” or have a final permit. These facilities are required to have closure plans to effectively deal with the end of their waste management activities. Environmental contamination found at any time before closure requires a corrective action cleanup plan. Ecology is working on 22 high priority corrective action cleanup sites right now.

Expected Results

Facilities that treat, store, or dispose of hazardous wastes are constructed and operated to prevent soil, water, or air contamination. This is accomplished through:

- Timely issuing three high priority draft operating permits for facilities that treat, store, or dispose of hazardous wastes.
- Continuing to meet or exceed EPA's 2012 cleanup goals for protecting human health, controlling



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Reduce the Use of Toxic Chemicals and Manage Hazardous Waste

migration of contaminated groundwater, and sites reaching “remedy construction complete.”

- Acting on high priority permit modifications from facilities.
- Ensuring proper financial assurance requirements are in place at used oil processors and recyclers.

Performance Measure

- Percent progress toward completed corrective action.

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

The state Hazardous Waste Reduction Act calls for the reduction of hazardous waste generation and the use of toxic substances and requires certain businesses to prepare plans for voluntary reduction. Ecology staff provide assistance through innovative programs for source and waste generation reduction, including more than 480 toxics-related technical assistance visits per year. Ecology also focuses on improvements in industries that have the highest rate of waste generation and non-compliance to help them achieve energy savings, water conservation, and reduced hazardous waste production.

Expected Results

Toxics in products and the initial generation of hazardous waste is reduced resulting in less need for site cleanup, reduced public exposure, and helping save businesses money. This is accomplished through:

- Reducing hazardous waste generation by four percent each year (approximately four million pounds), resulting in cleanup and disposal cost savings for businesses, reduced public exposure, and fewer site cleanups.
- Receiving and reviewing 100 percent of pollution prevention (P2) plans (approximately 450) each year from businesses and facilities.
- Increasing the number of P2 opportunities implemented by businesses and reported to the National P2 Roundtable.
- Visiting or assisting 100 percent of pollution prevention planners using or producing waste containing lead, mercury, or cadmium.
- Documenting 150,000 pounds in lead, mercury, and cadmium reductions from businesses reporting through the Toxic Release Inventory, TurboWaste data system, P2 Planning, or other sources if quantifiable.
- Conducting two to four detailed technical assistance projects each year.
- Conducting 20 energy assessments through an Environmental Protection Agency grant.
- Prototyping the Global Reporting Framework (GRI) as a P2 plan equivalent.

Performance Measures

- Pounds of hazardous waste generated.

Reduce Toxic Chemicals in Products and Promote Safer Alternatives

Toxic chemicals in products are polluting our environment and have the potential to harm humans. Reducing toxic chemicals in products over time will lower risks to people and the environment. To make significant progress toward achieving this goal requires several strategies:



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- Identifying chemicals of concern in consumer products and strengthening the ability to gather data on the presence of these chemicals in products and the environment.
- Improving tools and authorities to promote safer alternatives to identified chemicals.
- Promoting green chemistry.
- Promoting environmentally preferred purchasing.
- Improving education, outreach, and communication.

Reducing toxic chemical threats is the smartest, cheapest, and healthiest approach to protecting people and the environment.

Expected Results

Toxic chemicals in products are reduced over time to lower health risks to people and the environment. This is accomplished through:

- 40 million pounds of electronics containing toxic substances collected through the E-Cycle Program.
- Expanding the product stewardship program to paint, carpets, and pharmaceuticals.
- Collection and capture of an additional 4,000 pounds of mercury.
- Collection, evaluation, and information shared on the presence of chemicals of high concern for children in children's products.
- Assurance that state principles for chemical policy are incorporated in the federal Toxics Substances Control Act (TSCA) reform.
- Protocols, in coordination with other states, are developed for identifying safer alternatives for toxic chemicals of concern in products and manufacturing.
- Development of a chemical alternative assessment guidance document.
- Development of a green chemistry "road map" for Washington.
- Amendments to the Children's Safe Products Act passed to require manufacturers to use the protocol to assess safer alternatives to toxic chemicals of concern.
- State and local governments improve purchasing practices of environmentally preferred products.

Performance Measures

- Pounds of hazardous materials reduced.
- Pounds of mercury collected and/or captured.



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Mission Statement

The mission of the Waste 2 Resources Program is to eliminate wastes and toxics whenever we can and use the remaining wastes as resources. This will contribute to environmental, social, and economic vitality.

Environmental Threats

Washington State has a system of waste management that relies on partnerships of state, local governments and the private sector. State law requires Ecology to develop regulations for solid waste handling and disposal facilities and a state plan, the *Beyond Waste* plan. Local governments are required to develop local plans that align with the state plan and address their needs for managing local solid and hazardous waste. Facilities, hauling of waste, recycling programs, and funding for those programs must be included in plans approved by Ecology. Support for implementing those plans and programs are provided through local fund sources such as tipping fees and Coordination Prevention Grants through Ecology. Ecology provides technical assistance to local governments for their plan development and implementation. The private sector provides much of the waste and recycling hauling services in the state and owns and operates many of the waste handling and disposal facilities.

As Washington's population grows, so does the amount of waste it produces. Over time, the character of the waste stream has changed along with the way we manage the waste. There is increasing demand to recover and reuse materials for a higher use than disposal. In addition, Chapter 70.95 RCW, *Solid Waste Management – Reduction and Recycling*, the primary statute for solid waste management in the state, establishes waste prevention as the first goal for solid waste management. This is reflected in *Beyond Waste*, the state solid and hazardous waste plan. Preventing waste in the first place is the smartest, cheapest, and healthiest approach.

Consistent with implementing state and federal laws, Ecology develops regulations to prevent improper disposal of hazardous and toxic wastes and requires better designed landfills that are environmentally monitored both while they are actively used and for a number of years after they have closed. The goal is to ensure contaminants do not reach the environment through groundwater, surface water, or discharges to the air.

Ecology provides technical assistance to local jurisdictional health departments (JHDs) that are responsible for permitting and compliance in the state, and facility owners and operators to implement these regulations. Ecology provides technical hydrogeologic and engineering assistance to the majority of JHDs, as they lack this technical expertise. This assistance includes reviewing landfill cover design and operational issues, like landfill liners, leachate collection systems, and groundwater sampling. This protects ground and surface water, and the air. Ecology also provides technical assistance for other solid waste handling facilities, such as transfer stations, compost facilities, and household hazardous waste facilities. Ecology staff reviews all permits JHDs issue and help them interpret our regulations.

While solid waste landfills have become more protective of the environment, disposal of certain wastes still poses potential threats. The waste stream itself has changed with new products, such as electronics



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and mercury lamps, which contain toxic materials. Keeping those out of the landfill in the first place provides even better environmental protection.

The need to reduce potential environmental threats from toxic components in electronic products and mercury lamps has helped to produce two recent take-back laws in Washington. Ecology developed and oversees the E-Cycle Washington Program, which has resulted in keeping more than 100 million pounds of electronics containing toxic substances out of landfills since the program began in 2009. As directed by the 2010 Legislature, Ecology is currently developing a similar take-back program for mercury lamps.

In addition to keeping toxic products out of landfills, Ecology's investment in prevention strategies is the focus of our reducing toxic threats priority initiative and a fundamental principle of the *Beyond Waste* plan. This initiative, building on and coordinating work already underway across Ecology, is aimed at fostering development of prevention approaches to avoid exposure to toxic chemicals and future costs that come when toxic chemicals find their way into the environment. Two focus areas have been identified: (1) preventing use of toxic chemicals in consumer products; and (2) preventing toxics from entering Puget Sound. Ecology is implementing the Children's Safe Products Act, passed by the Legislature in 2008. Ecology is also developing Chemical Action Plans for persistent bioaccumulative toxins (PBTs).

Currently, we dispose of many wastes that have value and could be used in a beneficial way. Ecology is working with others to improve recovery and management of those beneficial materials. We need to ensure those uses are done in a way that protects the environment as they reduce the use of expensive raw materials and benefit economic vitality.

Recycling traditional commodities, such as aluminum cans and paper, has become common in most areas. Expanding the types of materials collected for recycling helps to reduce the amount of waste going to landfills. Recycling also reduces the need for raw materials, when those commodities can be substituted, which conserves energy and reduces greenhouse gas emissions.

Organic materials make up about 30 percent of the municipal solid waste generated by Washington residences, businesses, and institutions. The majority of these organic materials—food waste, yard waste, compostable paper, clean wood, and textiles—are now landfilled or incinerated. Keeping organics out of landfills reduces greenhouse gas emissions by decreasing methane production, a potent greenhouse gas that is released during decomposition. Turning organics into compost, bioenergy, biofuels, and other products promotes economic vitality in growing industries, and protects the environment.

Ecology oversees the state biosolids program, develops the standards, and permits wastewater treatment plants, biosolids beneficial use facilities, septage management facilities, and compost facilities that use biosolids as feedstocks. Applying biosolids to land provides a valuable soil additive that improves soil structure and moisture holding capacity, and can substitute for chemical fertilizers.

Ecology's biosolids program is supported by fees paid by wastewater treatment plants. Enforcing the requirements for proper handling, quality standards for biosolids and rates at which biosolids are applied to the land, protects human health and the environment, while providing farmers and foresters a beneficial nutrient source.

Major industries in the state, such as pulp and paper, aluminum smelting, and oil refining have the potential to be major polluters of the environment. Ecology provides a single point of contact for



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improved environmental permitting, compliance, and technical assistance to ensure their activities minimize negative air, land, and water impacts.

Authorizing Laws

- RCW 49.70 Worker and Community Right-to-Know Act
- RCW 70.93, Waste Reduction, Recycling and Model Litter Control Act
- RCW 70.94, Washington Clean Air Act
- RCW 70.95, Solid Waste Management Reduction and Recycle
- RCW 70.95C, Waste Reduction
- RCW 70.95D, Solid Waste Incinerator
- RCW 70.95F, Labeling of Plastics
- RCW 70.95G, Packages Containing Metals
- RCW 70.95I, Used Oil Recycling
- RCW 70.95J, Municipal Sewage Sludge – Biosolids
- RCW 70.95K, Biomedical Waste
- RCW 70.95M, Mercury
- RCW 70.95N, Electronic Product Recycling
- RCW 70.105, Hazardous Waste Management
- RCW 70.105D, Hazardous Waste Clean Up—Model Toxics Control Act
- RCW 70.132, Beverage Containers
- RCW 70.138, Incinerator Ash Residue
- RCW 70.240, Children’s Safe Products Act
- RCW 70.270, Replacement of lead wheel weights
- RCW 70.275, Mercury-containing lights – proper disposal
- RCW 70.280, Bisphenol A – Restrictions on sale
- RCW 70.295, Storm water pollution-coal tar
- RCW 90.48, Water Pollution Control Act
- RCW 90.52, Pollution Disclosure Act

Constituents/Interested Parties

- Federal, state, and local governments.
- Environmental organizations.
- Businesses.
- Citizens.
- G-certificated haulers.
- Recyclers.

Issues

The Waste Reduction, Recycling and Litter Control Account Reductions and Proviso Language for the 2011-13 Biennium



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Ecology's Waste 2 Resources program receives funding from the Waste Reduction, Recycling, and Litter Control Account (WRRLCA). RCW 70.93.180 requires 50 percent of the fund to be used for state agency litter pickup and prevention programs, 20 percent goes to local government for the Community Litter Cleanup Program, and 30 percent is directed to Ecology's waste reduction and recycling work. The 2011 Legislature suspended the 50/30/20 split and reduced Ecology's funding by \$7 million. The Legislature also included proviso language that limits how we can spend the remaining funds while prioritizing litter pickup efforts, regulatory programs, and technical assistance to local governments.

Some of the specific activities and associated staff resources suspended for the biennium include:

- Ecology's litter prevention campaign, the litter survey, and 1.6 FTEs were suspended during the 2009-11 biennium because of the reductions in the WRRLCA. Those programs continue to be suspended. Surveys had shown a 25 percent reduction in litter because of the prevention campaign.
- Washington State Patrol's emphasis on secured load requirements is suspended.
- The litter hotline is no longer in service, resulting in less education and outreach to the public (0.65 FTE).
- Reductions to the Community Litter Cleanup Program continue.
- Funding to Washington State Parks and the Washington Department of Fish and Wildlife was suspended, resulting in increased litter on county roads, state lands, recreational areas, and more illegal dumps.
- Beyond Waste coordination and outreach was suspended.
- Implementation of the Green Building Initiative was suspended (2.0 FTEs).
- Staffing was reduced to provide technical assistance and work with construction and demolition recycling.
- Work promoting food waste composting and prevention programs was suspended.
- The School Awards Program was suspended, resulting in fewer incentives for exceptional waste reduction and recycling efforts in schools.
- Staff for the 1-800-RECYCLE hotline was greatly reduced (1.2 FTEs).
- Staffing and contract funds were reduced to compile, manage, and organize solid waste management and litter reduction data and share this information with local governments.
- There is no funding for a planned statewide waste characterization study.

In addition, to continue accomplishing Ecology's priority work, it was necessary to shift some work of existing staff to other eligible funding sources, resulting in approximately 5.8 FTEs as unfunded vacancies. We prioritized our reduced staff resources, focusing on the most problematic waste streams as discussed in the following sections.

Preventing and Cleaning Up Litter with Reduced Funding

Because of reduced funding in the 2011-13 biennium, coupled with proviso requirements, Ecology is prioritizing litter pickup efforts in partnership with the Washington State Department of Corrections (DOC). Historically, the most effective strategy for picking up the most litter with the least amount of investment included both DOC crews and Ecology Youth Corps (EYC) crews. Ecology kept DOC funding at 2009-11 levels and is continuing litter pickup with EYC at a reduced level. Reductions taken to other agency funding will mean fewer crews on county roads and public lands, and fewer miles covered for litter pickup. Expected results will be dirtier and potentially more dangerous roads.



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Managing Waste Prevention and Recycling Issues with Reduced Funding

Ecology works on many different issues that deal with waste prevention and recycling. Reductions to the WRRLCA hamper our ability to evaluate new technologies and programs to prevent waste, deal with emerging recycling issues, and to provide technical assistance that furthers the goals of Beyond Waste (the state's solid and hazardous waste management plan). We are prioritizing our technical assistance to support work on priority waste streams.

Organics Management

Organic materials, including yard waste, food waste, land clearing debris, and construction and demolition debris have historically been a significant portion of the waste stream. To meet the Beyond Waste goal of closed-loop recycling and reuse of organic materials, those materials are being diverted from disposal to other management options. Some of the management options have associated concerns.

In major population centers of western Washington, there has been an increased demand for landfill diversion options for organic wastes like residential yard debris and food wastes. Local governments and waste management companies have responded with increased collection and diversion programs. Unfortunately, the infrastructure to support the increased collection is not adequate. The result is an overburdened compost industry with odor problems and excess product supply.

To address these issues, Ecology is providing technical assistance to jurisdictional health departments and compost facility owners to alleviate some of the problems. We are in the process of revising rules, WAC 173.350.220, Composting Facilities, to address feedstock, materials management, odor issues, and conditions for exempt compost facilities to improve organics management. Ecology is also working with local governments in their planning process to encourage them to evaluate the presence of adequate facility infrastructure to handle organic materials before they implement the collection programs.

Anaerobic digestion is also a proven technology that converts organic matter to biogas in the absence of oxygen, with nutrient rich fiber and liquid as by-products. Our rule revision process for WAC 173.350.220 will also address anaerobic digesters.

Sustainable building materials

Many organizations and non-profits are focused on promoting green building. Ecology has shifted focus to sustainable building materials. This involves using less material in the construction process, reducing the use of toxic building materials, and recovering more through deconstruction, reuse, and recycling of the construction and demolition debris. Construction and demolition (C&D) debris makes up about 25 percent of the waste stream. Reducing, reusing, and recycling this material not only keeps it out of landfills, it reduces greenhouse gas emissions and creates needed jobs and economic stimulation.

Keeping Mercury Lamps Out of Landfills

In 2010, the Washington State Legislature passed a law that requires producers of mercury-containing lights sold in or into Washington State for residential use to fully finance and participate in a take-back



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program to take effect on January 1, 2013. Producers of mercury-containing lights must fund Ecology's administration and enforcement costs. We are currently working with producers to fund the program and are developing guidelines and rules to implement this program.

Implementing Consumer Product Laws

Ecology adopted rules to carry out the state's groundbreaking Children's Safe Products Act, passed by the Legislature in 2008. The rule is designed to collect information that will help government and the public better understand the presence of chemicals in children's products. It requires manufacturers of children's products to report if their products contain certain chemicals.

In consultation with the Washington State Department of Health, Ecology developed a list of 66 chemicals of high concern for children. Beginning in August 2012, manufacturers of children's products that contain these chemicals must report that use to Ecology. Retailers who only sell, but do not make or import children's products, are not subject to the rule.

Ecology is developing strategies to implement a variety of laws that limit certain chemicals in consumer products, including:

- Lead in wheel weights.
- Bisphenol A in baby bottles and sippy cups.
- PBDE flame retardants in televisions, computers, mattresses and residential upholstered furniture,
- Coal tar containing pavement sealants.

Ensuring compliance with these laws, as well as the Children's Safe Products Act, is challenging with limited resources, since it involves the purchase and testing of affected products.

Preventing Toxics from Entering Puget Sound

Ecology has received funding from EPA through the National Estuary Program to help implement priority work consistent with the 2020 Action Agenda for the protection and restoration of Puget Sound. The goal of one strategy for toxics and nutrients prevention, reduction, and control is to improve both human and environmental health in the Puget Sound ecosystem by preventing, reducing, and controlling toxics and nutrients from entering Puget Sound fresh and marine waters.

Ecology, including the Waste 2 Resources Program, Shorelands and Environmental Assessment Program, and Water Quality Program, is working with various partners at the federal, tribal, state, and local levels and non-governmental organizations, academia, and businesses to develop and implement projects in line with a strategic framework. This strategic framework includes a multi-pronged approach to prevent toxics and nutrients from entering and impacting the Puget Sound ecosystem. Investments fall into five categories:

- Scientific investigation of toxics and nutrients.
- Prevent substances from being used in the first place.
- Limit or manage the amount of toxics and nutrients released into the environment.
- Clean up substances that have polluted air, land, or water.



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- Measure program performance and use adaptive management to continuously improve programs.

Biomass as an Energy Source

Forest biomass has been used as an energy source in Washington for many years. Recently, use of forest biomass has drawn interest from the public, businesses, and government agencies. Some see it as source of renewable energy, jobs, and economic development and a way to decrease our reliance on fossil fuels. Others see it as a source of pollution and a threat to the health of people, forests, and the environment.

Governor Gregoire has called for the state to increase energy production from renewable resources. She believes renewable biomass and biofuels should be thought of as another crop that Washington can produce in our forests and fields.

Ecology is actively working with several pulp and paper mills on proposals to expand use of forest biomass. Cogeneration—the production of renewable power for sale and steam for manufacturing—is one of the most efficient uses of biomass. It often results in a direct reduction in the amount of fossil fuels used and pollution generated.

Thus far, each proposal for increased use of forest biomass has been opposed by local, regional, and national environmental groups. Ecology and the Attorney General's Office are working hard to ensure our regulatory decisions are solid and that approvals thoroughly address all applicable state and federal air pollution control rules.

Industrial Redevelopment and Coal Export

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

An example is the former Reynolds Metals aluminum smelter in Longview. This facility produced high purity aluminum for almost 60 years, and left behind some residual soil and groundwater contamination. Millennium Bulk Terminals recently purchased the rights to the property and plans to build a coal export terminal. Millennium's proposal has stirred concerns from many local, regional, and national environmental groups. They fear it will result in more reliance on fossil fuels, and local air and water impacts from coal dust.

Ecology is working with the landowner, Northwest Alloys (Alcoa) and Millennium to investigate and clean up residual contamination. While Ecology does not take a position on whether a coal terminal is a good idea for the site, we are working to ensure the investigation and cleanup are thorough, that we involve the community, and the property is ready for whatever its future use may be.



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Activities, Results & Performance Measures

Eliminate Waste and Promote Material Reuse

Solid waste prevention and reusing materials that would otherwise be sent to landfills are important to protecting the environment and human health. Ecology's goal through its Beyond Waste plan is to eliminate wastes whenever we can and use the remaining wastes as resources. This will contribute to economic, social, and environmental vitality. Ecology will focus its efforts on green building, including reusing construction and demolition debris, assisting local recycling programs, and reusing organic materials. Waste reduction and material reuse conserves resources and saves money in both the public and private sector.

Expected Results

Waste will be eliminated and the remaining waste will be used as resources whenever possible. This is accomplished through:

- Technical assistance provided to local governments that operate recycling programs.
- Identifying barriers to construction material reuse.
- Development of regulations to promote reuse of organic materials.

Performance Measure

- Tons of solid waste generated annually in Washington.
- Tons of materials reused or recycled annually.
- Tons of electronics with toxic chemicals collected for recycling.
- Pounds of solid waste generated per dollar (State GDP, gross domestic product).
- Dollar value of recyclables disposed.
- Percent market share of green building projects in Washington.
- Tons of organics recycled and diverted from landfills.

Prevent and Pick Up Litter

Litter control efforts include a litter prevention campaign, Ecology Youth Corps litter pickup crews, Community Litter Cleanup contracts, and coordination with other state and local efforts to maximize litter pickup. Litter prevention and pickup helps keep Washington green, supports tourism, and provides employment opportunities to youth.

Expected Results

Litter prevention and pickup results in 45,000 miles of cleaner roads through the employment of youth litter crews (Ecology Youth Corps) and local governments to clean up litter and illegal dumps. This is accomplished through:

- 450 employed youth picking up 1.4 million pounds of litter.
- Local governments cleaning up 8 million pounds of litter through \$2.2 million in grants.



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Performance Measures

- Road cleanliness rating (1 = cleanest, 6 = very littered).
- Pounds of litter picked up annually.

Fund Local Efforts to Clean Up Toxic Sites and Manage or Reduce Waste

Ecology protects public health and promotes resource recovery through administration of three capital grant programs.

- Coordinated Prevention Grants support local government activities related to landfill regulation to protect groundwater; recycling and reuse programs; hazardous substance use reduction; and moderate risk waste collection (hazardous waste generated from households and small businesses). New initiatives focus on reuse of organic materials, reducing building construction waste, and reducing toxicity in products.
- Remedial Action Grants provide funding to local governments to clean up property contaminated by hazardous substances, which protects human health and environmental resources, such as groundwater. Restored properties can then be redeveloped.
- Public Participation Grants provide funding for interest groups to inform citizens of local cleanups and for waste reduction efforts.

Expected Results

Groundwater is protected, hazardous substance use is reduced, recycling and reuse programs are operated, and moderate risk waste is collected through the Coordinated Pollution Prevention Grant program. This is accomplished by:

- Providing technical assistance on landfill regulations and moderate risk waste through more than 500 agreements with local governments and non-profits.
- Over 108 thousand pounds of moderate risk waste collected for proper recycling or disposal at moderate risk waste collection facilities.
- Jurisdictional health departments ensuring that approximately 700 solid waste facilities statewide comply with regulatory standards.
- Toxic sites and contaminated drinking water systems are cleaned up and managed through the Remedial Action Grant program.
- Citizens have access and information related to cleanup of contaminated sites through the Public Participation Grant program.

Performance Measures

- Tons of solid waste generated annually in Washington.
- Tons of materials reused or recycled annually.
- Pounds of household and small quantity generator hazardous wastes recycled or properly disposed.
- Pounds of solid waste generated per dollar (State GDP, gross domestic product).
- Dollar value of recyclables disposed.
- Tons of organics recycled and diverted from landfills.



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Improve Environmental Compliance at State's Largest Industrial Facilities

Ecology provides a single point of contact for petroleum refineries, pulp and paper mills, and aluminum smelters. Rather than having multiple inspectors work on the many environmental issues at a facility, one engineer provides coverage for all media. This means more balanced regulation for these major industries.

Expected Results

Pulp and paper facilities, oil refineries, and aluminum smelters have an improved compliance rate with environmental standards through one-stop environmental permitting, compliance, and technical assistance. This is accomplished through:

- Assurance that at least 90 percent of permits are up-to-date at all times.
- Facility compliance with their permit standards resulting in pollutant emissions going down over time.

Performance Measure

- Percent of industrial section permits that meet timeliness goals.

Reduce Persistent Bioaccumulative Toxins in the Environment

Persistent bioaccumulative toxins (PBTs) are a particular group of chemicals that can significantly affect the health of humans, fish, and wildlife. In the 2001-03 biennium, the Legislature funded Ecology implementation of a long-term strategy designed to reduce PBTs in Washington's environment over the coming years. This strategy will coordinate agency-wide efforts, engage other key organizations and interest groups, and provide for public education and information on reducing PBTs in the environment.

Expected Results

Public health and environmental impacts associated with PBTs and other toxic substances are minimized. Strategies are developed and implemented to reduce and eliminate these harmful chemicals. This is accomplished through:

- Development and implementation of Chemical Action Plans for lead and poly-aromatic hydrocarbons.
- Developing a six-year toxics reduction strategy for Puget Sound.
- Implementing a product stewardship program for lights containing mercury.

Performance Measures

- Pounds of mercury collected and/or captured.
- Number of children tested for lead in blood.
- Percent of tested children with elevated lead blood levels.
- Tons of electronics with toxic chemicals collected for recycling.
- Pounds of household and small quantity generator hazardous wastes recycled or properly disposed.

Manage Solid Waste Safely

Solid waste prevention and recycling, and reusing wastes that can't be prevented, are Ecology goals. But, we know that eliminating solid waste entirely is not realistic. In addition, the need remains for disposal facilities for cleanup-type wastes, such as asbestos, petroleum contaminated soils, and other contaminated materials. Solid waste facilities are managed by local health jurisdictions. Ecology provides technical assistance and oversight to local health departments to ensure solid waste handling and disposal facilities



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are in compliance with environmental requirements. Proper solid waste handling and disposal practices will minimize toxics contamination to the state's groundwater, surface water, and air.

Expected Results

Disposed solid waste is managed in environmentally compliant facilities to minimize toxics contamination to water and air. This is accomplished through providing technical assistance to jurisdictional health departments to ensure facility compliance with environmental regulations.

Performance Measures

- Tons of solid waste generated annually in Washington.
- Tons of solid waste disposed annually by Washington residents and businesses.
- Pounds of household and small quantity generator hazardous wastes recycled or properly disposed.
- Dollar value of recyclables disposed.

Reduce Toxic Chemicals in Products and Promote Safer Alternatives

Toxic chemicals in products are polluting our environment and have the potential to harm humans. Reducing toxic chemicals in products over time will lower the risks to people and the environment. Making significant progress toward achieving this goal requires several strategies:

- Identifying chemicals of concern in consumer products and strengthening the ability to gather data on the presence of these chemicals in products and the environment.
- Improving tools and authorities to promote safer alternatives to identified chemicals.
- Promoting green chemistry.
- Promoting environmentally preferred purchasing.
- Improving education, outreach, and communication.

Reducing toxic chemical threats is the smartest, cheapest, and healthiest approach to protecting people and the environment.

Expected Results

Toxic chemicals in products are reduced over time to lower health risks to people and the environment. This is accomplished through:

- 40 million pounds of electronics containing toxic substances collected through the E-Cycle Program.
- Expanding product stewardship program to paint, carpets, and pharmaceuticals.
- Collection and capture of an additional 1,500 pounds of mercury.
- Collection, evaluation, and information shared on the presence of chemicals of high concern for children in children's products.
- Assurance that state principles for chemical policy are incorporated in the federal Toxics Substances Control Act (TSCA) reform.
- Protocols, in coordination with other states, are developed for identifying safer alternatives for toxic chemicals of concern in products and manufacturing; and development of a chemical alternative assessment guidance document.
- Development of a green chemistry "road map" for Washington.



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- Amendments to the Children’s Safe Products Act passed to require manufacturers to use the protocol to assess safer alternatives to toxic chemicals of concern.
- State and local governments improve purchasing practices of environmentally preferred products.

Performance Measures

- Tons of electronics with toxic chemicals collected for recycling.



Mission Statement

The mission of the Toxics Cleanup Program is to remove and keep contaminants out of the environment.

Environmental Threats

Ecology has identified nearly 11,600 toxics contaminated sites since the mid-1980s. Over 6,500 of these sites resulted from underground storage tanks leaking contents into the environment and contaminating the soil or groundwater. Of the 11,589 contaminated sites, 52 percent have been reported cleaned up or 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, and backyards, as well as 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.

Authorizing Laws

- RCW 70.105D, Model Toxics Control Act
- RCW 90.48, Water Pollution Control Act
- RCW 90.71, Puget Sound Water Quality Protection
- RCW 90.76, Underground Storage Tanks

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 citizens. 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.
- Owners of contaminated sites.
- Water purveyors.
- Citizens 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.

Issues

Puget Sound Cleanups

We have focused efforts on ranking and prioritizing Puget Sound sites waiting to be cleaned up, taken on-the-ground actions to speed up cleanups, and are further integrating restoration plans into cleanup efforts. Ecology defines Puget Sound sites as those sites within one-half mile of the Sound.

Ecology is using a combination of strategies to rank and prioritize, including a focus on “aquatic pairs.” These are contaminated sites on or in the Sound that are at risk of recontamination from an upland source. These pairs have been prioritized and evaluated for risk.

We are coordinating with Ecology’s Water Quality Program on upland source control, and with the Department of Natural Resources on contaminated aquatic site cleanup and source control to restore natural resources, including geoducks and other shellfish and habitat. We are working with the Puget Sound Partnership to integrate our priority measures into their Action Agenda. We are also ensuring priority is given to those publicly-funded cleanups in the Puget Sound area that support the Action Agenda.

In addition, the Office of Financial Management required Ecology to perform a Lean process. There was concern about increasing re-appropriations of Remedial Action Grant (RAG) dollars during the last several biennia. The majority of RAG funds are currently used to clean up sites near Puget Sound. The outcome of the Lean process was to speed up cleanups conducted with RAG funding. The Lean process was completed last June and several actions are under way to speed up cleanups.

Managing Capital

The challenge for the Toxics Cleanup Program this biennium is maintaining site cleanup momentum for local government cleanups. The funding for local government cleanup grants has declined slightly. This limits the ability of the program to take on additional cleanup work, though the local government need for these grants continues to grow.

The good news is the continued use of Asarco Bankruptcy funds for orphaned and abandoned sites in eastern Washington. Asarco funds were first used last biennium (2011-2013). This funding will allow continuation of cleanup work at schools and daycares impacted by the Tacoma Smelter Plume, residential yards impacted by the Everett site, as well as mining operations in central and eastern Washington.



Voluntary Cleanup Program Use Continues to Grow

The Voluntary Cleanup Program helps site owners voluntarily clean up their contaminated sites. This program provides property owners an opportunity to engage with Ecology in cleaning up their contaminated site. Completing cleanup of contaminated sites not only provides protection for human health and the environment, it also makes it easier for property owners during property transactions.

The interest in the Voluntary Cleanup Program continues to create a workload challenge for Ecology. A large number of sites shift to voluntary cleanups when possible. These cleanups are faster than non-voluntary sites, as they are generally less complex cleanups, though some may involve multiple properties.

Rule Revisions are Underway

We began working on revisions to the Model Toxics Control Act (MTCA) Cleanup Regulation and the Sediment Management Standards (SMS) rules in 2009. The MTCA rule revisions were put on hold in December 2010 in response to the Governor's rule moratorium. However, we decided to continue revising the SMS rule. We conducted a lengthy process of stakeholder engagement and dialogue from 2009 through 2012 and drafted rule language and supporting documents in 2012 based on this dialogue.

We filed the CR 102 on August 15, 2012 and plan to adopt final rule revisions no sooner than December 15, 2012. There are four main rulemaking topics: (1) update the rule decision framework for establishing sediment cleanup standards for bioaccumulative chemicals that pose a risk to human health and the environment;; (2) establish chemical and biological benthic criteria to support cleanup decisions at freshwater sites; (3) integrate the cleanup requirements in both the SMS and MTCA rules; and (4) clarify policies for coordinating cleanup actions and source control measures.

We have completed revising the Underground Storage Tank (UST) rule. The UST rule revision process will be completed in two phases. In the first phase, which is complete, we made limited changes to comply with the Federal Energy Act and to address financial responsibility issues. We also added the requirement for operator training which goes into effect next year. In the second phase, we plan to incorporate the new federal rule requirements, which EPA is currently developing, and make additional corrections to the state rule. We anticipate that much broader changes will be made during this second phase. To maintain state program approval, we will have three years to incorporate the new federal rule requirements after they are adopted.

We plan to resume efforts to revise the MTCA rule once we have finished the SMS rule revisions. Changes are needed to make sure cleanup standards stay current with changes in science and/or amendments to the MTCA law. We also intend to look at the Remedial Action Grant rule for some limited revisions.

Implementing the Asarco Bankruptcy Settlement

Large areas of western Washington soils are contaminated with low to moderate levels of arsenic and lead from the Asarco smelters in the Everett and Tacoma areas. Asarco filed for Chapter 11 bankruptcy, the largest environmental bankruptcy ever filed in the United States. Washington received a settlement in late 2009 to address the smelter contamination. The settlement also provided funds for cleanup at mine sites in northwestern and eastern Washington and for the B&L Woodwaste site.



Ecology developed an Interim Action Plan to address Tacoma Smelter Plume contamination impacting over 1,000 square miles. In October 2011, the plan went out for public comment. Ecology is designing and implementing a new residential yard sampling and cleanup program. It targets areas where arsenic is over 100 ppm. In 2012, we identified and assessed private multi-family housing. We will begin sampling and cleanup of single family homes.

Ecology is encouraging local permit offices to require sampling and cleanup during development by offering new model remedies, guidance, and technical assistance. We are continuing the cleanup of play areas at schools and childcares through the Soil Safety Program. This biennium, the Toxics Cleanup Program is focusing on sampling and cleanup for existing parks and camps, in addition to new childcares and schools. Broad-based and targeted outreach to residents in Pierce, King, and Thurston counties continues.

Ecology also developed a ten-year plan to address Everett Smelter contamination and five mine sites in central and eastern Washington. In the next biennium, Ecology will continue sampling and cleaning up contaminated soil in residential areas of north Everett over the next several years. Twenty-four properties were cleaned up in 2011 and 55 more will be completed in 2012. We are continuing, and expanding, outreach and education efforts in the residential cleanup area and the surrounding community. Efforts are also underway to characterize contamination in the Lowland area (mostly industrial). Soil and groundwater data will be collected over the next several months to determine areas impacted by the smelter.

Sampling will begin and be completed in the mining areas in northwest and eastern Washington. Ecology is continuing to manage cleanup activities at the B&L Woodwaste site, including treating arsenic-contaminated groundwater near the landfill.

Lake Roosevelt/Upper Columbia River

The Upper Columbia River site extends over a distance of approximately 151 miles—from the U.S./Canadian border, downstream to the Grand Coulee Dam. Lake Roosevelt, created by the construction of Grand Coulee Dam, is the largest reservoir, by volume, in the state of Washington, and spans a length of approximately 133 miles. Metals such as zinc, cadmium, lead, copper, and mercury are present in the Upper Columbia River and Lake Roosevelt sediments and beaches at elevated concentrations. Studies also show metals such as mercury and arsenic at elevated levels in fish. Upland soils and sediments also are documented at elevated concentrations due to historical smelter emissions. The primary source of metals is directly attributed to the Teck Resources, Limited (Teck) lead-zinc smelting complex in Trail, British Columbia.

In 2003, the U.S. EPA issued a Unilateral Administrative Order to Teck requiring the company to study the extent of contamination in the reservoir and river between Grand Coulee Dam and the international border. Teck did not comply. The Confederated Tribes of the Colville Reservation (CTCR) filed a citizens' suit, later joined by the state of Washington, to compel them to comply. In 2006, EPA and Teck entered into a settlement contract in which Teck agreed to complete a remedial investigation and feasibility study (RI/FS). Ecology, tribal and federal government counterparts are presently advising EPA in their oversight of the study.



Ecology continues to partner with the CTCR to demonstrate Teck liability at the Upper Columbia River site. The revised trial date is set for September 17, 2012. Teck wastes continue to be present and redistributed throughout the site, polluting the Lake Roosevelt/Upper Columbia River site. Affirming Teck's liability will establish the foundation for properly achieving the cleanup and natural resource restoration of the site.

In addition to the litigation and participation in the RI/FS, Ecology is representing the state's interest on the Upper Columbia River/Lake Roosevelt Natural Resource Trustee Council (Council). Other Council members include the CTCR, the Spokane Tribe of Indians, and the United States Department of the Interior. The Council's primary objective is to determine what natural resources have been injured and ensure that the injured resources are restored. The Council is initiating injury assessment planning.

Safe Soils Program

For sites outside of the Tacoma Smelter Plume but impacted by lead and arsenic, the Safe Soils Program was created. Former orchard lands can have soil pollution from past use of lead arsenate pesticides. Some of the largest affected areas are in central Washington. As development and population in this area have grown, areas impacted by lead arsenate pesticides have been discovered in schools and child care facilities.

Historic aerial photographs have helped identify former orchards. Sampling is conducted at schools that appear to be in the areas of former orchards. Sampling has shown some school properties require cleanup activities to reduce children's exposure to levels of lead arsenate that are not safe.

There have been 118 sites identified and sampled. Of these, 39 schools need cleanup actions. Twenty of those schools have completed cleanup actions.

Activities, Results & 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.
- Cleaned sites are ready for redevelopment and job creation.
- The number of sites with cleanup actions in progress will increase.



Performance Measures

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

Manage Underground Storage Tanks to Minimize Releases

Ecology currently regulates over 10,000 active tanks on over 3,600 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 such 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 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 that are cleaned up.
- Increased percent of underground storage tanks inspected that pass compliance for leak detection.

Performance Measure

Average number of underground storage tank inspections completed per inspector.

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.
- Independent with some Ecology assistance or review.
- 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 such 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 who voluntarily cleaned up sites.



Performance Measures

- Percent of 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.



Mission Statement

The mission of the Nuclear Waste Program is to lead the effective and efficient clean up of the United States Department of Energy's Hanford Site, to ensure sound management of mixed hazardous wastes in Washington, and to protect the state's air, water, and land at and adjacent to the Hanford Site.

Environmental Threats

The Hanford site covers 560 square miles located in southeast Washington. Hanford's half-century of nuclear materials production has created one of the world's most polluted areas. The cleanup challenges include:

- Removing and vitrifying (changing into glass) an estimated 56 million gallons of radioactive and chemically hazardous waste in Hanford's 177 underground storage tanks.
- Removing the residual corrosion sludge after removal of 2,100 tons of disintegrating nuclear fuel rods stored in the remaining water-filled concrete basin at the "K-Reactor" near the Columbia River.
- Providing groundwater monitoring for approximately 190 square miles of contaminated groundwater that flows toward and eventually enters the Columbia River. Approximately 80 square miles of contaminated groundwater currently exceed federal and state drinking water standards.
- Operating and closing 50 hazardous waste treatment, storage, and disposal sites ranging from small demolition sites to half-mile long, concrete buildings.
- Cleaning up 1,200 waste sites ranging from liquid waste disposal ditches to former reactor facilities, including 9.35 million tons of contaminated soil adjacent to the Columbia River.

Authorizing Laws

The U.S. Department of Energy (USDOE), which operates the Hanford site, the U.S. Environmental Protection Agency (EPA), and the Department of Ecology signed a comprehensive cleanup and compliance agreement May 15, 1989. The Hanford Federal Facility Agreement and Consent Order, or Tri-Party Agreement (TPA), directs the Hanford site cleanup and reflects a concerted goal of achieving, in an aggressive manner, full regulatory compliance and remediation with enforceable milestones.

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

Authorizing laws include:

- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund)
- Hazardous and Solid Waste Amendments Act
- RCW 70.94, Clean Air Act
- RCW 70.105, Hazardous Waste Management Act
- RCW 70.105D, Model Toxics Control Act



- RCW 90.48, Clean Water Act
- Resource Conservation and Recovery Act (RCRA)
- Toxic Substances Control Act

Constituents/Interested Parties

- Congress, USDOE, EPA, the Defense Nuclear Facility Safety Board, and U.S. Fish and Wildlife Service.
- Environmental Council of States, National Governors Association, Western Governors' Association, USDOE's State and Tribal Government Working Group, and the Oregon Office of Energy.
- Tribes: As the state's lead for natural resource damage assessments at the Hanford site, Ecology works with the Yakama, Umatilla, and Nez Perce Indian nations.
- 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 citizens.
- Washington State Departments of Health and Fish and Wildlife and the Northwest Interstate Compact on Low-Level Radioactive Waste.

Issues

Slowed Progress in Site Cleanup

The USDOE Environmental Management Program is the largest environmental program in the nation. The cleanup of the Hanford site is the largest effort in this program. The USDOE has missed several major cleanup milestones and will not meet many critical, near-future milestones. Ecology engaged the USDOE in unsuccessful negotiations, and then initiated litigation to address the missed milestones and establish an enforceable and achievable plan for cleaning up Hanford.

The state and USDOE agreed to a tentative settlement of the lawsuit August 10, 2009. The final settlement was put in place October 2010. The settlement requires further actions, including a 45-day public involvement process, amending milestones in the Hanford TPA, and completing an Environmental Impact Statement by USDOE that includes limitations and exemptions on off-site waste importation at Hanford.

Tank Waste Cleanup

The cleanup of 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 has been retrieving radioactive wastes from failing and aging single shell storage tanks and placing the waste in interim, stable storage tanks for eventual treatment and storage.

Construction of a tank waste treatment facility by USDOE is approximately 45 percent complete. However, the construction schedule has been repeatedly delayed and a new enforceable schedule is included in the lawsuit settlement.



Continuing and Accelerating Hanford Cleanup Progress

Cleanup progress has started on major contaminated Hanford facilities. Ecology is working with the USDOE to continue seeking ways to maintain progress to stabilize and decommission these facilities to reduce hazards to workers and the environment. Progress must be maintained on issuing closure or final operating permits for waste treatment, storage, and disposal at the Hanford site.

The USDOE at Hanford received nearly two billion dollars in American Recovery and Reinvestment Act (ARRA) funding. Those funds are being used for a number of projects that will support reducing the contaminated Hanford “footprint.” The projects include soil and groundwater cleanups; additional groundwater monitoring, characterization, and treatment; large nuclear facility decontamination and demolition; and upgrades to tank farm facilities, equipment, and infrastructure.

Protecting the Columbia River

Work must continue to clean up sites that could add to groundwater or river contamination, including removing decaying fuel rods from concrete storage areas located near the Columbia River. Groundwater cleanup, close monitoring of liquid waste discharges, and cleaning up contaminated soil must also continue.

Ecology, EPA, and the USDOE added new TPA milestones that provide the schedule for groundwater and soil cleanup along the Columbia River.

Decisions About Additional Waste Storage or Treatment at Hanford

Many recent and pending national decisions center on Hanford as a potential storage, treatment, and disposal site for not only wastes and materials generated on-site, but also for wastes from many other sites in the country. As a result of a settlement agreement, the USDOE currently cannot import low-level mixed or transuranic wastes from other USDOE sites to Hanford. The settlement of the tank waste lawsuit extends this waste importation ban until the tank waste treatment facility is operational. At the same time, long-term plans for Hanford cleanup include shipping transuranic and high-level wastes, spent nuclear fuel, and surplus plutonium to other sites for disposal. Ecology is participating in national forums that deal with these issues to advise state policy makers on responses to these cleanup plans.

Activities, Results & Performance Measures

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 Nuclear Reservation. We do this by cleaning up contaminated sites from past activities. Radioactive and hazardous contaminants are removed, residual contaminants are contained and monitored, and natural resource damage mitigation on Hanford occurs.

Expected Results

- Public use of the air, soil, and water at Hanford is restored and human and environmental risks associated with past Hanford activities are removed or reduced.
- Continue cleanup of contaminated waste sites adjacent to the Columbia River.
- Begin cleanup on the Hanford Central Plateau.



Performance Measures

- Tons of radioactive and/or chemically contaminated soil and debris removed and securely disposed at Hanford.
- Gallons of groundwater contaminated by hexavalent chromium that is remediated at Hanford.
- Pounds of chromium removed from contaminated groundwater at Hanford.

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

Ecology oversees decommissioning the large, complex, and high risk facilities throughout the Hanford Nuclear Reservation, including nuclear reactors and chemical processing facilities used for nuclear weapons material production. Transition of these facilities to safe and stable conditions requires coordinating multiple regulatory and technical requirements. Ecology also provides regulatory oversight of waste management activities at four facilities not managed by the USDOE (Energy Northwest, AREVA, Perma-Fix Northwest, and the U.S. Navy's Puget Sound Naval Shipyard).

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. This is accomplished through:

- Completing 60 percent of the 324 Building removal and remediation actions.
- Completing 65 percent of the decontamination and decommissioning effort at the Plutonium Finishing Plant.
- Completing 100 percent of the interim safe storage of the N Reactor 105-N/109-N Building.

Performance Measure

- Percent completion of the decontamination and decommission of the plutonium finishing plant on Hanford by 2016.

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 Nuclear Reservation. 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 immobilized high-level waste storage facility.

Expected Results

56 million gallons of high-level radioactive mixed waste from Hanford's interim storage tanks is retrieved and treated during the life of the tank treatment project. This is accomplished through:

- Continued construction of the Hanford Waste Treatment Plant at a rate that supports approved milestones, with completion of construction by 2019.

Performance Measure

- Percent of the Hanford Tank Waste Treatment Plant construction completed.



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 56 million gallons of high-level radioactive tank waste at the Hanford Nuclear Reservation. The Hanford Tank Waste Storage Project is focused on permitting the double-shelled tank waste storage system, removing liquid wastes from the single-shelled 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 2028.

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. This is accomplished through:

- Two single-shell tanks being emptied each year and waste stored safely through 2019.
- A permit issued for the double shell tank farms.
- A closure plan issued for the single shell tank farms.

Performance Measure

- Number of tanks containing radioactive hazardous waste emptied at Hanford's C-Tank Farm.

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 retrieval, treatment, and safe disposal of transuranic and high-level mixed wastes currently buried in shallow, unlined trenches.

Expected Results

Transuranic and mixed low-level waste is managed, retrieved, treated, processed, stored, and disposed in compliance with existing regulations to reduce risks posed to Hanford workers and the environment. This is accomplished through:

- Complete retrieval of contact-handled retrievably stored waste from the low-level burial grounds at Hanford.
- Completion of the commercial low-level radioactive waste site Model Toxics Control Act Feasibility Study and Cleanup Action Plan.

Performance Measure

- Amount of transuranic waste removed from the low level burial grounds at Hanford (cubic meters).



2013 – 15 Department of Ecology Strategic Plan Protect Wetlands, Shorelands and Watershed Health

Mission Statement

The mission of the Shorelands and Environmental Assistance Program is to work in partnership with communities to support healthy watersheds and promote statewide environmental interest.

Environmental Threats

Washington's quality of life is defined by its beautiful environment. Our state has an abundance of shorelines, rivers, streams, lakes, wetlands, floodplains, and marine waters. These natural treasures attract people to the state. At the same time, population growth and development can threaten the very resources that we all value.

In the last 100 years, many shorelines, floodplains, and wetland systems have been damaged or completely destroyed. The challenge facing our citizens and communities is to manage development for the 21st century, ensure the health of watersheds and adequate water supplies, and restore Puget Sound. As population growth continues to pressure remaining natural habitats, we must find more effective ways to preserve them and their connections to other functioning habitats.

Authorizing Laws

- Federal Clean Water Act
- Federal Coastal Zone Management Act
- RCW 43.21C, State Environmental Policy Act (SEPA)
- RCW 43.42, Office of Regulatory Assistance
- RCW 43.143, Ocean Resource Management Act
- RCW 43.220, Washington Conservation Corps (WCC)
- RCW 78.56, Metals, Mining and Milling Act
- RCW 86.16, Floodplain Management Act
- RCW 86.26, State Participation in Flood Control Maintenance
- RCW 90.03.265 and 43.21a.690, Cost Reimbursement
- RCW 90.36A, Growth Management Act
- RCW 90.48, Water Pollution Control Act
- RCW 90.58, Shoreline Management Act
- RCW 90.71, Puget Sound Water Quality Program
- RCW 90.74, Aquatic Resources Mitigation
- RCW 90.82, Watershed Planning Act
- RCW 90.84, Wetlands Mitigation Banking

Constituents/Interested Parties



2013 – 15 Department of Ecology Strategic Plan

Protect Wetlands, Shorelands and Watershed Health

- Citizens.
- Property owners.
- Local governments.
- State and federal resource agencies.
- Tribes.
- Business.
- Environmental organizations.

Issues

Shoreline Master Program Updates

Shoreline Master Programs are our most important tool to protect and restore shorelines. Local governments and Ecology work in partnership to develop Shoreline Master Programs that include goals, policies, and regulations for managing shorelines. They help us protect and restore important habitats, keep water clean, protect homes and property from shoreline hazards, and provide opportunities for public access. All local governments with shorelines must update their Shoreline Master Programs by 2014.

The Washington State Legislature adopted a schedule and began providing funding for this in 2003. Ecology places a high priority on shoreline program updates and provides grants and technical support to communities throughout the state. In 2011, the Legislature provided a total of \$7.5 million for pass-through grants to governments and a half-million dollars for Ecology staffing. To date, over three quarters of the updates are complete or underway.

Sustaining Our Remaining Wetlands

Wetlands provide many benefits to people, fish, and wildlife. They filter pollutants, provide habitat, store flood waters, recharge aquifers, and maintain water flows during dry periods. Our state has lost more than one-third of its wetlands.

To stop this loss, laws require mitigation to replace lost wetlands and their functions. However, mitigation only works part of the time. Ecology organized the Environmental Mitigation That Works initiative to improve the success of wetland mitigation. Our priorities are:

- A compliance program to make sure the mitigation we approve is successful.
- Ensuring wetlands are protected and replaced by conditioning projects through water quality certifications.
- Support alternative mitigation approaches, such as wetland banking, in-lieu fees and advance mitigation, and provide templates, guidance, and training on these approaches.
- Provide technical training to communities.
- Assist local governments in managing wetlands through technical assistance on updated critical areas ordinances and on voluntary stewardship programs in agricultural areas.
- Protect important coastal wetlands through acquisition grant programs.



2013 – 15 Department of Ecology Strategic Plan

Protect Wetlands, Shorelands and Watershed Health

Protecting Puget Sound Habitat

Habitat protection is a priority for Puget Sound restoration. One-third of the Sound’s shoreline has been altered by bulkheads, rip rap, or concrete walls. Many wetlands and floodplains have been lost to cutting, grading, and filling for homes, businesses, towns, cities, and transportation.

With another million people expected to move into the Puget Sound area by 2025, we must become more effective in protecting our shorelines and upland habitats. In this biennium, Ecology will help counties and cities update their rules that protect shorelines and other important habitats, such as Shoreline Master Programs and critical area ordinances. We will improve the effectiveness of wetland mitigation, and we will provide trainings and work in partnerships to promote appropriate development.

Protecting and Restoring Puget Sound Watersheds

Ecology received funding from EPA through the National Estuary Program to help implement priority work consistent with the 2020 Action Agenda for the protection and restoration of Puget Sound. The primary focus of the watershed grant is to implement a comprehensive, integrated watershed protection and restoration strategy that advances ecosystem recovery. Ecology, in coordination with the Department of Commerce, is developing a six-year strategy to guide investments that will help protect and restore Puget Sound watersheds. The six-year strategy will outline three strategic areas of investment:

- Protecting and restoring watersheds.
- Effectively managing stormwater.
- Protecting ecologically significant and working lands.

Climate Change and Preparing for Sea-Level Rise

One aspect of climate change is the anticipated rise in sea level. Nearly 40 communities along our 2,300 miles of shoreline will be affected by rising sea levels. Climate change is predicted to bring higher tides, stronger storms, bigger waves, increased flooding, heavier rains, smaller snow packs, and engulf low-lying shorelines.

Understanding and preparing for climate change is a strategic priority for Ecology. We are supporting local community planning for sea-level rise and flood protection. We will share technical guidance and provide financial help for local government planning through the Flood Control Assistance Account Program grants and Shoreline Master Program grants to support hazard assessments and prepare for sea-level rise. We will respond to Executive Order 09-05 by working with our local government partners to examine challenges and opportunities to prepare and adapt to sea-level rise.

Ocean and Coastal Health

Washington has two coasts with distinct issues, resources, communities, and needs: the outer coast and Puget Sound. While Puget Sound tends to have greater problems with water pollution, stormwater runoff, and toxic sediments, our outer coast is not immune from troubling forces. On the outer coast, these forces include aquatic invasive species, toxic algal blooms that routinely close shellfish harvesting and threaten human health and wildlife, and shoreline erosion that threatens infrastructure and property.



2013 – 15 Department of Ecology Strategic Plan

Protect Wetlands, Shorelands and Watershed Health

Ecology will work with other agencies and stakeholders to improve coastal and ocean resource management, mostly on Washington's outer coast, through the State Ocean Caucus, Ocean Policy Advisory Group, and other regional and international partnerships. Through all of these partnerships, we will focus on:

- Improving basic research, monitoring, and education on our ocean resources.
- Advancing erosion and sediment management.
- Supporting development of sustainable coastal communities.
- Understanding potential impacts of new proposed ocean uses and developing appropriate strategies to manage these activities.
- Coordinating implementation of other recommendations in Washington's Ocean Action Plan.

Protecting Floodplain Resources

Ecology helps local governments and citizens with awareness and planning for flood hazards to improve public safety and prevent damages to property and public infrastructure. We also take part in floodplain management activities that protect the natural and beneficial functions of our floodplains. Floodplains provide many environmental benefits, including flood storage, groundwater recharge, and habitat for aquatic and terrestrial species. The Federal Emergency Management Agency (FEMA) has established minimum standards for the National Flood Insurance Program, and the state of Washington has adopted those standards.

In recent months, the National Marine Fisheries Service issued a biological opinion, and found that existing minimum standards have an adverse impact on endangered salmon and killer whales in the Puget Sound Region. We will be working with FEMA and the affected local governments to help communities adjust their floodplain management regulations to assure compliance with this opinion.

Activities, Results & Performance Measures

Protect and Manage Shorelines in Partnership with Local Governments

The Shoreline Management Act is a joint program between local and state governments for managing shorelines to provide habitat for fish and wildlife, and for minimizing flooding and property damage. Local governments develop and manage local Shoreline Master Programs.

Ecology provides support and oversight to local governments through:

- 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 resources are protected and the law is followed.

Ecology works with local governments on permit compliance by:

- Responding to public inquiries and complaints,



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- Making field visits.
- Providing compliance-related technical assistance.
- Issuing notices of correction, orders, and penalties.

Expected Results

State shorelines 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 government are consistent with their Shoreline Master Programs.

Performance Measures

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

Protect Water Quality by Reviewing and Conditioning Construction Projects

The federal Clean Water Act and Coastal Zone Management Act set up water and coastal protection programs. Ecology reviews construction proposals that may impact streams, lakes, rivers, wetlands, shorelines, or marine waters. Ecology implements these laws in four ways: (1) offering technical assistance to applicants from the beginning to the end of the permit process; (2) providing applicants a joint multi-agency permit application; (3) coordinating with other regulatory agencies that have interests in proposals; and (4) making permit decisions that protect water, sediments, fish, and shellfish habitat. This allows Ecology to participate in federal permitting activities to ensure state water quality interests are identified 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, efficient, thorough, and consistent.
- Projects comply with permit conditions.

Performance Measures

- Number of days it takes to make a final decision on 401 water quality certifications.

Protect, Restore, and Manage Wetlands

The Water Pollution Control Act and Shoreline Management Act set frameworks for wetlands protection. Local governments write wetland protection and mitigation rules into local Shoreline Master Programs and critical area ordinances. Ecology provides support to local government and carries out independent wetland protection and restoration programs in the following ways:

- Providing technical assistance to local governments to implement wetland protection programs.
- Developing mitigation requirements for state water quality certifications that offset unavoidable impacts to wetlands.
- Inspecting, monitoring, and collecting data on wetlands and mitigation sites.



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- Coordinating state policies, rules, and guidelines for wetland management, banking, protection, and conservation.
- Helping individuals and organizations create and maintain wetland conservation and stewardship programs.

Properly functioning wetlands protect water quality, reduce flooding, provide aquifer recharge for drinking water and other uses, and provide critical habitat for fish and wildlife.

Expected Results

- Wetlands are protected, restored, replaced, and managed consistent with state and local permits and laws.
- Local governments and other parties get technical assistance to carry out local wetland protection efforts.
- Wetland losses are fully replaced by improving the success rate of wetland mitigation.
- Approved mitigation achieves compliance through meaningful performance standards and monitoring project success.

Performance Measures

- Percent of mitigation sites inspected within 18 months after receiving as-built reports.
- Number of completed watershed characterizations.
- Percent of wetland banking certification documents reviewed within 30 days of receipt.

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

The Flood Plain Management Act sets up programs to reduce flood damage. Local governments develop and manage local floodplain restrictions, and Ecology provides support to local governments and carries out independent prevention and response programs through:

- Providing grants and technical help to local governments for flood management planning and flood reduction projects.
- Administering the National Flood Insurance Program, which helps over 250 cities and towns enrolled in this program.
- Doing outreach on recognizing and reducing potential flooding hazards.

In this role, Ecology makes regularly scheduled technical assistance visits to communities and assesses local regulatory programs for compliance with state and federal requirements. 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.
- Local governments get technical and financial help to maintain flood management programs and respond to flooding.



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- Flood-prone communities are better prepared for responding to flooding emergencies.

Performance Measures

- Number of flood-prone communities receiving direct support on regulatory issues, flood hazard reduction, and the protection of floodplain functions and values.

Provide Technical Assistance on State Environmental Policy Act Review

The State Environmental Policy Act (SEPA) sets up a joint program between local and state governments designed to ensure environmental impacts from private or public actions are considered by government officials. Local and state governments review project impacts and determine how projects can be done with minimal impacts. Ecology provides technical support and carries out independent actions through:

- Conducting training and giving technical assistance to local and state government.
- Maintaining the SEPA register, which catalogs SEPA projects across the state.
- Coordinating the SEPA process when Ecology is the decision making agency.

SEPA provides an opportunity for local citizen involvement in the environmental review process and provides developers an opportunity to identify mitigation opportunities that help overall project approval and minimize development costs.

Expected Results

- The public has input into projects that may have environmental impacts.
- 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.
- Percent of SEPA workshop participants who said they intend to apply what they learned in their work.

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

The Coastal Zone Management Act sets up estuarine reserves that are jointly managed by state and federal governments. The Padilla Bay National Estuarine Research Reserve is one of 27 national reserves established to protect estuaries for research and education through:

- Operating the Breazeale Interpretive Center and research facility.
- Providing classes for teachers, students, and adults on Puget Sound ecology, watersheds, wetlands and coastal management.
- Presenting technical and professional trainings and workshops.
- Conducting scientific research.



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The reserve also provides funding and technical support to local Marine Resource Committees as part of the Northwest Straits Initiative and administers the Northwest Straits Marine Commission.

Expected Results

The Padilla Bay Reserve is managed and maintained in a cost-efficient and effective way to provide public education, training, and scientific research and monitoring.

- Students, teachers, professionals, and researchers participate in education and training programs.
- Coastal ecosystem research is carried out and shared with government and academic organizations.
- Coastal and land-use managers and planners are trained to carry out environmental policies and rules in Western Washington.
- Volunteers and professionals carry out Puget Sound restoration activities, including derelict gear removal, marine debris collection, and habitat enhancements.

Performance Measures

- Number of people participating in Puget Sound education and training programs at the Padilla Bay Reserve.
- Percent of Puget Sound and coastal training workshop participants who said they intend to apply what they learned in their work.
- Acres of Puget Sound cleaned of derelict fishing nets.

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

The Washington Conservation Corps (WCC) was established in 1983 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). Ecology manages the WCC program through:

- Creating partnerships with federal, state, and local agencies, private entities, and nonprofit groups to complete conservation projects (these include stream and riparian restoration, wetlands restoration and enhancement, soil stabilization, other forest restoration activities, fencing, and trail work).
- Providing emergency response and hazard mitigation services to local communities.

Expected Results

- Local communities get help from WCC crews to carry out conservation and emergency response projects.

Performance Measure

- 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.



Provide Streamlined Project Permitting for Transportation Projects

A contract between Ecology and the Washington State Department of Transportation (WSDOT) is set up to support environmental permitting for state transportation projects. WSDOT submits transportation project applications and documents, and a dedicated Ecology team facilitates the permit process. This expedited permit review process was designed to address traffic congestion and allow businesses to efficiently transport products in Washington.

Expected Results

- State transportation projects meet environmental laws.
- WSDOT gets technical help on reducing impacts and receives timely decisions.
- Projects achieve compliance with permit conditions.

Performance Measures

- Percent of reviews and decisions made within agreed upon timeframes for WSDOT applications or other documents.

Provide Regulatory Assistance for Significant Projects and Small Businesses

A contract between Ecology and the Governor's Office of Regulatory Assistance (ORA) is set up to support permit assistance services. ORA provides funding and Ecology provides staff and direct services to businesses and the public through:

- Operating a Service Center for call-in and walk-in permit information.
- Developing and maintaining an online permit assistance resource center.
- Offering regional case managers for more complex and complicated projects.

Expected Results

- People and businesses who contact the Office of Regulatory Assistance receive permit information.
- Helpful information is available to applicants on environmental permits such as web-based tools, directories, fact sheets, guidance, and other materials.

Performance Measure

- Number of applicants and customers provided permit assistance by the Office of Regulatory Assistance.

Support Watershed-Based Water Supply and Resource Stewardship

Ecology supports watershed-based management of water for people, farms, and fish. We provide technical support, staff support, scientific expertise, and financial assistance to help local groups design and implement integrated watershed management and locally-tailored water supply solutions. Work in this activity focuses on improving long-term reliability and availability of water for in-stream and out-of-stream needs per locally developed watershed plans and activities.



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Expected Results

- Water supply solutions are developed and implemented in water-short areas of the state to provide water for people, farms, and fish.
- Targeted technical and financial assistance is provided for plan implementation and updates where community/watershed-based groups are active partners in identifying in-stream and out-of-stream water availability solutions and projects.

Performance Measure

- Number of watersheds in the implementation phase of watershed planning.



Mission Statement

The mission of the Water Quality Program is to protect and restore Washington's waters.

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. Several sources contribute to poor water quality, and chief among them is stormwater. Stormwater is rain and snow melt that runs off surfaces such as rooftops, paved streets, highways, and parking lots. As water runs off these surfaces, it can pick up pollution such as oil, fertilizers, pesticides, soil, trash, and animal waste. From here, the water might flow into a local waterway. In addition, 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 other 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 Improvement Reports to address those pollutants. The Water Quality Improvement Project (Total Maximum Daily Load) 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. 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.

Authorizing Laws

- Federal Clean Water Act
- Federal Safe Drinking Water Act
- RCW 43.21A.650, Freshwater Aquatic Weeds Account
- RCW 70.105D, Model Toxics Control Act
- RCW 70.146, Water Pollution Control Facilities Financing Act
- RCW 76.09, Forest Practices Act
- RCW 90.42, Water Resources Management Act
- RCW 90.46, Reclaimed Water Use
- RCW 90.48, Water Pollution Control Act
- RCW 90.50A, Water Pollution Control Facilities Federal Capitalization Grants
- RCW 90.54, Water Resources Act of 1971
- RCW 90.64, Dairy Nutrient Management Act
- RCW 90.71, Puget Sound Water Quality Protection



Constituents/Interested Parties

- Citizens & special interest groups.
- Local governments, cities, counties.
- Businesses & industries.
- Environmental organizations.
- State & federal governments/agencies.
- Tribes & tribal governments.
- Conservation districts.

Issues

Point Source Water Pollution

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

- Help dischargers comply with existing permits.
- Make permits understandable and effective in protecting water quality.
- Work to increase the use of reclaimed water.

Clean Up Polluted Waters

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

- Assess state waters and update the list of polluted marine waterbodies.
- Work with communities to clean up nonpoint source pollution.

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 will:

- Secure federal funding to support nonpoint source work.
- Make 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 will:

- Help dischargers improve compliance with existing stormwater permits.
- Work to ensure that having a permit is not a competitive disadvantage.



- Help dischargers reduce contaminated stormwater run-off from their sites.

Financial Assistance

Ecology will distribute more than 200 million dollars in water quality grants and loans this biennium to protect public health and the environment. Ecology will:

- Provide financial assistance efficiently and effectively to 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 to properly manage public funds.
- Continue to effectively manage the 65.4 million dollars received by the state from the Federal American Reinvestment and Recovery Act of 2009 (for water pollution control projects) that were awarded to the highest priority projects.

Activities, Results & Performance Measures

Clean Up Polluted Waters

The federal Clean Water Act requires Ecology to develop water quality standards and to identify waterbodies 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 waterbodies 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 waterbody segments are managed on 650 waterbodies (Washington's legal commitments specified in a Memorandum of Agreement prompted by a lawsuit).
- 50 water improvement reports and associated technical reports are submitted each year to the U.S. Environmental Protection Agency (EPA).
- Local communities get help implementing water quality improvement reports.
- An updated list of marine waterbodies failing to meet water quality standards is developed.

Performance Measures

- Number of water quality cleanup plans submitted to the EPA.

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

- Number of days it takes to make final decisions on construction stormwater permits.
- Percent of city and county Phase II Municipal Stormwater permittees in substantial compliance with their permit.
- Number of industrial stormwater inspections.
- Number of construction stormwater inspections.
- Industrial stormwater facilities submitting discharge monitoring reports.
- Construction stormwater facilities submitting monitoring reports.

Prevent Point Source Water Pollution

Ecology protects Washington's water by regulating point source discharges of pollutants to surface and groundwaters. 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

- Percent of active water quality discharge permits that are up-to-date.



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 is improved by awarding about 75 million dollars 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 funded in Puget Sound counties.

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.

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 reports 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 funded in Puget Sound counties.



Mission Statement

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

Environmental Threats

Ecology conducts monitoring programs and designs scientific studies to measure the quality of water, sediments, and fish tissue in marine and fresh waters across the state. We address both point and nonpoint pollution sources. We use this data to evaluate threats ranging from conventional pollutants, such as fecal coliform bacteria, nutrients, and temperature, to toxic contaminants and invasive aquatic weeds.

Based on our monitoring data, we identify violations of water and sediment quality criteria and assess the condition of aquatic habitat and biological communities. In doing so, we may focus on impacts from individual sources or evaluate the combined impacts from multiple sources. Many of our monitoring programs and scientific studies are done to support clients in other Ecology programs.

Authorizing Laws

- Federal Clean Water Act
- RCW 43.21A, Department of Ecology
- RCW 70.105D, Model Toxics Control Act
- RCW 70.119A.080, Public Water Systems – Penalties and Compliance
- RCW 90.48, Water Pollution Control
- RCW 90.71, Puget Sound Water Quality Protection

Constituents/Interested Parties

- Federal and local governments; state agencies.
- Tribes.
- Businesses.
- Environmental organizations.
- General public.
- Internal clients.

Issues

Monitoring for Action

Ecology investigates and monitors rivers, streams, lakes, and marine waters threatened by pollution so we can take appropriate action to clean up, restore, and protect those resources. We design monitoring programs and studies to support pollution cleanup efforts, guide regulatory actions (including permitting decisions and instream flow rule setting), and provide data to support critical management decisions.



Water Quality Improvement Studies (Total Maximum Daily Load Studies)

Section 303(d) of the federal Clean Water Act requires the state to develop Water Quality Improvement Plans (also known as Total Maximum Daily Loads) for waterbodies that don't meet water quality standards. As part of a lawsuit agreement, a memorandum of agreement with the U.S. Environmental Protection Agency (EPA) requires Ecology to develop nearly 1,500 water quality improvement plans by 2013. At current funding levels, meeting this goal while keeping up with newly discovered listings will be a challenge. Ecology is working with EPA and the lawsuit plaintiffs to renegotiate the settlement agreement and extend the timeframe for compliance.

Marine Waters – Linking Models with Monitoring

For our marine waters, linking water quality and hydrodynamic (circulation) models to a carefully designed monitoring program could provide a powerful new approach to assessing and predicting environmental impacts. We are using this approach right now in our South Puget Sound dissolved oxygen study. South Puget Sound is particularly vulnerable to pollutants due to the large number of sources and limited water circulation.

When completed, this combined modeling/ monitoring program will provide the data we need to specify measures to reduce pollutant discharge (e.g., denitrification requirements for wastewater treatment plants).

Stream Gauging

Watersheds across the state are requesting our help to initiate and maintain stream flow gauging. Watershed managers need stream flow data to support in-stream flow rule setting and compliance monitoring in response to watershed planning requirements and efforts to restore salmon.

Beach Monitoring

Using BEACH Act grant funds from the EPA, Ecology is working with the Department of Health and local health agencies to monitor bacterial contamination at many (but not all) marine swimming beaches in Washington. Local health agencies use these data to determine when public beaches must be closed to protect swimmers from unsafe contamination. During 2011, Ecology received an additional grant from EPA's National Estuary Program that allowed us to monitor an additional 31 beaches (for a total of 81) during the 2011 monitoring season.

Emerging Toxic Threats

Toxic chemicals are widespread in the environment, but analyses are costly, and we can only afford to sample for a small number of chemical compounds. We sample toxic chemicals in several current monitoring locations, but we need more capacity to keep up with requests to screen for new toxic chemicals (such as flame retardants, phthalates, new pesticides, and pharmaceuticals).

Monitoring for Success

In addition to targeting known sites and specific problem areas, we are frequently asked, "What is the overall health of the environment?" (e.g., "is the water getting cleaner or dirtier?"). Site-specific sampling only tells us about the conditions at a specific location. We also need to know whether the combined



benefits of all our management actions and investments are making a difference against the cumulative impacts of pollution sources and environmental degradation across broad regions of the state (such as Puget Sound or the Columbia Basin).

To do this, Ecology needs to expand its statistically-reliable monitoring programs to help us measure progress toward our broad environmental goals—like the restoration of Puget Sound or improving watershed health to support salmon recovery. Without such programs, Ecology won't be able to answer the basic question, "Is the water quality and environmental condition of the state (or any region of interest) getting better or worse?"

Status and Trends In Freshwater

Beginning in the 2009-11 biennium, the Legislature provided ongoing funding for a statewide status and trends monitoring program. This program will provide statistically reliable estimates of the overall status, condition, and trends in freshwater quality and aquatic habitat.

Physical, chemical, and biological data were collected in the Washington Coastal and Lower Columbia River Salmon Recovery Regions during fiscal year 2011. Ecology's efforts will shift to the Middle Columbia River and Snake River Regions during fiscal year 2012.

Ecology completed a data management system to house the status and trends data during the 2009-11 biennium and we are currently using EPA grant funding to develop a web interface to allow enhanced access to the data.

Groundwater Monitoring

We have no program in place to systematically monitor groundwater quality or quantity. This represents a significant gap in our understanding of pollution sources and transport, and means we can't predict how groundwater levels may change as a result of water withdrawals, surface flows, climate, and precipitation trends, etc. Without an adequate groundwater monitoring program, we will not be able to properly manage drinking and irrigation water supplies or evaluate this important pollution pathway. We are continuing to look for funding opportunities to fill this gap.

Urban Waters Initiative

This program provides baseline status and trends for toxics reduction efforts in a rotating series of urban bays. It is the best way to measure the net effect of targeted cleanup activities and compare local conditions to overall Puget Sound-wide sediment quality. Ecology will sample sediments in Everett Harbor/Port Gamble in 2012 then cycle back to Elliott Bay/Lower Duwamish in 2013 (last sampled in 2007).

Biological Assessment

Most of our management actions are ultimately intended to benefit the living resources of our rivers, streams, lakes, and marine waters. So, it makes sense to more directly assess the biological health of our waters. Monitoring benthic invertebrate communities, or phytoplankton abundance and distribution, can provide a more direct measure of environmental health than our usual chemical and physical parameters.



Therefore, during the past biennium, we have developed an ambient biological monitoring program with a network of 33 sites statewide.

Monitoring Coordination and Data Sharing

There are multiple organizations mandated or chartered to coordinate monitoring and data sharing. These include the Puget Sound Partnership and the Pacific Northwest Aquatic Monitoring Partnership. Each of these groups is developing pathways to improve monitoring coordination; standardize field methods and protocols; standardize data sharing formats; and integrate monitoring at watershed, regional, and statewide levels. Coordination (or streamlining) among these groups is critical. Recently, EPA has adopted a new method of providing funding through its National Estuary Program (NEP) grants using “lead organizations” to distribute the funding. This change has increased coordination between state agencies that receive the NEP funds.

Activities, Results & Performance Measures

Conduct Environmental Studies for Pollution Source Identification and Control

Ecology conducts pollution 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, Water Pollution Control Act, and Model Toxics Control Act. Studies range from simple water quality sampling for bacteria or dissolved oxygen, to very complex projects measuring toxic contaminants in fish tissues or pesticides in groundwater.

Many projects are water cleanup studies, which calculate the total maximum daily load (TMDL) of a pollutant a waterbody can absorb without causing violations of water quality standards. Under a Memorandum of Agreement with the EPA, Ecology must develop nearly 1,500 TMDLs by 2013. Study results are published in scientific reports used for regulatory decision making, policy development, and environmental health protection.

Expected Results

Scientific studies are conducted to assess pollution sources and environmental health.

- Resource managers have credible scientific information to inform decisions on pollution controls needed to protect environmental and public health.
- All study reports are peer reviewed, completed on schedule, and posted to the Internet.

Performance Measure

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

Ensure Environmental Laboratories Provide Quality Data

Ecology accredits environmental laboratories that submit data to us. The accreditation program covers analyses in all typical environmental matrices (water, sediment, tissue), including drinking water. Accreditation helps ensure environmental laboratories have the demonstrated capability to provide accurate and defensible data. Ecology’s laboratory accreditation program is the primary source of performance monitoring for the 480 labs in the accreditation program.



Expected Results

Environmental laboratories submitting data to Ecology and the Department of Health have the demonstrated ability to provide accurate and defensible data.

- Approximately 460 environmental laboratories in 26 states and two provinces, including 106 drinking water laboratories, are evaluated and accredited.
- Performance testing analyses for major permitted wastewater discharge laboratories are evaluated.
- Regulated laboratories maintain successful, quality programs.
- Environmental and public health decisions are based on accurate and defensible scientific data.

Performance Measure

- Percent of acceptable performance testing analyses completed by Washington State laboratories.

Improve the Quality of Data Used for Environmental Decision Making

Sound environmental policy and regulatory decisions require accurate and timely data. To ensure the reliability and integrity of data Ecology uses, our staff provide guidance and training on developing quality assurance project plans, review project proposals, and consult on sampling design requirements and interpretation of results. This quality assurance function is required by EPA 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, review grantee monitoring plans, and supply information for policy decisions to support agency mandates.

Expected Results

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.
- Environmental sampling and laboratory methods are described in formal standard operating procedures.

Performance Measure

- Percent of environmental monitoring field procedures covered by formal standard operating procedures.

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, Water Pollution Control Act, Puget Sound Water Quality Protection Act, and Model Toxics Control Act.

Expected Results

Ecology's full-service environmental testing laboratory provides defensible and accurate analytical and laboratory support to decision makers.

- Scientifically sound laboratory results are provided to clients for making environmental decisions.

Performance Measures

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



Laboratory.

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, and evaluate changes and trends in water quality over time. This network includes sampling stations in rivers, streams, and in-shore marine waters (Puget Sound and the major coastal estuaries). Ecology also measures stream flows in salmon-critical basins and key watersheds statewide, and posts the results in near real-time on our website.

Expected Results

Trends, conditions, and changes in water quality of major freshwater rivers, Puget Sound, and the largest coastal estuaries are tracked.

- Monthly samples from approximately 82 freshwater and 35 marine water sites are collected.
- Stream flows at approximately 62 near real-time stations are measured and reported.
- Real-time stream flow data is provided via the web.
- Ecology staff and the public are alerted to emerging water quality problems.
- The effectiveness of water cleanup activities is tracked and assessed.

Performance Measures

- Percent of monitored stream flows below critical flow levels.
Statewide river and stream water quality index score.



Mission Statement

The mission of the Water Resources Program is to support sustainable water resources management to meet the present and future water 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. However, water availability can no longer be taken for granted. Washington increasingly lacks water where and when it is needed for communities and the environment. Increased demand for water is due mainly to population and economic growth. At the same time, stream flows need to be restored to save fish from extinction.

There is increased awareness of water needs and availability. Many factors have combined to build the awareness:

- Threat of extinction to once abundant fish stocks and federal Endangered Species Act requirements.
- Frequent droughts resulting in dry streams, withered crops, dead fish, wildfire hazards, and reduced hydropower production.
- Record low stream flows and declining aquifer and groundwater levels in some areas of the state.
- Lack of water for further allocation without impairing senior water rights, instream flows, or depleting aquifers in many areas of the state.
- Legal uncertainty related to the validity and extent of water rights and claims, including federal and Indian rights and claims.
- Lack of adopted instream flow levels for many rivers and streams.
- Inadequate information on water availability, stream flows, and groundwater.
- A growing concern over the long-term effects of climate change on the water supply.

Authorizing Laws

- RCW 18.104, Water Well Construction Act (1971)
- RCW 43.21A, Department of Ecology (1970)
- RCW 43.27A, Water Resources (1967)
- RCW 43.83B, Water Supply Facilities (1972)
- RCW 43.99E, Water Supply Facilities – 1980 Bond Issue (Referendum 38) (1979)
- RCW 86.16.035, Department of Ecology Control of Dams and Obstructions (1935)
- RCW 90.03, Water Code (1917)
- RCW 90.08, Stream Patrolmen (1925)
- RCW 90.14, Water Rights Claims Registration and Relinquishment (1967)
- RCW 90.16, Appropriation of Water for Public and Industrial Purposes (1869)
- RCW 90.22, Minimum Water Flows and Levels (1969)
- RCW 90.24, Regulation of Outflow of Lakes (1939)
- RCW 90.28, Miscellaneous Rights and Duties (1927)



- RCW 90.36, Artesian Wells (1890)
- RCW 90.38, Yakima River Basin Water Rights (Trust Water) (1989)
- RCW 90.40, Water Rights of United States (1905)
- RCW 90.42, Water Resource Management (Trust Water) (1991)
- RCW 90.44, Regulation of Public Groundwaters (1945)
- RCW 90.46, Reclaimed Water Use (1992)
- RCW 90.54, Water Resources Act of 1971
- RCW 90.66, Family Farm Water Act (1977)
- RCW 90.80, Water Conservancy Boards (1997)
- RCW 90.82, Watershed Planning (1997)
- RCW 90.86, Joint Legislative Committee on Water Supply During Drought (2005)
- RCW 90.90, Columbia River Basin Water Supply (2006)
- RCW 90.92, Pilot Local Water Management Program (Walla Walla) (2009)

Constituents/Interested Parties

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

Issues

Improving Water Management Capacity

Several factors are leading us to improve water management:

- Increasing water demand.
- Frequent droughts.
- Better understanding and acceptance of water availability problems.
- Concern for how climate change could impact water supplies and the environment.

Ecology is working with stakeholders and the Legislature to update water management policies and provide additional funding to address the increased demand and competition for water. These actions have resulted in some progress, but have also highlighted the gap between current water management capacity and other challenges:

- Setting instream flow requirements while providing for future water use, implementing local water management plans, and taking other actions to get water back into streams. An intensive effort is ongoing with local interests to set instream flows on streams and rivers.



- Implementing local watershed plans designed to meet water needs and protect water resources sustainability. We are working with local watershed planning units to help them successfully finish local planning. We are providing funding for plan implementation, including actions ranging from storage projects to compliance.
- Processing water rights applications. We are focusing on more efficiently making decisions on new water rights applications, as well as change applications to help facilitate the sale, transfer, and changes in water use to better use existing water supplies.
- 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 close to completing the Yakima River Basin Adjudication, 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 & Performance Measures

Clarify Water Rights

Ecology supports water rights adjudication. Adjudication reduces water right conflicts and supports sound water management by increasing certainty regarding validity and extent of water rights. It is a judicial determination of water rights and claims, including federal, tribal, and non-tribal claims. Current focus is on completing the Yakima River Basin surface water adjudication and pre-adjudication work in the Spokane and Colville watersheds.

Expected Results

- Work with tribes on water settlements, increased water rights certainty, and reduced conflict.
- Major uncertainty regarding the validity and extent of surface water rights in the Yakima Basin is removed.
- Water rights documents (certificates, claims, permits, etc.) in the Spokane Basin will be reviewed to prepare for anticipated adjudication proceedings with Idaho.

Performance Measures

- Number of tribal water right settlement processes initiated.
- Number of claims, rights, and/or permits reviewed for the Spokane adjudication.

Assess, Set and Enhance Instream Flows

Ecology evaluates and sets instream flows that are fundamental to water resources management. Instream flows are used to determine how much water needs to remain in streams to meet environmental needs, how much can be allocated, and when to regulate junior water users based on flow levels. Ecology



acquires water and uses other management techniques to restore and protect flows, while also meeting out-of-stream needs.

Expected Results

- Water availability is determined and water is sustained for current and future needs.
- Increased setting and enhancing of instream flows in critical water basins to benefit people, fish, farming, and the environment.
- Four instream flows are set (Walla Walla, Wenatchee, Lewis, and Salmon-Washougal) working with local watershed groups and critical basins not engaged in watershed planning.

Performance Measures

- Volume of water saved for instream flow in acre feet.
- Number of instream flow rules adopted.
- Acre-feet of additional water availability in eastern Washington.

Ensure Dam Safety

Ecology protects life, property, and the environment by overseeing the safety of Washington's dams. It includes inspecting the structural integrity, 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 are 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.

Manage Water Rights

Ecology allocates surface and groundwater to meet the many needs for water. We make decisions on applications for new water rights and on applications for changes and transfers of existing water rights. Water right decisions assess many factors, including determining whether water is available and whether existing rights would be impaired. Ecology is responsible for managing an existing water rights portfolio of over 51,000 certificates, 3,000 permits, and 166,000 claims.

Expected Results

- Water needs are met and existing water users and the environment are protected.
- Improved allocation of new water rights and changes to existing rights.
- New municipal water right provisions are implemented with the Department of Health.
- Timely and sound decisions are made on applications for new water rights and changes to existing rights to (re)allocate water.

Performance Measure

- Number of total water right decisions completed.



Prepare and Respond to Drought

Ecology provides services to reduce the impact of droughts and to prepare for future droughts and climate change. When droughts are declared, services include providing water via emergency transfers, water right changes, and temporary wells. Ecology also provides drought related information and financial assistance and coordinates drought response efforts. Emerging information on climate change is also monitored for future water supply implications.

Expected Results

Drought effects are monitored and, where feasible, mitigated (such as impacts to water supply and drought preparedness) through:

- Improved planning.
- Communication.
- Coordination.
- Loss prevention efforts.

Performance Measure

- No measures are associated with this activity until a state drought is declared by the Governor.

Promote Compliance with Water Laws

Ecology helps ensure water users comply with the state's water laws so other legal water users are not impaired, water use remains sustainable over the long-term, and the environment is protected for the benefit of people and nature. Activities include water metering and reporting 80 percent of water use in 16 fish critical basins, along with education, technical assistance, and strategic enforcement in egregious cases.

Expected Results

Increased awareness and compliance with the state's water laws so legal water users and applicants for water rights are not impaired, water use remains sustainable, and the environment is protected.

- 80 percent of water is metered and reported in 16 critical water basins.
- Water right holders receive compliance information, assistance, and strategic enforcement action.
- Water use of streams with flows set is regulated during low flow periods.

Performance Measures

- Percent of water use that is metered in 16 critical basins.
- Number of compliance actions for water management.

Provide Water Resources Data and Information

Ecology protects state water resources through collection, management, and sharing of data and information that is critical to modern water management. Reliable data is essential to local watershed groups, conservancy boards, businesses, local governments, nonprofit groups, the Legislature, other agencies, and the media. It 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; supporting compliance actions; metering; tracking progress; communicating with constituents; and serving other water resource functions.



Expected Results

Sound water management is supported through improved agreement and more informed water resources decisions based on increasing 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

- Percent of water rights mapping completed statewide.

Regulate Well Construction

Ecology protects consumers, well drillers, and the environment by licensing and regulating well drillers, investigating complaints, approving variances from construction standards, and providing continuing education to well drillers. Work is accomplished in partnership with delegated counties delivering technical assistance to homeowners, well drillers, tribes, and local governments.

Expected Results

- The public's safety, environment, and property are protected.
- Well drillers get licensing and training services.
- Well drilling is regulated.

Performance Measure

- Percent of water supply wells inspected in delegated counties.

Support Water Use Efficiency

Ecology provides agricultural, commercial/ industrial, and nonprofit water users with services that deliver water savings. These include information, planning, and technical, engineering, and financial assistance. Support also is provided for water reuse projects and to the Department of Health for municipal water conservation.

Expected Results

- Increase water, energy, and cost savings to protect the environment, increase business competitiveness, and reduce pressure on water supplies and waste treatment facilities.
- Agricultural, commercial, industrial, and non-profit water users get technical support.
- Department of Health water conservation and reclaimed water efforts get support.

Performance Measure

- Amount of funding provided to projects that improve water use efficiency.

Support Watershed-Based Water Supply and Resource Stewardship

Ecology supports watershed-based management of water for people, farms, and fish. We provide technical support, staff support, scientific expertise, and financial assistance to help local groups design and implement integrated watershed management and locally-tailored water supply solutions. Work in



this activity focuses on improving long-term reliability and availability of water for in-stream and out-of-stream needs per locally developed watershed plans and activities.

Expected Results

Water supply solutions are developed and implemented in water-short areas of the state to provide water for people, farms, and fish. Targeted technical and financial assistance is provided for plan implementation and updates where community/watershed-based groups are active partners in identifying in-stream and out-of-stream water availability solutions and projects.

Performance Measure

- Number of watersheds in the implementation of watershed planning.



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Mission Statement

The mission of the Spill Prevention, Preparedness and Response Program is to protect Washington's environment, public health, and safety through a comprehensive spill prevention, preparedness, and response program. The program focuses on prevention of oil spills to Washington waters and land, as well as planning for an effective response to oil and hazardous substance spills whenever they occur.

Environmental Threats

Over 20 billion gallons of oil and hazardous chemicals are transported through Washington State each year by ship, barge, pipeline, rail and road. Human error and natural calamities can all lead to spills and toxic release with unintended and potentially disastrous consequences. Oil and chemical spills can threaten some of Washington's most productive and valuable ecosystems. These incidents can kill fish, birds, and marine mammals. They can also contaminate beaches, shellfish, and groundwater. All spills—whether on land or water—can threaten public health, safety, the environment, and ultimately damage the state's economy and quality of life.

Authorizing Laws

The harm caused by major oil spills and other toxics 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
- RCW 70.105, Hazardous Waste Management Act
- RCW 70.105D, Model Toxics Control Act
- RCW 70.136, Hazardous Materials Incidents Act
- RCW 82.23B, Oil Spill Response Tax
- RCW 88.40, Transport of Petroleum Products – Financial Responsibility
- RCW 88.40, Transport of Petroleum Products – Financial Responsibility
- RCW 88.46, Vessel Oil Spill Prevention and Response
- RCW 90.48, Water Pollution Control (includes early legislation from the 1970s)
- RCW 90.56, 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:



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- Federal, state, local, and tribal governments, including the U.S. Coast Guard, U.S. Environmental Protection Agency, U.S. Corps of Engineers, and local emergency management agencies.
- 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, and oil trucking companies.
- Spill response cooperatives and contractors.
- The Puget Sound Partnership, environmental organizations, the general public, and others.

Issues

Ecology is an adaptive organization that takes pride in being responsive to legislative direction, customer needs, and in responding rapidly and aggressively to oil spill, hazardous material incidents and natural disasters. In working to fulfill the following commitments, we will continue to align policies and procedures to ensure efficient and effective service delivery within the current economic and budget restriction environment.

The initiatives described in this document are in addition to our essential service delivery of vessel and oil transfer inspections, plan review and approvals, contingency plan drills, incident response, and environmental restoration that are delivered 24/7 from field offices. In delivering these services, Ecology plays a key role in minimizing the long-term release of toxics into the environment and helping to protect the waters of the state. In meeting these many challenges, we will focus on the following strategic initiatives during the 2011-2013 biennium:

- Improve marine safety by emphasizing a risk based approach.
- Develop the capability to provide the best achievable protection during response to major spills.
- Continue to provide a rapid, aggressive, and well-coordinated response to spills and significant incidents.

The Spills Program will pursue these strategic initiatives within its current level of funding.

Improving Marine Safety by Emphasizing a Risk-Based Approach

A renewed emphasis will be placed on marine risk-based assessments and management activities to protect our environment, economy, and quality of life. The risk assessment initiative will eventually culminate in the identification of appropriate risk mitigation measures. Some lower cost risk management measures could be implemented during the current biennium. This work will entail effort on several levels. Ecology will:

- Consider findings of recent vessel risk assessments and participate or lead additional assessments for system-wide improvements to waterways management system. From these findings and other assessments, Ecology will work with U.S. Coast Guard and Canadian marine safety elements to strengthen marine safety standards within shared waters, as appropriate.
- Continue to track the large changes in marine traffic in the North Puget Sound area as a result of increased transport of crude oil from Alberta through our state's waters and to our refineries, and



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projected significant growth in cargo vessel traffic. This vessel traffic information will be compiled and analyzed along with data on vessel incidents and spills.

- Implement the vessel emergency notification requirements in the 2011 Legislature's House Bill 1186 by:
 1. Continuing to assess and review responses to each vessel emergency with the U.S. Coast Guard to identify opportunities for improved risk mitigation, including increased tug escorting, restricting vessel entries or movements to limit threats to U.S. waters.
 2. Monitoring the effectiveness and use of emergency towing in response to vessel emergencies. This information may result in development of new recommendations.
 3. Approving changes to ship oil spill contingency plans and adopting new internal procedures for managing these incidents to respond aggressively before spills occur.
- Maintain emphasis on prevention performance measures to evaluate trends and adjust various prevention inspection priorities accordingly. Ensure policy and procedures for inspections implement U.S. Coast Guard/Ecology protocols, training, and communication goals.
- Fulfill the promise of a strong collaborative partnership with the U.S. Coast Guard by updating the state's cooperative partnership agreements and working to ensure they are fully implemented.

Developing the Capability to Provide the Best Achievable Protection During Response to Major Spills

The public and elected officials expect the government and private sectors to carry out a well coordinated, rapid, and aggressive response when significant incidents and spills occur. The recent BP oil spill in the Gulf of Mexico in 2010 offered many lessons learned that are applicable here in Washington, many of which focus on improving preparedness planning.

In applying these lessons learned, in 2011 the Legislature passed House Bill 1186, that helps to position the state now and into the future for continuous improvement in preparedness planning and best achievable protection for state waters. Ecology will:

- Complete rulemaking to implement HB 1186 by December 2012 to revise vessel planning standards to incorporate best achievable protection through improved technology, staffing, training, and operational methods.
- Revise rules to establish a vessel of opportunity program to assist with oil spill response activities, including on-water oil recovery in the near-shore environment and the placement of oil spill containment booms to protect sensitive habitats.
- Work under the area plan to continue developing a volunteer management system that includes addressing pre-trained and convergent volunteers.
- Continue to systematically verify, inspect, and test response equipment around the state to ensure equipment is ready for a rapid deployment during incidents.
- Reduce the number of industry self certification of large tabletop drills by increasing the number of Ecology participation and evaluation of tabletop drills.
- Continue to do outreach and education to local governments and tribal communities before and during spills and incidents.



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Continue to Ensure Responses to Spills and Incidents are Rapid, Aggressive, and Well Coordinated

Ecology is responsible for rapidly responding to and cleaning up oil spills, hazardous material incidents, methamphetamine drug labs, and helping other "first response" organizations. Ecology will:

- Deliver 24-hour-a-day, statewide hazmat response services from field offices.
- Work closely with local governments, tribes, and other public entities that have spill response and safety equipment "caches" to enhance the rapid initial containment of oil spills. This system is intended as a first response capability to contain oil until a private contractor and state response personnel are able to travel to the scene of the pollution incident.
- Build partnerships with local government, industry, and the public to provide rapid reporting of releases and provide rapid, independent verification of the spill incident.
- Clean up methamphetamine labs in coordination with local, state, and federal law enforcement agencies.
- Initiate enforcement actions when there are violations related to oil and hazardous material spills.

Strengthen Delivery of Public Education, Outreach and Technical Assistance Services

Ecology, along with our other local, state, federal and multi-state jurisdictions partners, is committed to expanding and maximizing outreach and education efforts. To help improve public education and technical assistance, Ecology will:

- Expand efforts to disseminate the technical findings from in-depth casualty and oil spill investigations to applicable industries.
- Expand field visits to ports and marinas statewide, and increase participation in the Clean Marina Program.
- Reinstigate a spill prevention campaign to include the commercial fishing fleet's preparation for seasonal departure to Alaskan fishing grounds.
- Improve use of the Spills Program's website and social networking sites to provide information during spill incidents to interested stakeholders and the public.
- Develop and maintain a website for volunteer registration and management (pending additional funding).

Activities, Results & Performance Measures

Prepare for Aggressive Response to Oil and Hazardous Material Incidents

Large commercial vessels and oil handling facilities operators are required to maintain state-approved oil spill contingency plans to ensure they can rapidly and effectively respond to major oil spills. State planning standards ensure equipment and response personnel are strategically staged throughout the state. This work is carried out through staff review and approval of contingency plans to ensure plan holders and spill response contractors maintain readiness. Ecology also conducts scheduled and unannounced drills, partners with other agencies to maintain a regional contingency plan that guides how spills are managed in the Northwest, and develops geographic response plans in consultation with other natural resource experts and communities.



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Expected Results

- Ecology and the regulated community are fully prepared to promptly respond to oil spills and ensure damages from spills are minimized.
- Compliance with the industry sponsored Neah Bay response tug is documented in approved vessel contingency plans.
- Four Geographic Response Plan chapters are updated.
- The ongoing maintenance of response equipment is documented by industry and records verified by Ecology.
- Ecology targets oil spill related outreach efforts to local governments in coastal communities.

Performance Measure

- Percent of industry and privately-owned response equipment inspected, deployed, and/or verified.

Prevent Oil Spills from Vessels and Oil Handling Facilities

Ecology works with the regulated community and others to minimize the environmental threat of oil spills from vessels and oil handling facilities by focusing on human procedural and organizational factors. This work is done through the following core activities:

- Inspecting facilities vessels and monitoring oil handling facility transfers.
- Boarding vessels for educational and compliance purposes.
- Overseeing oil transfer operations.
- Requiring and reviewing operations manuals and prevention plans.
- Overseeing the implementation of industry funded Neah Bay response tug to ships in difficulty.
- Helping and recognizing oil tanker and barge companies for achieving best achievable protection.
- Investigating near-miss and actual accidents to identify new prevention strategies.

Expected Results

- Strive to achieve zero oil spills from vessels and oil handling facilities.
- Minimize or prevent spills through risk management and targeted inspections.
- Reduced number of oil spills entering surface waters, particularly from marine sources.
- Reduced total volume of oil entering surface waters to less than one gallon for each 100 million gallons transferred over water.
- Reduced percent of vessel and oil transfer accidents resulting in or potentially leading to spills by (1) boarding and inspecting targeted high priority vessels and facility operations; and (2) Neah Bay rescue tug helping vessels as needed.
- Increased tanker and tank barge enrollment in the Exceptional Compliance Program (also known as ECOPRO) focused on improved vessel safety and environmentally secure operations.
- Reduced incidence of intentional waste oil discharges at sea from vessels.

Performance Measures

- Number of oil spills to surface waters from all sources.
- Total volume of oil spilled to surface waters from all sources.
- Percent of potential high risk vessels boarded and inspected.
- Gallons of oil spilled to surface waters during oil transfers for every 100 million gallons of oil



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transferred.

- Percent of regulated marine oil transfer operations inspected.

Rapidly Respond to and Clean Up Oil and Hazardous Material Spills

Oil and hazardous materials spills present a danger to human health and the environment. Ecology is responsible for rapidly responding to and overseeing the cleanup of oil spills, hazardous material incidents, methamphetamine drug labs, and helping other "first response" organizations during Weapons of Mass Destruction (WMD) incidents. This work is done through the following core activities:

- 24-hour-a-day, statewide response capability from field offices.
- Coordination with local, state, and federal law enforcement agencies for methamphetamine drug lab cleanup.
- Compliance actions for violations related to oil and hazardous material spills.

Expected Results

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

Performance Measure

- Percent of reported oil and hazardous material spill incidents that receive field responses.

Restore Public Natural Resources Damaged by Oil Spills

Ecology leads a multi-natural resource agency trustee committee to assess damages to publicly-owned natural resources from oil spills. This work is done through the following core activities:

- Assessing the monetary value of damaged natural resources.
- Seeking fair compensation from the responsible parties.
- Chairing the Coastal Protection Committee to ensure the money collected is used for projects to restore the environmental damage.
- Conducting site follow-up visits to ensure accountability of project success after the project is completed.

Expected Results

- The 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 using natural resource damage funds.

Performance Measure

- Percent of completed restoration projects that meet plan specifications.



Mission Statement

The mission of the Agency Administration Program is to direct and sustain the agency's effort to accomplish its mission: to protect, preserve, and enhance Washington's environment, and promote the wise management of the people's air, land, and water for the benefit of 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 citizens about environmental threats.
- Promoting good working relationships with members of the Legislature and tribes.
- Managing financial systems and issues.
- Providing human resource services.
- Providing high quality information technology services.
- Providing safe and secure workplaces.
- Managing Ecology records and ensuring appropriate public access to those records.
-

Authorizing Laws

- RCW 43.21A, Department of Ecology – In 1970, this law created the Department of Ecology to consolidate water, air, solid waste, and other environmental management, protection and development programs authorized by the Legislature.
-

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.

Issues

Facilities

We are working closely with other natural resource agencies to pursue co-location opportunities. Our goal is to site offices where we can better serve our customers, while saving money by sharing space and investing in partnerships with other agencies that do work related to Ecology's.



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Provide Efficient and Effective Administrative Support

We are still working on solutions to our facility problem at our Northwest Regional Office in Bellevue. The current building continues to be prone to flooding during heavy rains, which affects agency operations and indoor air quality.

The state's six-year facilities plan notes the need to move the Central Regional Office in Yakima. This is a shared facility with Labor and Industries and the Department of Agriculture. The current facility has a number of ongoing maintenance issues, and is currently in foreclosure.

Records Management

Ecology is implementing lifecycle records management for paper and electronic records. We are reworking Ecology records retention schedules to line up with today's business needs and set us up for future initiatives. This effort includes training for every person in the agency to create consistency, simplify records series, minimize storage and handling, and streamline searching. We are also training all staff in public disclosure requirements and processes to be more efficient and diligent in responding to the more than 18,000 Public Records Act requests we get each year.

Human Resources Management

Ecology will continue to carry out its strategic plan for developing and managing its workforce for optimal performance and achieving Ecology and program goals by:

- Implementing the new Ecology employment center website. This site provides managers, supervisors, and employees with information, guidance, and instruction about key employment activities and processes for workforce and position planning; making employment decisions; employee retention; succession management; and career planning.
- Renewing and expanding our interagency and intergovernmental partnerships for recruiting highly qualified, diverse candidates.
- Assessing our selection and hiring process. We will develop new methods to streamline the process and further improve the quality and diversity of our candidate pools.
- Expanding the scope of our training program. We will provide tools for managers, supervisors, and employees to take on emerging issues from the economic recession, including workload management and Lean processes.

Statewide Time and Attendance Reporting System

The Fiscal Office will continue working with the Department of Transportation to develop a new statewide tool to automate time and attendance reporting. The tool will allow employees to self-enter time and attendance, route to supervisor for approval, and feed the information into the existing enterprise Human Resources Management System (HRMS). This system will enforce the terms of applicable collective bargaining agreements and perform and/or support payroll cost allocation.

General Fund Shortfall

Since the start of the 2007-09 biennium, Ecology's near General Fund-State (GF-S) has been reduced by \$35.6 million, or nearly 27 percent. About 22 percent of our 2011-13 Operating Budget is supported by



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Provide Efficient and Effective Administrative Support

GF-S, with the remainder coming from dedicated environmental accounts and federal dollars. In addition to the GF-S reductions, \$255 million has been transferred from dedicated environmental accounts, managed by Ecology, to the GF-S.

Consolidating Services

- Ecology is consolidating application and data servers to position itself to move to the new state data center. We have completed the migration to shared services electronic mail, hosted at the new Consolidated Technology Services.
- Ecology is working with the new Department of Enterprise Services to consolidate vehicle fleet resources, data, and management responsibilities.

Regulatory Improvement

- The State Auditor's Office is conducting a performance audit on streamlining business regulations this biennium. The audit is focused on best practices for streamlining regulations and permitting and inspections. Ecology is one of 26 agencies in the audit. We will be implementing the best practice recommendations based on the State Auditor's Office findings.
- To achieve our mission, Ecology is making sure our work is prioritized and focused on direct benefits to the environment and human health protection. The principles and practices of tools such as Value Stream Mapping and Lean are being applied to targeted regulatory processes. The intent is to identify and reduce non-value added work that adds time and costs and doesn't contribute to environmental or human health protection or the final products or services we deliver to our customers. We are building our capacity to support continuous process improvement as we learn and do more with Lean.

Environmental Education

Ecology is launching new communication and education resource-sharing partnerships and strengthening existing partnerships. Our aim is to maintain a high level of service, transparency, and accountability to the public, to communities, and to Washington businesses that want to operate in a way that is safe for people and the environment.

Examples of our communication and education partnerships include:

- Working with the carpet cleaning industry, we're providing easy-to-use information to carpet cleaning businesses on how to dispose of their leftover wastewater (laden with chemicals) in way that is safe for people, the businesses themselves, and the environment.
- Working with the City of Seattle and South Seattle Community College, we're providing free car-repair workshops so Puget Sound residents can learn how to prevent engine oil, transmission fluid, and other pollutants from leaking onto the ground and into streams, lakes and the Sound.
- Ecology signed a cooperative agreement with the U.S. Coast Guard 13th District, spelling out how the two agencies work together in communication and public notification about oil spills and related incidents.

We will continue to improve our use of rapidly changing communication technologies to gather and share information. This means understanding our customers and what they need, and it means constantly improving delivery of information so it's easily accessible to them when they need it.



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Climate Policy

The overwhelming majority of climate scientists agree that human activities, especially the burning of fossil fuels are responsible for much of the climate change currently being observed and the changes in seawater chemistry. Washington State's contribution to greenhouse gas emissions is only a small fraction of the World's CO₂ emissions. However, we are already experiencing trends that are consistent with a warming climate, from warmer temperatures to rising sea levels to melting snow and ice to more drought and extreme rainfall. Climate scientists project that these trends will continue and in some cases accelerate, posing significant risks to human health, our forests, agriculture, freshwater supplies, coastlines, and other natural resources that are vital for our economy and the environment.

To avoid significant climate impacts and reduce the risk of creating impacts beyond our ability to respond and adapt, Washington State and societies around the globe need to reduce greenhouse gas emissions. Washington State is addressing the challenge by taking a comprehensive approach in implementing practical and coordinated sets of policies and solutions - including incentives, regulations, and disincentives - to meet the greenhouse gas emissions reductions adopted into law in 2008, and to prepare for a changing climate. A broad coalition of leaders, stakeholders and the public have over the past few years offered policy ideas to mitigate and adapt to climate change.

Activities & Results

Note: These activities share results with Ecology's environmental programs across the agency.

Communication and Education

Ecology carries out state and federally mandated rule-making, policy development, enforcement actions, toxic site cleanup, and other work that demands substantial public information and public involvement. Ecology is committed to being transparent, open, and accountable to the public, policy leaders, news media, and the communities we serve. The Communication and Education Office provides needed support to Ecology leadership and our environmental programs to accomplish this.

The public relies on rapidly changing communication technologies to gather, understand, and share information. This requires public agencies to constantly improve delivery of needed information to our customers. The Communication and Education Office helps Ecology respond to this need. The office coordinates Ecology's use of the Internet and other technologies, with a focus on understanding our customers, what they need, and how to make information easily accessible to them at all times.

The office also leads Ecology's participation in education partnerships with local governments, community groups, schools, and universities to help Washington residents make informed choices about using and protecting Washington's waters and air, reducing toxic threats, and reducing risks related to climate change.

Communication and Education provides round-the-clock communication and outreach support for oil and hazardous chemical spills. This includes being available 24/7 to provide timely information to the media and the public and, when they're established, to staff multi-jurisdiction incident response teams.



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Governmental Relations

The Governmental Relations Office provides leadership, policy support, and coordination for federal and state legislative issues, as well as issues that affect local governments, tribes, and British Columbia. This office includes the Rules Unit, which provides rule development assistance and coordination, along with economic analysis, including Small Business Economic Impact Statements and cost/benefit studies. They also coordinate performance measurement and develop environmental indicators. This office is responsible for leading the agency's Lean process improvement work.

Human Resources

The Human Resources Office provides a full scope of human resource management and consulting services, including recruitment, labor relations, classification and compensation, performance management, training and development, employee safety and wellness, layoffs, personnel records management, and personnel action processing.

Human Resources plays a key role in ensuring Ecology complies with federal and state employment laws, civil service rules, and agency policy. The Human Resources Office also manages implementation and administration of collective bargaining agreements, including bargaining, contract compliance, handling grievances, and arbitration.

The office develops and manages Ecology's Affirmative Action Plan and ensures equal employment opportunity, and sponsors and coordinates activities that encourage diversity. This includes helping create a supportive work environment that reflects the diversity of the communities we serve.

Regional and Field Offices

The leadership and office management of these offices are budgeted in Agency Administration. However, the staff doing the environmental work are included in the environmental programs. Each of Ecology's four regional offices (Lacey, Yakima, Spokane, and Bellevue) and field offices (Bellingham and Vancouver) has an executive management representative and is provided core administrative support. This support includes reception, mail, records management, complaint tracking, regional fleet management, and State Environmental Policy Act (SEPA) functions. The Regional Directors in these offices help local communities and provide cross-program coordination and management of large, multiple-program environmental reviews and permitting projects.

Executive, Financial, Administrative, and Information Technology Services

Ecology leadership comes from the executive office.

- Financial Services provides centralized financial support in accounting, budget, contracts, payroll, fiscal notes, audits, purchasing, and inventory.
- Administrative Services maintains Ecology's central records, facilities, and vehicles. They respond to public records requests, provide mail services, and manage extensive library resources at headquarters and in the regions in the form of books, periodicals, and research.



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Provide Efficient and Effective Administrative Support

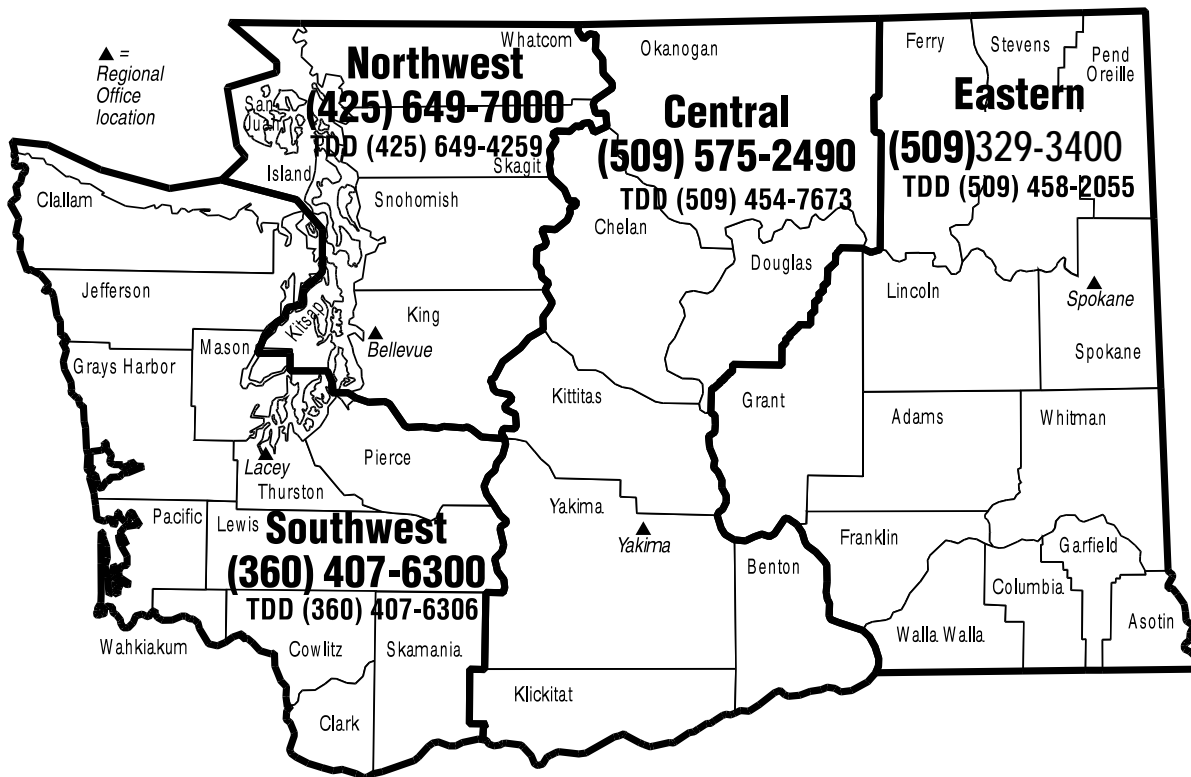
- The Information Technology Services Office includes desktop and network services, application development, and data planning. They guide information technology policy and strategic direction for the agency.
- Agency Administration is supported by each fund source available to the Department of Ecology. Each fund contributes to Administration in the same percentage that each fund contributes to the total of the environmental programs' salaries and benefits.

Expected Results

- Ecology managers, the Governor, State Auditor, Office of Financial Management, and the Legislature have confidence in Ecology and our financial information, and can use it to make crucial decisions affecting the environment.
- The public is informed about the work Ecology does, is educated about its role in environmental protection, and understands the policies we are developing and the opportunities available to influence our decisions.
- Washington's environmental laws and rules are improved through Ecology's relationships with legislators, local governments, businesses, Native American tribes, and environmental and citizen groups.
- Ecology managers and supervisors have the highest-quality communication, performance management, hiring, and leadership skills.
- Ecology's work environment reflects the diversity of the communities we serve.
- Ecology staff get reliable, secure, and high quality desktop support and network services.
- Customers have easy access to Ecology information.
- Facilities and vehicles are well-maintained, safe, and efficient.
- Requestors of public records are provided responsive records in a timely manner.
- Adopted federal legislation reflects Washington's priorities (e.g., transition to a clean energy future, a level playing field for Washington businesses, recognition of our unique and clean energy portfolio).
-

Performance Measures

- Number of agency audit findings.
- Percent of Ecology-administered accounts with a positive cash balance.
- Metric tons of Ecology greenhouse gas emissions.
- Number of pages printed and copied.
- Gallons of fuel used in Ecology vehicles and equipment.
- Percent of employees who are accident-free.
- Diversity goal percentage for the total agency.
- Percent of employees meeting the discrimination and sexual harassment training requirements.
- Percent of vacancies filled within 45 days.



Ecology Headquarters & Regional Offices

Headquarters

300 Desmond Drive SE PO Box 47600
Lacey, WA Olympia, WA 98504-7600
360.407.6000

Northwest Regional Office

3190 160th Avenue SE
Bellevue, WA 98008-5452
425.649.7000

Central Regional Office

15 West Yakima Avenue, Suite 200
Yakima, WA 98902-3452
509.575.2490

Southwest Regional Office

300 Desmond Drive SE PO Box 47775
Lacey, WA Olympia, WA 98504-7775
360.407.6300

Eastern Regional Office

N. 4601 Monroe Street, Suite 202
Spokane, WA 99205-1295
509.329.3400



Ecology Field Locations

Bellingham Field Office

1440 10th Street, Suite 102
Bellingham, WA 98225-7028
360.715.5200

Vancouver Field Office

2108 Grand Boulevard
Vancouver, WA 98661-4622
360.690.7171

Ecology Program Locations

Richland Nuclear Waste Office

Ecology Nuclear Waste Program
3100 Port of Benton Boulevard
Richland, WA 99354-1670
509.372.7950

Padilla Bay National Estuarine Research Reserve

Ecology Shorelands and Environmental Assistance Program
10441 Bayview-Edison Road
Mt. Vernon, WA 98273-9668
360.428.1558

Ecology Limited Purpose Locations

Staff available by appointment only in these offices.

Manchester Environmental Laboratory

7411 Beach Drive E
Port Orchard, WA 98366
360.871.8800

Laboratory Accreditation Office

2350 Colchester Drive
PO Box 488
Manchester, WA 98353-0488
360.895.6145

Environmental Assessment Program Operations Center

8270 28th Court, NE
Lacey, WA 98516-7148
360.480.9224

Methow Valley Water-Master Office

134 Riverside Avenue
Winthrop, WA 98862
509.996.8273

Walla Walla Water-Master Office

Walla Walla Community College
500 Tausick Way
Walla Walla, WA 99362
509.329.3400

Wenatchee Water-Related Services

303 South Mission Street, Suite 300
Wenatchee, WA 99362-6142
509.575.2490



2013 - 2015 Department of Ecology Strategic Plan Ecology's Organization Chart

Department of Ecology - Executive Management

