DEPARTMENT OF
ECOLOGY
State of Washington

2011 – 2013 Strategic Plan

September 2010
Publication Number 10-01-005

Publication and Contact Information

This report is available on the Department of Ecology's website at:
www.ecy.wa.gov/biblio/10-01-005/html

For more information contact:

Executive Office
P.O. Box 47600
Olympia, WA 98504-7600

Phone: 360-407-7000

Washington State Department of Ecology - www.ecy.wa.gov

o	Headquarters, Olympia	360-407-6000
o	Northwest Regional Office, Bellevue	425-649-7000
o	Southwest Regional Office, Olympia	360-407-6300
o	Central Regional Office, Yakima	509-575-2490
o	Eastern Regional Office, Spokane	509-329-3400

To ask about the availability of this document in a format for the visually impaired, call the Executive Office at 360-407-7000. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Department of Ecology

2011 – 2013 Strategic Plan

Washington State Department of Ecology
Olympia, Washington

This page intentionally blank.

Table of Contents

This page intentionally blank.

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

The agency 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.

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 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 1,550 people located in communities throughout Washington State. Our headquarters is in Lacey, along with 15 offices located throughout the state to provide convenience and better 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, Seattle, Portland, Walla Walla, Methow Valley, and Padilla Bay.

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

The agency is 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 six administrative offices are: Executive; Human Resources; Financial Services, Administrative Services; Communication and Education; and Governmental Relations.

Agency Objectives

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. The agency adopted and recently reaffirmed the following strategic priorities:

- Protect and restore Puget Sound.
- Reduce toxic threats.
- Water Smart Washington.
- Facing climate change.

Protect and Restore Puget Sound

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

- Toxic chemicals are concentrating in urban bays and entering the food chain.

- Low oxygen levels are killing fish in Hood Canal.
- Many species, such as salmon, orca and shorebirds, are in serious decline.

The agency is 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 2013:

- State and/or federal policy to address toxics at the source have been achieved, including GreenScreen protocols to identify safer alternatives to priority toxic chemicals.
- A dedicated fund source has been secured to support stormwater and source control work, including funding for local governments, state clean water programs and support for an independent Stormwater Technology Center.
- The remaining priority instream flows for Puget Sound have been established and a rational policy for permit-exempt wells has been adopted.
- Programs to better control nutrients from agricultural lands, wastewater, and other land management activities are being implemented where needed.
- Shoreline Master Programs throughout the basin have been modernized.
- Public awareness and large-scale citizen engagement in recovery is evident and growing.

Strategies

Effectively Implement Ecology Strategic Priorities in Puget Sound

Reduce Toxic Threats:

- Complete the data collection portions of the Puget Sound toxics loadings studies.
- Work with key partners to develop a toxics reduction strategy for Puget Sound.
- Expand the Puget Sound Partnership STORM social marketing effort as foundation for Sound wide education and outreach, including increased emphasis on source control.

Water Smart Washington:

- Establish instream flows in remaining priority Puget Sound watersheds.
- Adopt and enforce rational permit-exempt well policy.
- Scope instream flow protection and enhancement framework to support salmon recovery.

Facing Climate Change:

- Understand the impacts of climate change and develop a response strategy.
- Provide public education and outreach opportunities on impacts and reduction strategies.

Effectively Implement Other Key Strategic Initiatives in Puget Sound

Stormwater:

- Sustain administration of multiple permits that require basic stormwater management responsibilities and make progress on the next set of municipal stormwater permits.
- Finalize recommendations of Low Impact Development “feasibility.”
- Develop investment strategy to better articulate stormwater funding needs.
- Develop significant long-term funding mechanism for local government stormwater programs and to fully fund the state’s stormwater related work.

- Work with municipalities that operate treatment plants and have stormwater jurisdiction and land use decision making to understand options to avoid expensive treatment plant upgrades by addressing nonpoint and stormwater.
- Support stormwater work group of Monitoring Consortium to define efficient and effective monitoring protocols to inform permits and Puget Sound monitoring program.
- Provide multi-media training for Ecology staff in select Ecology programs to help address multi-media issues that contribute to stormwater problems.
- Develop incentives to promote rainwater harvest.

Nutrients:

- Engage Conservation Commission, Natural Resource Conservation Service, Environmental Protection Agency (EPA), Agricultural and Conservation Districts in process to improve clean water outcomes and critical areas protection on farm lands.
- Work to help institute local source control programs, targeting nutrient hot spots.
- Advance South Sound Dissolved Oxygen Study and related efforts to determine whether wastewater treatment plants need to upgrade to advanced treatment.

Shorelines:

- Continue to develop, implement, and evaluate communications strategy.
- Support efforts to develop and implement a framework for the *No Net Loss* policy by participating in the EPA-funded Clallam County grant intended for this purpose.
- Work with sister agencies to advance green shorelines legislation to encourage environmentally preferable alternatives to shoreline stabilization techniques).

Effectively Implement other Agency Responsibilities

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

This GMAP work will help the agency 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 agency 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 and rainwater harvest.
- Coordinated pollution prevention grants, green buildings, and Chemical Action Plans.

Secure Significant New Federal Funding

Work with the Environmental Protection Agency and Puget Sound Partnership to develop and implement federally-funded strategies to advance the Action Agenda. This is likely to include Ecology being a "Lead Organization in key issue areas, such as toxics and watersheds.

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 programs in the agency are working to reduce toxic threats in one way or another. The agency has well established and effective programs to clean up and manage toxic substances but these programs were not designed to prevent many of the point or non-point 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.

Effectively reducing the threats posed by the ongoing generation and use of toxic substances in our society requires a balance between cleanup, management and prevention activities. We must continue to refine our permitting and compliance work to improve our ability to manage ongoing releases. And we must continue to address the legacy of this use through our cleanup programs. But ultimately, prevention programs are the smartest, cheapest and healthiest approaches.

The agency has six strategic objectives that taken together make up our strategy to improve our ability and capacity to prevent uses and releases of toxic substances.

Goals

While continuing our investments in cleanup and management, the agency 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; and
- Create a systems approach to reducing toxic threats that is effective, fair and economically feasible.

Strategies

To make significant progress toward achieving these goals over the next decade will require use of a number of strategies. Over the next three years we will focus on the following:

- Identify chemicals of concern and strengthen our ability to gather data on the presence of these substances in products and the environment.
- Improve tools and authorities to prevent uses and releases of toxic substances.
- Continue to act to reduce and phase out the worst of these toxic substances, known as PBTs or persistent, bioaccumulative, toxic substances.
- Expand incentives, regulations, best management practices and guidance to spur development of safer alternatives to toxic substances and reduce their use.
- Promote green chemistry and design Improve education/outreach/communication tools.

Identify Toxic Substances of Concern

- Working with key partners, 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.

Gather Data on Toxic Substances of Concern

- Adopt the final Children's Safe Products Act rule.
- Complete development of the Children's Safe Products Act reporting system.
- Complete the Puget Sound toxics loading study, including source identification work, to inform policy and management decisions.
- Coordinate multiple program information technology projects aimed at collecting and managing data on toxics in products.

Improve Tools and Authorities

- Introduce framework legislation to prevent toxics in products and stormwater.
- Revise the Puget Sound toxics reduction strategy based on the final toxics loading study.
- Continue to provide multi-program stormwater technical assistance as part of all agency inspections.
- Continue to develop outreach materials to educate consumers and businesses about priority chemicals in the environment, sources of these chemicals, and how they can be proactive.
- Develop guidance for consumers regarding identifying safer products for household use that flows from the Beyond Waste moderate risk waste and industries initiatives (focus on cleaners and pesticides), environmentally preferable purchasing and the toxics loading study.
- Integrate GreenScreen 2.0 into pollution prevention work focused on target chemicals (metals).

Phase Out Persistent, Bioaccumulative, Toxic Chemicals

- Introduce legislation to implement Lead Chemical Action Plan (CAP) recommendations.
- Complete the polycyclic aromatic hydrocarbons CAP.
- Identify sources of persistent, bioaccumulative, toxic chemicals to Puget Sound.

Spur the Development of Safer Alternatives for Products That Contain or Release Toxic Substances through Their Use

- Introduce legislation to include Environmentally Preferable Purchasing principles in government purchasing decisions.
- Working with volunteer businesses, provide technical assistance to demonstrate application of GreenScreen 2.0 as a tool to identify safer alternatives. Based on these efforts, develop case studies to demonstrate the business case for switching to safer alternatives.

Promote Green Chemistry and Encourage Design of New Products That Are Environmentally Benign

- Working with key stakeholders, develop the business case for adoption of green chemistry/green engineering practices in Washington.
- Continue to seek funding to implement toxics prevention and green chemistry initiatives.

Water Smart Washington

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. 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.

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

Goals

- Active Water Management – improving 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 –pursuing 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 the application backlog by 2030.
- 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.
- 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.
- Transform the Watershed Planning Act into the Watershed Management Act.
- 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 wells, encourage water supply development and water conservation, especially in areas with water budget deficits.
    - Most permit-exempt wells provide a good, reliable source of water for domestic and other small uses. In many rural areas permit-exempt wells are the only readily available and affordable option for new water supplies. Some parts 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. This is especially true in areas such as upper Kittitas County, where all of the water is needed to satisfy senior water rights and there is already not enough to do that in dry years. So adding more wells every year just makes that problem worse. We anticipate that permit-exempt wells will continue to provide a viable source of water for small water uses. However, we need to account and plan for the number of existing and anticipated future uses and find ways to mitigate their impacts if needed, so that new wells can continue to be used while senior water rights and instream resources 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 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.

Facing Climate Change

Climate shapes everything — ecosystems, crops, water, economy, lifestyles, health — and even small changes can have big impacts. A few degrees in temperature may not feel like much, but it can make the difference between rain and snow, early or late snowmelt, and flowing summer streams or dry creek beds.

Washington is a leader on addressing the causes and impacts of climate change. We have adopted greenhouse gas reduction targets in statute, 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.

Facing climate change—and making sure Washington is climate ready—will allow us to be a winner in the worldwide competition in energy efficiency and renewable energy. It will also ensure that we are aware of the impacts we are already experiencing as a result of a warmer climate – ocean acidification, sea level rise, and extreme weather events. This strategic plan brings together all of the agency's activities into one place to demonstrate how they are and will collectively help us achieve the imperative of facing climate change.

Goal

Provide leadership and assistance in reducing greenhouse gas emissions and preparing for the impacts of a changing climate.

Strategies

Understand the causes of and contributors to greenhouse gas emissions in Washington.

- Develop state's greenhouse gas reporting rule, with initial reporting starting in 2012.
- Prepare biennial emissions inventory starting in 2010 that provides the total emissions of greenhouse gases for the preceding two years by each major source sector.
- Implement the requirements of Senate Bill (SB) 5560, requiring the agency to work with state agencies to report and reduce their greenhouse gas emissions.
  - Develop emissions calculator and survey of actions taken in the past 5 years to reduce emissions by state agencies.

  - Consolidate all state agencies' reported emissions data and actions and prepare report for the legislature.
- Provide public education and engagement opportunities reduction strategies.

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

- Using data submitted under the Greenhouse Gas (GHG) reporting rule as well as information in the emissions inventory and by state agencies, track progress toward meeting the statutory emission reductions.
- Report on that progress and make recommendations for further reductions by preparing biennial updates to the 2008 report "Growing Washington's Economy in a Carbon-Constrained World; A Comprehensive Plan to Address the Challenges and Opportunities of Climate Change."
- Develop guidance for developers and lead agencies on including greenhouse gas emissions in State Environmental Policy Act (SEPA) analyses.
- Meet the Governor's challenge to become carbon neutral by 2020.

Understand the impacts of climate change and develop the state's response strategy.

- Implement the requirements of SB 5560, requiring Ecology to:
  - Work with the Departments of Agriculture, Commerce, Fish and Wildlife, Natural Resources and Transportation to develop an integrated climate change response strategy so that state and local agencies, public and private business, nongovernmental organizations and individuals are better able to prepare for address and adapt to the impacts of climate change.
  - Serve as the central clearinghouse for relevant scientific and technological information about the impacts of climate change on the state's ecology, economy and society.
  - Act as the central convener for the development of vital programs and necessary policies to help the state adapt to a rapidly changing climate.
- Within 18 months of the next and each successive global or national assessment of climate change science, consult with the Climate Impacts Group at the University of Washington regarding the science on human-caused climate change and provide a report to the legislature summarizing that science and make recommendations regarding whether the statutory emission reduction s should be updated.
- Develop tools and guidance for local governments to plan for rising sea levels and impacts on water resources.
- Provide public education and engagement opportunities on impacts.

Continue our leadership position in promoting national and regional efforts to reduce emissions and prepare for and adapt to climate change.

- Participate as a partner in the Western Climate Initiative and work towards expanding its charter to include a full range of policies that could be harmonized between and amongst participating jurisdictions to further reduce greenhouse gas emissions.
- Participate in multi-jurisdictional efforts to prepare for and adapt to climate change, such as through the Western Governors Association's Adaptation Work Group and West Coast Governors Agreement on Ocean Health.

- Track, assess, and comment on proposals from Congress and/or U.S. EPA, National Oceanic and Atmospheric Administration (NOAA), and other federal agencies to reduce emissions and prepare for impacts.

Key Business Strategies

The agency's business strategies are:

1. 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.

2. 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.

3. 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.

4. Leverage with ***Other Agencies***
   - Build relationships with other agencies around common goals.
   - Leverage the state's capacity.

5. Build Small ***Coalitions***
   - Listen to and build upon like interests.
   - Use coalitions to champion support.

6. Be ***Innovative***
   - Bounce ideas around with others.
   - Create a new approach or solution.
   - Focus more on results, less on process.

7. Be a ***Leader***
   - Be visible and accountable.
   - Communicate clearly.
   - Take and allow risk with solutions and approaches.

8. Assemble the ***Right Team***
   - The right mix of skills, knowledge, and abilities to get the job done.

- Find talented and motivated people.

9. ***Respect*** Different Values
   - Be open to listening to the perspectives of others.
   - Take time to learn and understand differing interests.

10. Leverage our ***Cash***
    - Use our grants and loans to leverage environmental protection.
    - Make strategic capital investments through grants and loans to locals.

Priorities of Government

The process for building the next state budget traditionally begins in the spring, when we receive instructions from the Office of Financial Management (OFM) to explain how we justify spending for each activity. The state uses a process called Priorities of Government — or POG — that starts at zero, not with what an agency has been spending. POG requires agencies to categorize proposed spending by its importance to the mission of the agency.

When agency requests are returned to OFM in September, they will look first at funding those items that are essential. Items that aren't as important aren't funded. And when times are tough, such as now, even some essential items aren't funded. Given both immediate and longer-term projected state shortfalls, OFM has a new budget building process that features eight questions that agencies must answer to support our 2011 – 2013 spending proposal. These questions build upon and reinforce the POG process:

Fiscal Responsibility

1. Is the activity an essential service?
2. Does state government have to perform the activity, or can it be provided by others?
3. Can the activity be eliminated or delayed in recessionary times?
4. Does the activity need to be paid for with state general funds? Should users pay a portion of the costs?
5. Are there federal funds or other fund sources available to support this activity?

Efficiency

6. Are there more cost-effective, efficient ways to do the activity?

Performance

7. Can the activity be the subject of a performance contract?
8. Can the activity be the subject of a performance incentive?

OFM has invited a panel of leaders to pose their own hard questions and lend other perspectives to help them evaluate spending proposals from agencies. The Governor's Committee on Transforming Washington's Budget will consult with budget staff. They participated in public hearings that took place during the summer 2010. Based on this new process, the Governor's proposed budget for 2011–13 will be presented to the Legislature mid-December 2010.

For more information about the statewide budget process, please go to:
http://www.governor.wa.gov/priorities/budget/default.asp

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 6.7 million people in 2008 to 8.4 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 of protecting and restoring Puget Sound, reducing toxic threats, successfully managing our water, and finding ways to mitigate and adapt to climate change 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."

We stepped up to this challenge by developing an ambitious work plan centered on our customer interactions and business practices. To understand the needs of our customers, while meeting our mission to protect the air, land, and water, we surveyed our permit applicant customers in 2002, 2004, 2006, and 2008. The 2010 survey is being conducted in late summer through early fall 2010. The surveys ask permit applicants about their level of satisfaction with our customer service and the clarity and timeliness of our permitting processes and decisions. The results of our surveys can be found at: http://www.ecy.wa.gov/quality/survey/customersurvey.html#PermitApplicantsSurvey.

We continue to make improvements to our permitting services, based in part on our survey results. A few examples include:

- Created permit flow diagrams and descriptions to improve the clarity and predictability of our different environmental permit processes.
- Improved timeliness and clarity of permit decisions.
- Tracking permit timeliness measures.
- Improving the clarity of our permit applications to make it easier to "get it right the first time" in filling out the forms.
- Increasing the number of general permits.

Capacity Assessment

Financial Capacity Assessment

Financial and Economic Recession Impacts

The national economic recession that began in 2008 significantly impacted Ecology's budget. After closing a $9 billion state General Fund gap in 2009, the state faced another $2.7 billion shortfall in 2010. The cumulative impacts of reductions and fund shifts in the state's 2009 and 2010 budgets for Ecology:

- **$204 million of dedicated environmental funds were redirected** from toxic site cleanups and other environmental and public health projects throughout the state to offset the state General Fund shortfall.
- **$38.9 million less in Ecology's Operating Budget** to protect the environment, human health, and support economic development.
- **45.7 fewer authorized staff than in 2007-09.**

In dollars, the 2009-11 biennial budget remained unchanged from the 2007-09 budget at $1.2 billion. There were, however, significant changes in the ratio of operating to capital funding. Capital investments in local communities grew from $789 million in 2007-09 to $875 million in 2009-11, a 10.9 percent increase. With the Capital Budget increase, approximately 68 percent of Ecology's 2009-11 budget was passed through to local communities to support local clean water, toxic cleanup, hazardous waste management, and pollution prevention efforts.

At the same time, the Operating Budget went from $472 million to $437 million, a 7.4 percent reduction. Water resources, watershed planning, litter pickup, oil spill prevention, and administration saw major reductions, including less grant dollars to local communities.

$204 million of dedicated environmental funds—primarily from the State and Local Toxics Control Accounts and the Waste Reductions, Recycling and Litter Account—were redirected to the state General Fund. These funds are no longer available for toxic site cleanups and other environmental and public health projects throughout the state.

Fund Outlook

Eighty percent of Ecology's funding is from 42 dedicated environmental accounts and state bonds, 11 percent is from the state General Fund, and the final nine percent is from federal funding. These ratios are relatively consistent with the previous biennium but there are two major changes.

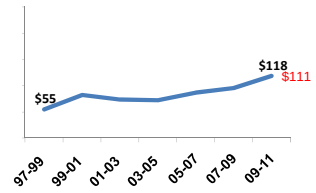
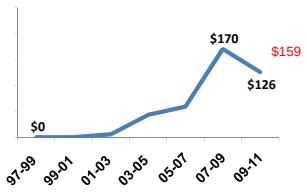
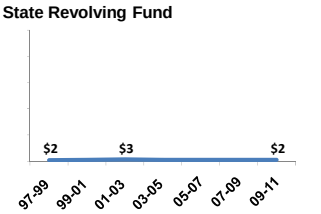
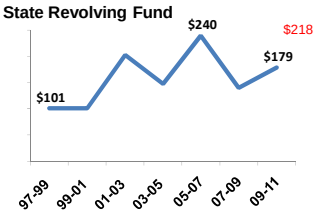
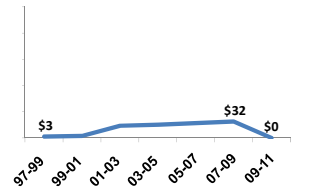
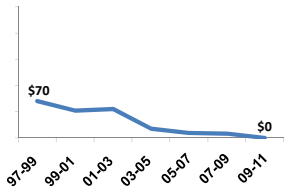
The Water Quality Account, which was five percent of the 2007-09 budget, was incorporated into the state General Fund in 2009. This offset, and to some extent masked, the actual reductions to the state

General Fund. When the state General Fund and Water Quality Account reductions were combined, they resulted in a total reduction of $16 million in what is now the state General Fund.

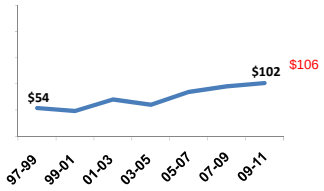
In 2007-09, the Local Toxics Control Account represented 11 percent of Ecology's total budget. To transfer funds from the Local Toxics Control Account to the state General Fund, the account was zeroed out in the 2009-11 budget and replaced by state bonds. After the 2010 supplemental session, a portion of the Local Toxics Control Account was restored, and the account represented nine percent of Ecology's total budget.

The following chart summarizes the trends for major funds from 1997-99 though the 2010 Supplemental Budget.

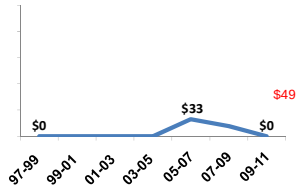
Appropriation trends for Ecology's major funds 1997 to 2011 (dollars in millions | 2010 supplemental data indicated in the far right side of the graphs)

Operating	Capital	
General Fund-State 	**State Building Construction Account** 	The Water Quality Account was incorporated into the state General Fund in 2007-09 making it appear that GF-S has grown. When taken in total – GF-S and WQA – there is a $16 million reduction in GF-S funding for 2009-11. The 2010 Supplemental Budget reduced GF-S by another $7.3 million primarily through a $5 million fund shift to STCA reducing the total from $118 m to $111 million. Additional reductions to GF-S are likely in 2011-13. State Building Construction Account (bonds) funds replaced State and Local Toxic funding for capital projects 2009-11. The 2010 Supplemental Budget added $33 million new SBCA funding bringing the 2009-11 total to $159 million.
State Revolving Fund 	**State Revolving Fund** 	The State Revolving Fund is managed in perpetuity as required by EPA. It is relatively stable and fluctuates based on federal capitalization grants and loan repayments. An additional $68 million (one time) of Recovery Act funding is reflected in the 2009-11 appropriation level. The 2010 Supplemental Budget added $37 million to the 2009-11 appropriations bringing the total to $218 million.
Water Quality Account 	**Water Quality Account** 	WQA revenues from tobacco declined over time and the fund became more dependent on state General Fund. In 2007-09 the legislature incorporated WQA into the state General Fund. State Building Construction Account (bonds) funding replaced Water Quality Account capital funding.

State Toxics Control Account



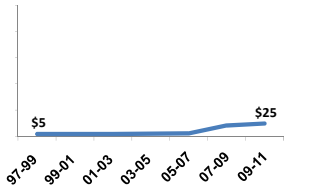
State Toxics Control Account



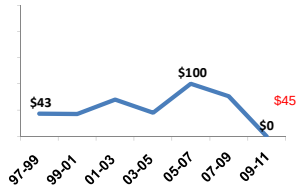
The State Toxics Control Account operating appropriations remained stable from 2007-09 to 2009-11. The 2010 Supplemental Budget added $4.9 million to bring the operating total to $106 million. STCA capital funds were replaced by SBCA (bonds) in the 2009-11 biennium and the fund balances transferred to the state General Fund. The 2010 Supplemental Budget added $49 million STCA funding for capital projects. A total of $35.1 million has been transferred to the state General Fund since 2007-09.

Operating | **Capital**

Local Toxics Control Account

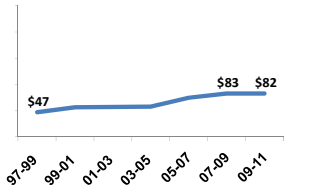


Local Toxics Control Account

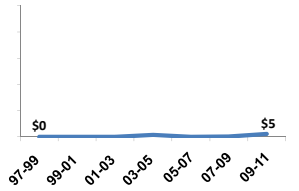


The Local Toxics Control Account operating appropriations remained stable from 2007-09 to 2009-11. The 2010 Supplemental Budget reduced the operating appropriations by $40,000. LTCA capital funds were replaced by SBCA (bonds) in the 2009-11 biennium and the fund balances transferred to the state General Fund. The 2010 Supplemental Budget added $45 million LTCA funding for capital projects. A total of $160.8 million has been transferred to the state General Fund since 2007-09.

General Fund-Federal

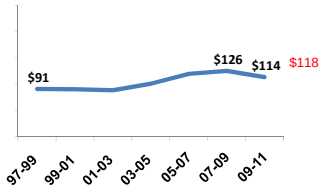


General Fund-Federal

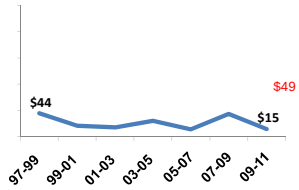


Federal appropriations remain flat and relatively stable. However, there are capacity issues for programs dependent on federal appropriations as workload and costs increase and appropriations stay flat. This is particularly true for the Air Quality Program, where changes in federal air quality standards and state climate change initiatives have increased workload without corresponding funding.

Other



Other



On the operating side, appropriations for other funds decreased, reflecting both declines in revenues in some funds and transfers to the state General Fund. The 2010 Supplemental Budget transferred another $2 million from Litter to GF-S (for a total of $6 million from Litter to GF-S in the 2009-11 biennium), but added $2.6 million appropriation authority in other operating accounts and $34 million in capital appropriations. The Oil Spill Prevention Account appears stable due to a transfer in 2009-11 of state General Fund to the account to cover a $6.3 million shortfall. 2010 supplemental increases are indicated in the right column.

Risks, Uncertainties and Opportunities

On the whole, Ecology's financial health is good. The dedicated environmental accounts have positive cash and fund balance forecasts through the end of the biennium. There are, however, significant risks and uncertainties in both the 2009-11 and 2011-13 biennia that must be addressed to ensure sustainable funding for core foundation activities and strategic priorities.

Oil Spill Prevention Account Shortfall

Funding from the Oil Spill Prevention Account is used to prevent and prepare for oil and hazardous material spills. The account is based on a $0.04 per barrel tax on the first possession of petroleum imported and consumed in the state. Revenues have declined over the past six years, resulting in an $8 million shortfall in the 2009-10 Oil Spill Prevention Account. Significant reductions to the program and a $6.3 million transfer of state General Funds shored up the account for one biennium. Additional revenue will be needed in 2011-13 to maintain the current (reduced) level of work and restore the account to 2007-

09 levels. The oil spill disaster in the Gulf of Mexico has renewed interest in support for the oil spill prevention program that may provide a pathway to securing a more sustainable funding base. In 2010, the account received a boost when the private sector took over the costs for the Neah Bay tug. This resulted in a $3.6 million annual savings for the Oil Spill Prevention Account and other dedicated accounts.

State General Fund for Natural Resource Agencies

The state General Fund shortfall impacted Ecology's budget in the 2009 and 2010 legislative sessions. Recovery appears to be slow, with additional shortfalls expected in the 2011-13 biennium. Ecology's programs that rely most on the state General Fund—Air Quality, Water Resources, Shorelands & Environmental Assistance, Environmental Assessment, and Administration—will continue to feel the economic impact.

Model Toxics Control Act

Both the State and Local Toxics Control Accounts receive money from a tax on the price of hazardous substances, including oil. In 2007-09, oil prices were at record highs, and revenue into the accounts grew significantly. With the economic recession, oil prices fell from their May 2008 record high of $147 per barrel, and revenue in the Model Toxics Control Account dropped by $90 million from June to November 2008. Since then, oil prices have rebounded to $70–80 per barrel, and the accounts are more stable.

Risks include the historic volatility of the accounts, unpredictable tax refunds, transfers to the state General Fund, and a lawsuit challenging the constitutionality of the hazardous substance tax. To minimize these risks, we continue to invest in one-time toxic cleanup and prevention projects that can be "scaled to size" as revenues fluctuate.

Federal Cuts to State Programs

Nine percent of Ecology's total budget is from federal funding. While federal funding has held steady or increased slightly over the past ten years, most of these increases have been for one-time projects. Funding for core foundation activities have been drastically reduced in the Water Quality, Air Quality, and Shorelands and Environmental Assistance programs. Given the federal debt, it is unlikely that federal funding will increase significantly for core foundation work.

Water Quality Permit Fee Account

The economic downturn and resulting slowdown in construction resulted in a $3.6 million shortfall in the Water Quality Permit Fee Account in 2007-09. A fiscal growth factor fee increase approved in the 2008 legislative session and reductions to the program have stabilized the account. We are working to restructure the fee program increase fees to more fully support the cost of the work and address subsidies among fee payers.

Facilities Capacity Assessment

Economic Recession Impacts and Current Outlook

Ecology has seen limited staffing reductions as a result of the national economic recession that began in 2008. These reductions were small enough and spread across the 16 facilities used by Ecology to conduct business that no facility changes were warranted. The three owned facilities and 13 leased facilities are adequate in size and location to serve current and projected business needs. If Ecology shrinks significantly, vacant space will be consolidated within each facility and made available for use by tenant agencies. If Ecology experiences another growth spurt, more field offices may be needed to provide space for staff in the right locations.

Over time, operations have shifted from headquarters to our regional and field offices to better serve local communities. Also, smaller teams of staff have been located in communities to bring our services closer to the people we work with. 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. So, Ecology's four Regional Offices are located in the major population centers of Spokane, Yakima, Lacey, and Bellevue. But, watershed work requires staff to be located in the watershed near the water sources being regulated; this caused us to locate small offices in Winthrop and Walla Walla.

Risks, Uncertainties and Opportunities

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

Our facilities goals are:

- Facilities 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 in safe locations to aid staff recruitment and retention.
- Green facilities 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 13-15 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 an improvement to provide adequate laboratory and storage space to efficiently support agency business.

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.

As stated above, we will seek out tenants if staffing levels decline much further. We currently have tenants in five of our facilities, including hosting the Multi-Agency Permitting Team.

Ecology is pursuing increases in some of the fees that fund some of the activities to reduce General Fund subsidies. If these happen, or additional funding is provided for oil spill prevention or stormwater control work, we may need to add field offices 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 at least 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 guides IT investment decisions. More recently, in April 2009, Ecology established its first full-time Chief Information Officer (CIO) to provide agency IT leadership and to represent us in the state IT Transformation.

Information Technology Strategies

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

- Data integration
  - Data architecture
  - Geographic Information Systems
  - Document management
- Connectivity and access
  - Common tools and services (includes leveraging state services)
  - Maturing the infrastructure (includes security)
  - Connecting the people (includes video conferencing)
  - Public access
- Efficiencies

Support for Ecology's Business Needs

In fiscal year 2011, Ecology's Information Technology Services Office (ITSO) will be working with agency programs on a number of significant projects, including:

- Data integration strategy.
- Groundwater data management.
- SharePoint 2007 – Expand use and leverage its capabilities; continue evaluation of document management capabilities.
- Photo and Image Management System (PIMS) – Expand use to all programs for photo management.
- Contracts and Grants Payables System re-imaging.
- Financial Reporting Migration (retiring ADDS, using Enterprise Reporting).
- South Puget Sound Dissolved Oxygen Study – Modeling Support.

- Server virtualization and consolidation (~120 servers to ~20 servers).
- Virtual desktop pilot.
- E-mail re-hosting – migration to Department of Information Services (DIS).
- E-mail vault implementation at DIS to support e-mail records retention.
- Workstation backup strategy.

Support for the State Information Technology Transformation

Historically, Ecology generally has been supportive of state enterprise IT initiatives and has participated in many of these initiatives. Most of these initiatives were optional, but Ecology found participation to be in the best interests of the agency and our customers. More recently, a more directed approach has emerged within the state.

The Governor's February 2009 Shared Services Directive (09-02) began the development and implementation of a shared services model for IT, fleet management, property management, and human resources. The Washington Department of Information Services (DIS) Director was named as the lead for IT, and DIS was directed to "focus on using common infrastructure and services – including consolidation of e-mail services and expansion of the statewide data center – to reduce costs and improve information security." In October 2009, a shared services model for IT was completed, and work groups were created by the DIS Customer Advisory Board to work on e-mail, server management, and desktop support. Ecology's CIO and other IT staff have been and continue to be actively engaged in this work.

In June 2010, a draft Executive Order (EO) on Information Technology Transformation was published by the Governor's Office for discussion within the IT community. This EO would further the IT Transformation, including state IT governance, shared services, and data center consolidation. Among other provisions, the draft EO includes the following:

- The DIS Director would be designated as the CIO for the state of Washington and would serve as the enterprise-wide lead executive for the state's IT transformation.
- The CIO would create an Office of the CIO to support an enterprise-wide approach.
- A subset of cabinet agencies would be represented in decision making through the Executive Steering Committee that was created to oversee data center consolidation and IT transformation.

Other more controversial provisions of the draft EO address the authority and control of the state CIO over agency IT assets, including staff, equipment, and funds. Work on the draft EO continues, and a final draft is expected to be reviewed with the Customer Advisory Board, IT Executive Steering Committee, and cabinet agencies in late August.

Risks, Uncertainties and Opportunities

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

Governance

The expected EO on IT Transformation will bring significant changes in IT governance. The extent and timing of these changes are unknown at this time, but they will surely affect IT investment decision-making for Ecology and others.

Implementing Shared Services

Ongoing development and implementation of shared services present substantial risks, uncertainties, and opportunities, including:

- Allocate substantial agency resources to enterprise shared services research, planning, and development. These resources will not be available for Ecology initiatives.
- Change management issues, including IT staff morale/productivity and potential disruption of services that might occur during transition to shared services.
- Opportunities on the "other side" – shared services offer the promise of lower costs and higher service levels. If the IT community can deliver on this promise, Ecology and our customers will benefit.
- Quality and timeliness of service delivery could impact customer relationships. Ecology staff are used to a high level of IT service. As shared services is implemented, competition for IT services from other agencies could result in a lower service level to Ecology staff.

Funding

A number of IT funding issues face Ecology and other agencies:

- Funding the initial costs of implementing shared services, e.g. the costs of consolidating and virtualizing servers to prepare for migration to the state Data Center.
- Further budget cuts are expected as part of the state's overall response to the major budget shortfalls that began last biennium and are projected to continue into 2011-13.
- Continuing pressure to deliver IT savings.
- Uncertainties about rates/fees for shared services and the resulting difficulty in budgeting for these services in the coming biennium.
- The perception of significant savings could result in IT funding cuts due to Engrossed Substitute House Bill (ESHB) 3178 (2010 legislative session) $30 million savings initiative. This could impact funding of much-needed initial investments for implementing shared services.

Capacity to Address Emerging Business Needs

Ecology's Information Technology Services Office (ITSO) has been working with agency leadership and programs to identify IT investments needed to support business initiatives. As of April 2010, ITSO and the Business Advisory Team had identified the following information systems support needs for agency roadmap activities in 2011-13.

- Natural Resources and General Reform
  - Geographic Information System Data Consolidation Effort (Department of Agriculture lead).
  - Data Standards (Monitoring Forum).
  - Data Exchange Protocol (Information Services Board – Enterprise Architecture Committee).
- Restore Puget Sound
  - Puget Sound Collaborative Environmental Data Exchange.
  - Map-based web interface for public view of environmental conditions (high-level environmental indicators).
  - Environmental Report Tracking System (ERTS) modernization.
  - Puget Sound Watershed Characterization.
- Reducing Toxic Threats
  - Children's Safe Products Act and Brake Friction Material (Copper Brake Pad) Manufacturers Products - Chemicals of Concern Reporting Database.
  - Mercury Lights Products Stewardship (Billing and Revenue Tracking System (BARTS) modification for fee billing and related database).
- Enhance Stormwater Management

- Automate Compliance Feedback to Permittees
- Water for Washington
  - Columbia River Information Tracking System (CRITS).
  - Adjudication System (Spokane).
- Facing Climate Change
  - Greenhouse gas reporting.
  - Washington State Climate Change Clearinghouse.
  - Washington State Agency Greenhouse Gas (GHG) Emission Inventory & Reporting.

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 is particularly challenging. The response of the state to the economic recession has included freezes on hiring, salary increases and recognition awards, as well as temporary layoffs and permanent layoffs. These circumstances have had a broad range of effects on the recruitment, training 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 had critical roles in a variety of key programs and projects
- Re-evaluating agency and program priorities to determine how to manage increasing workloads and new services and responsibilities with fewer employees.

Coupled with the changing demographic composition of the Ecology's workforce, managing compliance with a variety of complex state and federal employment laws, evolving labor relations and ensuring a safe work environment, Ecology is at a cross-road of transformation in workforce management.

Workforce Outlook

Personnel System Changes and Cultural Impacts

Since the implementation of the Personnel Systems Reform Act, Ecology's workforce experienced a number of changes that have affected internal administrative and business practices. Changes included the modernization of the state's personnel system, a new classification system that consolidated classifications, the certification of a wall-to-wall union bargaining unit and the attendant changes in labor relations, the increased emphasis on federal employment laws and regulations, and initiatives to streamline government operations and increase the efficient use of state resources and personnel.

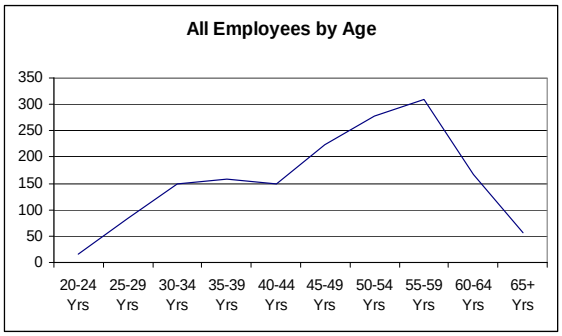
All of these changes have had significant impacts on employees and the management of the agency and, perhaps most importantly, the culture of Ecology. Impacts on traditional agency practices and relationships have been pervasive. Many of these changes will continue to evolve and are expected to produce additional impacts throughout the 2011-13 biennium.

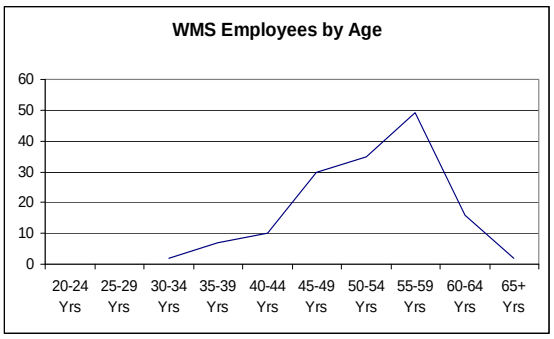
Aging Workforce

While the size of the Ecology's workforce has remained stable over the past five years (chart), the demographic composition of the employees has continued to age. The average age of Ecology's workforce is 48. The percent of employees who are over 40 years of age increased to 74% of the total Ecology workforce. The largest age group is 55 – 59 years, with 310 employees or 20% of Ecology's workforce. Washington Management Service employees have a significantly higher average age.

The number of retirement eligible employees in FY 2011 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 641 or 41% of the Ecology's workforce. Most of these employees are Ecology's most experienced and knowledgeable, many holding key positions in the agency.

Retirements have fluctuated over the past five years, with a high in FY 2005 of 3% and a low in FY 2009 of 1%, with a slight increase in FY 2010. However, since it is surmised that the rise of post-employment health care costs have held retirements in check, it is also expected that when the economy recovers, retirements will once again rise, which will likely coincide with the substantial increase in retirement eligibility in 2015.

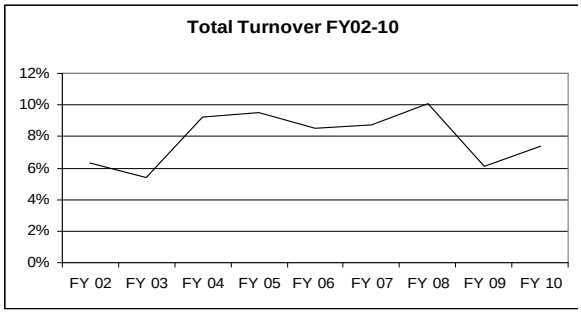


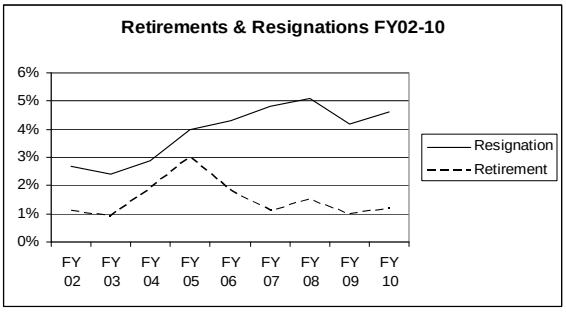


Job Market Competition

While the aging workforce has been a focus of concern as a factor in turnover and succession planning, the statistical reality is that far more employees resign, usually to take positions with other employers in both the public and private sectors that have more competitive salaries. Whereas between FY 2002 to FY 2005 the average rate of resignation was 3%, over the past five fiscal years, the average rate of resignations has been 4.6%, far higher than retirements. With a high of 5.1% in FY 2008 and a slight dip in FY 2009, the rate in FY 2010 was 4.6%, the same as the five year average.

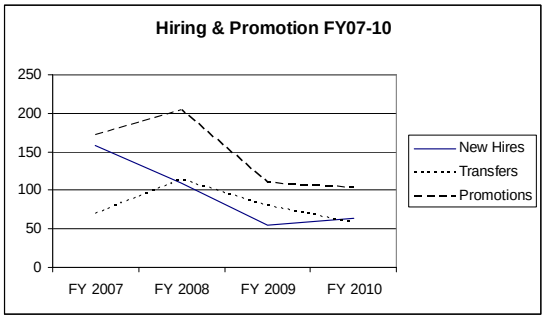
Despite the serious recession, there have been enough public and private employers who have maintained higher average salaries and positions to have a serious impact on Ecology's ability to retain experienced, highly qualified employees, many of whom we trained up. The job market salary survey, conducted by the Department of Personnel, and anecdotal examples, indicate that this will be a continuing challenge.

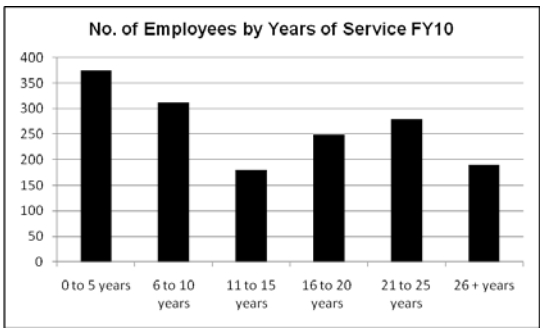




Investment in the Future

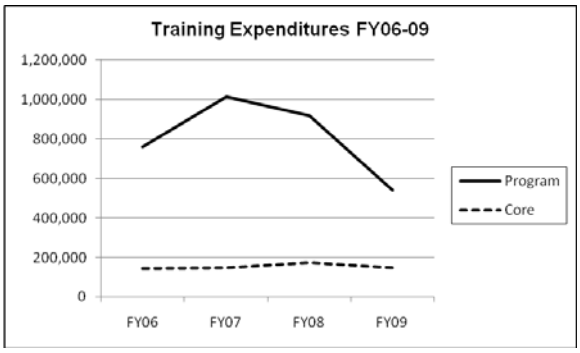
While the aging, experienced workforce retires or resigns to take better paying jobs with local government or the private sector, the number of newer, less experienced employees has also increased in Ecology. Although the protracted recession has generally increased the number of qualified applicants available to compete for Ecology jobs, the attendant budget reductions and hiring freezes has severely limited Ecology in replacing experienced employees and the salary freezes have made us 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 nevertheless has hired 255 new or transferred employees (16% of the total workforce) to replace experienced employees who retired or resigned.

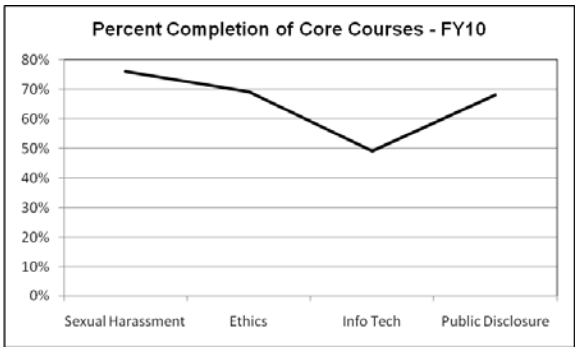




With the increase in the number of new, inexperienced employees, Ecology has had to make a significant investment in both formal and on-the-job training. An increase in on-the-job training means that lead employees and supervisors have less time to focus on performing their substantive duties and responsibilities. With the expected trend of increasing retirements, this obligation will continue to rise during 2011-13, with a cumulative loss of knowledge, experience and key business and stakeholder relationships.

With the budget reductions and out-of-state travel freezes, the amount of funds expended on training has continued to decline. Another continuing challenge is lower than expected completion rates for core required training courses, increasing the risk factors for Ecology in compliance with state and federal employment laws.





Diverse Workforce for a Stronger Ecology

Despite the overall stagnation of the economy and turnover, the diversity of Ecology has remained stable. 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. During the sustained recession, Ecology has been redesigning and organizing its diversity recruitment program and reorganizing and expanding its Diversity Team, to achieve and sustain its diversity goals.

Our Diversity Vision and Mission

Our vision is that Ecology's workforce and culture celebrate and reflect the diversity of Washington's ever-changing communities. Our diversity mission is to foster an internal culture that recognizes, values and is strengthened by the diversity of all employees; and to build a workforce that better reflects Washington's diverse communities..

Diversity Profile

	No.	Percent	Goal
Female	811	51%	42.80%
Persons with Disabilities	44	3%	6%
Vietnam Era Veterans	68	4%	7.70%
Disabled Veterans	11	1%	1.10%
Persons of Color	183	11%	14%
Persons Age 40 and older	1,184	74%	N/A
African American	27	2%	2%
Hispanic	41	3%	2.60%
Native American	26	2%	2.10%
Asian	89	6%	7.70%

Risk and Opportunities

Despite the expectation that the effects of the economic recession will continue through the 2011-13 biennium, the Department of Ecology must continue to prepare for the likelihood that the rate of retirements and resignations will increase while the work of the agency will remain as demanding and challenging as ever. Ecology will need to take strategic measures to ensure a smooth transition with the remaining workforce and the new staff that it hires. The agency must continue to implement plans to improve retention and to transition senior staff or risk losing its most experienced and knowledgeable staff at an unsustainable rate, potentially jeopardizing select operations and programs.

Our priorities in human resource management are the following:

Recruitment, Retention & Succession Management

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

- Develop long-term candidate source relationships with higher education institutions, professional organizations and on-line recruitment systems to improve the quality of recruitment candidate pools.

- Accelerate the agency's selection and hiring processes, with a competitive time-to-hire rate, using the new On-line Recruitment System (OLRS).
- Continue to implement an agency recruitment marketing program with intra- and inter-agency collaboration.
- Continue to 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.
- Develop and implement a long-term employee retention and succession management plan.
- Develop and implement improved processes, guidelines and tools that will help prepare our employees for promotional opportunities.

Diversity

Ecology is implementing the following strategies to increase the diversity of its workforce:

- Develop a new diversity program and work plan to expand and improve the recruitment and retention of diverse workforce populations within the agency.
- Expand internal programs and activities that encourage the long-term retention of diverse employees and expand the cultural awareness and competency of the agency's workforce.
- Increase the number and type of special diversity events, including guest speaker presentations and educational workshops.

Human Resources Risk Management

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

- Continue to update our risk management response plan for high priority sources of human resource management risk.
- Continue to identify and assess human resources risk management issues and develop and implement solutions.
- Implement and sustain human resources risk management best practices, including comprehensive supervisor and manager training.
- Work in collaboration with the Department of Personnel to address systemic risk management issues, such as classification and compensation.

Sustainability

Ecology has a Sustainability Plan 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:

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

For more information on Ecology's Sustainability Plan, please go to:
http://www.ecy.wa.gov/sustainability/index.html

Ecology's Air Quality Program smoke management specialist, Jay Carmony, takes humidity and wind speed observations as he monitors the plume of a U.S. Forest Service prescribed burn near Naches, September 2009.

Air Quality Program 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. In 2011, EPA will further strengthen its fine particle standard. When that happens, at least two, and as many as eight, new counties are at risk of violating the standard. In addition, EPA will tighten its ozone standard in fall 2010. The greater Puget Sound area will violate the new protective level for ozone. Clark and Spokane County areas could also be in violation.

EPA is in the process of reviewing the primary four criteria pollutant standard through 2010 and 2011. All are expected to become more stringent. Additional nonattainment areas in Washington for these pollutants (SO_2, NO_2, lead, and carbon monoxide) may occur.

Meeting federal standards is very important. It reduces the health impacts of air pollution and prevents the risk of financial and economic sanctions and 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 70.120, Motor Vehicle Emission Control
- RCW 70.235, Limiting Greenhouse Gas Emissions
- RCW 70.94, Clean Air Act
- 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.

Strategic Priorities

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. Ecology expects EPA will introduce new, tougher air quality standards for several pollutants, including lead, nitrogen dioxide, and ozone, in the near future. As those standards are toughened, we 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 technical analysis, planning, and strategy development work for Ecology.

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 2010, we completed efforts to install emission control equipment on existing diesel school buses and other publicly-owned diesel fleets. More than 8,300 engines have been retrofitted. Work is shifting to address the legacy fleet of private sector engines, especially in areas where lots of these large engines 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. Depending on the age and type of equipment, retrofits result in 30-100 percent reduction in particle emissions. To date, retrofits have resulted in reductions of more than 25 tons of toxic diesel soot each year, with significant health care and economic savings in Washington. 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, and 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.

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 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 is expected to be submitted to EPA for approval in fall 2010.

Responding to Climate Change

To make meaningful reductions in greenhouse gases, citizens and policy makers must know what activities emit those gases, and in what quantities. Ecology's Air Quality Program 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 the Air Quality Program 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.

The Air Quality Program provides expertise on emissions from vehicles and motor fuels. Emissions from the transportation sector are the largest single source of greenhouse gases in Washington. Staff in the program 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. Our staff are also working to develop recommendations for the Governor regarding adopting a low-carbon fuel standard for Washington (Executive Order 09-05). And staff will implement any changes required by federal clean car regulations for greenhouse gas emissions.

The program will work with the TransAlta coal-fired power station to negotiate an agreed order to achieve significant greenhouse gas emission reductions at that facility, and will implement any new federal climate regulations for major industrial source permittees.

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 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 against 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, designs and implements strategies to prevent violations, and develops and implements action plans in natural events such as wildfires and windblown dust.

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, 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 Environmental Protection Agency, 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.
- Strategies are evaluated to help prevent areas from violating federal air quality standards—Yakima and Clark Counties for fine particles; other communities for ozone.

Performance Measures

- Number of areas in Washington measuring air quality levels that are not in compliance with federal air quality standards.
- 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 air quality, the environment, and public health 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 Notice of Construction permit processing time (days).

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 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 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.
- 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—mostly in central and eastern Washington—and affects public health and quality of life. To address these continuing problems, 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; design and deliver

woodstove education programs. And, through technical assistance, research, and demonstration projects, we promote development and use of practical alternatives to burning.

Our goal by 2010 is to achieve air quality levels in Ecology's eastern and central Washington jurisdictions 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 ambient 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 ambient assessments and toxics risk models indicate the level and extent of airborne toxics pose significant health and environmental risks, including cancer, other serious health effects, and death. Ecology has identified 11 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 20 percent by 2010 using a 2005 baseline.
- Federal Diesel Emission Reduction Act and Recovery Act 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 equipment) retrofitted with pollution control equipment.
- Tons of diesel soot emissions produced statewide.
- Tons of diesel soot emissions produced in counties contiguous to Puget Sound.

Climate Change Mitigation and Adaptation

State law requires reductions in emissions of greenhouse gases, as well as efforts to prepare for and respond to climate changes that are already underway. To better understand the volume and sources of greenhouse gas emissions in the state, the Air Quality Program conducts a biennial emissions inventory and will adopt a rule and systems to begin mandatory greenhouse gas reporting.

Expected Results

To understand the volume and sources of greenhouse gas emissions in the state and develop recommendations for specific strategies to reduce greenhouse gas emissions.

- A statewide greenhouse gas emission inventory is completed, and operation of a greenhouse gas reporting program is underway.
- An emission reduction order with TransAlta that reduces its emissions by at least 50 percent is signed.
- Recommendations are made to the Governor about a Washington Low-Carbon Fuel Standard.

Performance Measure

- Tons of green house gas emissions produced statewide.

Compliance inspector Daylin Davidson confirms whether a Puget Sound area business is properly handling its hazardous waste. When hazardous waste is mismanaged it can contaminate soil and contribute to toxic stormwater runoff.

Hazardous Waste and Toxics Reduction

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

There are risks in using, storing, and disposing of hazardous chemicals. Some toxic chemicals pose an immediate health threat (cleaning products or yard chemicals), 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, bio-accumulative toxics (PBTs), and heavy metals.

When hazardous substances are no longer usable, they become hazardous wastes. When mismanaged, they get into water and soil where they can create hazards to human health and the environment. They may cause costly new toxic cleanup sites. Over 4,000 facilities and businesses produce 112 million pounds of hazardous waste each year in Washington (2008 data). Thousands of smaller, less-regulated businesses, along with millions of Washington households, create more hazardous waste. Reducing toxic threats is one of Ecology's priority initiatives.

Safe hazardous waste management is essential to protecting 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.

Reducing the use of toxic chemicals and ensuring safe management of hazardous waste are our two highest priorities. We recognize the current economic challenges for us all. Many businesses have had to cut positions that focused on environmental issues and need help more than ever. While our program has

had to cut several positions and streamline efforts on several projects, our focus remains on providing information that will help the public make informed choices about use of toxic chemicals.

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 70.102.020, Hazardous Substance Information Act
- RCW 70.105 (1976), Washington's Hazardous Waste Management Act
- RCW 70.105D (1989), State Hazardous Waste Clean Up (MTCA)
- RCW 70.95, Hazardous Waste Reduction Act
- RCW 70.95C, State Solid Waste Act
- RCW 70.95E, Hazardous Waste Fees
- WAC 173-303, Dangerous Waste Regulations (2000)
- WAC 173-305, Hazardous Waste Fees (1992)
- WAC 173-307, Pollution Prevention Plans (1991)

Constituents and Interested Parties

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

Strategic Priorities

State Waste Reduction Plan

In 2009, Ecology updated the 2004 *Beyond Waste Plan*—our state waste reduction plan. The plan envisions by 2035, we can transition to a society where wastes are viewed as inefficient and where most wastes and toxic substances have been eliminated. Ecology staff, local government officials, and many others agree that reducing the use of toxic substances and generation of wastes should be our focus. The goal is to transition from managing wastes, to eliminating the use of hazardous chemicals, while protecting the environment, human health, and the state's economic interests. The strategies to reduce chemical use and waste generation will also help improve the health of Puget Sound by 2020.

The HWTR Program focuses on three of the five *Beyond Waste Plan* initiatives:

- Eliminating industrial wastes through partnerships with industry sectors.
- Reducing hazardous wastes from small businesses and households.
- Tracking progress toward the *Beyond Waste* vision through performance measures and improved data tracking.

The 2009 plan update strengthened our focus on product stewardship and prevention, because their importance has increased over the last five years. The update now includes a section that more clearly defines the role of local governments. The plan is more closely aligned with Ecology's priorities on mitigating climate change, protecting Washington waters, and reducing toxic threats—because *Beyond Waste* is about more than just waste.

Reducing Risk through Business Visits

Face-to-face visits result in compliance rates of 90 percent or higher. Studies show that compliance rates drop after three years of no contact. Poor compliance equals higher risk to the environment from hazardous substances. Since 2008, the chance of finding a significant hazardous waste violation during an inspection is at an all-time high. Local government regulates smaller businesses to assure appropriate hazardous waste disposal, while Ecology regulates larger businesses.

Ecology funds and oversees a local source control program, where local government inspectors conduct technical assistance visits to small businesses, respond to issues covered by local ordinances, or refer them to Ecology for investigation or action as appropriate. The local source control program has conducted over 3,300 site visits since April 2008. Nearly half of those visits identified hazardous waste, stormwater, wastewater, and spill concerns. Ecology's ability to inspect larger businesses is more constrained, with resources to inspect businesses once every seven years on average.

Chemical Action Plans

Ecology is working with businesses and other entities to reduce and ultimately eliminate the generation of harmful PBTs and metals of concern. Ecology implements this chemical-by-chemical approach through developing and implementing Chemical Action Plans (CAPs). The state's Mercury CAP has resulted in over 14,000 pounds of mercury collected or kept out of the environment, through work with dental offices, schools, auto recyclers, hospitals and others. Mercury was contained from key products such as batteries, laboratory mercury, auto switches, utility switches, thermometers, thermostats, and fluorescent bulbs. CAPs have also been completed to reduce lead and flame-retardants in products and the environment.

Chemicals Policy Reform

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

To reduce toxic threats, we need to identify safer alternatives for the most hazardous chemicals. This will help businesses, government, and citizens make better choices on what to use and buy. Ecology is working to (1) develop an approved methodology that will help to assess "safer alternatives" to help businesses reduce the amount of toxic chemicals they use; (2) identify less toxic products for state purchases; and (3) provide information so citizens can make informed choices related to consumer products.

A number of Ecology projects to support reducing toxic threats are underway, including:

- The Interstate Chemicals Clearinghouse (IC2) is designed to facilitate states' collaboration on chemical data and information sharing, and conduct safer chemical alternative assessments.
- A multi-state effort to reform federal chemical management law (the 1976 Toxic Substances Control Act), including developing states principles on national chemicals policy reform, maintain states' rights to manage chemicals of concern, and seek federal grant funding to build states' chemical capacity.
- Green chemistry programs that help create safer chemicals and products through research and development, and curriculum development for K-12 and higher education.
- The Toxics in Packaging Clearinghouse, which focuses on regulating toxic metals in packaging. Ecology is working with other states to monitor compliance of these substances to ensure they do not end up in consumer products packaging.

Reducing Business Wastes through Technical Assistance

Waste is inefficient and means lost profit. If industries were better able to design their processes and products to not pollute right from the start, there would be fewer regulatory hurdles and less hazardous waste for government to regulate. Fewer costs for industry, less government regulation, improved worker safety, and a better environment is a winning combination.

The good news is that hundreds of businesses in Washington have saved money and increased their competitive advantage through reducing their use of toxic chemicals. In the last ten years, Ecology has teamed with 30 Washington businesses to re-design production processes, resulting in 30 million dollars of potential cost savings, reduction of toxic waste by over 200,000 pounds, and decreased water usage of 200 million gallons.

Over the past 17 years, businesses that track their waste generation through pollution prevention planning have reduced their waste by more than 50 percent. 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 to specially designed hazardous waste treatment, storage, and disposal (TSD) facilities. Permit renewals for the state's three commercial TSD facilities are currently underway. Ecology also oversees closure and needed corrective action at these facilities.

TSD facilities, mostly located near Puget Sound, are contaminated and require some form of cleanup. Cleanups are proceeding at 34 priority sites because of their significance as designated by the EPA. Ecology expects to have these 34 cleanups finished or in maintenance mode by 2020.

Human exposures are under control at 92 percent, while contaminated groundwater is under control at 77 percent of our facilities. This exceeds EPA's national goals for 2011 of 65 and 55 percent, respectively. While expensive, most cleanup costs are recoverable from property owners. Once clean, these properties provide opportunities for habitat restoration, economic development, and public recreation.

Activities, Results & Performance Measures

Improve Community Access to Hazardous Substance and Waste Information

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, local governments, citizens, and decision makers.

- “Chemicals in Washington” on-line report is developed and distributed annually.
- Information requests from citizens and businesses are responded to by the Toxic Free Tips hotline and e-mail.
- "Shoptalk" newsletter transitions to electronic distribution.
- Business publications are created or updated annually, posted to the website, and available for electronic distribution.
- Hazardous waste reports from businesses are collected and analyzed yearly.

Performance Measure

- Number of visits to toxics-related websites.

Increase Compliance and Act on Environmental Threats from Hazardous Waste

Ecology conducts yearly formal compliance enforcement inspections at large and medium quantity generators and TSDs 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

Facility compliance in managing hazardous wastes is improved to protect public health and the environment.

- Compliance inspections are conducted annually.
- Complaints regarding hazardous wastes or substances are responded to.
- More facilities, including treatment, storage, and disposal facilities, achieve and stay in compliance with regulatory requirements.

Performance Measures

- Number of significant environmental threats* resolved.
- Chance of finding a significant environmental threat during a compliance inspection.
  **Note: Significant environmental threats include major hazardous waste violations (hazardous materials spills, illegal disposal, failure to designate hazardous waste, and poor container management), as well as stormwater violations per RCW 90.48.*

Increase Safe Hazardous Waste Management through Technical Assistance

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. 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.

- Toxics-related technical assistance visits are conducted each year, helping businesses determine how to safely manage their hazardous wastes and reduce the use of toxic chemicals.
- Businesses receive visits from local government staff to explain hazardous waste requirements.

Performance Measures

- Number of toxics-related technical assistance visits.
- Number of local source control technical assistance visits.

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 15 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 27 high-priority corrective action cleanup sites right now.

Expected Results

Facilities that treat, store, or dispose of hazardous wastes are constructed and operated properly to prevent soil, water, or air contamination.

- Protective permits for facilities that treat, store, or dispose of hazardous wastes are issued in a timely manner.

- Four percent annual increase in the overall cleanup at 39 selected TSD facilities. Proper financial assurance requirements are in place at used oil processors and recyclers to fund potential future cleanups at abandoned facilities.

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 275 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. Reducing toxics in products and the initial generation of hazardous waste minimizes disposal costs, reduces the need for cleanup, minimizes public exposure, and saves money.

Expected Results

Hazardous waste generation is reduced by two percent each year (approximately five million pounds), resulting in cleanup and disposal cost savings for businesses, reduced public exposure, and fewer cleanups.

- Reduce hazardous waste generation by two percent each year.
- Establish a statewide toxics-use reduction goal with annual targets.
- Work with businesses to reduce energy and toxics metal use.
- Provide assistance to state agencies to reduce energy use three percent per year (in support of new greenhouse gas law).
- Provide support for implementing the Safe Children's Product Act and Lead Chemical Action Plan, and the polycyclic aromatic hydrocarbons (PAH) CAP development.
- Develop a clear system for pollution prevention planners to report their use of toxic chemicals.
- Track the number of pollution prevention suggestions implemented by clients.

Performance Measures

- Annual pounds of hazardous waste generated (in millions).
- Pounds of mercury collected and/or captured.

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 overtime will lower the risks to people and the environment. To make significant progress toward achieving this goal requires several strategies:

- identifying chemicals of concern in consumer products and strengthen 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; and
- improving education, outreach and communication.

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

Expected Results

Reducing toxic chemicals in products overtime will lower risks to people and the environment.

- Completed rule making and development of a list of chemicals of high concern for children's products.
- Developed a mechanism for manufacturer reporting.
- Provide support to implement the Children's Safe Product Act and lead chemical action plan.
- Reformed chemical policy at the state and federal levels.
- Developed protocols for identifying safer alternatives to toxic chemicals of concern.
- Conducted a pilot with Washington businesses to identify safer alternatives for up to five chemicals of concern.
- Improved state government purchases through environmentally preferred purchasing.

Performance Measure

- Annual pounds of hazardous materials reduced.

Gary Bleeker (left) and Canming Xiao (right) discuss operations at the Kittitas County Compost Facility with Patti Johnson (center), Kittitas County Solid Waste Director. The facility was built using Coordinated Prevention Grant funds to provide a recycling alternative to burning or landfilling yardwaste.

Waste 2 Resources

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

As Washington's population grows, so does the amount of waste it produces. What people don't recycle, compost, or reuse, they throw away. In the past, some of the largest toxic waste cleanup sites in Washington were former solid waste landfills that failed to contain the hazardous materials people had dumped there. Ecology works to minimize contamination to the state's groundwater, surface water, and air that result from improper waste disposal.

Despite success in recycling, composting, reusing, and reducing wastes, our reliance on raw material use is increasing every year. Growing consumption of earth resources threatens the environment's natural ability to regenerate oxygen, such as the functions provided by forests. In addition, certain materials used in new consumer products have limited availability. Because wasted materials have significant impacts on climate, human health, the environment, and the economy, Ecology is leading the transition to more sustainable systems by implementing our *Beyond Waste Plan*. We are investing in a closed-loop materials management cycle where today's waste becomes tomorrow's "raw material" feedstock.

Reducing the threats caused by historical and ongoing releases of toxic chemicals is the rationale behind many of Ecology's successful regulatory programs. But we are finding that cleaning up or managing these releases is not enough. These approaches are expensive and usually leave some level of contamination behind. New research is increasingly finding that very low levels of some types of toxic chemicals can cause serious harm. Reducing toxic threats by preventing the releases in the first place is the smartest, cheapest, and healthiest approach. Increasing Ecology's investment in prevention strategies is the focus of our reducing toxic threats priority initiative and is a fundamental principle of the *Beyond Waste Plan*.

This initiative, building on work already being done across the agency, is aimed at fostering the development of prevention approaches to avoid exposures to toxic chemicals and future costs that come when toxic chemicals find their way into the environment. Two focus areas have been identified: preventing use of toxic chemicals in consumer products and preventing toxics from entering Puget Sound.

As we move toward the goals of the *Beyond Waste Plan*, reducing the amount and toxicity of waste, there are still wastes that need to be managed properly. Improper disposal practices of the past have resulted in today's cleanup sites. Ecology provides technical hydrogeologic and engineering assistance to local health jurisdictions lacking this technical expertise. This assistance includes reviews of landfill cover design and operation issues, like landfill liners, leachate collection systems, and groundwater sampling. This protects ground and surface water and the air.

Ecology staff review all permits issued by the local health jurisdiction. In the future, as there are fewer disposal facilities in operation, we will see an increase in technical assistance provided to local health jurisdictions to ensure proper management of wastes at other facilities, like transfer stations, recycling facilities, moderate risk waste collection facilities, and compost facilities.

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

Authorizing Laws

- RCW 49.70 Worker and Community Right-to- Know Act
- 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 70.93, 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 90.48, Water Pollution Control Act
- RCW 90.52, Pollution Disclosure Act

Constituents/Interested Parties

- Federal, state, and local governments.
- Environmental organizations.
- Businesses.
- Citizens.

Strategic Priorities

New Program Name – Waste 2 Resources Program

For years, the Solid Waste and Financial Assistance Program name has not accurately reflected the varied work and mission of the program. A new name was needed after the rollout of the *Beyond Waste Plan* and incorporation of the Industrial Section. Waste 2 Resources was chosen because:

- "Waste 2 Resources" implies the program covers everything from managing solid wastes to developing new resources. It includes our financial assistance, technical assistance, and regulatory resources.
- The name reflects our *Beyond Waste* initiative, including Green Building, Organics, and Moderate Risk Waste, which encourages using recycled and reused materials previously viewed as wastes. At the same time, we focus on turning those wastes into resources such as energy conservation, organic nutrients in lieu of fertilizers, and green energy, through new technologies.
- To derive resources from wastes, it is best these waste materials be toxics-free and PBT-free. This reflects the work of our Reducing Toxic Threats Section.
- Unlike the old program name, we believe Waste 2 Resources also reflects work the Industrial Section does through the Footprint Project and numerous mills that take used cardboard, hog fuel, and commingled recyclables.

Moving Beyond Waste

Over the years, Washington's government, businesses, and citizens have put considerable effort into making positive changes in waste management practices. Yet problems remain. We still throw away millions of dollars worth of recyclables every year. Toxic substances remain prevalent in our environment.

Preventing waste and the use of toxic substances is the smartest, cheapest, and healthiest approach to waste management. The state's solid and hazardous waste management plan, *Beyond Waste*, calls for eliminating most wastes and toxic substance in 30 years. Reducing wastes and toxics will lessen environmental and health risks and lead to economic, environmental, and social vitality. The purpose of the plan is to set direction for waste management in Washington State. It also helps address other problems, including mitigating climate change and protecting Washington waters.

A key area of focus for moving beyond waste is producer responsibility and encouraging the design and use of less wasteful and less toxic products and services. Promoting state and local government's purchase of environmentally preferred products will help increase market demand for less harmful products. The first five years of the plan saw many achievements. The plan was updated in 2009, and we are now working on the next five years, including many of the issues listed below.

Preventing and Recycling Waste

Key to the *Beyond Waste* vision is waste prevention and diversion from landfill disposal (or recycling). These are essential strategies for reducing greenhouse gas emissions and conserving energy. Products that enter the waste stream have energy impacts and associated greenhouse gas emissions at each stage of the life cycle—extraction, manufacturing, and disposal.

Conserving resources through recycling is key to a sustainable economy and environment. The recycling rate in Washington State is at the highest level ever. At the same time, total waste generation, particularly waste disposal, is also at an all time high. When products and materials are thrown away, they have lost their value within the economy. Most products become waste within six weeks of purchase. Ecology is working to improve recycling and reuse of materials in those products to a higher and better use than disposal.

Decomposing waste in a landfill produces methane, a greenhouse gas more potent than carbon dioxide. Waste prevention and recycling reduce the amount of waste sent to landfills, lowering the greenhouse gases emitted during decomposition. Also, when transporting waste to a landfill, greenhouse gases are emitted through the combustion of fossil fuels. Implementing actions of the *Beyond Waste Plan* will help reduce those greenhouse gases impacting climate change. *Beyond Waste* is now part of the state climate change implementation strategy.

As part of the waste prevention and reduction strategy, the *Beyond Waste Plan's* organic initiative reduces impacts on climate change through carbon storage and reduced methane emissions. Carbon storage increases when woody materials are recycled into new products rather than burned. Composting is an effective method of adding organic materials to soil, which increases carbon storage in the ground. In this way, compost becomes a beneficial product for soil improvement. Rather than landfilling organics, where they decay without oxygen and release methane (a powerful greenhouse gas), it is better to turn organic materials into useful products like compost, mulch, or biofuels.

Anaerobic digestion is also a proven technology that meets the goal of closed-loop recycling and reuse of organic materials. Anaerobic digestion converts organic matter to biogas in the absence of oxygen, with nutrient rich fiber and liquid as by-products.

Another key area for waste prevention and recycling is the *Beyond Waste Plan*'s green building initiative. The long-term goal of the green building initiative is for sustainable building to become standard building practice in Washington. Green buildings create healthier and more durable commercial buildings and homes, which saves significant amounts of energy and water, uses less toxic products, encourages salvage and reuse of building materials, and dramatically reduces construction and demolition waste.

Green buildings are more energy-efficient than conventional buildings, which helps mitigate climate change. According to the U.S. Green Building Council, buildings account for 72 percent of electricity use and 39 percent of energy use, and are responsible for 38 percent of carbon dioxide emissions in the U.S. each year.

Through these varied efforts of *Beyond Waste*, Washington's measured diversion efforts for 2007 reduced greenhouse gas emissions by about three million tons or over 1,000 pounds per person in Washington

State. This is similar to removing 2.5 million passenger cars from the roadway each year—over half of the passenger cars in Washington.

The 7.3 million tons of material diverted from disposal in Washington in 2007 saved over 133 trillion BTUs of energy. This is equal to about half of all energy used in homes in the state annually or one million gallons of gasoline.

Reducing Toxic Threats

Persistent bioaccumulative toxics (PBTs) are toxic chemicals that build up in the food chain and last a long time. Because so many PBTs exist in the environment and products, a significant amount of waste management and cleanup work is still necessary.

To avoid management costs in the future, we will need to increasingly invest in strategies that can successfully prevent these problems from occurring in the first place. Ecology completed a PBT rule in January 2006 that lays out a path to reduce health impacts of PBTs on our citizens. Ecology is working with other states and local governments to implement programs that can effectively reduce threats posed by PBTs in products and the environment.

With resources at a premium, it will be increasingly important to keep expenses low and to build on positive results achieved by others. Ecology is working with several other states to develop ways to share data, influence federal policy reform, and establish a more standardized approach to identifying safer alternatives for toxic chemicals still being used.

In the face of these challenges, our efforts to reduce toxic threats focus on five key policy areas:

- Protecting the most vulnerable human and environmental populations, especially children.
- Expanding producer responsibility to improve product safety.
- Strengthening our ability to gather data on the presence of chemicals in products and the environment.
- Continuing to implement the PBT strategy.
- Expanding incentives and regulations to spur development of safer alternatives to toxic chemicals and reduce their use.

Funding Local Solid Waste Management Programs

Along with the state, local governments are experiencing budget restrictions and staffing reductions in all aspects of their programs, including solid waste management. This is making it difficult to continue some existing programs and especially difficult to take on new programs, many of which would help move the state forward to the *Beyond Waste* goals.

The *Beyond Waste Plan* focuses on preventing generation of solid and hazardous wastes. Local governments are currently dependent on tip fees tied to the amount of disposed waste (the more waste, the more money) to fund many of their solid waste programs. Funding is used for everything from infrastructure development to waste reduction and recycling programs.

We need to find alternate funding mechanisms to fund the solid waste system, including prevention programs that will help move local programs beyond waste. Ecology, along with the State Solid Waste

Advisory Committee, is evaluating options for solid waste management financing for both current and future needs.

Ecology currently provides state grant funds through the Coordinated Prevention Grant (CPG) Program to help local governments manage a broad range of solid waste management programs. Funds for the 2009-11 biennium were reduced from what is normally used by the local governments for their programs. Funds were also moved from the Local Toxics Account to the State Building Construction Account, requiring the sale of bonds. This requires closer tracking of funds spent on a quarterly basis. Detailed spending plans are now required from the recipients, resulting in additional work for them, as well as Ecology. Additional administrative work takes staff time away from actual project implementation.

Because of the uncertainty of funding for the full two-year grant cycle, which continues into the 2011-13 biennium, local governments are concerned about the possible loss of funding and may not pursue some of their programs. With reduced resources at the local level, some counties are having difficulty obtaining funds for their required 25 percent match and cannot pursue the grant funding needed for their programs.

Preventing and Cleaning Up Litter

Litter Prevention campaigns in the past have resulted in people throwing out less litter. However, over six million pounds of litter are still picked up each year in Washington by Ecology's Youth Corps, other state agencies, and local governments through Community Litter Cleanup contracts.

Reduced funding in the 2009-11 biennium resulted in suspension of the prevention campaign. Reduced funds will also mean fewer crews on the roads and fewer miles covered for litter pickup. Expected results will be dirtier and potentially more dangerous roads.

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, reusing organic materials, and promoting environmentally preferred purchasing. 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.

- Technical assistance is provided to local governments that operate recycling programs.
- Barriers to construction material reuse are identified.
- Regulations are developed to promote reuse of organic materials.
- State and local governments are provided advice on how to promote environmentally preferred purchasing.

Performance Measures

- Millions of tons of solid waste generated annually in Washington.
- Millions of tons of materials reused or recycled annually.
- Percent market share of green building projects in Washington.
- Tons of organics recycled and diverted from landfills.
- 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.

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 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 will be managed in environmentally compliant facilities.

- Decreased amount of wastes disposed of at waste disposal facilities.
- Technical assistance is provided to jurisdictional health departments to ensure facility compliance with environmental regulations.

Performance Measures

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

Prevent and Pick Up Litter

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

Expected Results

Litter prevention and pick-up results in cleaner roads and employs youth.

- 4,750 tons of litter is picked up with local partners.
- 450 youth are employed in litter pick-up.
- 25,000 litter hotline calls are responded to.

- Litter citations by the State Patrol are decreased by five percent.
- Litter survey is suspended.
- $2.6 million in grants is provided to local governments to clean up litter and illegal dumps.
- Litter is picked up on over 55,000 miles of roads.

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

Funding grants to local governments and non-profits are provided and managed through Coordination Prevention Grants, Remedial Action Grants, and Public Participation Grants, leveraging local government resources.

- Technical assistance on landfill regulations and moderate risk waste is provided through more than 500 agreements with local governments and non-profits.
- Moderate risk waste is collected each biennium for proper recycling or disposal at moderate risk waste collection facilities funded through Coordinated Prevention Grants.
- Grant funds are provided to local jurisdictional health departments are managed to ensure that solid waste facilities statewide comply with regulatory standards.
- Funding for toxic sites and drinking water system cleanup is provided and managed.
- Citizens have access and information related to cleanup of contaminated sites.

Performance Measures

- Millions of pounds of household and small quantity generator hazardous wastes that are recycled or properly disposed.
- Millions of tons of solid waste generated annually in Washington.
- Millions of tons of materials reused or recycled annually.
- Tons of organics recycled and diverted from landfills.

- Pounds of solid waste generated per dollar (State GDP, gross domestic product).
- Dollar value of recyclables disposed.

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.

- Assurance that at least 90 percent of permits are up to date at all times.
- Plant permits comply with federal standards to drive emissions down over time.

Performance Measure

- Percent of industrial section permits that meet timeliness goals.

Reduce Persistent Bioaccumulative Toxics in the Environment

Persistent, bio-accumulative toxics (PBTs) are a particular group of chemicals that can significantly affect the health of humans, fish, and wildlife. Ecology developed, and the Legislature funded in the 2001-03 biennium, 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 through the development of chemical action plans.

- Strategies are developed and implemented to reduce and eliminate these harmful chemicals.
- Affected stakeholders are involved in the process to implement Chemical Action Plans.
- Data is collected to support Chemical Action Plans.

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.

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 overtime will lower the risks to people and the environment. To make significant progress toward achieving this goal requires several strategies; identifying chemicals of

concern in consumer products and strengthen the ability to gather data on the presence of these chemicals in products and the environment; improve tools and authorities to promote safer alternatives to identified chemicals; promote green chemistry; and, improve education, outreach and communication. Reducing toxic chemical threats is the smartest, cheapest and healthiest approach to protecting people and the environment.

Expected Results

Reducing toxic chemicals in products overtime will lower risks to people and the environment.

- 36 million pounds of covered electronics are collected through the E-Cycle Program.
- Rule making and development of a list of chemicals of high concern for children's products is completed and a mechanism for manufacturer reporting is developed.
- Support is provided to implement the Children's Safe Product Act and lead chemical action plan.
- Protocols are developed for identifying safer alternatives to toxic chemicals of concern.
- State government purchases are improved through environmentally preferred purchasing.

Performance Measures

- Tons of electronics with toxic chemicals collected for recycling.
- Millions of pounds of household and small quantity generator hazardous wastes recycled or properly disposed.

Dredging in the Duwamish River with the West Seattle Bridge in the background.

Toxics Cleanup

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 11,667 toxics-contaminated sites since the mid-1980s. Over 5,500 of these sites resulted from underground storage tanks leaking contents into the environment and contaminating the soil or groundwater. Of the 11,667 contaminated sites, 57 percent have been reported cleaned up or require no further cleanup action and 26 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 toxic chemicals or substances 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.

Strategic Priorities

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 cleanups, and are bringing stronger restoration plans into cleanup efforts. The Toxics Cleanup Program 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 the 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 looking at our priority structure for publicly-funded cleanups in the Puget Sound area to ensure funding goes to those activities that support the Action Agenda.

Managing Capital

The challenge for the Toxics Cleanup Program this biennium is maintaining site cleanup momentum. The funding for local government cleanup grants has dropped significantly—to nearly one-third of the 2007-09 biennium level. In the same way, funding for orphaned, abandoned, Puget Sound, and area-wide contaminated sites has also dropped significantly.

The overall reduction to the Capital Budget has limited the capacity of the program to take on additional cleanup work. We are closely managing capital funding re-appropriations to maximize the use of all fund sources to ensure cleanups already begun last biennium can continue into the next biennium.

Voluntary Cleanup Program Use Continues to Grow

The Voluntary Cleanup Program helps site owners voluntarily clean up their contaminated sites. Even though the economy has slowed, the number of voluntary cleanups continues to hold steady. 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.

Real estate disclosure laws have contributed to the increase in property owners that want to participate in voluntarily cleaning up their site. The interest in the Voluntary Cleanup Program continues to create a workload challenge for the Toxics Cleanup Program. We have stepped up by actively working to adapt to the continued and growing number of sites shifting to voluntary cleanups.

Overall, voluntary cleanups are being reported and cleaned up at a significantly faster rate than non-voluntary sites. Voluntary cleanups are generally less complex sites, and can involve multiple properties.

Rule Revisions are Underway

Every five years, we review the MTCA cleanup rule to make sure cleanup standards stay current with changes in science. We also use this opportunity to review the entire rule. We are well into the process of stakeholder engagement and dialogue. This feedback will be useful as we look at state priorities and agency resources, and work on the rule. The time frame for updating the rule will depend to some extent on the comments we receive. Typically, the rule revision process takes 18 months to two years. We are eight months into the formal rule revision process.

In addition to updating the MTCA rule, we are also making broad revisions to the Underground Storage Tank rule, and providing more harmonization between the MTCA rule and the Sediment Management Standards. In the near future, we intend to look at the Remedial Action Grant rule for some limited revisions.

Implementing the Asarco Bankruptcy Settlement

Large areas of western Washington are contaminated with low-to-moderate levels of arsenic and lead from the Asarco smelters in the Everett and Tacoma areas. The state of Washington has cleanups at three Asarco-owned sites—the two smelters and the B&L Woodwaste site. Contamination from the smelters has also included homes in the smelter area. The state is paying for cleanups at these homes and for some of the cleanup costs at these three sites. Asarco has also paid for some site cleanup costs.

Asarco filed for Chapter 11 bankruptcy, the largest environmental bankruptcy ever filed in the U.S. Washington has been able to reach settlements for some cleanup costs and for some natural resource damage costs.

In this next biennium, the Toxics Cleanup Program will continue working with daycares and schools in western Washington. If the Asarco settlement is released to the State, Ecology is proposing cleanup work associated with the operations of the Asarco smelters in Tacoma and Everett, along with mining operations in northwest and eastern Washington.

In the Tacoma Smelter Plume area, we are identifying the next "high" zone (100 ppm arsenic) and developing a sampling sequence for daycares and schools, homes, parks, and camps. Broad education campaigns will continue for soil safety measures, as well as specific soil safety action plans for individual schools and daycares.

In the Everett area, sampling and cleanups will continue in the residential areas. Sampling will begin and be completed in the next biennium in the mining areas.

Lake Roosevelt/Upper Columbia River

Lake Roosevelt, the reservoir created by the construction of Grand Coulee Dam, is the largest reservoir, by volume, in the state of Washington. The reservoir extends approximately 150 miles along the Columbia River reaching upstream almost to the Canadian border. Metals such as zinc, cadmium, lead, copper, and mercury are found in sediments and beaches at elevated concentrations. Studies also show elevated concentrations of metals and other chemicals in fish. The primary source of contamination is from the Teck Cominco lead-zinc smelting complex in Trail, British Columbia.

In 2003, the U.S. Environmental Protection Agency (EPA) issued a unilateral administrative order to Teck Cominco requiring the company to study the extent of contamination in the reservoir and river between Grand Coulee Dam and the Canadian border. Teck Cominco did not comply. The Confederated Tribes of the Colville Reservation filed a citizens' suit, later joined by the state of Washington, to compel them to follow the order and comply with federal laws. In 2006, EPA and Teck Cominco entered into a settlement contract in which Teck Cominco agreed to complete a remedial investigation and feasibility study. Ecology, along with the Confederated Tribes of the Colville Reservation, the Spokane Tribe of Indians, and the United States Department of Interior, are presently providing oversight assistance to EPA. This EPA-directed investigation is independent of the ongoing litigation in federal court.

Ecology continues to advance its joint-litigation with the Confederated Tribes of the Colville Reservation to demonstrate Teck liability at the Upper Columbia River site. The trial is set for June 2011. Teck smelter-generated hazardous substances continue to be present and transported, polluting the Upper Columbia River site. Affirming Teck's liability will establish the foundation for properly achieving the cleanup and natural resource restoration of the Upper Columbia River.

The State, the Tribes, and the Department of the Interior have also formed a Natural Resource Trustee Council for the Upper Columbia River and Lake Roosevelt Watershed. The council has prepared a draft preliminary assessment screen. The preliminary assessment screen concludes further investigation is justified. The council is preparing to develop a work plan for injury assessment.

Also, in 2010, under an agreement with Ecology, Teck will conduct an interim action to remove slag from a beach area on the Upper Columbia River known as Black Sand Beach. Approximately 5,000 cubic yards of slag will be removed and transported for recycling and reuse to Teck's Trail smelter facility. Teck has agreed to remove and recycle the slag to avoid continued erosion and movement of the material into the river.

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.
- Number of Puget Sound contaminated sites where cleanup has begun (cumulative).
- Percent of the Tacoma Smelter Plume service area schools with completed soil safety plans and/or cleaned up.
- Percent of childcare facilities in the Tacoma Smelter Plume service area requiring action that have soil safety plans completed.
- Percent of eastern Washington schools cleaned up.
- Estimated sediment acreage evaluated with cleanup actions in process.
- Estimated sediment acreage evaluated with cleanup actions completed.
- Estimated sediment acreage evaluated for interim/emergency 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 the agency.
- Independent with some agency assistance or review.
- Agency oversight under a signed legal agreement (an agreed order or consent decree).

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

Ecology's Noe'l Smith-Jackson (left) collecting confirmatory soil samples at a Hanford cleanup site with Toni Welch-Koelling, a sampling subcontractor to Washington Closure Hanford.

Nuclear Waste

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 on 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 for the program include:

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

Strategic Priorities

Hanford Cleanup Maintained by ARRA Funding

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. American Reinvestment and Recovery Act (ARRA) funds have maintained progress in some areas of Hanford cleanup, notably removing one million tons of contaminated soil and debris from the Columbia River corridor each year. Expanded capacity to remove and treat contaminated groundwater has also protected the river.

The state and USDOE tentatively settled a lawsuit in August 2009 establishing new milestones to construct the tank waste treatment plant, and remove and treat 55 million gallons of hazardous radioactive liquids from underground storage tanks. Legally assured federal funding of the new milestones supports progress on Hanford's greatest environmental threat.

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 over 50 percent complete. 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 cleanups 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 the 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 proposed tentative settlement of the tank waste lawsuit would extend 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.

The USDOE has petitioned the Nuclear Regulatory Commission to withdraw its license application with prejudice for the deep geologic repository for high level nuclear waste disposal in Yucca Mountain, Nevada. Washington filed a petition to intervene in the licensing proceeding before the NRC. The state also filed a lawsuit against the DOE in federal court to fully protect the state's interests regarding the Yucca Mountain application.

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.
- Increase cleanup progress on the Hanford Central Plateau.

Performance Measures

- Tons of radioactive and/or chemically contaminated soil and debris removed and securely disposed at Hanford.
- Millions of 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.

- Complete the 324 Building removal and remediation actions.
- Complete 90 percent of the decontamination and decommissioning effort at the Plutonium Finishing Plant.
- Complete the interim safe storage of the N Reactor 105-N/109-N Building.

Performance Measure

- Decontaminate and decommission the plutonium finishing plant on Hanford on schedule by 2016 (percent complete).

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.

- Continue construction of the Hanford Waste Treatment Plant at a rate that supports approved milestones.
- Start conceptual planning and design of an interim storage facility for immobilized high-level waste.

Performance Measure

- Percent of the Hanford Tank Waste Treatment Facility 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 2052.

Expected Results

Public health and environmental risk from the highly toxic, mixed radioactive and hazardous tank waste is reduced and tank wastes are safely managed until treated and properly disposed of.

- Two tanks per year are emptied and the waste is stored safely.
- A permit is issued for the double shell tank farms by July 2011.
- A closure plan is issued for the single shell tank farms by December 2011.

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.

- Issue permits for the Central Waste Complex, Waste Receiving ad Processing Facility, 222-S Laboratory, and T-Plant.
- 250 cubic meters per year of contact-handled retrievably stored waste are retrieved from the low-level burial grounds at Hanford.
- US Ecology, Inc., commercial low-level radioactive waste site interim cover is installed and cleanup actions are initiated.

Performance Measure

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

A Washington Conservation Corps crew (clad in yellow rain gear) led by Troy Warnick (white hat) frantically fill and stack sandbags in an effort to prevent flooding in the Nisqually Valley. Crewmembers from left to right include Jason Smith, Ben Amidon, Wade Arnold, Courtney Irby, and Ana Hansa-Ogren (with shovel).

Shorelands and Environmental Assistance

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 43.143, Ocean Resource Management Act
- RCW 43.21C, State Environmental Policy Act (SEPA)
- RCW 43.220, Washington Conservation Corps (WCC)
- RCW 43.42, Office of Regulatory Assistance
- 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

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

Strategic Priorities

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 2009, the Legislature provided an additional three million dollars for pass-through grants to governments and a half-million dollars for Ecology staffing. To date, over half 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 a 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 new *Environmental Mitigation That Works* initiative to improve the success of wetland mitigation. This biennium, we will focus on three key areas: (1) improving the way we do mitigation, (2) providing alternatives for more ecologically significant mitigation, and (3) training practitioners and local governments on how to use the new approaches and policies.

Our priorities are:

- A compliance program to make sure the mitigation we approve is successful.

- Provide guidance and training on the wetland banking rule and reduce the time needed to certify a wetland bank.
- Support alternative mitigation approaches, such as in-lieu fees and advance mitigation, and provide templates, guidance, and training on these approaches.
- Assist the Puget Sound Partnership in developing a Puget Sound In-Lieu Fee Program.
- Provide technical training to communities.
- Test a new tool for selecting the best mitigation sites using a watershed approach.

Watershed Planning and Implementation

The Watershed Planning Act provides a framework for state, local, and tribal governments to create watershed plans that address local water needs, reduce water pollution, and protect fish habitat. Ecology manages grants to help locals move their watershed plans through each phase—from planning to implementation—to ensure plans and priority action items are carried out and to get a return on the state's water planning investments.

Out of 62 Water Resource Inventory Areas (WRIAs) statewide:

- 28 Watershed Planning Units representing 35 WRIAs have approved plans.
- 22 planning units received Phase 4 implementation funds in 2009-11.
- Two planning units in the plan development stage received funds in 2009-11 and should finish their plans in two to three years.
- A plan for one WRIA has been approved by the planning unit, and county board adoption is pending.
- The rest of the state's WRIAs don't have planning units or had planning units (six) that elected to stop the Watershed Planning Act process.

We are focusing our limited resources on those watershed planning units ready to implement their plans. We are working with 2009-11 grant recipients to make sure funded projects achieve their intended results. We also provide technical assistance to watershed groups that have recommended instream flows for adequate water for farms, fish, people, and the environment.

In the Puget Sound region, we help watershed planning groups integrate watershed, salmon recovery, and other environmental plans to support Puget Sound recovery efforts. In the Upper and Mid Columbia River regions, watershed planning outcomes are being linked to the goals and objectives of the Columbia River Basin Water Management Program. In the Lower Columbia River, watershed planning and salmon recovery planning efforts are being well coordinated. For more information, see http://www.ecy.wa.gov/biblio/0806027.html.

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.

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 are threatened 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.

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 Fishers 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 minimizing flooding and property damage. Local governments develop and manage local Shoreline Master Programs, and

Ecology provides support and oversight 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, making field visits, providing compliance-related technical assistance, and 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 plans.
- Permits approved by local government are consistent with their shoreline master plans.

Performance Measures

- Number of communities (cities & counties) that have submitted updated shoreline master plans.

Protect Water Quality by Reviewing 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. We implement these laws in four ways:

- Offering technical assistance to applicants from the beginning to the end of the permit process.
- Providing applicants a joint multi-agency permit application.
- Coordinating with other regulatory agencies that have interests in proposals.
- 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 Measure

- The 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.
- 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.
- Percent completion of the wetland banking rule.
- Number of completed watershed characterizations.
- Percent of wetland banking certification documents reviewed within 30 days of receipt; except for mitigation bank instruments, which will be reviewed within 90 days.

Provide Technical and Financial Assistance for Local Watershed Planning and Implementation

In 1998, the Watershed Planning Act set a framework for state, local, and tribal governments to create watershed plans that address water needs, reduce water pollution, and protect aquatic habitat. Ecology is involved in three ways:

- Supplying technical assistance to local groups during planning and implementation.
- Providing financial assistance to local groups.
- Adopting county-approved watershed actions into state rules and agency activities.

Expected Results

Future in-stream and out-of-stream needs are managed consistent with adopted watershed plans.

- Local planning groups get technical and financial assistance for plan implementation and updates.
- Local, state, and tribal organizations and stakeholders participate in solving water issues.

Performance Measure

- Number of Watershed Planning Units in Phase 4 – Plan Implementation.

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

Performance Measure

- 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, this 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.

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 teachers, students, adults, and professionals 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

- Acres of habitat restored by the Washington Conservation Corps.

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 from Ecology's transportation team made within agreed upon timeframes for WSDOT's applications, permits, National Environmental Policy Act/SEPA documents, or other environmental 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 on-line 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 information by the Office of Regulatory Assistance Service Center.

Mark Henley conducts a Class II inspection of King County's West Point Wastewater Treatment Plant. A secondary clarifier is in the background.

Water Quality

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, chief among them being 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 flows of 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.

Strategic Priorities

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 marine waters and update the list of polluted marine waterbodies.
- Work with communities to clean up nonpoint source pollution.
- Determine if and where human-related nitrogen sources need to be reduced to protect dissolved oxygen levels in south Puget Sound.

Nonpoint Source Water Pollution

Nonpoint pollution is Washington's most serious pollution problem, and the most difficult one to solve. This is because it comes from diffused sources, is generated by every kind of land use, and has no specific regulatory tool—like a permit—designed 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:

- Develop a manual of best management practices that are known to keep water clean.
- 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 quickly 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.
- 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) to the highest priority projects that were ready to proceed to construction.

Activities, Results & Performance Measures

Clean Up Polluted Waters

The federal Clean Water Act requires Ecology to develop water quality standards and to identify water-bodies that fail to meet those standards. We do this by reviewing thousands of water quality data samples and publishing an integrated water quality assessment report. This report lists the 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. 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 U.S. EPA.
- Number of polluted waters where Ecology is directly involved in implementing cleanup projects (annual measure).

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.

- 3,000 construction and industrial stormwater dischargers that require permits are managed.
- New permit applicants get a response within 60 days of application receipt.
- 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

- Mean 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.
- Percent of industrial stormwater facilities submitting discharge monitoring reports as required by permit.
- Number of construction stormwater inspections per year.
- Percent of construction stormwater facilities submitting discharge monitoring reports as required by permit.

Prevent Point Source Water Pollution

Ecology protects Washington's water by regulating point source discharges of pollutants to surface and ground waters. This is done with a wastewater permit program for sewage treatment plants and an industrial discharge program for other industries.

A permit is a rigorous set of limits, monitoring requirements, or management practices, usually specific to a discharge, designed to ensure a facility can meet treatment standards and water quality limits. The permit is followed by regular inspections and site visits. Technical assistance and follow-up on permit violations also are provided through various means.

Expected Results

Fewer wastewater discharges and lower toxicity through administering the permit program.

- 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.
- Site visits are done each year.
- 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 (national pollutant discharge elimination system 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 water quality grants and loans per year to local communities.
- 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.
- Existing grants and loans are managed each year.
- Local governments get support through implementing revised grant and loan program rules that address updated water quality needs, the State Revolving Fund loan program perpetuity; balanced funding allocations, and design-build alternative contracting options.
- Environmental benefits are documented and illustrated through data generated from grants and loans.

Performance Measure

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

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 non-point pollution problems are implemented.
- State and federal grants are available to, and used efficiently by, local governments.
- The number of stream miles restored or protected is increased through work with local communities and other agencies.

Performance Measure

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

Noel Philip and Kasey Ignac measure the water level in a well for an aquifer mapping study in Western Whatcom County.

Water Resources

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 43.83B, Water Supply Facilities (1972)
- RCW 43.99E, Water Supply Facilities – 1980 Bond Issue (Referendum 38)
- RCW 90.03, Water Code (1917)
- RCW 90.14, Water Right Claims Registration and Relinquishment (1967)
- RCW 90.22, Minimum Water Flows and Levels (1969)

- RCW 90.38 and 90.42, Trust Water Rights Program (1989 and 1991)
- RCW 90.44, Regulation of Public Ground Waters (1945)
- RCW 90.54, Water Resources Act of 1971
- RCW 90.80, Water Conservancy Boards (1997)
- RCW 90.82, Watershed Planning (1997)
- RCW 90.90, Columbia River Basin Water Supply (2006)

Constituents/Interested Parties

- Agricultural groups, environmental organization; local watershed planning & 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.

Strategic Priorities

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 change applications. We are focusing on 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 increasingly 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 and expanding the stream gauging network; responding to local watershed requests for compliance service; and taking actions on water law violations.
- 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. We are also continuing water rights settlement discussions with a number of tribes including specific settlement negotiations with two tribes.
- 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. Water rights adjudication is a legal process conducted in a county superior court to determine who has a valid water right, how much water can be used, and who has priority during shortages. An adjudication is fundamental to using, protecting, planning for, and selling water much like a clear title does for real estate. Current focus is on completing the Yakima River Basin surface water adjudication and preparing for the Spokane River Basin adjudication.

Expected Results

- Make progress with tribes on water settlements.
- Remove uncertainty regarding the validity and extent of surface water rights in the Yakima Basin.
- Review and digitally map water rights documents (certificates, claims, permits, etc.) in the Spokane River Basin to prepare for the adjudication.

Performance Measures

- Number of tribal water right settlement processes initiated.
- Number of claims, rights, and/or permits reviewed and digitally mapped 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 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.

- Five instream flows are set (Walla Walla, Wenatchee, Lewis, Salmon-Washougal, and Quilcene-Snow) 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 (Columbia Basin).

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 to existing water rights to reallocate water. 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.
- Timely and sound decisions are made on applications for new water rights and changes to existing rights to (re)allocate water.
- Implement new expedited processing of application procedures and certified water right examiners program.

Performance Measure

- Number of 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, and 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 of, 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 on streams with flows set is regulated during low flow periods.

Performance Measures

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

Provide Water Resources Data and Information

Ecology protects state water resources through collection, management, and sharing of data and information which 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 increasingly timely and accurate data and improved public access to information.

- Data and information systems are developed and maintained to support internal and 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 Local Watershed Management of Water Resources

Ecology works with other agencies, local watershed planning groups, and tribes to address water quantity issues under the Watershed Management Act. It includes providing technical support and studies for local watershed planning groups to develop and adopt local plans to serve as a basis for sound water management.

Expected Results

Sound local watershed management plans are developed, adopted, and implemented with enough information and agreement to support sound water use and actions.

- Local watershed planning groups receive technical support.

Performance Measure

- Percent of Watershed Planning Units in Phase 4 – Plan Implementation.

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 re-use projects and to the Department of Health for municipal water conservation.

Expected Results

Increased 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.

This page intentionally blank.

Ecology's Jessica Archer climbs a navigation marker in Willapa Bay to service oceanographic instruments and download water quality data.

Environmental Assessment Program

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 non-point 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.

Strategic Priorities

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.

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). Whidbey Basin is the next priority area where similar work is needed.

Stream Gaging

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

With 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. Because of federal grant shortfalls, only about 75 percent of at-risk beaches are currently monitored.

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 (like 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 carefully designed 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

In the 2008 session, the Legislature provided 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. During fiscal year 2009, Ecology began developing a data management system to house the status and trends data. Ecology completed the data management system in fiscal year 2010, and during fiscal year 2011, Ecology is collecting data in the Lower Columbia and Coastal Salmon Recovery Regions.

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 working to develop a proposal for a program to fill this gap.

Urban Bay Sediment Monitoring

This newly funded program will provide baseline status and trends for toxics reduction efforts in Elliot and Commencement 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.

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. We need to develop and better incorporate biological measures into our core monitoring programs.

Monitoring Coordination and Data Sharing

There are multiple organizations mandated or chartered to coordinate monitoring and data sharing. These include the Forum on Monitoring Watershed Health and Salmon Recovery, the Puget Sound Partnership, Puget Sound Monitoring Consortium, and 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.

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

- Over 480 environmental laboratories in 29 states and three provinces, including 92 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 the 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 Ecology's 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 140 sites statewide (62 near real-time) are measured and reported.
- Real-time stream flow data is provided via the website.
- Ecology staff and the public are alerted to emerging water quality problems.
- The effectiveness of water cleanup activities is tracked and assessed.

Performance Measures

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

Southwest regional office spill responder Ron Holcomb assesses various containers of oil, paint, and other hazardous materials that were deposited in a log jam following the December 2007 Chehalis River flood.

Spill Prevention, Preparedness and Response

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. Accidents, equipment failure, and human error can all lead to 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 and 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 in the late 1980s and early 1990s sparked public concern and resulted in state and federal legislation to protect the environment and human health from such spills.
Specific Washington laws include:

- RCW 70.105, Hazardous Waste Management Act
- RCW 70.105D, Model Toxics Control Act
- 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
- RCW Chapter 82.23B, Oil Spill Response Tax

Constituents/Interested Parties

Ecology works closely with people interested in environmental protection, emergency response organizations, the oil industry, oil handling facilities, maritime shipping companies and other transportation industries, and other users of Washington's waters. These include:

- 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 Canada, British Columbia, Oregon, and Idaho.
- 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 the Citizen's Committee on Pipeline Safety.

Strategic Priorities

Obtain Sustainable Funding for Program Operations

The five-cent-per-barrel tax on imported oil provides 60 percent of the Operating Budget for Spills Program work. A portion of this tax (four cents) goes to spill prevention and preparedness and has remained unchanged since the early 1990s. There are several problems with this funding mechanism:

- This tax is based on the volume of oil coming into the state. This volume has not kept pace with increased costs and inflation.
- The tax structure allows for large periodic, unpredictable tax credits, which can seriously deplete the Oil Spill Prevention Account (OSPA).
- The tax allows industry to shift untaxed oil to internal state consumption; and then exporting and receiving a tax credit for oil shipped to Oregon, California, and British Columbia. The tax is not imposed on oil imported from Canada via pipeline.

As a result of expenditures exceeding revenues, the budget shortfall in the OSPA required the 2009 Legislature to transfer 6.5 million dollars into the account and cut eight funded positions from Ecology's program and four funded positions from other state programs.

Based on state revenue forecasts, this problem will continue to persist into the future unless additional funding is identified. If we cannot establish a new funding mechanism, Ecology will need to cut an additional 22 funded positions from the program. Such a cut would nearly eliminate the state's spill prevention and preparedness efforts. Ecology's goal is to develop a long-term, viable funding solution during the 2010-2011 legislative sessions.

Expand the Scope of Our Work in Marine Safety

Federal preemption under the Supremacy Clause of the U.S. Constitution limits state authority to conduct certain spill prevention activities in the marine transportation field. Washington has pressed the boundary of federal preemption and had two oil spill prevention authority-related cases decided by the U.S. Supreme Court. Ecology is pursuing a number of strategies to accomplish high-priority oil spill

prevention initiatives in the maritime field, while keeping clearly within the state's Constitutional authority. Initiatives include:

- Expanding our cooperative partnership with the U.S. Coast Guard consistent with the memorandum of agreement and the strategic work plan signed by the Governor and Admiral in June of 2007.
- Seeking delegated authority from the U.S. Coast Guard for qualified and experienced state personnel to conduct key prevention activities.
- Working with the federal delegation to request federal oil spill legislation to improve maritime safety while preserving state authority.

Emergency Response Tug for the Strait of Juan de Fuca

The Legislature passed Senate Bill 5344 requiring the maritime shipping industry to permanently station an emergency response towing vessel year-round at Neah Bay to prevent potential maritime casualties and resulting oil spills. The uniquely rich and vulnerable biological, marine, and cultural resources of the state and several irregularities of local waters contribute to the need for the tug. Irregularities include periodic severe storms with high seas, strong current, and obscuring fog.

Ecology has had ten years of experience managing the tug, and it remains a proven and invaluable essential prevention and response asset. The maritime industry is required to provide an emergency response towing vessel at Neah Bay beginning on July 1, 2010. The legislation also requires:

> *"Participants to the negotiations shall provide interim progress reports to the appropriate committees of the legislature by October 31, 2009, and again by December 1, 2009, the latter date coinciding with the deadline for contingency plans for covered vessels operating in the Strait of Juan de Fuca to provide for the emergency response system required by RCW 88.46.130."*

Ecology will retain the ability to directly contract with the towing vessel company in the event that a vessel that does not pay into the industry funded tug needs assistance.

Expand Oil Spill Prevention Initiatives

We will document the need for and seek stakeholder support for the following initiatives:

- Delegated authority from the U.S. Coast Guard to conduct vessel and facility inspections to provide a stronger approach for preventing spills in Washington waters.
- Review the feasibility of implementing a program to prevent dumping of oily wastewater into state and international waters by providing for bilge water and oil reception facilities in Puget Sound ports and marinas.
- Continue to strengthen efforts to engage non-regulated entities and facilities, such as hydroelectric dams, railroads, and small to mid-sized commercial fishing boats to prevent and prepare for spills.
- Increase inspections and educational visits to marinas and boat yards that are considered oil transfer facilities.

Enhance Oil Spill Readiness

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. To do this, all organizations must be prepared to come to the incident quickly, arrive on scene with sufficient resources, and adhere to

agreed upon roles and policies. Any unnecessary delays can place public health, safety, and the environment at additional risk.

The Spills Program will work with the broader response community to begin delivering customer focused, well-coordinated, rapid, and aggressive response services to manage incidents and spills beginning in 2011. This means immediate notifications are completed, resources are rapidly dispatched, initial over-response is expected, and work in the incident command post will focus entirely on the event and implementing agreed-upon roles and policies. This initiative will take the existing response system to a new level of competence and effectiveness.

The program will encourage the response community to begin responding to the full potential spill volume and impact that an incident (such as a grounded oil tanker or leaking oil tank) could have. Implementing this critical action will require the program to refocus some staff on this issue. It may also require additional future legislative appropriations for equipment and contractors.

Other oil spill preparedness efforts that will contribute to this system include:

- Systematic verification of response equipment availability and contractor readiness. Over the next six years, Ecology will work to verify, inspect, or deploy all industry-owned response equipment in the state.
- Conduct drills during real incidents where a casualty has occurred, but a large spill may or may not be imminent. This initiative will expand and test the effectiveness of the program's Incident Management Assist Team (IMAT), and strengthen the use of Unified Command organizations by multiple agencies.
- Improve the state's ability to use helicopters and fixed-wing aircraft to detect and track oil spills, and to direct on-water spill recovery operations. Continued refinement is necessary because there are limitations to the effectiveness of current technology during night operations, fog, and major storms.
- Improve on-water recovery rates by ensuring aggressive response with 24-hour on-water recovery capability.
- Expand the number of locations where equipment is staged throughout the state.

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 us improve public education and technical assistance, we 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.
- Reinstitute a spill prevention campaign to include the commercial fishing fleet's preparation for seasonal departure to Alaskan fishing grounds.
- Improve use of the program's website and social networking sites to provide information during spill incidents to interested stakeholders and the public.
- Develop and maintain website for volunteer registration and management (pending additional funding).

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. Our core incident response activities include:

- Delivering 24-hour-a-day, statewide response services from six field offices. This activity includes maintaining two responders with proper training and field equipment on pager from each of the field offices at all times. The program also has two maritime experts available on pagers and a public information officer on call. All members of the program's management team are available for consultation on a 24-hour basis. Sustaining these operations requires a high level of funding, good communications, and effective policies and procedures to ensure consistent quality and service delivery.
- The program maintains access to a small network of aerial observation platforms. Included in this informal network are U.S. Coast Guard helicopters, Washington State Patrol fixed-wing planes, King County Sheriff's office helicopters, and the ability to contract with private service providers.
- Program responders 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. For example, it is common for citizens to report floating algae blooms as oil spills. Ecology trains local emergency first responders on how to verify whether the citizen's pollution report is truly a recoverable spill.
- Coordinate with local, state, and federal law enforcement agencies for methamphetamine drug lab cleanup.
- Initiate compliance actions when there are violations related to oil and hazardous material spills.

Review Tug Escort Standards for Loaded Tankers

The 2003 Legislature directed Ecology to complete "an evaluation of tug escort requirements for laden tankers to determine if the current escort system requirements… should be modified." A detailed technical report was completed in December 2004. Ecology hopes to obtain funding or federal direction from the U.S. Coast Guard to complete additional work on "human factors" that can help optimize the effectiveness of tug escort system.

Health of Puget Sound and Other State Waters

As the Spills Program looks forward, we will be working with the Puget Sound Partnership to meet the goal of a healthy Puget Sound by 2020 through a state-of-the-art spill program. The program is also striving to approach the legislative zero-oil-spill goal, and to ensure a well coordinated, rapid, and aggressive response to all spills. Some of the items outlined below are critical to achieving these goals.

The following items are not new to us, but as we observed events following the November 7, 2007, *Cosco Busan* oil spill in San Francisco, the need for action has become more prominent. We will continue working to make progress on the following, some of which may require additional funding or new statutory authority:

- Volunteer Management Program – Ecology hopes to implement a program with full coordination and management of a volunteer network throughout the state to use during a major spill.
- Bird and Marine Mammal Rescue and Rehabilitation – Our current capability to rescue and rehabilitate oiled wildlife is very limited. We need an expanded collaborative partnership between industries, state, federal government, and animal care networks to fund a fully effective wildlife rescue and rehabilitation program.
- Vessels of Opportunity – Ecology conducted a study in 2005 of the feasibility of using commercial fishing and other vessels to augment oil spill response capabilities during major incidents. We will make recommendations to stakeholders on how to implement a well-organized comprehensive program. Alaska has similar programs and, to a lesser extent, so does California.
- State Pilotage Programs – Washington currently has a Pilotage Commission responsible for overseeing state pilots in Puget Sound, the Strait of Juan de Fuca, and Grays Harbor. The Columbia River is regulated by the Oregon Board of Maritime Pilots. A legislative or regulatory change is needed to allow for Washington State membership on the Oregon pilotage commission.

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.

Expected Results

Ecology and the regulated community are fully prepared to promptly respond to oil spills, and damages from spills are minimized.

- Compliance with the industry sponsored Neah Bay response tug is documented in approved vessel contingency plans.
- Two 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-owned 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.
- Dispatching the Neah Bay rescue 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, the Neah Bay emergency response vessel, 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 spills to surface water 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 each 100 million gallons of oil 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 five 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 incidents that receive field responses by Spills staff.

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.

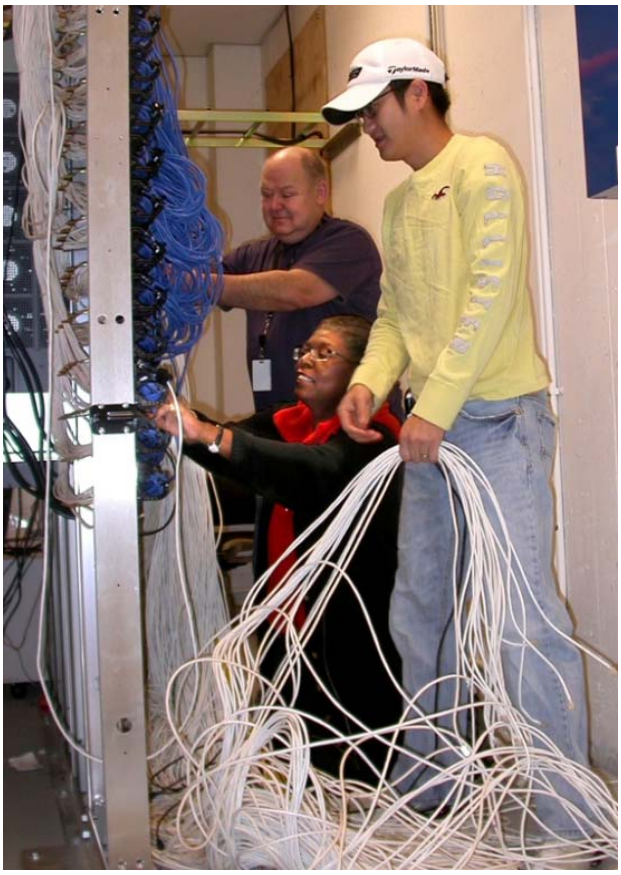
Expected Results

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.



Ecology employees (from left) David Hovik, Gwen Campbell, and Shawn Lee work together on a network infrastructure upgrade project replacing cables in a communication closet at Lacey headquarters.

Administration

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.
- Developing policies and programs that help the state achieve its greenhouse gas limits and prepare for and respond to climate changes.

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.
- RCW 43.21M, Integrated Climate Change Response Strategy
- RCW 70.235, Limiting Greenhouse Gas Emissions
- RCW 80.80, Greenhouse Gas Emissions

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.

Strategic Priorities

Facilities

Our facilities goals are:

- Facilities 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 in safe locations to aid staff recruitment and retention.
- Green facilities 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 13-15 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 an improvement to provide adequate laboratory and storage space to efficiently support agency business.

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.

Information Management and Communication

Ecology has a strategic plan for improving our data management and making information more available to citizens, stakeholders, and staff. Ecology's IT Strategic Plan identifies the following long-term enterprise-level technology initiatives:

- Data integration
  - Data architecture
  - Geographic Information Systems
  - Document management
- Connectivity and access
  - Common tools and services (includes leveraging state services)
  - Maturing the infrastructure (includes security)
  - Connecting the people (includes video conferencing)
  - Public access
- Efficiencies

Human Resource Management

Ecology will be implementing a strategic plan for managing its workforce for optimal performance and efficiency to achieve agency and programmatic goals. The plan will:

- Continue to implement human resources management best practices that foster solutions for managers and supervisors.
- Implement a long-term plan, including a revised marketing strategy, to effectively recruit and retain a highly qualified, diverse work force.
- Design and implement an effective employee retention and succession management plan.
- Design a human resources risk management plan to provide guidance in risk identification, assessment, prevention and mitigation.

Long-term Financial Stability

The national economic recession that began in 2008 significantly impacted Ecology's budget. After closing a $9 billion state General Fund gap in 2009, the state faced another $2.7 billion shortfall in 2010. The cumulative impacts of reductions and fund shifts in the state's 2009 and 2010 budgets for Ecology:

- $204 million of dedicated environmental funds were redirected from toxic site cleanups and other environmental and public health projects throughout the state to offset the state General Fund shortfall.
- $38.9 million less in Ecology's Operating Budget to protect the environment, human health, and support economic development.
- 45.7 fewer authorized staff than in 2007-09.

In dollars, the 2009-11 biennial budget remained unchanged from the 2007-09 budget at $1.2 billion. There were, however, significant changes in the ratio of operating to capital funding. Capital investments in local communities grew from $789 million in 2007-09 to $875 million in 2009-11, a 10.9 percent increase. With the Capital Budget increase, approximately 68 percent of Ecology's 2009-11 budget was passed through to local communities to support local clean water, toxic cleanup, hazardous waste management, and pollution prevention efforts.

At the same time, the Operating Budget went from $472 million to $437 million, a 7.4 percent reduction. Water resources, watershed planning, litter pickup, oil spill prevention, and administration saw major reductions, including less grant dollars to local communities.

$204 million of dedicated environmental funds—primarily from the State and Local Toxics Control Accounts and the Waste Reductions, Recycling and Litter Account—were redirected to the state General Fund. These funds are no longer available for toxic site cleanups and other environmental and public health projects throughout the state.

Climate Change

Washington is a leader on addressing the causes and impacts of climate change. We have adopted greenhouse gas reduction targets in statute, 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.

Facing climate change—and making sure Washington is climate ready—will allow us to be a winner in the worldwide competition in energy efficiency and renewable energy. It will also ensure that we are aware of the impacts we are already experiencing as a result of a warmer climate – ocean acidification, sea level rise, and extreme weather events. This strategic plan brings together all of the agency's activities into one place to demonstrate how they are and will collectively help us achieve the imperative of facing climate change.

Activities & Results

Human Resources

The Human Resources Office (HRO) provides a full scope of human resources support, including safety, equal employment opportunity, labor relations, and employee training and development. HRO manages and ensures that recruitment, selection, hiring, classification and pay, disciplinary actions, layoffs, complaint processing, and investigations comply with federal and state employment laws, civil service rules, and agency policy. HRO also implements and manages the collective bargaining agreement. HRO develops and monitors the agency's Affirmative Action Plan and coordinates diversity activities for Ecology, including helping to create a supportive work environment that reflects the diversity of the communities we serve.

Expected Results

- 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.

Performance Measures

- Percent of employees who are accident-free.

- Diversity goal percentage for total agency.
- Percent of employees meeting the Discrimination & Sexual Harassment training requirements.
- Percent of vacancies filled within 45 days.

Executive, Financial, and Administrative Services

Ecology leadership comes from the executive office. Financial Services provides centralized financial support in accounting, budget, contracts, purchasing, and inventory. This office also manages and coordinates strategic planning for Ecology and coordinates performances measurement.

The Administrative Services Office includes information management (desktop and network services, application development, and data administration), and facility and vehicle management and security. This office maintains Ecology's central records, responds to public-records requests, provides mail services, and manages extensive library resources at headquarters and in regions in the form of books, periodicals, and research.

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.
- 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).
- An integrated climate change strategy is available to better enable state and local agencies, public and private businesses, non-governmental organizations, and individuals to prepare for, address, and adapt to the impacts of climate change.

Performance Measures

- Number of agency audit findings.
- Percent of Ecology-administered dedicated accounts with a positive cash balance at the end of each fiscal year.
- Pounds of Ecology greenhouse gas emissions.
- Number of Ecology pages printed and copied.
- Gallons of fuel used in Ecology vehicles and equipment.

Climate Policy Group

The Climate Policy Group was formed to implement the Facing Climate Change strategic priority for Ecology and the state. The group provides leadership, policy support, and coordination on state and federal climate change legislation, policies, regulations, and programs. It works closely with Ecology's Air Quality Program and other environmental programs, Washington's Energy Office, other state agencies, other states and Canadian provinces, stakeholder groups, and the public.

Communication and Education

The Communication and Education (C&E) Office provides needed support to Ecology leadership and our environmental programs to accomplish carrying 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.

The C&E 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.

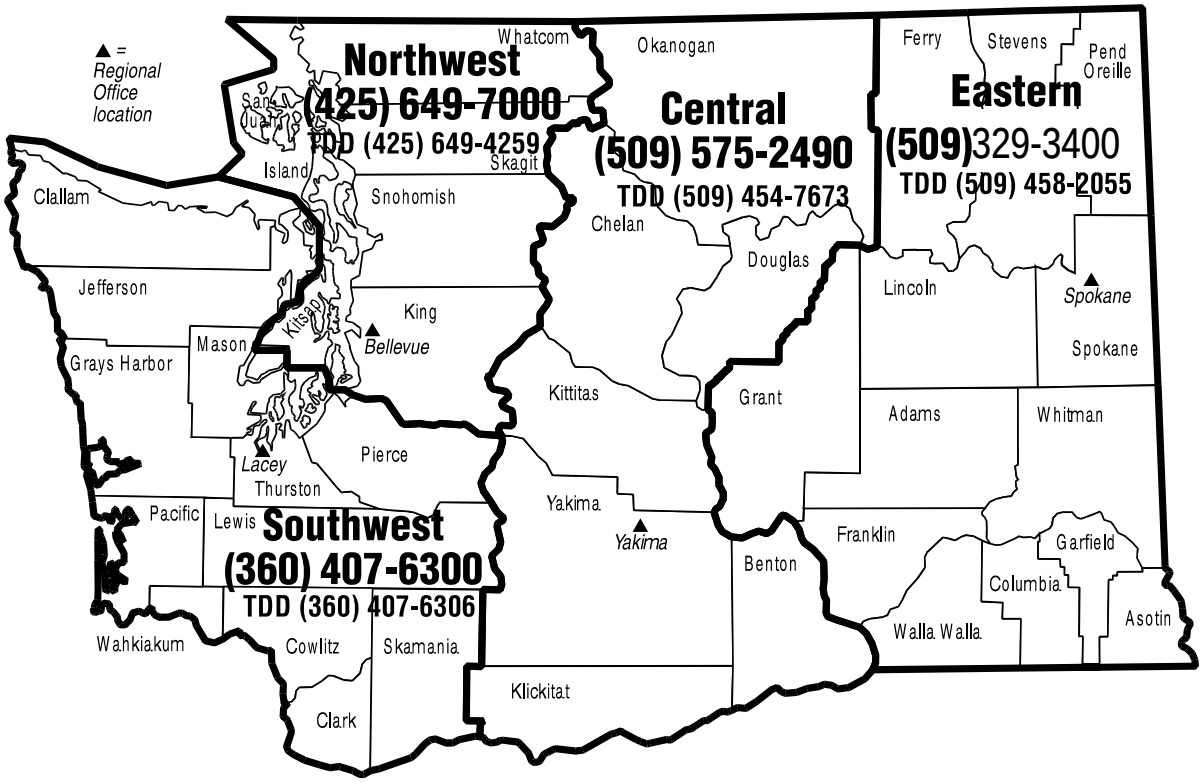
The C&E Office provides round-the-clock communication and outreach support for oil and hazardous chemical spills. This includes being available 24/7 to provide timely information to the media and the public and, when they're established, to staff multi-jurisdiction incident response teams.

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.

Regional and Field Offices

Each of Ecology's four regional offices (Lacey, Yakima, Spokane, and Bellevue) and field offices (Bellingham, Richland, Vancouver, and Wenatchee) has executive management representatives and provides core administrative support to regional office staff. 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.



Ecology Headquarters & Regional Offices

Headquarters
300 Desmond Drive SE
Lacey, WA
360.407.6000

PO Box 47600
Olympia, WA 98504-7600

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 98902-3401
509.575.2490

Southwest Regional Office
300 Desmond Drive SE
Lacey, WA
360.407.6300

PO Box 47775
Olympia, WA 98504-7775

Eastern Regional Office
4601 North Monroe Street, Suite 202
Spokane, WA 99205-1295
509.329.3400

Ecology Satellite Locations

Bellingham Field Office
1204 Railroad Avenue, Suite 200
Bellingham, WA 98225
360.738.6250

Manchester Laboratory
7411 Beach Drive East
Port Orchard, WA 98366-8204
360.871.8860

Manchester Quality Assurance Section
2350 Colchester Drive
Manchester, WA 98353-0488
360.895.4649

Methow Valley Field Office
502 Glover Street
Twisp, WA 98856
509.997.1363

PO Box 276
Twisp, WA 98856

Padilla Bay National Estuarine Research Reserve
10441 Bayview-Edison Road
Mt. Vernon, WA 98273
360.428.1558

Richland Field Office
3100 Port of Benton Boulevard
Richland, WA 99354-1670
509.372.7950

Vancouver Field Office
2108 Grand Boulevard
Vancouver, WA 98661-4622
360.690.7171

Walla Walla Field Office
1815 Portland Avenue, Suite 1
Walla Walla, WA 99362-2396
509.329.3400

Ecology's Organization Chart