



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

**2009 – 2011**  
**Strategic Plan**

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## Mission

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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

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



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.*

## About Ecology

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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.

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 Web site, walk-in services in each office, and several toll-free telephone numbers.

Ecology's headquarters is located in Lacey, Washington. We also have 15 offices located throughout the state to provide convenience and better service to our customers and stakeholders



in those areas. 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; Solid Waste and Financial Assistance; 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; Employee Services; Financial Services, Administrative Services; Communication and Education; and Governmental Relations.

## Agency Objectives

To carry out its mission, the agency’s objectives are:

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• Reduce the use of toxic chemicals and manage hazardous wastes ....	Page 35
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• Clean up toxic sites .....	Page 48
• Clean up the Hanford Nuclear Reservation .....	Page 54
• Protect wetlands, shorelines, and watershed health .....	Page 60
• Improve water quality .....	Page 71
• Manage the sustainability of water resources .....	Page 77
• Monitor and assess environmental conditions .....	Page 85
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Information for each objective includes:

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



## Strategic Priorities for 2009 - 2011

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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.

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

- Protect and Restore Puget Sound
- Reduce Toxic Threats
- Support Successful Water Management
- Address Climate Change
- Improve the Success of Environmental Mitigation Projects

### 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 caused by failing septic tanks, sewage treatment plants and other pollutants are killing fish in Hood Canal.
- Critical habitat, such as salt marshes, eelgrass beds and estuaries, are damaged by poor development practices and storm water-runoff.

These and other environmental threats have caused populations of marine birds, fish and marine mammals to plummet. In fact, 40 Puget Sound species are listed as threatened, endangered or are candidates on state and federal lists, including Orca and Chinook salmon and Steelhead.

In 2007, Governor Chris Gregoire charged the new Puget Sound Partnership agency with developing an ambitious action agenda to protect and restore Puget Sound.

“The Puget Sound Partnership is a community effort, engaging elected and public officials, tribal and business leaders, scientists, environmentalists and, most importantly - citizens. We are all working collaboratively to develop the Action Agenda for Puget Sound by our December 1, 2008 deadline.

The Action Agenda will be the roadmap to health for the Puget Sound. It will prioritize cleanup and improvement projects, coordinate federal, state, local, tribal and private



resources, and ensure that we are all working cooperatively. We will base decisions on science, focus on actions that have the biggest impact, and hold people and organizations accountable for results.”

The Puget Sound Partnership Action Agenda, due in December 2008, will inform our strategic priorities for the 2009-11 biennium. We have developed the following priorities for the protection and restoration of habitat, water quality and water quantity. Over the next several months, we will be working with the Puget Sound Partnership to develop the Action Agenda. Some of these proposed actions will require additional funding or policy authority that we may be seeking during the 2009 legislative session, depending upon the priorities outlined in the Action Agenda.

### **Habitat Protection**

- Invest in local and state capacity to improve regulations.
- Improve the state’s shoreline law.
- Restore habitat through toxic cleanup actions.
- Improve the success of wetland mitigation.

### **Water Quality**

- Stabilize Ecology’s core water quality programs.
- Reduce the bioaccumulation of toxic chemicals in Puget Sound.
- Enhance implementation of water quality cleanup plans.
- Improve the control of nutrient pollution from wastewater treatment systems and facilities.
- Broaden stormwater control through a comprehensive stormwater management strategy.
- Explore the implementation of a “no-discharge” zone for vessels in Puget Sound.

### **Water Quantity**

- Establish instream flows in the remaining priority Puget Sound watersheds.
- Develop water use compliance and enforcement strategies.
- Increase support for processes that recognize federally reserved instream flow water rights that are acceptable to federal, tribal, state, and other water interests.
- Develop and implement flow improvement programs as needed.
- Consider instream flow needs during planning and permitting for stormwater, and reclaimed water infrastructure.

In addition to the environmental actions, Ecology will pursue in the 2009-11 biennium, the following strategies are critical to building and sustaining capacity to improve the health of Puget Sound:

- Increase citizen engagement.
- Improve data management.



- Increase ecosystem monitoring.
- Increase compliance and enforcement of existing laws.

## Reduce Toxic Threats

Toxic chemicals are in our air, our water and our soil. They are in many of the products we buy and use at home and at work. There are about 80,000 chemicals in use in the U.S. today and while many of them have added to our quality of life, the cumulative effect on our health from the exposure to thousands of these chemicals is simply not known.

Infants and children are a special concern – they tend to have greater exposures because pound for pound, children breathe more air, drink more water, and eat more food than adults. Also just being kids – putting their hands and toys in their mouths and playing on the ground can expose children directly to toxic chemicals.

We know that many toxic chemicals have neurological and developmental effects on children. While the linkage to toxics is not completely understood, we know that pre-natal exposure to toxics like lead, mercury, and polychlorinated biphenyls (PCBs) can cause problems in the way our kids learn and behave – and the effects are permanent.

The agency invests considerable resources in managing and cleaning up toxic chemicals – both costly strategies to reduce human exposure and environmental contamination. We are aggressively ramping up efforts to prevent toxic threats. Prevention is the smartest, cheapest and healthiest approach to averting toxic exposures and avoiding future costs of management and cleanup.

The key policy challenges we will be addressing as we increase our efforts to reduce toxic threats include:

- Insufficient data on the presence and hazards of toxic chemicals in products and in the environment.
- Poor understanding of the full life-cycle impacts of toxic chemicals, from front-end design to disposal, and clean up costs.
- Lack of incentives and assistance to reduce the use of toxic chemicals.
- Inadequate protection and regulation at the federal level.

To address these challenges, Ecology is focused on the following policies as we undertake prevention efforts to avoid future impacts and costs and address priority pollutants and sources:

- Protecting the most vulnerable human and environmental populations, with particular emphasis on the developing fetus and young children.
- Expanding “producer responsibility” to improve product safety.



- Strengthening our ability to gather data on chemical presence and hazards in products and in the environment.
- Ensuring the agency's persistent, bioaccumulative toxics strategy is fully implemented.
- Expanding market incentives and regulation to reduce toxics use and spur development of safer chemical alternatives.

## Support Successful Water Management

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 changes are creating water scarcity in Washington and other western states. The problem is showing itself in a number of ways:

- The threat of extinction to once abundant fish stocks.
- Recurring droughts resulting in dry streams, withered crops, dead fish, and concern for wildfire hazards and reduced hydropower production.
- Record low stream flows and declining aquifer and groundwater levels.
- The lack of water for future needs while protecting senior water rights, instream flows, and groundwater aquifers.
- Legal uncertainty related to the validity and extent of water rights and claims.
- Absence of established stream flow levels for most state rivers and streams.
- Inadequate information on water availability, stream flows, and groundwater.
- Growing awareness and concern over the long-term effects of climate change on water supply.

### Eastern Washington Water Supply

For many years, the state has struggled to provide water for growing communities and agriculture, while also protecting aquatic resources and stream flows. In the Columbia River salmon populations are declining, with 15 fish species listed as endangered or threatened. New water right decisions have ground to a halt.

In 2006, the Legislature passed House Bill 2860, the Columbia River Basin Water Management Program to aggressively find new water supplies for communities and agriculture while protecting instream flows for fish. Since this bill passed, several early successes have been achieved. It will be critical to continue to implement the Columbia River Basin Water Management Program into the 2009-11 biennium to maintain these and other projects to improve water supply and instream flows.

- **Lake Roosevelt Incremental Releases.** In early 2008, Governor Chris Gregoire signed agreements with the Spokane Tribe of Indians and the Confederated Tribes of the Colville





Indian Reservation to deliver water from Lake Roosevelt to the Columbia Basin for farmers, cities and endangered salmon.

- **Kennewick Aquifer Storage & Recovery Project.** In 2008, Ecology allocated \$1 million to help fund an aquifer storage and recovery pilot project with the City of Kennewick. The pilot will be funded and conducted in two phases. In the first phase, Ecology will spend \$200K on testing to determine if the aquifer will be capable of storing water. If the project passes that test, the remaining \$800 thousand will be used to construct and test an injection and recovery well in the second phase. The state-funded portion of the saved water will be allocated according to statutory requirements: one-third instream, two-thirds out-of-stream.
- **Voluntary Regional Columbia River Agreements.** Ecology and the Columbia-Snake River Irrigators Association (CSRIA) are proposing a Voluntary Regional Agreement (VRA), provided for in RCW 90.90.030. The purpose of this VRA is to supply new water for issuing drought permits to existing interruptible water rights holders and new water rights on the Columbia and Snake River. Ecology and the CSRIA will evaluate how much conserved water can be developed through a series of pilot projects, including canal lining projects, on-farm efficiency improvements, and shallow aquifer recharge.
- **Columbia River Grant Program.** Ecology is currently processing pre-applications for the first round of its Columbia River Basin Water Management Grant Program. The grants will fund a variety of projects, from conservation and storage, to feasibility studies. Following review by a Technical Advisory Group, Ecology will recommend projects for funding in 2009.
- **Walla Walla Pump Exchange.** Ecology has allocated \$400,000 to the Confederated Tribes of the Umatilla Indian Reservation for a cooperative study in the Walla Walla River Basin. The four-year study will be completed in 2008 and will determine the feasibility of restoring stream flows through several options. These include acquisition, conservation, groundwater recharge, and replacement of Walla Walla River irrigation water with Columbia River water.
- **Columbia Basin Project Conservation Alternatives.** Ecology and the Columbia Basin Project Irrigation Districts are working together on a water conservation strategy to develop water supplies for the Odessa Sub-Area and protect Columbia River stream flows.
- **Odessa Sub-area Special Study.** The U.S. Bureau of Reclamation and Ecology are investigating continued phased development of the Columbia Basin Project to replace groundwater currently used for irrigation in the Odessa Groundwater Management Sub-area with surface water.
- **Supplemental Potholes Feed Route.** Ecology and the U.S. Bureau of Reclamation are collaborating to make water supplies more reliable to the southern portion of the Columbia Basin by feeding additional water into Potholes Reservoir through a supplemental feed route. The feed water will come from the Columbia River via Billy Clapp Reservoir in the northern



part of the Basin. It will be conveyed to Potholes via Crab Creek and the Frenchman Hill's Waterway beginning in 2008.

- **Kennewick Irrigation District Pump Exchange.** Ecology and the Kennewick Irrigation District (KID) are investigating the feasibility of a pump exchange on the Yakima River. In the first phase, KID would move its withdrawal point downstream to the Columbia River to double the steam flow in the lower Yakima River. In the second phase, additional water supplies developed under the CSRIA Voluntary Regional Agreement would be used to increase irrigated acreage at Red Mountain and supply additional residential irrigation.

## Watershed Planning

The 1998 Legislature passed the watershed Management Act, to set a framework for developing local solutions to watershed issues on a watershed basis. The Act states: “The legislature finds that the local development of watershed plans for managing water resources and for protecting existing water rights is vital to both state and local interests.”

This law provides a process allowing citizens in a watershed to join together to assess the status of water resources in their watershed and develop plans for how best to manage them. Local planning groups are required to address water quantity by assessing water supply and use within the watershed. This includes recommending long term strategies to provide water in sufficient quantities to satisfy minimum instream flows and to provide water for future out-of-stream needs.

Watershed planning and associated state funding is done in four phases:

- Phase 1 - Organizational.
- Phase 2 – Assessment.
- Phase 3 - Planning. Six watershed planning units are expected to complete their watershed plans between now and 2013. Seven additional local watershed plans have been approved by either the planning unit or the county and are expected to move into the implementation phase.
- Phase 4 – Implementation to carry out the plan recommendations. Since the Watershed Planning Act was passed, 26 watershed planning units have adopted and approved watershed plans and are in the implementation phase. Continued grant funding to local watershed planning units to implement their plans will be critical to the success of long-term management of water resources and instream flows.



## **Instream Flows**

The term "instream flow" is used to identify a specific stream flow (typically measured in cubic feet per second, or cfs) at a specific location for a defined time, and typically following seasonal variations. Instream flows are usually defined as the stream flows needed to protect and preserve instream resources and values, such as fish, wildlife and recreation. Instream flows are most often described and established in a formal legal document, typically a state rule.

While instream flows are determined through scientific studies, factors such as legal and economic concerns also affect the levels at which flows are set. Determining instream flow levels requires considering both "instream values" (how water is used within the stream) and "out-of-stream" needs.

Continued investment in instream flow rule adoption and enhancement will be critical to the success of protecting and preserving instream resources and values, including fish and wildlife, water quality, navigation, livestock watering and recreation.

## **Address Climate Change**

Washington State is addressing climate change because its impacts go far beyond a change in the weather. Climate shapes everything — ecosystems, crops, water, economy, lifestyles, health — 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.

Our state is vulnerable to a warming climate, especially our snow-fed water supplies and nearly 40 communities along our 3,000 miles of coastal waters that are threatened by rising sea levels. But we have some unique opportunities, too. Because we rely heavily on hydropower, power generation is not as significant a source of "greenhouse gas" emissions as in other states. In Washington, 45 percent of greenhouse gas emissions come from cars, trucks, planes, and ships.

### **Governor's Executive Order on Climate Change**

The Governor's Executive Order 07-02 directed Ecology and the Department of Community, Trade and Economic Development (CTED) to develop recommendations on actions the state should take to prepare and adapt to the unavoidable impacts of climate change that we are already seeing and those that are expected to occur. Ecology and CTED were to provide a report to the Governor in February 2008 (completed). The Executive Order declared the state's commitment to address climate change by:

1. Establishing the following greenhouse gas emissions reduction and clean energy economy goals for Washington:



- By 2020, reduce greenhouse gas emissions to 1990 levels.
  - By 2035, reduce greenhouse gas emissions to 25 percent below 1990 levels.
  - By 2050, reduce emissions to 50 percent below 1990 levels.
  - By 2020, increase the number of clean energy jobs from 8,400 to 25,000.
  - By 2020, reduce expenditures on imported fuel by 20 percent and develop in-state resources.
2. Implementing the significant policy actions taken in 2005 and 2006 to reduce green house gas emissions to move the state to 60 percent of the 2020 goal and grow the clean energy economy.
3. Achieving at least the remaining 40 percent toward the 2020 goal for Washington State and planning for the future. To achieve this goal the directors of Ecology and Community, Trade and Economic Development (CTED) will:
- Consult with a broad range of stakeholders to develop a climate change initiative. The initiative will consider a full range of policies and strategies to ensure the economic and emission reductions goals are achieved. This includes policy options that can maximize the efficiency of emission reductions, including market-based systems, allowance trading and incentives.
  - Determine specific steps to take to prepare for the impact of global warming.
  - Coordinate with British Columbia on regional and national climate policies.
  - Recommend how state government can reduce its own generation of greenhouse gas emissions.
  - Work with local governments to maximize coordination and effectiveness.

Ecology and CTED established a Climate Advisory Team of external stakeholders to develop recommendations to meet the Governor's goals. The Climate Advisory Team was supported by technical working groups structured around different segments of Washington's economy: agriculture; energy supply; residential, commercial and industrial buildings; forestry; and transportation. The technical working groups had assistance from the Center for Climate Strategies, a national non-profit helping states develop climate change action plans. They suggested actions that fit the unique characteristics of Washington's economy, institutions, and environment.

As a result, in February 2008, the Climate Advisory Team developed 12 recommendations that provide direction for Washington to help meet its emissions and economic goals. Together, these recommendations provide a framework for further action. Acting on them will set in motion Washington's transition to a clean economy, sending signals that motivate entrepreneurs, investors, businesses, and individuals to pursue opportunities, technologies, and choices that reduce carbon.

The full report to the Governor is available at:

<http://www.ecy.wa.gov/climatechange/interimreport.htm>



Simultaneously, five Preparation and Adaptation Working Groups formed to develop recommendations on how the state can prepare for and adapt to the impacts of climate change. With scientific support from the University of Washington's Climate Impacts Group, they examined preparation actions in agriculture, forestry, coasts and infrastructures, water quality, and human health.

### **Climate Advisory Team Recommendations**

1. Build market-based mechanisms to unleash the creativity and innovation that will deliver cost-effective emission reductions.
2. Set up reporting systems to measure, track and acknowledge progress in mission reductions.
3. Analyze greenhouse gas emissions and mitigation options early in decision-making, planning processes, and development projects.
4. Invest in worker training for the emerging clean economy to ensure having a skilled workforce and meaningful employment opportunities throughout the state.
5. Build and continue to redesign communities that offer real and reliable alternatives to single occupancy vehicles.
6. Ensure Washington has vehicles that are as efficient as possible and use non-carbon or lower carbon intensity fuels developed from sustainable regional resources.
7. Focus investments in Washington's transportation infrastructure to prioritize moving people and goods cleanly and efficiently.
8. Design, build, upgrade, and operate new and existing buildings and equipment to maximize energy efficiency.
9. Deliver energy from lower or non-carbon sources and more efficient use of fuels.
10. Restore and retain the health and vitality of Washington's farms and forest lands to increase carbon sequestration and storage in forests and forest products, reduce the releases of greenhouse gas emissions, and support the provision of biomass fuels and energy.
11. Reduce waste and Washington's emissions of greenhouse gasses through improved product choices and resource stewardship.
12. Allocate sufficient state resources to maintain Washington's leadership role regionally and nationally and to fulfill its responsibilities for structuring and guiding implementation of emission reduction strategies.

### **Western Climate Initiative**

On February 22, 2008, Governor Gregoire signed the Western Regional Climate Action Initiative (WCI) along with the Governor's of Oregon, California, New Mexico and Arizona. The WCI directs staff from these states to:

- Adopt a regional greenhouse gas reduction goal.
- Join a multi-state greenhouse gas registry to track emissions.
- Design a multi-sector market-based mechanism (i.e. compatible) to help achieve the regional reduction goal.



The WCI also tasked the states to work jointly to:

- Promote clean and renewable energy in the region.
- Increase energy efficiency.
- Advocate for the regional and national policies that are in the interest of western states.
- Identify measures to adapt to climate change impacts.

Since the signing of the WCI, the following actions have been accomplished:

- British Columbia, Manitoba, Utah, Montana and Quebec have joined as partners.
- Two of the three directives have been achieved:
  1. Adopt a greenhouse reduction goal.
  2. Join a multi-state greenhouse gas registry.
- States are working on designing a policy framework for a regional cap and trade.

Ecology is required under House Bill 2815, passed by the legislature in 2008, to develop legislation and a budget proposal for implementing the cap and trade program in 2012. The report is due December 1, 2008. The agency will also work with the Climate Action Team to identify three or four of its most promising strategies for development.

The agency is also required to develop a plan outlining how the state will achieve the reduction limits set in House Bill 2815. The plan is to be submitted to the legislature by December 1, 2008. The agency must also track the states progress toward meeting the reduction limits, report publicly on the progress, and recommend additional greenhouse gas reduction strategies if needed to meet the limits.

## Mitigation that Works

In Washington State we spend millions annually to mitigate for unavoidable impacts to important habitats (e.g., wetlands and eelgrass beds) stemming from development. Studies show that wetland mitigation is successful about 50% of the time, a far cry from this state's policy of no net loss of wetlands.

Numerous regulatory agencies are involved in permitting mitigation. There is a need for enhanced coordination, reduced overlap in the review process, and consistent review standards and permit conditions for proposed mitigation projects. In addition, the state needs a range of mitigation options to adequately protect a variety of resources that are impacted by development projects, ranging from wetlands, to fish, uplands habitats, and endangered species.

Ecology has taken significant steps toward improving wetland mitigation over the past couple years, including the following:



- Establishing a compliance program to inspect 100% of wetland mitigation sites to ensure environmental performance.
- Providing trainings on new mitigation guidance to provide clarity to applicants on steps for successful mitigation. The guidance was issued jointly by Ecology, EPA and the Army Corps of Engineers.
- Developing a wetland banking program for Washington State. Wetland banks are pre-existing wetland restoration project specially licensed by Ecology, the U.S. Corps of Engineers, and the appropriate local government agency. Wetlands banks are an innovative mitigation tool that involves private transactions between a willing buyer and a willing seller.

Despite these recent improvements, Ecology realized additional reforms were needed and launched a Mitigation that Works Stakeholder Forum to develop a shared vision for a coherent and effective approach to mitigation; one that employs a comprehensive range of mitigation options. This has been a long-standing and elusive goal for the state.

The Mitigation that Works Forum is building on previous efforts to reform mitigation including the significant work of the Transportation Permit Efficiency Advisory Committee (TPEAC), recent efforts by Shared Salmon Strategy, and others. With the results of these efforts as a starting point, the Forum's goal is to find solutions to improving the ecological success and permit efficiency of mitigation. Preliminary recommendations focus on the following areas:

- Establish a watershed based approach to mitigation;
- Strengthen avoidance and minimization protocols for resources that provide high ecological function;
- Develop a more coordinated and predictable approach mitigation project review;
- Encourage the use of a wide variety of compensatory mitigation tools;
- Support mitigation efforts with compliance monitoring and enforcement; and,
- Increase support for local governments to carry out innovative mitigation approaches.

The "Mitigation that Works" Forum represents one in a series of efforts on the part of Ecology to improve the success of mitigation throughout the State of Washington. While Ecology is serving as the convener of this Forum, it is the stakeholder group as a whole who will ultimately establish the direction for achieving a better approach to mitigation in Washington State.



## Key Business Strategies

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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

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In 2002, the state was dealing with serious revenue shortfalls created by the post 9/11 economy. As Governor Gary Locke began developing the 2003-05 biennial budget, it became clear that across-the-board cuts would not effectively manage the shortfalls. Governor Locke and his budget team developed the Priorities of Government (POG) statewide approach to budget building, and established a mechanism to help guide budget decisions by producing a results-based prioritization of state activities.

POG is a top-down approach to the budget that starts with statewide results rather than agency budget requests. The premise is that state activities, regardless of the agency involved, need to prove their effectiveness in achieving statewide results and strategies before they deserve inclusion in the budget.

POG is intended as advisory to the executive budget process, rather than actual decision-making. A result and performance-based assessment of state services is a critical perspective on budget investments, but fund sources, existing statute, federal rules, the Governor's highest priorities and multiple other factors also influence the final product.

The upcoming 2009-11 budget will represent the fourth time that POG has been used for a biennial budget. Ecology participates in the POG result team to improve the quality of Washington's natural resources. Through the spring and fall of 2008, our activities and performance data will be analyzed along side the other state natural resource agencies to help inform the Governor's proposed budget for the 2009-11 biennium.



## Appraisal of Our External Environment

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

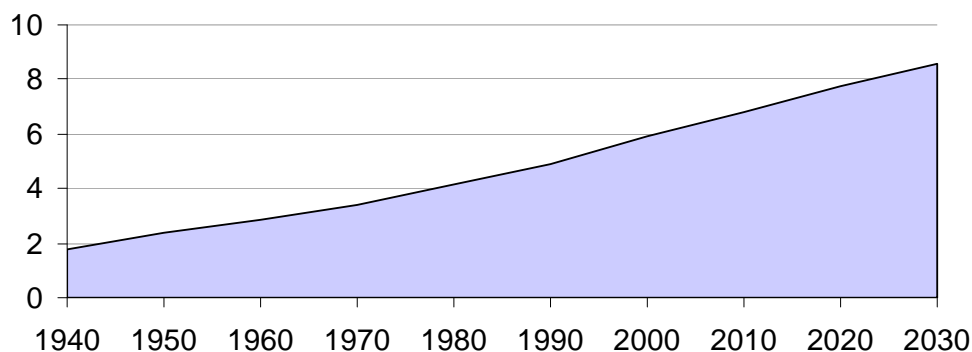
- Population growth.
- Our partners.
- Customer needs and expectations.

### 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 8.6 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.

Projected Population Growth in Washington State  
In Millions





## 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, and 2006. The surveys asked 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 will be surveying permit customers again in the summer of 2008.

We continue to make improvements to our permitting services, based in part on our survey results. A couple 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.



## Capacity Assessment: Financial

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The Department of Ecology employs approximately 1,550 people located in communities throughout Washington State. Our headquarters is in Lacey, with major regional offices in Spokane, Yakima, Lacey, and Bellevue. We also have field offices and staff in Bellingham, Vancouver, Manchester, Richland, Seattle, Portland, Walla Walla, Methow, and Padilla Bay.

### Financial Health

In the last four years, a strong state economy and increased revenue from higher prices on a barrel of oil allowed for significantly increased state investments in local and state environmental protection. Local governments, public ports and Ecology are using this increased funding to address a backlog of environmental needs that accompanied a steady surge in the state's population growth. Every two years, population growth has added the equivalent of another Tacoma or Spokane to the state.

Ecology's combined operating and capital budget for the 2007-09 biennium is \$1.26 billion (\$789 million capital and \$472 million operating) - a \$320 million increase from the 2003-05 biennium. This is an 81 percent increase in pass-through funding for local governments and community based environmental work, a 15 percent increase in funding for Ecology's work and a 14 percent increase in the work force since 2003-05. The 2007 Ecology workforce of 1,545 full-time employees is 86 fewer than the 1993 work forces of 1,631 full-time employees.

The significant 2007-09 increases in our budget were primarily for the clean-up and protection of Puget Sound, water management in the Columbia River, contaminated site cleanups, stormwater control, toxics prevention, and climate change.

The majority (\$237 million or 74 percent) of the increased funding is for new "pass through" loans and grants to local governments and communities to:

- Accelerate local toxic cleanup efforts.
- Fund wastewater treatment plants.
- Control stormwater.
- Improve solid waste management and recycling.
- Pre-position rapid-response oil spill equipment.
- Address other important local environmental challenges.

Of the growth in the last four years, 60 percent comes from a single source - the Hazardous Substance Tax created by the voters when they passed the Model Toxics Control Act (Initiative 97: MTCA) – in 1988.



Most (80 percent) of Ecology's funding does not come from general tax dollars, but from state bonds and 40 dedicated state revenue sources for specific environmental purposes. These funds come from user fees, permits, fines, taxes on oil and sale of state bonds. The State General Fund accounts for 11 percent of our funding and the remainder (9 percent) comes from federal funding.

Although our budget has grown, we are actively managing several issues to avoid or minimize financial risks to the agency.

## **Model Toxics Control Account**

Both the State and Local Toxics Control Accounts (STCA and LTCA) receive money from a tax on the price of oil, which is at record highs. In the last four years, we have seen appropriations from these accounts increase by almost 300 percent as oil prices have climbed from \$65/barrel to \$130/barrel. At the same time appropriations for on-going work at Ecology and other state agencies have expanded.

Given the historic volatility of the accounts due to changes in oil prices and unpredictable tax refunds, there is an increased risk that funding for on-going program staff may not be sustainable over time. To minimize these risks we continue to invest in one-time toxic clean-up and prevention projects that can be scaled to size as revenues change. Much of the growth in appropriations from the STCA and LTCA during the last four years has supported the Puget Sound Partnership, toxic clean-up and prevention and stormwater. As General Fund-State revenues tighten, we expect increased demand on these accounts.

## **Oil Spill Prevention Account**

Funding from the Oil Spill Prevention Account is used to prevent and prepare for oil and hazardous material spills. This is a fee account based on a \$.04 per barrel tax on the first possession of petroleum imported into and consumed in our state. We have seen a downward trend in the fund balance for several years and are now projecting a \$3 to \$6 million shortfall in the 2009-11 biennium.

A Joint Legislative Audit and Review Committee (JLARC) study and recommendations to the Legislature in September 2008 will highlight this issue in more detail. Without a funding fix, reductions to staffing and services will need to be made. At the same time, we are looking to identify ways to provide secure funding for the Neah Bay rescue tug. Federal legislation currently being considered could provide funding for a year round tug. Without a federal solution, the state will need to address the funding gap.



## General Fund Money for Natural Resource Agencies

State General Fund money makes up 11 percent of our budget. Most of our water and air quality monitoring, and protection and management programs rely on funding from the state General Fund. With the state facing a General Fund deficit, there is risk to funding stability for these critical programs.

## Federal Cuts to State Programs

Federal funding makes up 9 percent of our budget. While federal funding has held steady or increased slightly over the last ten years, the increases have largely been for one-time projects. Funding for foundational activities in Water Quality, Air Quality, and Shorelands and Environmental Assistance programs have seen significant reductions. Here's how a coalition of states (ASIWPCA) view this trend:

*“The President’s FY2009 budget proposal for EPA [Environmental Protection Agency] is the lowest since 1997. Since 2004, there has been an overall decrease of \$1.23 billion to EPA’s budget. In simple terms, the States and Tribes have been subject to over 100% of the cuts in EPA’s budget. Making this more difficult is the earmarking of State monies for priorities that do not support core state environmental work – water and air quality.” (edited for length)*

## Water Quality Account & Water Quality Permit Fee Account

In the past three biennia the statutorily required state General Fund transfers have not been provided to the Water Quality Account. State Building Construction Account and State Toxic Control Account funds have been used in lieu of the Water Quality Account to fund the Centennial Clean Water Program. This substitution has limited the range of work accomplished through the Centennial Program to infrastructure and large construction projects. There is less money for “soft projects” such as habitat restoration work.

Due to a down turn in the construction industry, the Water Quality Permit Fee Account experienced a \$3.6 million shortfall in the 2007-09 biennium. Fiscal Growth factor fee increases were approved in the 2008 legislative session. Reductions to the program were made and revenue appears to be stabilizing.

Added cost pressures:

- Population growth is increasing pressure on our ability to protect air and water quality, reduce waste generation, and manage our water supplies. Even when we are successful in reducing our pollution or garbage, population growth often offsets those successes.



- The increased cost of materials and fuels puts extra pressure on our budget since these are growing faster than inflation increases in dedicated funds.

## Capacity Assessment: Facilities

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### Capital Funding Strategies

Ecology owns and leases space in 16 buildings throughout the state. During the past several years, operations have shifted from headquarters to our regional and field offices to better serve local communities. In addition, smaller teams of staff have been located in communities to bring our services closer to the people we 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, and implementing the Governor's initiatives around Climate Change, Puget Sound, and Columbia River will likely cause agency growth. However, watershed work requires staff to be located in the watershed near the water sources that are being regulated; and this will cause us to continue to locate small offices around the state.

Our three main statewide facilities goals are:

- High quality buildings to aid staff recruitment and retention.
- Green facilities to reduce energy and resource consumption (supports mission).
- Facilities close to workload drivers and the people served to reduce travel time and our carbon footprint.

We deal with some challenges when we try to meet these and Ecology's unique programmatic needs in our leased facilities. Our programmatic needs include laboratory and chemical storage; adequate storage for field gear and equipment; high speed data connections; 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.

In the next several years, we will be looking for opportunities to move toward ownership for some of our larger offices, such as our Northwest Regional Office (NWRO), currently located in Bellevue. Ownership allows us to meet our statewide capital facilities goals and effectively manage programmatic needs. A request to build a new facility to house our NWRO, using Certificates of Participation, will be included in the 2009-11 budget request.

The following capital projects are on our list of priorities to maintain the facilities we own:



### **Eastern Regional Office - Spokane**

- Develop a long-term plan for the facility and site.
- Do pre-design on an environmental laboratory/storage addition.
- Purchase adjacent property to remove uncertainty from site planning.

### **Padilla Bay National Estuarine Research Reserve**

- Add a boat storage facility.

### **Headquarters and Southwest Regional Office**

- Repair the 32,000 square-foot stucco wall on the east side of the Lacey building.
- Repair and renovate the parking garage to deal with a failing support structure and surface.

## **Capacity Assessment: Technology**

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### **Information Technology Strategies**

Ecology's major business priorities require the agency's programs to work closely together and share data. These priorities also require extensive coordination and data sharing among Ecology and other partners. Coordination and data sharing needs have been increasing and will continue to increase given current and emerging environmental issues. To meet these business needs, technology investments within Ecology and across all agencies must be enterprise-oriented.

Ecology's recently-updated Information Technology Strategic Plan identifies the following long-term enterprise-level technology priorities:

- Data integration
  - Data architecture
  - Geographic information systems (GIS)
  - Document management
- Connectivity and access
  - Common tools and services (includes leveraging state services)
  - Maturing the infrastructure (includes security)
  - Connecting the people (includes video conferencing and workflow)
  - Public access
- Efficiencies
  - Streamlined business processes.





Proposed technology investments for the 2009-11 biennium include:

- Continuing enhancements of environmental information systems including:
  - Facility/Site (F/S) and Environmental Information Management (EIM) systems including the Exchange Network node and related environmental data flows.
  - Migrating existing groundwater data to EIM and developing data management tools.
  - Developing and implementing of Puget Sound data strategy.
- Continuing enhancements of administrative information systems including:
  - Integrating of new enterprise Grants, Contracts, and Loans Management System with Ecology systems.
  - Document management system requirements analysis, data taxonomy development, document storage technology, and implementing of the State enterprise solution for e-mail archiving.
- Continuing infrastructure enhancements including network improvements, server consolidation, and Web content management and related services for Ecology’s Internet Web site.
- High priority business system (re)development of databases, including: Aquatics, Water Pollution Life Cycle System (WPLCS), Water Adjudications, Water Resources Tracking System (WRTS), and Well Construction.

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## Capacity Assessment: Human Resources

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### Diversity

The communities and citizens Ecology serves are diverse. We have outlined goals and strategies to achieve a more diverse workforce that reflects the citizens of Washington State, including:

- A comprehensive Diversity Program that is built into the "way we do business" as a state agency. For example, an agency check-list is used by employees during rule development processes to assess the need to provide translation or interpretation services for citizens who speak English as a second language.

#### **Our Diversity Vision and Mission**

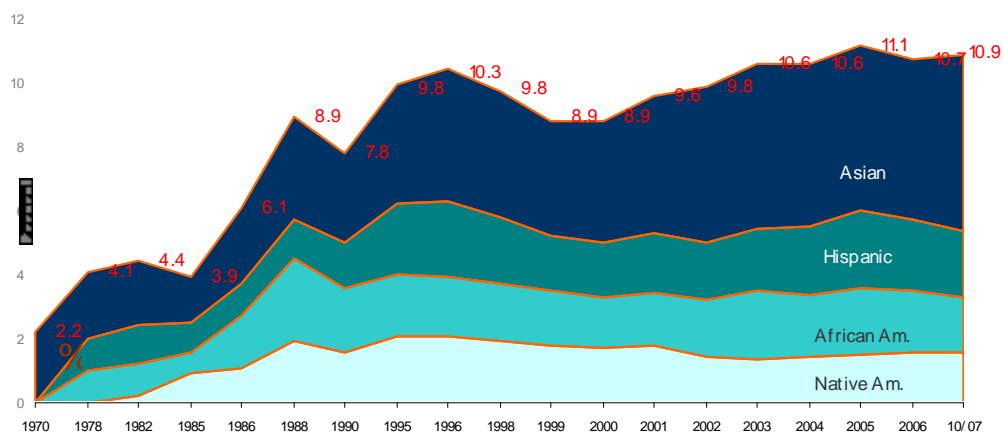
*Our vision is that Ecology’s workforce and culture celebrate and reflect the diversity of Washington’s ever-changing communities.*

*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.*



- Recruitment and hiring plans with a focus on reaching affirmative-action availability goals, recognizing that affirmative action hiring is one component of our diversity efforts.
- Programs that increase retention of Ecology employees. For example, sponsoring potlucks that feature speakers with diverse perspectives to increase cultural awareness and understanding within the agency.

### Workforce History People of Color (Percentage) 1970 - 2007



## Workforce Priorities

Ecology has a dedicated workforce that is passionate about the protection of our air, land and water. The agency employs approximately 1,550 people. Our workforce ranges from scientists, engineers, and environmental specialists and planners to financial managers, educators, information technology specialists, and administrative support staff. Our priorities in human resource management are the following:

### Recruitment & Retention

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

- Improve the quality of recruitment candidate pools through the development of long-term candidate source relationships with higher education institutions, professional organizations and on-line recruitment systems.
- Accelerate the agency's selection and hiring processes, with a competitive time-to-hire rate.



- Develop and implement an agency marketing program with intra- and inter-agency collaboration.
- Organize and produce in-house career fairs.
- Organize and 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 conduct informational interviews at career fairs.
- Implement an effective, qualitative employee exit survey and interview program to generate information and data for targeting recruitment and retention efforts.

### **Diversity**

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

- Assess the history and current condition of Ecology’s diversity program.
- Develop a new diversity program strategy 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 will be developing an human resource risk management strategy to identify and assess sources of employment-related risk and develop solutions for reducing or eliminating liability.

- Survey human resources risk management best practices in collaboration with the Department of Personnel and the Office of Financial Management’s Risk Management Division.
- Form a Human Resources Risk Management Assessment Work Group to identify, assess and prioritize key sources of human resource management risk in the agency.
- Design and implement a risk management response plan for the high priority sources of human resource management risk.



## Sustainability Plan

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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/Plan/index.html>



Lynnette Haller, air quality engineer, inspecting calibration gas canisters for a continuous emissions monitoring system.

## 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 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. Thanks to federal, state, and local efforts, all 13 of those areas were brought into compliance with federal air quality standards. However, in 2006 and 2007, the federal health based air quality standards were lowered for PM<sub>2.5</sub> and ozone.

Consequently, Washington now has two areas that are violating the lower federal standards for fine particle pollution and one area very close to the ozone standard. In addition, 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 than adults. Air pollution can hasten death for people with these health problems.

Extremely fine particles in smoke and combustion engine exhaust are the primary air pollution health concern. The US Environmental Protection Agency (EPA) recently tightened the standard for fine particle pollution. Some communities in Washington will not meet the new standard for fine particles, and EPA will designate these communities out of compliance with the federal standard.

In addition to the six federal criteria pollutants, hundreds of other chemicals, known as toxic air pollutants, enter the atmosphere from a wide variety of sources. There are currently no health-based standards for these chemicals. However, studies are increasingly showing they pose significant health risks. The sources of most concern are the toxic particles and chemicals emitted from vehicles, diesel engines, and wood burning.

Air pollutants also damage soil, water, crops, vegetation, manmade materials, property, animals, and wildlife, impair visibility, and affect climate and weather. Toxic air pollutants are not only emitted to the



air and breathed by citizens, but are also deposited to the land and waters of the state. Preliminary studies show that 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

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- Federal Clean Air Act
- RCW 70.94, Clean Air Act
- RCW 70.120, Motor Vehicle Emission Control

## Constituents/Interested Parties

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- 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

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### Growth Threatens Air Quality Gains

Air pollution levels for ozone (also known as smog) and fine particles are within 10 percent of federal standards in a number of Washington communities and within 3 percent in the central Puget Sound. Since 2001, ozone levels across the state have been increasing. Increases in car ownership and vehicle miles traveled, and larger vehicle size, are pushing air pollutant emissions higher. It will take vigilance and the combined efforts of citizens, businesses, and governments to protect our air quality.

### Reducing Diesel Soot

Ecology has determined that soot from diesel engines is the greatest toxic health threat from air pollution. We are working with the state's seven local air quality agencies to install emission control equipment on existing diesel school buses and other publicly-owned diesel fleets. More than 5,000 engines have been retrofitted to date. We expect 6,000 school buses and 2,000 diesel engines operated by local government will be retrofitted by the end of the 2007-09 biennium. To date, retrofits have resulted in reductions of more than 100 tons of toxic and criteria air pollutants a year, with significant health care and economic savings in Washington. Reducing soot from private diesel fleets is the next challenge.

### Smoke

Ecology has determined that fine particle pollution from smoke is the second greatest toxic threat from air pollution. The main source of this pollution is the use of wood for heating. During winter months, stagnant weather conditions and smoke from wood heating devices contribute to serious air quality problems. 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. With two nonattainment areas due to wood smoke and 7 communities within 6 percent of the standard, more needs to be done.

Burning household trash, yard waste, and agricultural and forest debris also create 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 backyard burning to reduce yard waste is a common practice in some rural communities. At the same time, pressure to reduce burning is also increasing. People 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. The state Legislature restored Ecology's budget to address regional haze in the 2007-09 biennium. We are currently evaluating pollution sources that will be used to develop a plan to achieve and maintain the federally-required visibility goals.

### **Responding to Climate Change**

The Governor's Executive Order 07-02, "Washington Climate Change Challenge," directs Ecology and the Department of Community, Trade and Economic Development to work with a broad group of stakeholders to address the causes of climate change. Our task is to develop recommendations for the Governor on how to achieve the following greenhouse gas reduction goals established in the Executive Order and passed into law by the state Legislature in 2007:

- Reduce greenhouse gas emission levels to 1990 levels by 2020.
- Spur job growth in the state's clean energy sector.
- Identify the specific steps the state must take to prepare for climate change impacts already underway and those that are expected.

We are also participating in national and regional partnerships, including the Western Climate Initiative and The Climate Registry. We are working together to assure Washington can meet the Governor's commitments to other states and provinces to achieve regional greenhouse gas reduction goals.

## **Activities, Results & Performance Measures**

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### **Measure Air Pollution Levels and Emissions**

To make sound decisions, Ecology, along with local air agencies, and the public rely on information about the amount and sources of air pollution and how it moves in the air. We use three primary systems to measure air pollution levels and emissions:



- Air quality monitoring to assess trends, focus our compliance efforts, and assess control strategies, health effects, and environmental damage.
- Emission inventories to quantify the amount and type of air pollution coming from different sources.
- Meteorological and dispersion modeling forecasts to determine the movement and concentration of air pollutants, what happens when different pollutants mix, and the point of maximum impact of pollution.

#### Expected Results

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

- Annual network review and modifications are conducted to meet air quality needs.
- No one is exposed to violations of standards.
- Adequate data are available to policy makers.
- A regional consortium for air quality forecast modeling is established.
- Improved emissions data and modeling tools to predict air quality levels, impacts and trends.
- Region-wide, trans-boundary efforts to characterize air quality patterns are developed.

#### Performance Measure

- Percentage of air monitoring data that is complete.

### **Prevent Unhealthy Air and Violations of Air Quality Standards**

Federal law establishes minimum air quality standards for six air pollutants known as criteria pollutants. Violations of those standards trigger:

- Costly regulatory actions against businesses and consumers.
- Potential economic constraints.
- Possible severe financial sanctions against the state if problem areas are not cleaned up in a timely manner.

To prevent unhealthy air, we continuously measure air pollution levels and trends. For places not meeting air quality standards, we develop and implement area-specific cleanup plans and design strategies to prevent violations. We also have action plans for cases of natural events that pollute the air, such as wildfires and windblown dust. Our goals are: for all areas of the state to meet minimum federal standards, and to reduce ambient air pollutant concentrations to levels that ensure air is healthy to breathe.

#### Expected Results

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

- Measured air quality is good for 85 percent of all days and 99 percent of all measurements.
- Areas violating the EPA standards are restored to attainment within required timeframes and federal sanctions are avoided.





- Areas meeting EPA standards do not have pollution levels that violate them.
- Strategies are designed and implemented to address fine particles in eastern Washington.
- Statewide, health-based goals for fine particle and ozone pollutants are adopted.

#### Performance Measures

- Number of areas in Washington measuring air quality levels that do not comply with federal air quality standards.
- Number of citizens living in areas that are not in attainment with federal air quality standards.
- Number of citizens exposed to levels of pollution that exceed the federal air quality standards.

### **Reduce Air Pollution from Industrial and Commercial Sources**

Ecology issues permits to new and existing facilities to reduce air pollution from industrial and commercial sources. Our permit programs are mandated by either federal or state clean air laws and are designed to be self-supporting through fees.

Permits are conditioned and approved to make sure all federal and state laws are met, and that air quality, the environment, and public health are protected. We conduct compliance inspections to make sure permitted facilities are meeting their permit requirements. We also 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.

- At least 10,000 tons of air emissions per year are reduced through permit conditions.
- 100 percent of permits meet timeliness targets.
- The regulated community is certain about the need, content, and time frames for permits.
- Local air pollution control agencies retain delegation and local control of federal permit programs.
- Best Available Retrofit Technologies are installed on industries that impair visibility in national parks and wilderness areas.

#### Performance Measure

- Average Notice of Construction permit processing time.

### **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. Exhaust emissions from these sources harm public health, increase health care costs, and increase cancer and mortality rates.

Significant reductions in emissions from these sources must be achieved to:

- Meet federal air quality standards.



- Avoid multi-million dollar control costs to businesses and citizens.
- Reduce or prevent harmful health effects.

Ecology is working to reduce public health and environmental threats from motor vehicle pollution through a vehicle emission check program of nearly two million cars and trucks. In addition, we promote transportation alternatives and cleaner motor vehicles and fuels through voluntary, regulatory, and incentive programs. An example is our program to retrofit school buses with emission controls to reduce exposure to toxic diesel exhaust.

#### Expected Results

- Air pollution emissions from motor vehicles is reduced.
- Pollution from approximately two million cars is prevented by operating an Inspection and Maintenance Program in three maintenance areas in the state.
- Diesel school buses and public fleet engines are retrofitted with appropriate air pollution controls.
- Strategies to reduce engine idling in high exposure areas (near schools and around truck stops) are developed and implemented.

#### Performance Measures

- Tons of motor vehicle emissions.
- Number of citizens exposed to air quality that does not meet “healthy” levels for ozone pollution.

### **Reduce Health and Environmental Threats from Smoke**

Regional smoke pollution is impacting many communities in Washington. Smoke affects public health and quality of life. Ecology and local air agencies issue permits for agricultural, land clearing, fire training, and other outdoor burning to control smoke from these activities. Our goal, by 2010, is to restore areas that violate federal standards due to wood smoke to compliant levels and, in the long run, to achieve air quality levels in Washington that experts agree protect human health. We help people manage and reduce smoke from outdoor burning through:

- Posting daily burn forecasts.
- Responding to and resolving complaints related to smoke.
- Providing technical assistance to manage and prevent outdoor burning impacts.
- Designing and delivering wood stove education programs.
- Providing grants to Local Air Authorities to change-out the oldest, most polluting wood stoves.
- Calling burn bans when weather conditions hold pollution close to the ground to prevent unhealthy levels of smoke
- Providing technical assistance, research, and demonstration projects to foster development and use of practical alternatives to burning.

#### Expected Results

- Public health threats from smoke and dust are managed and minimized.
- Burn bans prevent violations of EPA standards from wood burning devices
- Smoke impacts on communities from cereal grain stubble 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.
- Alternatives to back yard burning are identified and implemented through work with communities.

#### Performance Measures

- Number of citizens exposed to air quality that does not meet “healthy” levels for particle pollution.
- Number of times monitored particulate matter less than 2.5 microns exceeds healthy levels statewide ( $20\mu\text{g}/\text{m}^3$  over a 24-hour period).
- Number of wood stoves replaced with cleaner burning technologies.
- Percentage of population living where residential and land-clearing burning are banned.
- Percent increase in commercial composting and waste-to-product conversions.

#### Reduce Risk from Toxic Air Pollutants

There are hundreds of toxic chemicals emitting millions of pounds of pollutants into the air annually in Washington. We have no standards and very few pollutant limits for these chemicals. Models and studies indicate that 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 widespread in Washington. To significantly reduce potential risk to public health, we will:

- Complete a health assessment of agricultural burning smoke.
- Complete a health effects analysis of diesel soot.
- Collect and prepare annual air toxics emission inventories.
- Operate air toxics monitoring sites.
- Limit toxic emissions through permit conditions for commercial facilities, combustion processes, and outdoor burning.

#### Expected Results

- The public health threat from toxic air pollutants is minimized.
- Less than 60 percent of facility-reported toxics released to the environment (Worker & Community Right to Know, Toxics Release Inventory) are air emissions.
- Emissions of priority toxics are reduced by 50 percent by 2010 (2002 baseline).
- Diesel soot emissions are reduced by 20 percent by 2010 (2005 baseline).
- 2,000 additional school buses are equipped with new emission controls by 2009 (7,500 total buses retrofitted).
- 1,000 additional publicly-owned engines are equipped with new emission controls by 2009 (1,800 total engines retrofitted).
- 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.



### Performance Measures

- Tons of diesel soot emissions reduced statewide.
- Tons of diesel soot emissions reduced in counties contiguous to Puget Sound.
- Number of diesel vehicles (school buses and public sector equipment) retrofitted with pollution control equipment.

### Climate Change Mitigation and Adaptation

A changing climate in Washington poses significant challenges for the state's economy, infrastructure, and environment. It also presents economic opportunities.

Executive Order 07-02, Washington's Climate Change Challenge, and the 2007 state Legislature direct state agencies to:

- Identify ways to reduce overall emissions of greenhouse gases in the state.
- Begin preparing and planning for the impacts of climate changes in the state.
- Encourage economic development and use of clean fuels, clean power, and other conservation and sustainable enterprises actions.

### Expected Results

Through a comprehensive stakeholder process, recommendations will be made to the Governor and the 2008 Legislature to reduce greenhouse gas emissions.

- Reductions are sufficient to meet the reduction targets identified in the Washington Climate Change Challenge (Executive Order 07-02) and ESSB 6001.
- Regulations are completed for governing the greenhouse gases emission performance standard for long-term power supplies in Washington. This includes criteria for evaluating carbon dioxide sequestration proposals.
- Research and funding is coordinated to get appropriate, focused, and reliable scenario information on the impacts of climate change for planning and preparation.
- Specific steps are developed to prepare for the impacts of climate change on public health, agriculture, coastal resources, forestry, infrastructure, water quality, and water supply.
- Climate change impacts to state water resources (such as water supply) are monitored, and we are prepared for climate-driven drought and response actions.
- Comprehensive, reliable, sector-based inventories of statewide greenhouse gas emissions are produced.

### Performance Measures

- Trends in statewide greenhouse gas emissions.
- Number of adaptation strategies identified through stakeholder process that are implemented.



## 2009 – 2011 Department of Ecology Strategic Plan Reduce the Use of Toxic Chemicals and Manage Hazardous Waste



Bob Stillwell of International Aero Inc. shows Toxics Reduction staff member Tom Boucher a non-chemical paint stripping process they use.

### 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 inherent risks in using, storing, and disposing of hazardous chemicals. When chemicals are disposed, they become hazardous waste, and can be harmful to the environment or human health. Many of these wastes are persistent in the environment, remaining toxic for a very long time; and some can build up (bio-accumulate) in the food chain. Currently, about 4,356 facilities and businesses produce more than 281 million pounds of hazardous waste each year in Washington (2006 data).

Ecology addresses two primary environmental threats from hazardous waste: the long-term risks of using hazardous chemicals, and improper hazardous-waste handling and disposal. Reducing the use of toxic chemicals is a top priority, with a second major focus to ensure that hazardous waste generated is managed safely.

## Authorizing Laws

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



## 2009 – 2011 Department of Ecology Strategic Plan Reduce the Use of Toxic Chemicals and Manage Hazardous Waste

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### Constituents and Interested Parties

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- General public.
- Local governments and other agencies.
- Business groups and associations.
- State agencies: Department of Agriculture; Department of Health; Washington State University.
- Regulated businesses and agencies.
- Tribes.
- Environmental groups.
- Environmental Protection Agency (EPA).

### Strategic Priorities

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#### State Waste Reduction (Beyond Waste) Plan

Ecology developed a state waste reduction plan in November 2004, which includes a vision of eliminating most wastes and toxics in one generation (30 years). This plan, referred to as the Beyond Waste Plan, was developed with solid and hazardous waste reduction and elimination goals in mind. Ecology staff, local government officials, and many others agree that reducing the use of toxic substances and the generation of wastes should be our main focus. Statewide strategic plans for hazardous waste and solid waste management are required by state law.

The focus of the Beyond Waste Plan is to make the transition from managing wastes to eliminating them from being generated in the first place. We developed strategies to help us integrate solid waste and hazardous waste reduction efforts to protect the environment, human health, and the state's economic development. The strategies to reduce chemical use and waste generation will also help to inform efforts to improve Puget Sound by 2020.

The Beyond Waste Plan focuses on the following five initiatives:

- Eliminating industrial wastes through partnerships with industry sectors.
- Establishing a closed-loop reuse and recycling system for capturing organic materials.
- Encouraging a green-built environment by making sustainable building the norm in Washington.
- Reducing hazardous wastes from small businesses and households.
- Tracking overall progress toward the Beyond Waste vision through performance measures and improved data tracking.

#### Reducing Risk Through Increased Contact With Business

Face-to-face visits result in voluntary compliance rates of 90 percent or higher, and studies show that compliance rates drop after three years of no contact. Poor compliance equals more risk and harm to the environment. In the Urban Waters and Local Source Control initiatives, Ecology is conducting a multi-media technical assistance approach aimed at increasing the number of visits per year through focused inspections and coordination with local governments. Local government regulates smaller businesses to



## 2009 – 2011 Department of Ecology Strategic Plan Reduce the Use of Toxic Chemicals and Manage Hazardous Waste

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assure appropriate disposal of their waste and is a key resource for source control for these small businesses and the general public. Ecology is funding local government to work with these constituents, respond to issues covered by local ordinances, or refer them to Ecology for investigation or action as appropriate.

### **Chemical Action Plans**

Ecology is working with other local, state, and federal entities to reduce, and ultimately eliminate, the generation of mercury waste and releases of mercury to the environment. Our focus has been to reduce or eliminate mercury waste from dental offices, schools, auto recycling, hospitals, and certain products (batteries, auto switches, utility switches, thermometers, and fluorescent bulbs).

We are developing similar action plans to reduce lead and flame retardants in products and the environment. Our experience with chemical action plans has shown that finding safer alternatives is a key to successfully reducing the use of toxic substances. As a result, we also have a program that will help find safer chemical products.

### **Safer Chemical Alternatives**

To reduce toxic threats, we need to identify safer alternatives for toxic or hazardous chemicals. This will help businesses, government, and citizens make better choices on what to use and buy. Ecology is working to (1) 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. Identifying safer chemical alternatives for businesses and better informing the public on toxic chemical dangers and choices can reduce business and clean up costs, minimize public health risks, and result in non-regulatory reductions in the use of dangerous chemicals.

## **Activities, Results & Performance Measures**

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### **Improve Community Access to Hazardous Substance and Waste Information**

Ecology gives local governments, other agencies, and the public information about the type, location, and source of hazardous chemicals in their communities. We collect information on:

- Chemical releases to air, land, and water.
- Chemicals stored by businesses.
- The amount of hazardous waste generated by businesses.
- We respond to public inquiries about toxic chemicals and provide a Web site to let people know about toxic chemicals released in their community.

### **Expected Results**

Hazardous waste and chemical data (type, location, volume, etc.) is readily available to emergency responders, local governments, citizens, and decision makers.



## 2009 – 2011 Department of Ecology Strategic Plan Reduce the Use of Toxic Chemicals and Manage Hazardous Waste

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- Over 9,500 phone calls to the hazardous assistance hotline are responded to annually.
- "Shoptalk" newsletter is issued to 25,000 businesses.
- Forty publications for businesses are developed or revised yearly.
- The State Emergency Response Commission and local emergency planning committees get help from Ecology with data on chemicals and hazardous substances.
- 7,000 hazardous waste reports from businesses are collected and analyzed yearly.

### Performance Measures

- Number of visits to Ecology hazardous waste Web sites.

### **Increase Compliance and Act on Environmental Threats from Hazardous Waste**

Ecology inspects facilities that generate hazardous waste to ensure compliance with state and federal regulations. Technical assistance and inspections, combined with an effective enforcement program, are essential to ensuring compliance with hazardous waste laws. Our goal is voluntary compliance; however, for repeated refusal or inability of a facility to correct violations, we take enforcement actions.

### Expected Results

Facility compliance in managing hazardous wastes is improved for the protection of public health and the environment.

- Improved compliance shown by an increase in the number of facilities that have few or no violations.
- 320 compliance inspections are conducted annually (including 15 treatment, storage, and disposal facilities; 17 recyclers; and 70 large quantity hazardous waste generators).
- Nearly 180 complaints regarding hazardous wastes or substances are responded to.
- Environmental crimes (illegal dumping, falsifying records, etc.) are responded to and investigated.

### Performance Measures

- Number of significant environmental threats resolved.

### **Increase Safe Hazardous Waste Management Through Technical Assistance**

Ecology provides education and technical assistance to thousands of businesses on safe hazardous waste management. We do this through workshops, guidance materials, site visits, and Web updates. Facilities that safely manage hazardous waste protect the public and the environment, and reduce the need for significant clean up costs.

### Expected Results

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





## 2009 – 2011 Department of Ecology Strategic Plan Reduce the Use of Toxic Chemicals and Manage Hazardous Waste

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- 376 compliance technical assistance visits are conducted each year.
- Businesses get help determining how to manage their wastes safely.
- Annual workshops are held to explain regulatory requirements and best management practices.
- More facilities achieve and stay in compliance with regulatory requirements.
- New businesses get visits from agency staff to explain hazardous waste requirements.

### Performance Measures

- Number of waste reduction technical assistance visits to prioritized business sectors.

### **Prevent Hazardous Waste Pollution Through Permitting, Closure, and Corrective Action**

Fifteen facilities in the state are currently permitted to treat, store, and dispose of hazardous waste. These facilities are required to have closure plans to make sure human health and the environment are protected when these facilities close. Environmental contamination found at any time before closure requires a corrective action clean up plan. Ecology is currently working on 27 high-priority corrective action clean up sites.

### 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 treatment, storage, and disposal facilities are issued.
- Eight percent yearly increase in the complete clean up or remediation at 27 high-priority facilities.
- Improved compliance at treatment, storage, and disposal facilities.
- No new abandoned facilities requiring clean up.
- Proper financial assurance requirements are in place at used oil processors and recyclers to fund potential future clean ups at abandoned facilities.

### Performance Measures

- Percent progress toward completed corrective action activities.

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

Ecology works with businesses to voluntarily reduce their hazardous waste generation and use of toxic substances. Businesses that generate more than 2,640 pounds of hazardous waste each year are required to prepare plans for voluntary reduction. We provide technical assistance and innovative programs to help businesses do source and waste-generation reduction.



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One of these programs, Technical Resources for Engineering Efficiency, 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. We partnered with the Washington Manufacturing Association to offer a new program, “Lean and Green,” to help businesses use lean manufacturing techniques to improve their bottom line and the environment.

### Expected Results

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

- Quantifiable savings in energy, processed water conservation, and reduced hazardous waste at businesses that volunteer for assistance through the Toxics Reduction Engineering Efficiency and Lean and Green programs.
- Business sectors that have the highest rate of contamination and non-compliance (electroplaters, printed circuit boards, and aerospace parts manufacturers) receive focused assistance and inspections.
- Progress is made on purchasing environmentally preferable products and services at state and local government agencies.
- Businesses are recognized through the Annual Governor's Award for pollution prevention and sustainability practices.

### Performance Measures

- Annual pounds of hazardous waste generated (in millions).



Vicki Colgan from the northwest regional office sorting waste.

## Solid Waste and Financial Assistance

### Mission Statement

*The mission of the Solid Waste and Financial Assistance Program is to reduce both the amount and the effects of wastes generated in Washington State.*

## 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. We are investing in a closed-loop materials management cycle where today's waste becomes tomorrow's "raw material" feedstock.

In addition to solid waste management, staff in the program are responsible for assuring compliance with the major air, water and hazardous waste statutes at a number of major manufacturing facilities including pulp and paper, aluminum smelting, and oil refining businesses.

## Authorizing Laws

- RCW 70.93 – Waste Reduction, Recycling and Model Litter Control Act
- RCW 70.95 – Solid Waste Management Reduction and Recycle
- RCW 70.95C – Waste Reduction
- RCW 70.95D – Solid Waste Incinerator
- RCW 70.95F – Labeling of Plastics
- RCW 70.95G – Packages Containing Metals
- RCW 70.95I – Used Oil Recycling
- RCW 70.95J – Municipal Sewage Sludge – Biosolids
- RCW 70.95K – Biomedical Waste
- RCW 70.95M – Mercury



- RCW 70.95N – Electronic Product Recycling
- RCW 70.132 – Beverage Containers
- RCW 70.138 – Incinerator Ash Residue
- RCW 70.105 – Hazardous Waste Management
- RCW 70.105D – Hazardous Waste Clean Up -- Model Toxics Control Act
- RCW 70.94- Clean Air Act
- RCW 90.48, Water Pollution Control Act

## Constituents/Interested Parties

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

## Strategic Priorities

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### Moving Beyond Waste

The Beyond Waste Plan provides a 30-year waste prevention and toxics reduction strategy for Ecology programs, businesses and local governments. The plan's first phase includes providing assistance to increase green building and recycling of organic materials. Both efforts have been identified as critical to addressing climate change. Ecology is also developing programs to help businesses reduce wastes and toxic materials, an essential step in protecting Puget Sound. To build market demand for less harmful products, we are promoting state and local government purchasing of environmentally preferable products.

### Waste Prevention and Recycling

Waste prevention and diversion from landfill disposal (or recycling) are potent 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.

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. Additionally, when transporting waste to a landfill, greenhouse gases are emitted through the combustion of fossil fuels.

Conservation of resources through recycling is critical to a sustainable economy and environment. Fossil fuels are also required for extracting and processing raw materials necessary to replace disposed materials with new products. Manufacturing products from recycled materials typically requires less energy than manufacturing from virgin materials. Waste prevention and recycling delay the need to extract some raw materials, lowering greenhouse gases emitted during extraction. Waste prevention means more efficient resource use, and making products from recycled materials requires less energy. Both lower greenhouse gases emitted during manufacturing.



As an additional benefit to climate change impacts, waste prevention and diversion can help store carbon. Carbon storage increases when wood products are recycled. Carbon storage also increases when organic materials such as food waste and grass clippings are composted and added to the soil.

In 2006, efforts of local governments and Ecology resulted in a diversion of 7.6 million tons of material from landfills. That amount equates to over three million tons or over 1,000 pounds per person of reduced greenhouse gas emissions. This is similar to removing 2.5 million passenger cars from the roadway each year—over half of the passenger cars in Washington.

### **Electronics Recycling**

Electronic products are the fastest growing category of waste. These products contain valuable material richer in content than raw ore. They also contain hazardous materials that need to be handled appropriately to protect human health and the environment. The Legislature passed the Electronic Product Recycling law in 2006. The law requires manufacturers of televisions and computers to provide recycling services to consumers at no charge.

Ecology is working with manufacturers to have recycling services in full operation throughout the state by January 1, 2009.

### **Reducing Toxic Threats**

Certain toxic chemicals are persistent (last a long time) in the environment and bioaccumulate (build up) in animals. Ecology completed a Persistent Bioaccumulative Toxins (PBT) rule in January 2007 that lays out a path to reduce health impacts of PBTs on our citizens. To date, Ecology has completed two chemical action plans (CAPs) on mercury and a class of chemical flame retardants called PBDEs. A CAP for lead will be available for public comment in the summer of 2008. These plans lay out strategies for reducing the uses, releases and exposures to the worst chemicals.

In 2008, the Legislature passed the Children's Safe Product Act. This law requires that children's products meet the minimum standards for lead, cadmium and phthalates by July 2009. Ecology, working with the Department of Health, will develop a rule that lists chemicals of high concern for children's products. Six months after the rule is effective, manufacturers must report to Ecology.

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.

### **Funding Local Solid Waste Management Programs**

Local governments have primary responsibility for managing solid waste in Washington. Ecology provides Coordinated Prevention Grants to local governments with funding from the Local Toxics Control Account. These grants fund local programs for solid waste prevention, toxics reduction, enforcement, permitting, and waste management.

Local governments also fund some of their programs with user fees based on amounts of waste disposed. This funding structure is beginning to raise concerns because its unintended consequence is a disincentive to diversion and recycling programs. Ecology, along with the State Solid Waste Advisory Committee, is



evaluating the current solid waste management financing system and looking at possible options for future funding that do not rely on waste amounts.

### **Environmental Footprint Project**

Ecology is developing a “footprint tool” designed to help the regulated industries, Ecology and local communities understand the consequences of various manufacturing and pollution reducing strategies through the use of a consistent and standardized set of sustainability metrics. These metrics include environmental, economic, and social indicators consistent with the Beyond Waste vision of sustainability.

The footprint tool will help measure opportunities for saving energy, water, materials and money in order to improve environmental performance at facilities. The use of a standardized set of metrics is critical to educating the consumer and providing incentives for corporate behavior change. The “footprint tool” is currently being tested by five pulp and paper facilities (Simpson-Tacoma, Grays Harbor Paper, Boise in Wallula, Port Townsend Paper and Nippon Paper). The work to develop Footprints for the five facilities is expected to be completed by spring 2009. Additional sectors will be examined if funding becomes available.

### **Biosolids Management**

Biosolids are an unavoidable product of wastewater treatment, yet they do contain nutrients essential for plant growth. However, biosolids also contain small amounts of pollutants and some microorganisms that must be properly treated or managed.

Ecology provides oversight and assistance for operators of sewage treatment plants and other facilities that generate, treat, and use biosolids. Ecology designed the program to protect public health and the environment while encouraging the beneficial use of a valuable resource through land application of treated material.

## **Activities, Results & Performance Measures**

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### **Eliminate Waste, Promote Material Reuse, and Safely Manage Trash**

Waste reduction and recycling conserves resources and saves money in both public and private sectors. Ecology provides a 30-year vision for reducing waste and toxic materials, technical assistance on pollution prevention strategies, assistance in establishing and operating local recycling programs, better management of building materials (new and waste), and implementation of an organic materials reuse strategy.

#### **Expected Results**

Solid waste generation per capita decreases, saving businesses and people money, and saving resources for future generations.

- Implementation of a long-term strategic plan that leverages resources to reduce solid waste generation and increases recovery and use of valuable materials from wastes.



- Increased reuse of construction and demolition materials, organic matter, compost, and sludge (biosolids).
- Decreased amounts of waste disposed of at waste disposal facilities.
- Reduced generation and use of toxic materials by citizens and industries by focusing on moderate risk waste (hazardous waste generated from households and small businesses).
- Electronic product recycling program (televisions and computers) is developed and implemented.

#### Performance Measures

- Tons of solid waste generated.
- Tons of solid waste disposed.
- Tons of material recycled (including organic wastes).
- Number of registered collectors of recycled electronics.
- Number of collection locations in operation.

### Prevent and Pick Up Litter

Litter control efforts include a litter prevention campaign, Ecology Youth Corps litter pickup crews, Community Litter Clean Up contracts, and coordination with other state and local efforts to maximize litter pickup. Litter prevention and pickup helps to keep Washington green, supports tourism, and provides employment opportunities for youth. The hazards posed by litter are real and sometimes deadly.

Road debris and unsecured loads from trucks have caused several fatalities in the last few years. While strict enforcement and stiff fines continue to be a primary deterrent, the “litter and it will hurt” campaign launched in 2002 is also using a safety message to reduce littering. In the spring of 2007, Ecology re-launched the “litter and it will hurt” campaign with a new focus on reducing potentially dangerous litter, such as unsecured loads and lit cigarette butts. Ecology’s Youth Corps, together with local government and state agency partners, picks up 6.6 million pounds of litter each year. This work is made possible through the Model Litter Control, Waste Reduction and Recycling Act.

#### Expected Results

Roads are cleaner, as shown by a Road Cleanliness Indicator, through prevention campaigns and litter being picked up in a timely way.

- 6,500 tons of litter picked up with local partners.
- 800 youth are employed in litter pickup.
- 30,000 litter hotline calls are responded to.
- Litter citations increased by 10 percent.
- Litter survey will start in fall 2008.
- \$2.6 million in grants is provided to local governments to clean up litter and illegal dumps.
- Litter is picked up on over 60,000 miles of roads.

#### Performance Measures

- Road cleanliness rating.
- Pounds of litter picked up.



## **Fund Local Efforts to Clean Toxic Sites, Manage and Reduce Waste**

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

Coordinated Prevention Grants support local government activities related to landfill regulation to protect groundwater, prevention 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 and waste and toxicity reduction for buildings.

Remedial Action Grants provide funding to local governments to clean up property contaminated by hazardous substances, to protect 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 clean ups and for waste prevention efforts.

### **Expected Results**

Over \$95 million in grants is provided to local governments and managed leveraging approximately \$42 million in local government resources.

- Technical assistance is provided through 160 agreements with local governments on about 400 projects.
- Over 25 million pounds of 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 provided to local jurisdictional health departments is managed to ensure that approximately 350 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**

- Tons of household and small quantity generator hazardous wastes recycled or properly disposed of.
- Number of Remedial Action Grant funded hazardous waste cleanup projects completed.
- Number of Public Participation Grants awarded to non-governmental organizations for cleanup oversight.
- Number of funding grants and contracts managed by the Solid Waste and Financial Assistance Program (SWFAP).

## **Provide a One-Stop Oversight to Large 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 many environmental issues at a facility, one engineer is the single point of contact for air, water and waste permits and compliance at these 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 down emissions over time.

### Performance Measures

- Percentage of major industrial permit actions that meet Ecology timeline goals.
- Amount of pollution generated by industrial sector (paper mills, metal smelters, petroleum processing).

## Reducing Toxics Threats

Persistent bioaccumulative toxins (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 coordinates agency-wide efforts, engages other key organizations and interest groups, and provides for public education and information on reducing PBTs in the environment.

### Expected Results

- Public health and environmental impacts associated with PBTs are minimized and strategies are developed and implemented to reduce and eliminate these harmful chemicals.
- Lead exposures are reduced by focusing on eliminating exposures due to lead based paint in homes and lead containing children's products. Lead releases to the environment are reduced by encouraging the phase out of lead in products where alternatives are available.
- Chemical action plans are developed for polycyclic aromatic hydrocarbons (PAHs) in 2009 and perfluorooctane sulfonates (PFOS) in 2010.
- The 2008, the Legislature passed the Children's Safe Product Act. This law requires that children's products meet the minimum standards for lead, cadmium and phthalates by July 2009. SWFAP working with the Department of Health, must develop a rule that lists chemicals of high concern for children's products. Six months after the rule is effective, manufacturers must report to Ecology.

### Performance Measures

- Number of chemical action plans completed within the biennium.
- Number of children tested for blood lead
- Number of older homes remediated
- Chemicals of high concern for children are identified



Ecology's Christina Zerby inspects one of the Tiger Oil cleanup sites.

## 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 over 11,000 toxics-contaminated sites with toxics since the mid-1980's. Roughly 5,000 of these sites were the result of underground storage tanks leaking into the environment and contaminating the soil and/or groundwater. Of the 11,000 contaminated sites, 58 percent require no further clean up action and 25 percent are in the process of being cleaned up.

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

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

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

## Authorizing Laws

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



## Constituents/Interested Parties

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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.
- Business and individuals engaged in the clean up of contaminated sites.
- Ports.
- Insurance and petroleum companies.
- Tribes.
- Lenders, developers, 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

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### **Puget Sound Initiative**

In December 2005, Governor Gregoire launched an initiative to revitalize efforts to protect and restore Puget Sound. We have focused efforts on ranking and prioritizing Puget Sound sites waiting to be cleaned up, taken on-the-ground actions to speed up cleanups, and are bringing stronger restoration plans into clean up efforts. The program defines Puget Sound sites as those within one-half mile of the Sound.

Ecology is using a combination of strategies 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, other shellfish, and habitat.

### **Urban Waters Initiative**

Ecology has identified three urban areas to focus coordinated efforts to control chemical pollution sources: Spokane River, the Lower Duwamish Waterway and Commencement Bay. These urban waters are contaminated with chemicals from industrial sources, contaminated sites, stormwater, municipal wastewater, and businesses that use hazardous materials.



- The Spokane River has elevated concentrations of metals, polychlorinated biphenyls (PCBs), and dioxins/furans. Polybrominated diphenyl ether (PBDE) concentrations in fish are the highest in the state. Our primary work here is controlling metals from the Coeur d'Alene Basin Superfund site in Idaho, to reduce the metals on the beaches and impacts to fish.
- The Lower Duwamish Waterway has been contaminated by industrial activity, combined sewer overflows, and more than 100 storm drains. Our primary work is identifying specific sources of contamination and addressing upland site cleanups to support the cleanup of contaminated sediments.
- Commencement Bay has been contaminated by large, single-point polluters and by thousands of homeowners, small businesses, and vehicles. Some previously cleaned-up sites in Commencement Bay are being re-contaminated from these sources. We are providing technical assistance to the public and local governments on site cleanups to reduce recontamination.

### **Managing Capital**

The funding for local government cleanup grants has grown significantly, tripling in the last five years. In the same way, funding for orphaned, abandoned, Puget Sound, and area-wide contaminated sites has more than doubled during that time. While funding to manage clean ups has increased 200-300 percent, staff available to manage these clean ups has increased by less than 10 percent. Staff are at capacity to manage the additional cleanup opportunities created by the funding increase. The majority of the additional cleanups are being conducted in the Puget Sound area.

### **Rebuilding the Voluntary Cleanup Program**

We have a program to help site owners voluntarily clean up their contaminated sites. Growing use of the Voluntary Cleanup Program (VCP) creates a challenge. In 2005, we held two internal workshops to determine how to improve the VCP process for site owners and our site managers. We did a workload analysis to understand site-load capacity of staff and invited people representing different interests to provide feedback during this development phase.

These workshops resulted in reconstructing the VCP. In less than two years, we've set expectations for public response times for significant documents, created a workload overflow strategy, and built a billing system. This year we will continue work with mentoring and training to help our staff manage sites that have more than cleanup issues.

### **Five-Year Review of the Model Toxics Control Act (MTCA) Cleanup Standards**

Every five years, we review MTCA to make sure cleanup standards stay current with changes in science. We also use this opportunity to review the entire rule. We have engaged stakeholders in scoping meetings and informal comments on rule changes are already coming in. These comments will be useful as we will look at state priorities and agency resources, and begin work on the rule. The time frame for updating the rule will depend on the comments we receive. Typically, the rule revision process takes 18 months to two years.

### **Asarco Bankruptcy**

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 had also paid for some site cleanup costs.

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

The state is awaiting judgment on the outcome of a bankruptcy trial in late 2007. With the increase in copper prices, there is a real likelihood that Washington will receive a sizable financial judgment.

### **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 international 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 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 international border. Teck Cominco did not comply. The Colville Confederated Tribes 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 other tribal and federal government entities, are presently providing oversight assistance to EPA. This EPA-directed investigation is independent of the ongoing litigation in federal court.

## **Activities, Results & Performance Measures**

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### **Cleanup 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. Our 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 water body or the environmental health of sediments.
- May affect people that are living, working, or recreating near the site.

Contamination may be in the soil, sediments, under-groundwater, air, drinking water, and/or surface water.



### Expected Results

The number of 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.

### Performance Measures

- Number of known toxics contaminated sites with clean up 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. Ecology ensures that tanks are installed, managed, and monitored in accordance with federal standards and in a manner that prevents releases into the environment. Properly managing such tanks saves millions in cleanup costs and prevents contamination of limited drinking water and other groundwater resources.

### Expected Results

Underground storage tanks are properly installed, monitored and/or decommissioned to minimize the release of oil, gas, and other toxic materials into drinking water and other under-groundwater sources.

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

### Performance Measures

- 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 conducted in a variety of ways: completely independent of Ecology; independent with some agency assistance or review; or with agency oversight under a signed legal agreement (an agreed order or consent decree). The voluntary cleanup program minimizes the need for state funding and promotes local economic benefit through the redevelopment of contaminated 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.

- Decreased response time from Ecology to site owners and prospective buyers.



- Increased number of determinations made on final cleanup reports submitted by parties who voluntarily cleaned up sites.

#### Performance Measures

- Average number of days to provide an assessment of a plan or report received from a Voluntary Cleanup Program applicant.



Joe Caggiano, Jacqueline Shea, and Zelma Jackson take samples of Columbia River sediments.

## 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 consists of 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 53 million gallons of radioactive and chemically hazardous waste in Hanford's 177 underground storage tanks.
- Removing the residual sludge after removal of 2,100 tons of disintegrating nuclear fuel rods stored in concrete basins 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 1,500 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 United States Department of Energy (USDOE), which operates the Hanford Site, the federal 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 was not required to comply with hazardous waste, air, or water pollution standards. The Tri-Party Agreement serves to bring the Hanford Site into compliance with the same rules that regulate private industry. Authorizing laws include:





- Resource Conservation and Recovery Act (RCRA)
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund)
- Toxic Substances Control Act
- Hazardous and Solid Waste Amendments Act
- RCW 90.48, Clean Water Act
- RCW 70.94, Clean Air Act
- RCW 70.105, Hazardous Waste Management Act
- RCW 70.105D, Model Toxics Control Act
- SEPA State Environmental Protection Act

## Constituents/Interested Parties

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- Congress, USDOE, EPA, the Defense Nuclear Facility Safety Board, and US 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. Additionally these tribes have interests outlined by treaty.
- Franklin, Benton, and Grant counties and the cities of Pasco, Richland, Kennewick, Benton City, and West Richland.
- Hanford Advisory Board, Oregon Hanford Cleanup Board, public interest groups in Seattle, Portland, Hood River, and Spokane including: Heart of America Northwest, Hanford Watch of Oregon, Physicians for Social Responsibility, Washington League of Women Voters, and Columbia Riverkeeper.
- Tri-Cities area businesses, 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

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### Slowed Progress in Site Clean Up

The United States Department of Energy (USDOE) Environmental Management Program is the largest environmental program in the nation. The cleanup of the Hanford Site is one of the largest elements of this program. The USDOE has missed several major clean up milestones and will not meet many critical, near-future milestones due to federal funding reductions. We are engaged with the USDOE in negotiations, but may initiate litigation to address the missed milestones and establish an enforceable and achievable plan to get back on schedule in cleaning up Hanford. Those negotiations are ongoing, and the end-point commitments of many Tri-Party Agreement objectives are likely to change as a result of the negotiations.

### Tank Waste Clean Up

The cleanup of underground tanks at the Hanford Site will be one of the longest, most costly public works projects ever undertaken. 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 roughly 33 percent complete. However, the construction schedule has been repeatedly delayed. Ecology is actively pressing for construction to resume. The current requirement is for USDOE to begin operations of the treatment facility by 2011. USDOE's new proposal is for operation by 2019.

### **Continuation of 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 on the stabilization and decommissioning of these facilities to reduce hazards to workers and the environment. Progress must be maintained on issuing closure or final operating permits for waste transportation, storage, and disposal at the Hanford Site.

### **Protection of the Columbia River**

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

### **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 for the wastes and materials created on-site, but also wastes from many other sites in the country. As a result of a settlement agreement, the USDOE cannot currently import low-level mixed or transuranic wastes from other USDOE sites to Hanford. At the same time, long-term plans for Hanford clean up 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.

### **Public Involvement**

Because of the high level and broad based regional interest in Hanford, including impacts of waste transportation and disposition, informing the public, maintaining stakeholder relations, and ensuring public participation in Hanford decision making, are important goals of the Nuclear Waste Program.

## **Activities, Results & Performance Measures**

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### **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. This restoration results from cleaning up contaminated sites from past nuclear production activities. Ecology ensures that radioactive and hazardous contaminants are removed, residual contaminants are contained and monitored, and mitigation of natural resource damage on Hanford occurs.



### Expected Results

- Public use of the air, soil, and water at Hanford will be restored and human and environmental risks associated with past Hanford activities are removed or reduced.
- By 2009, 15 percent of the hexavalent chromium present in the groundwater plume in the Hanford Site 100 Area will be remediated before it reaches the Columbia River.
- Clean up of contaminated waste sites adjacent to the Columbia River continue.

### Performance Measures

- Tons of radioactive and/or chemically contaminated soil and debris removed and securely disposed 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 coordination of multiple regulatory and technical requirements.

In addition, Ecology has regulatory oversight of waste management activities at three facilities not under the management of the US Department of Energy (Energy Northwest, AREVA, and the US Navy's Puget Sound Naval Shipyard).

### Expected Results

All major facilities on the Hanford Site will be decontaminated and decommissioned, and either demolished or placed into a long-term safe storage configuration.

- Six of 19 high priority contaminated buildings in the 300 Area will be removed.
- 27 percent of the decontamination and decommissioning effort at the Plutonium Finishing Plant will be completed (target completion is by 2016).
- Continued removal of ancillary buildings in the 100-N Area and decontamination and stabilization of the 100-N Reactor.

### Performance Measures

- Percent completion of the decontamination and decommissioning of the Plutonium Finishing Plant at Hanford (final completion by 2016).

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

Ecology protects public health and natural resources by providing regulatory oversight for the treatment and removal of highly radioactive tank waste at the Hanford Nuclear Reservation. We focus on the design, permitting, construction, and operation of the Hanford Waste Treatment Plant, the Integrated



Disposal Facility (a mixed, low-level waste landfill), and the immobilized high-level waste storage facility.

#### Expected Results

- 53 million gallons of high-level radioactive mixed waste from Hanford's interim storage tanks will be retrieved and treated.
- Construction of The Hanford Tank Waste Treatment Plant that has been significantly delayed will be resumed.

#### Performance Measures

- Percent of the Hanford tank waste treatment plant construction completed.

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

Ecology protects public health and natural resources by ensuring the safe storage and management of 53 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-shell tank waste storage system, removing liquid wastes from the single-shell tanks, and beginning to close portions of the tank waste storage system. In coordination with the Hanford Tank Waste Disposal Project, the tank waste will be removed and treated, leading to eventual closure of all 177 Hanford waste tanks by 2028.

#### Expected Results

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

- Four single-shell tanks are emptied and waste is stored safely.
- A permit is issued for the Double Shell Tank Farms.

#### Performance Measures

- 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 Nuclear Reservation, as well as at radioactive mixed-waste sites throughout the state. We regulate the management of this historic and ongoing waste stream, and ensure the retrieval, treatment, and safe disposal of high-risk transuranic and high-activity wastes currently buried in shallow, unlined trenches.



### Expected Results

2.6 billion gallons of liquid wastewater and 35 million cubic feet of solid wastes will be treated and disposed of by 2017 to significantly reduce the risks posed to Hanford workers and the environment.

- Closure decisions for the commercial low-level radioactive waste disposal site are made.
- 4,900 cubic meters of transuranic waste are retrieved from the low-level burial grounds at Hanford.
- 2,445 cubic meters of mixed low-level waste are treated for disposal.
- 2,400 cubic meters of contact handled transuranic mixed waste are treated or certified for disposal.
- 600 cubic meters of contact and remote handled mixed low-level waste are treated.

### Performance Measures

- Cubic meters of transuranic waste removed from the low-level burial grounds at Hanford.



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Olympia-based WCC Crew rebuilds trails that were washed out during the November 2006 floods near the Carbon River at Mount Rainier. From L to R: Ted Dewees (supervisor), Paul Griffith, Samantha Harvell, Tricia Bays, and Samuel Lanz.

### **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 is bestowed with an abundance of shorelines, rivers, streams, lakes, wetlands, floodplains and marine waters. These priceless natural treasures attract people to the state. Ironically, population growth and development threaten the very resources that create the allure. In the last 100 years, many once-intact shoreline, floodplain, and wetland systems have been damaged or completely destroyed. Current regulations (and how they are implemented) sometimes allow development that damages or destroys these important resources.

The challenge facing our citizens and communities is defining appropriate and sustainable development for the 21<sup>st</sup> century while ensuring the health of watersheds, adequate water supplies, and restoration of 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**

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



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- *RCW 43.143, Ocean Resource Management Act*
- *RCW 78.56, Metals, Mining and Milling Act*
- *Federal Clean Water Act*
- *Federal Coastal Zone Management Act*

### **Constituents/Interested Parties**

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- Local government.
- State and federal resource agencies.
- Tribes.
- Business.
- Environmental organizations.
- Not-for-profit organizations.
- Citizens.
- Property owners.

### **Strategic Priorities**

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#### **Shoreline Master Program Updates**

Shoreline Master Programs are our most important tool for reaching shoreline protection and restoration goals. They are developed through a partnership between the state and local governments and include the 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 are scheduled to update their Shoreline Master Programs by 2014. The Washington State Legislature adopted a schedule and began providing funding for this in 2003. To date, one-third of updates are underway or complete. Ecology places a high priority on shoreline program updates and provides grants and technical support to communities throughout the state.

Achieving SMP updates by the adopted deadlines will require a significant increase in funding for grants and Ecology staff. We are working with our local partners and other interested parties to address this challenge.

#### **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. With population growth, 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 turn around the failure of wetland mitigation.



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This biennium, we will focus on two key areas: improving the way we do mitigation now, and providing alternatives for more ecologically significant mitigation. Our priorities are:

- Continue to implement a compliance program to make sure the mitigation we approve is successful.
- Use data from compliance work to inform future mitigation requirements and permit conditions.
- Complete the wetland banking rule and improve the predictability of the wetland bank certification process.
- Support alternative mitigation approaches such as in-lieu fees and advance mitigation.
- Finalize and implement the Mitigation That Works Forum Recommendations Report.
- Provide training to communities on wetland management.
- Provide technical assistance to local governments on
- Work with local governments to use the Landscape Characterization tool for identifying the best locations for mitigation sites.

### **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 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 major planning investment.

The state is divided into 62 Water Resource Inventory Areas (WRIAs). The planning status statewide is:

- 32 WRIAs have approved plans and are receiving Phase 4 Implementation funds.
- Five WRIAs have approved plans by their county boards and are close to Phase 4 Implementation.
- Two WRIA plans have recently been approved by the planning unit.
- Four WRIAs are expected to complete plans in the next two years.
- Three have just begun the planning process.
- The rest have either elected not to use or have stopped the Watershed Planning Act process.

We will be working with the 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, and people. In the Puget Sound region, we help watershed planning groups integrate watershed, salmon recovery, and other environmental plans.

### **Protecting Puget Sound Habitat**

Habitat protection is a priority for Puget Sound restoration. An astonishing 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 Puget Sound area by 2025, we must become smarter and more effective in protecting our functioning shorelines and upland habitats. In this biennium, Ecology will continue to assist counties and cities to update their regulations that protect shorelines and other important habitats - their local 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





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appropriate development. We will work with the Puget Sound Partnership and others to identify opportunities to remediate armored shorelines to improve this vital habitat.

### **Floodplain Management and Flood Hazard Reduction**

Proper flood hazard management protects people and private and public property, as well as natural resources and fish and wildlife habitat. Ecology administers the Flood Control Assistance Account Program (FCAAP), providing grants and technical assistance to local governments for comprehensive flood hazard management planning and flood damage reduction projects. Ecology is also the state's coordinating agency for the National Flood Insurance Program (NFIP) and the liaison with the Federal Emergency Management Agency (FEMA) and State Emergency Management Division. We assist with response and recovery efforts with declared flood emergencies and federally declared disasters.

Ecology staff works with local governments, the business community, and citizens on flood hazard recognition and hazard reduction. This includes grant funding, technical assistance, education and training, and hazard assessment and mitigation advice.

Responding to levee decertification will be special focus area this biennium. We will work with all concerned parties to identify challenges and opportunities for solutions regarding levee decertification. A second focus will be Chehalis watershed flood hazard reduction. We will work with our local, state and federal partners to improve the resilience of communities and infrastructure in this challenging area.

### **Climate Change - SEPA and Preparing for Sea Level Rise**

Ecology will clarify how considerations of climate change should be incorporated into environmental review and decision making under the State Environmental Policy Act (SEPA). Based on recommendations from the Climate Action Team (CAT), it is our intent to revise our state's SEPA rules, and prepare guidance regarding how climate change should be considered during SEPA environmental review, in order to avoid a "policy by litigation" scenario here in Washington

The anticipated rise in sea level is a particular challenge for our state. 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 grants through the Flood Control Assistance Account Program and Shoreline Master Program updates for communities desiring to improve their preparedness for 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



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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 primarily 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.

### **Shellfish Aquaculture Siting and Operation**

Shellfish aquaculture is gaining greater attention in western Washington for a variety of reasons including economic, water quality, and land use issues. In this biennium, we will assist local governments with implementing improved guidelines for siting and operation of intertidal geoduck aquaculture. A 2007-09 biennium project under HB 2220 directed Ecology to adopt rules for geoduck aquaculture siting and operations into the Shoreline Master Program guidelines. We will also continue to work with Sea Grant on research into environmental and other issues related to geoduck aquaculture.

## **Activities, Results & Performance Measures**

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### **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.



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### 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 that have submitted updated shoreline master plans.

### **Protect Water Quality by Reviewing and Conditioning Construction Projects**

The federal Clean Water Act and Coastal Zone Management Act set up water and coastal protection programs. Ecology reviews construction proposals that may impact streams, lakes, rivers, wetlands, shorelines, or marine waters. We implement these laws in four ways:

- Offer technical assistance to applicants from the beginning to the end of the permit process.
- Provide applicants a joint multi-agency permit application.
- Coordinate with other regulatory agencies that have interests in proposals.
- Make permit decisions that protect water, sediments, fish, and shellfish habitat.

This allows Ecology to participate in federal permitting activities to ensure that 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.
- The average number of days it takes to make a 401 certification decision is reduced.
- Projects comply with permit conditions.

### Performance Measures

- Number of days to make 401 certification decisions.

### **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:



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- 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.
- Assisting 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

- Average time to establish a wetland bank.
- Percentage of sites visited within 18 months after receiving as-built reports.

## **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 four 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 instream 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.



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### Performance Measures

- Percentage of watersheds in the implementation stage of watershed planning.

### **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 Measures

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

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

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

- Conducting training and giving technical assistance to local and state government.
- Maintaining the SEPA register which catalogs SEPA projects across the state.



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- 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.
- Percentage 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.



## 2009 – 2011 Department of Ecology Strategic Plan Protect Wetlands, Shorelines and Watershed Health

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- Coastal and land-use managers and planners are trained to carryout environmental policies and rules in Western Washington.
- Volunteers and professionals carryout 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 through the Padilla Bay Reserve.
- Percentage of Puget Sound and Coastal Training Workshop participants who said they intend to apply what they learned in their work.
- Acres of derelict fishing nets removed from Puget Sound.

### **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 Measures

- Acres of habitat restored.

### **Provide Streamlined Project Permitting for Transportation Projects**

A contract between the Department of 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 agency 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.



## 2009 – 2011 Department of Ecology Strategic Plan Protect Wetlands, Shorelines and Watershed Health

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### Expected Results

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

### Performance Measures

- Percentage of WSDOT environmental documents submitted to Ecology's transportation liaison program that are reviewed or approved within agreed upon time frames.

### **Provide Regulatory Assistance for Significant Projects and Small Businesses**

A contract between the Department of 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. This includes Web-based tools, directories, fact sheets, guidance, and other materials.

### Performance Measures

- Number of applicants or 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

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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, toxics and bacteria. Several sources of pollution contribute to poor water quality, chief among them being stormwater. Stormwater runoff is the water that runs off roads, pavement and roofs during rainstorms or snow melt. Stormwater can also come from hard grassy surfaces. Stormwater flows over land to surface water bodies: streams, lakes, and wetlands.

- Pollutants in stormwater are metals, oil and grease, toxic materials and bacteria.
- High stormwater flows erode stream channels, destroying spawning beds.
- On paved and hard surfaces, more water flows away during the wet season contributing to low summer base flows. This leads to drying out the habitat for salmon rearing.

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 Report (TMDL) establishes limits on pollutants that can be discharged to the waterbody and still allow state standards to be met.

Toxic pollution is a growing concern threatening water quality. Ecology is studying sources of toxic pollution and developing action strategies to protect and clean up 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 water bodies, marine sediments and groundwater polluted by an array of contaminants.

## Authorizing Laws

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- RCW 90.48, Water Pollution Control Act
- Federal Clean Water Act



- Federal Safe Drinking Water Act
- RCW 76.09, Forest Practices Act
- RCW 90.71, Puget Sound Water Quality Protection
- RCW 70.146, Water Pollution Control Facilities Financing Act
- RCW 70.105D, Model Toxics Control Act
- RCW 43.21A.650, Freshwater Aquatic Weeds Account
- RCW 90.64, Dairy Nutrient Management Act
- RCW 90.46, Reclaimed Water Use
- RCW 90.50A, Water Pollution Control Facilities Federal Capitalization Grants
- RCW 90.42, Water Resources Management Act
- RCW 90.54, Water Resources Act of 1971
- RCW 90.82, Watershed planning

## Constituents/Interested Parties

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

## Strategic Priorities

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### Non-Point 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 diffuse sources, is generated by every kind of land use, and has no specific regulatory tool, such as 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:

- Secure federal funding to support nonpoint activities,
- Develop a comprehensive manual of best management practices that are known to keep water clean.
- Make sure forest practices are on a path to meet water quality standards.

### Clean Up Polluted Waters

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

- Assess state waters and publish an updated list of polluted water bodies every two years.
- Increase the number of water cleanup plans being implemented.
- Use alternatives to cleanup plans to meet water quality standards faster.



### **Point Source Water Pollution**

The agency 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:

- Make permits more understandable and effective in protecting water quality.
- Help 2,500 industries and communities comply with water quality laws.
- Work to increase the use of reclaimed water and to decrease the toxicity and volume of wastewater discharges.

### **Stormwater**

Ecology assists local governments in building stormwater programs in cities and counties. Stormwater permits cover municipalities (120 local governments) industries (over 1,000) and construction projects (over 2,000 developers and contractors). Ecology will:

- Provide technical assistance and tools to help dischargers reduce contaminated stormwater run-off from their sites.
- Provide financial assistance to local governments to increase compliance with permit requirements.
- Assess and increase compliance with stormwater laws.

### **Financial Assistance**

Ecology will distribute over \$225 million in water quality grants and loans this biennium. Ecology will:

- Use streamlined administrative processes to provide financial assistance more quickly
- Capture environmental data and demonstrate the environmental benefits of the grant and loan program.
- Assist grant and loan recipients in properly managing public funds.

## **Activities, Results & Performance Measures**

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### **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. Ecology does this by reviewing thousands of water quality data samples and publishing an integrated water quality assessment report. This report lists the water bodies that do not meet standards. Ecology then works with local interests to prepare water quality improvement reports to reduce pollution, establish conditions in discharge permits and non-point source management plans, and monitor the effectiveness of the improvement report.

#### **Expected Results**

Water quality improvement reports are in place to protect public health and the environment.



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

#### Performance Measures

- Number of Water Quality Improvement Reports submitted to the US Environmental Protection Agency.

### **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 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.

- 3,500 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

- Number of days to make construction stormwater permit decisions.

### **Prevent Point Source Water Pollution**

Ecology protects Washington's water by regulating point source discharges of pollutants to surface and groundwaters. This is done with a wastewater permit program for sewage treatment plants and an industrial discharge program for other industries. A permit is a rigorous set of limits, monitoring requirements, or management practices, usually specific to a discharge, which is designed to ensure that a facility can meet treatment standards and water quality limits. The permit is followed by regular inspections and site visits.



### Expected Results

Fewer wastewater discharges and lower toxicity through administering the permit program for 2,300 permit holders.

- 100 National Pollution Discharge Elimination System wastewater discharge permits are issued or renewed each year.
- Permit backlog is reduced.
- New permit applicants get responses within 60 days.
- General permits are developed and managed on schedule for 1,500 dischargers.
- 700 site visits are done each year.
- 2,000 wastewater plant operators get certification.
- Communities get help increasing the production and use of reclaimed wastewater.
- Number of repeat violators (five or more violations per year) is reduced.

### Performance Measures

- Percentage 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 non-point source control projects such as watershed planning, stormwater management, freshwater aquatic weed management, education, and agricultural best management practices. Grants are targeted to non-point source problems and communities where needed wastewater facilities projects would be a financial hardship for taxpayers.

### Expected Results

Public funds dedicated to improving water quality are managed in a responsible way to protect public health and the environment.

- Water quality is improved by awarding \$90 million in water quality grants and loans per year to local communities.
- Fifty new grants and loans are awarded each year for projects under existing and ongoing financial assistance programs that demonstrate clear benefits for the environment.
- 300 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, balanced funding allocations, and design-build alternative contracting options.
- Environmental benefits are documented and illustrated through data generated from grants and loans.



### Performance Measures

- Number of failing septic systems repaired or replaced in Puget Sound watershed.

## **Reduce Non-Point Source Water Pollution**

Non-point source pollution (polluted runoff) is the leading cause of water pollution and poses a major health and economic threat. Non-point pollution comes from diverse human activities such as land development, agricultural practices, homeowners, and runoff from roads. These sources of pollution cause problems such as fecal coliform bacteria, elevated water temperature and toxic pollution.

Ecology addresses these problems through raising awareness, encouraging community action, providing funding; and supporting local decision makers. Ecology also coordinates with other stakeholders through the Washington State Non-point 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 Non-point 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 Measures

- Number of bacteria in the Union River (measured as Billions of Colony Forming Units per day at Timberline Drive).



Chuck Lehotsky (left) and Kirk Sinclair measuring the groundwater level in a monitoring well near Scatter Creek in southern Thurston 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, concern for 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 state rivers and streams.
- Inadequate information on water availability, stream flows, and groundwater.
- A growing awareness and concern over the long-term effects of climate change on the water supply.

## Authorizing Laws

- RCW 90.03, Water Code (1917)
- RCW 90.44, Regulation of Public Groundwaters (1945)
- RCW 18.104, Water Well Construction Act (1971)
- RCW 90.14, Water Right Claims Registration and Relinquishment (1967)
- RCW 90.22, Minimum Water Flows and Levels (1969)
- RCW 90.54, Water Resources Act of 1971
- RCW 90.38 and 90.42, Trust Water Rights Program (1989 and 1991)



- RCW 90.80, Water Conservancy Boards (1997)
- RCW 90.82, Watershed Planning (1997)
- RCW 90.90, Columbia River Basin Water Supply
- RCW 43.99E, Water Supply Facilities – 1980 Bond (Referendum 38)
- RCW 43.83B, Water Supply Facilities

## Constituents/Interested Parties

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- Agricultural groups; environmental organizations; 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; sport and commercial fishers.
- Water and power utilities.
- Water-right holders; well drillers.

## Strategic Priorities

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### Improving Water Management Capacity

Several factors are leading us to improve water management:

- Increasing water demand driven by population growth.
- Increased competition for scarce water.
- Frequent droughts that impose high cost on the state and its citizens.
- Better understanding and acceptance of water availability problems.
- Concern for how climate change could impact future water supplies and the environment.

Actions are contingent on funding and legislative mandates. Ecology has been working with stakeholders to update water management policies, and the Legislature has provided 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:

- Initiate state-wide water management strategy to provide context and direction for water management focused initially on water demand and supply forecast. Staff resources would be aligned to meet priorities and watershed planning recommendations.
- 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. Focusing on change applications helps facilitate the sale, transfer, and changes in water use to better use existing water supplies.
- Approving new uses and change uses that mitigate impacts to senior water rights and stream flows.
- Expanding the use of cost reimbursement to process more applications (new and changes) without adding more staff.
- Improving water use management and efficiency through improved policies and programs, incentives, and financial assistance.
- 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 innovative water supply solutions that include developing awareness of readily usable water limits and providing incentives and institutional capacity for new water efficiency technologies, water market improvements, water storage, reclaimed water, and stormwater management projects. We are doing this through the Columbia River Basin Management Program and we need a similar effort for the rest of the state.
- Improving water use accountability. We are increasing water use metering and reporting; maintaining and expanding the stream gaging network; responding to local watershed requests for compliance service; and taking actions on water law violations.
- Improving permit-exempt well management. These wells are impacting senior water rights and flows in some areas of the state.
- 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 considering several alternatives for future adjudications and adjudication reform to improve the effectiveness of water management. Further, we also are looking at water rights settlement discussions with tribes.
- Improving the availability of water resource data and information. We are developing, maintaining, and enhancing our water management data systems including well constructions and licensing, and the water rights tracking system, mapping and keeping pace with increased demands of modern water management, public service expectations, and technology.
- Providing sources for stable long-term funding for water management programs and capital facilities.

## Activities, Results & Performance Measures

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### Adjudicate Water Rights

Adjudication reduces water right conflicts and supports sound water management by increasing certainty regarding validity and extent of water rights. Adjudication is a judicial determination of water rights and claims, including federal, tribal, and non-tribal claims. Ecology's current focus is completing the Yakima River Basin surface water adjudication and pre-adjudication work in the Spokane area and assessing other areas.

#### Expected Results

- Increased water rights certainty and reduced conflict.



- Major uncertainty regarding the validity and extent of the water rights in the Yakima Basin is removed.

#### Performance Measures

- Number of tribal water right settlement processes initiated.

#### **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. Our goal is to restore and protect flows, while meeting out-of-stream needs.

Flows are enhanced by acquisitions via our Trust Water program by leases, purchases, and donations. Efficiency improvements in irrigated agriculture also help with flows. Enhancements are contingent on willing participants. Improvements and acquisitions have different values depending on location, timing and duration (short-term vs. long-term).

#### Expected Results

Water availability is determined and water is sustained for current and future needs.

- Increased setting and enhancing of instream flows in critical water basins to benefit people, fish, farming and the environment.
- Four instream flow rules are contemplated to be adopted ( Lewis, Salmon-Washougal, Quilcene, Dungeness) working with local watershed groups.

#### Performance Measures

- Number of instream flow rules adopted.
- Annual acre-feet of water acquired for instream flow (statewide).
- Annual acre-feet of additional water acquired in Eastern Washington (Columbia River) distributed between instream flows, and agricultural and municipal uses.

#### **Ensure Dam Safety**

Ecology protects life, property and the environment by overseeing the safety of Washington's dams. We do this by inspecting the structural integrity, flood and earthquake safety of existing state dams not managed by the federal government. We also approve and inspect new dam construction and repairs and take compliance and emergency actions.

#### Expected Results

Public and environmental health and safety is protected.



- Reduced risk of potentially catastrophic dam failures for the safety of people and property located below dams.
- Establish inventory of unpermitted dams and acquire resources to get them into the system.
- Develop outreach and compliance strategy as appropriate.

#### Performance Measures

- Number of high hazard dams inspected.

### **Manage Water Rights**

Ecology allocates surface and groundwater resources to meet 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. To make these decisions, we 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 49,000 certificates, 3,000 permits and 166,000 claims.

Ecology embarked on a quality improvement effort for water rights permitting, including reports on the Web and standardization of permit language. We would like to expand the use of cost reimbursement to process more applications (new water rights and water right changes) without adding more staff.

#### Expected Results

Water needs are met and existing water users and the environment are protected.

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

#### Performance Measures

- Number of water right decisions completed (includes new water rights and water right changes).

### **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, our services include providing water via emergency transfers, water right changes, and temporary wells. Ecology also provides drought related information and financial assistance to local governments and we coordinate drought response efforts. We are also working with emerging information on climate change to monitor 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 Measures

- Increased number of temporary water right permits processed during periods of drought.

### **Promote Compliance with Water Laws**

Ecology helps ensure water users comply with the state's water laws. Our 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 that legal water users and applicants for water rights are not impaired, water use remains sustainable, and the environment is protected.

- 80 percent of water use 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 (non-metering).
- Percentage of water use metered in 16 critical basins.

### **Provide Water Resources Data and Information**

The collection, management, and sharing of data and information is critical to local watershed groups, conservancy boards, businesses, local governments, nonprofit groups, the Legislature, other agencies, and the media. The data collected by Ecology supports daily operations, including making water allocation decisions; setting and enhancing stream flows; identifying the location and characteristics of wells, dams, and water diversions; supporting compliance actions; metering; tracking progress; and communicating with constituents.

#### 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 by increasing the numbers of external users (watershed groups, conservancy boards, businesses, etc.).
- Improved collection, preservation and availability of data and information for water allocation, dam safety, well construction, instream flows and communication.
- Mapping of water rights in selected basins, culminating in a state-wide map in the future.

#### Performance Measures

- There is no performance measure for this item.

### **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. Our 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.
- Updating of well drilling data system.

#### Performance Measures

- Percentage of water supply wells inspected by delegated counties.

### **Support Local Initiatives and 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 and other mechanisms. We provide technical support and studies for watershed planning and other local groups to develop and adopt local plans to serve as a basis for sound water management. We provide grants for studies and projects identified in watershed plans as needed for plan implementation.

#### Expected Results

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

- 42 local watershed planning groups get technical support.
- Regional initiatives for central Puget Sound, Columbia and Yakima Rivers, Dungeness, Kittitas, Nooksack, Quincy-Odessa, Spokane Aquifer, and Walla Walla.



#### Performance Measures

- Percentage of watersheds in the implementation (Phase 4) of watershed planning.

#### **Support Water Use Efficiency**

Ecology provides agricultural, commercial, industrial, and nonprofit water users with services that deliver water savings. Our services include information, planning, and technical, engineering, and financial assistance. We also provide support for water re-use projects and to the Department of Health for municipal water conservation. We provide grants and loans to irrigation and conservation districts who work with individual irrigators to achieve greater efficiency and save water for stream flow improvement.

#### 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 Measures

- Volume of water acquired for instream flow (statewide).



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 90.48, Water Pollution Control
- RCW 90.71, Puget Sound Water Quality Protection
- RCW 70.105D, Model Toxics Control Act
- RCW 43.21A, Department of Ecology



- RCW 70.119A.080, Public Water Systems – Penalties and Compliance

## Constituents/Interested Parties

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

## Strategic Priorities

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### 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 clean up efforts, guide regulatory actions (including permitting decisions, instream flow rule setting, etc.), 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 water bodies that don't meet water quality standards. As part of a lawsuit agreement, a memorandum of agreement with the 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 currently using this approach 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 assistance to initiate and maintain stream flow gaging. Watershed managers need stream flow data to support instream flow rule setting and compliance monitoring in response to watershed planning requirements and salmon restoration efforts.





### **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 State. 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.

### **New 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 additional 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 (e.g., 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 (e.g., 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 & Trends In Freshwater**

There is no existing statewide monitoring program that can provide statistically reliable estimates of the overall status, condition, or trends in freshwater quality and aquatic habitat. This means we can’t objectively measure the overall success or benefit of our combined investments in watershed restoration and water quality improvement. Ecology is working with the Puget Sound Partnership and the Washington Forum on Monitoring to develop and implement a Status and Trends monitoring program.

### **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 be unable to adequately manage drinking and irrigation water supplies or evaluate this important



pollution pathway. We are currently working on strategies to improve our understanding of groundwater across the state.

### **Urban Bay Sediment Monitoring**

This recently 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 clean up activities and compare local conditions to overall Puget Sound wide (PSAMP) 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. It makes sense, therefore, 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 & Data Sharing**

There are multiple organizations mandated or chartered to coordinate monitoring and data sharing including the Forum on Monitoring Watershed Health and Salmon Recovery, the Puget Sound Partnership, Puget Sound Monitoring Consortium, Pacific Northwest Aquatic Monitoring Partnership, and others. 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**

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### **Conduct Environmental Studies for Pollution Source Identification and Control**

Ecology conducts studies to address known or suspected pollution problems at specific sites and across regional areas. These studies support our work to protect water quality.

Ecology's 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 of our projects are water quality impact studies in which we calculate the total maximum daily load (TMDL) of a pollutant a water body can absorb without causing violations of water quality standards. We publish our study results 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 Measures

- Number of polluted waterbody segments and parameters evaluated in water quality improvement reports.

### **Ensure Environmental Laboratories Provide Quality Data**

Ecology accredits environmental laboratories that submit data to us. Laboratory accreditation is a formal recognition by Ecology of a laboratory's capability to perform testing, measurement and/or calibration activities. The accreditation program covers analyses in all typical environmental matrices (water, sediment, tissue) including drinking water. Ecology's accreditation programs help ensure that environmental laboratories have the demonstrated capability to provide accurate and defensible data. Our 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 Departments of Ecology and 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 Measures

- Percent of acceptable proficiency testing analyses completed by a subset of accredited permittee laboratories (of ~480 labs in the program).

### **Improve the Quality of Data Used for Environmental Decision Making**

Sound environmental policy and regulatory decisions made by Ecology require accurate and timely data. We ensure our employees have guidance and training on how to develop quality assurance project plans, review project proposals, and develop sampling design requirements and interpretation of results. We require a quality assurance plan for all of our data-generation projects. We also require a quality assurance plan from our grant recipients who receive funding for work involving environmental data. Ecology scientists, modelers, statisticians, chemists, and other specialists interpret technical data, review grantee monitoring plans, and prepare information for policy decisions.



### Expected Results

Environmental policy and agency decisions are based upon 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 Measures

- Percent of environmental monitoring field procedures covered by a formal Standard Operating Procedure.

## **Measure Contaminants in the Environment by Performing Laboratory Analyses**

Ecology's Manchester Environmental Laboratory is a full-service environmental laboratory. Our lab provides technical, analytical, and sampling support for chemistry and microbiology for multiple projects conducted by Ecology.

### Expected Results

- Ecology's full-service environmental testing laboratory provides defensible and accurate analytical and laboratory support to the decision making.
- Scientifically sound laboratory results are provided to clients for making environmental decisions.

### Performance Measures

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

## **Monitor the Quality of State Waters and Measure Stream Flows Statewide**

Ecology operates a statewide environmental monitoring network to:

- Assess the environmental status of major water bodies.
- Identify threatened or impaired waters.
- Evaluate changes and trends in water quality over time.
- Ecology's sampling network includes monitoring 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. We post stream flow data results in near real-time on our Web site.

### 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 Web.
- Agency staff and the public are alerted to emerging water quality problems.
- The effectiveness of water clean up activities is tracked and assessed.

#### Performance Measures

- Percent of freshwater ambient monitoring stations not meeting water quality criteria.
- Percent of monitored stream flows below critical flow levels.



## 2009 – 2011 Department of Ecology Strategic Plan Prevent and Clean Up Oil, Hazardous Spills and Illegal Dumps



Jim Sachet discussing the cleanup of the SS Catala with reporter Kathleen Wolgemuth.

### **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 the Washington's most productive and valuable ecosystems. These incidents can harm fish, birds, and other marine animals or contaminate beach habitats, important cultural sites and shellfish growing areas. 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 90.56, Oil and Hazardous Substance Spill Prevention and Response.
- RCW 88.46, Vessel Oil Spill Prevention and Response.
- RCW 90.48, Water Pollution Control.
- RCW 88.40, Transport of Petroleum Products – Financial Responsibility.
- RCW 70.105, Hazardous Waste Management Act.
- RCW 70.105D, Model Toxics Control Act.
- Citizen's Committee on Pipeline Safety.



## 2009 – 2011 Department of Ecology Strategic Plan Prevent and Clean Up Oil, Hazardous Spills and Illegal Dumps

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### **Constituents/Interested Parties**

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

- Federal, state, local, and tribal governments, including the US Coast Guard, US Environmental Protection Agency, 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 and the general public.
- The Oil Spill Advisory Council.

### **Strategic Priorities**

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#### **Obtain Sustainable Funding for Program Operations**

The 5-cent-per-barrel tax on imported oil provides 60 percent of the operating budget for spills program work. The proportion of this commodity based tax (4 cents) going to program administration has remained constant since the early 1990s. There are several problems with this funding mechanism:

- This commodity tax is based upon the volume of oil coming into the state. This volume has not kept pace with increased costs and inflation.
- The tax structure allows for periodic large, unanticipated tax credits which are not predictable and can seriously deplete the Oil Spill Prevention Account (OSPA).
- The Oil Spill Prevention Account is now over-appropriated with recent funding for the Oil Spill Advisory Council (OSAC) and the oil transfer regulations.

As a result of expenditures exceeding revenues, Ecology projects a budget shortfall in the Oil Spill Prevention Account beginning in the fall of 2009. In anticipation of this problem, the 2007 Legislature directed the Joint Legislative Audit and Review Committee (JLARC) to conduct a study and report back with recommendations to the Legislature in September 2008. Our goal is to develop a long-term, viable funding solution during the 2009 session.

#### **Expand the Scope of Our Work**

Federal preemption under the Supremacy Clause of the US Constitution limits state authority to conduct important 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 US Supreme Court. Ecology is pursuing a number of strategies to accomplish high-priority oil spill prevention initiatives in the maritime field while keeping within Constitutional limits. Initiatives include:



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- Seek delegated authority from the United States Coast Guard for qualified and experienced state personnel to conduct key prevention activities.
- Expand our cooperative partnership with the US Coast Guard consistent with the Memorandum of Agreement and the strategic work plan signed by the Governor and Admiral in June of 2007.
- Leverage efforts with the Puget Sound Partnership and Oil Spill Advisory Council.
- Work with the federal delegation to request federal oil spill legislation to improve maritime safety while preserving state authority.
- Improve and make the Voluntary Best Achievable Protection program available to all deep-draft commercial ships.

### **Complete the Emergency Response System for the Strait of Juan de Fuca**

In 1991, the Legislature directed the Washington state Office of Marine Safety to protect the state's critical coastal natural, economic and cultural resources through an undefined Emergency Response System for the Strait of Juan de Fuca (ERS). Ecology plans to formally define the scope of the ERS and continue to pursue significant progress on related initiatives. Ecology will work closely with the Oil Spill Advisory Council, local tribal nations and key stakeholders accomplish the following ERS objectives:

- Station a fully funded, year round (70-ton bollard pull) standby emergency response tug stationed at Neah Bay.
- Implement the state's Oil Spill Contingency Plan Rules.
- Request that the "federal high volume port line" be moved from Port Angeles to Neah Bay to expand federal response requirements on the outer coast.
- Request that the federally designated Area to be Avoided (ATBA) off the Olympic Coast National Marine Sanctuary is effective in excluding all vessels required to have a federally approved vessel oil spill response plans.

### **Expand Oil Spill Prevention Initiatives**

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

- Seek delegated authority from the United States Coast Guard to conduct vessel and facility 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 tanker trucks 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**

Ecology will continue to improve oil spill management and oil recovery efficiency through advanced planning and application of state-of-the-art technologies. These efforts include:





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- Systematic verification of response equipment availability and contractor readiness. Over the next 6 years, Ecology will schedule detailed inspections and conduct unannounced drills to verify, inspect or deploy all response equipment in the state.
- Conduct “orphan drills” where state and federal agencies will expand their ability to manage major spill incidents, even if the responsible party is unknown, unwilling or unable to manage the cleanup. This initiative will 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 as 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 through out the state.
- Maintain and provide training for recipients of existing equipment caches,

### **Strengthen Delivery of Public Education and Outreach Services**

Ecology has identified the need to increase the number of in-depth casualty and oil spill investigations, and to expand efforts to disseminate the technical findings to applicable industries. We will expand field visits to ports and marinas statewide, and increase participation in the Clean Marina program. To help us improve public education, we will:

- Reinstigate a spill prevention campaign to include the commercial fishing fleet’s preparation for seasonal departure to Alaskan fishing grounds.
- Improve use of website for information during spill incidents to interested stakeholders and the public.
- Develop and maintain website for volunteer registration and management.

### **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 anticipates completing additional work on “human factors” associated with spill events, with advice from the Oil Spill Advisory Council, when funding becomes available.

### **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 rapid and aggressive response to significant 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 be seeking to make progress on the following, some of which may require additional funding and/or new statutory authority:



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- Volunteer Management Program – Ecology would implement a program with full coordination and management of network of volunteers throughout the state for use in event of major spill.
- Bird and Marine Mammal Rescue and Rehabilitation – Currently the capability to rescue and rehabilitate oiled wildlife is very limited. A collaborative partnership between industry, state and federal government is needed to fund a fully effective wildlife rescue and rehabilitation program.
- Vessels of Opportunity – Ecology conducted a study in 2005 into the feasibility of using commercial fishing and other vessels to augment oil spill response capabilities during major incidents. We will be making recommendations to the Legislature and stakeholders for how to implement a well-organized comprehensive program. Similar programs exist in Alaska and to a lesser extent in California.
- Financial Responsibility – Washington state law provides for unlimited liability parties responsible for oil spills. However, recent spills demonstrate that private sector proof of financial responsibility (insurance) is not adequate for certain large spills.
- Oil Spill Response Account – The money in this account is used to cover the potential spill in which a responsible party can not be found or a known spiller is unwilling or unable to execute their responsibilities. The Legislature set the account cap in 1991 at \$25 million and over time it has been reduced to the point where today it is \$9 million. However, the cost to respond to spills has increased every year. At this time the amount in the current account is not adequate to fund a potential major spill.
- State Pilotage Programs – Washington currently has a Pilotage Commission responsible for overseeing state pilots in Puget Sound, 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 for a joint pilotage commission to manage this strategic waterway, and both state economic/port development interests.

## Activities, Results & Performance Measures

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### Prepare for Aggressive Response to Oil and Hazardous Material Incidents

Operators of large commercial vessels and oil handling facilities 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. Our core activities include:

- Review and approval of spill contingency plans and assurance that plan holders and spill response contractors maintain their readiness through scheduled and unannounced drills.
- Partnerships with other agencies to maintain a regional contingency plan that guides how spills are managed in the Northwest.
- Development of 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 and mitigate the impacts of oil spills.



## 2009 – 2011 Department of Ecology Strategic Plan Prevent and Clean Up Oil, Hazardous Spills and Illegal Dumps

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- Enhanced regional spill response team partnerships and capabilities.
- Oil spill contingency plans are approved.
- One new inland Geographic Response Plan is developed.
- Three existing marine Geographic Response Plans are updated.

### Performance Measures

- Percentage of response equipment inspected, tested 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. We do this by focusing on the human and organizational factors that can lead to spills. Our core activities include:

- Inspecting facilities, vessels and oil-handling facility transfers.
- Boarding vessels for educational and compliance purposes.
- Overseeing oil transfer operations.
- Requiring and reviewing facility operations manuals and prevention plans.
- Dispatching the Neah Bay rescue tug to ships in difficulty.
- Assisting 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

Oil spills from vessels and oil handling facilities are minimized or avoided through risk management, the Neah Bay Rescue tugboat, and targeted inspections.

- Reduced number of spills where 25 or more gallons of oil enter surface waters.
- Reduced total volume of oil entering surface waters.
- Reduced percentage of vessel incidents that can lead to spills (e.g., propulsion & steering losses).
- Neah Bay rescue tug helps vessels as needed.
- Increased prevention emphasis on non-regulated oil tankers and tank barges.
- Intentional waste oil discharges from vessels are eliminated.

### Performance Measures

- Number of oil spills that enter surface waters (25-10,000 gallons).
- Total volume of oil that enter surface waters (25-10,000 gallons).
- Percentage of large regulated vessels entering state waters that have spills and casualties.



## 2009 – 2011 Department of Ecology Strategic Plan Prevent and Clean Up Oil, Hazardous Spills and Illegal Dumps

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### **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 clean up of oil spills, hazardous material incidents, methamphetamine drug labs, and assisting other "first response" organizations. Our core activities include:

- Deliver 24-hours-a-day, statewide response services from five field offices.
- Maintain access to a network of aerial observation platforms.
- Work with local governments, tribes and other entities that received spill equipment "caches" to enhance the rapid containment of oil spills.
- Build partnerships with local government, industry and public to ensure effective response actions.
- Coordinate with local, state, and federal law enforcement agencies for methamphetamine drug lab cleanup and 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 7-days-a-week throughout the state.
- All oil spills are responded to no later than within 24-hours from the time they are reported.
- Serious spills receive a rapid and aggressive response.
- Approximately 3,800 annual spill reports are managed.

#### Performance Measures

- Number of field responses conducted by Spills staff.

### **Restore Public Natural Resources Damaged by Oil Spills**

Ecology leads a multi-agency natural resource agency trustee committee to assess damages from oil spills to publicly-owned natural resources. Our core activities include:

- Complete Natural Resource Damage Assessments (NRDA) on 100 percent of oil spills where 25 or more gallons reach surface waters.
- Seek fair compensation from the responsible parties.
- Chair the Coastal Protection Committee to ensure that compensation funds are used for projects to restore the environmental damage and ensure priority wildlife habitat is restored and/or protected.
- Conduct site follow-up visits to ensure accountability for project success after projects are completed.

#### Expected Results

- The environmental impacts from oil spills to publicly-owned natural resources are partially mitigated (compensated for) using funding from damage assessments.



## 2009 – 2011 Department of Ecology Strategic Plan Prevent and Clean Up Oil, Hazardous Spills and Illegal Dumps

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- Restore or protect priority wildlife habitat using natural resource damage funds.

### Performance Measures

- Amount of dollars recovered from oil spill damages.



## 2009 – 2011 Department of Ecology Strategic Plan Provide Efficient and Effective Administrative Support



Aaron Huntley configures an office cubicle for an Ecology employee.

### 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

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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.

## Authorizing Laws

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- RCW 43.21A, Department of Ecology

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

## Constituents/Interested Parties

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- 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

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### Facilities

The 32,000 square-foot stucco wall on the east side of Ecology's 15-year-old Lacey building must be rebuilt to maintain structural integrity and ensure employees' and visitors' health and safety. Our past repair attempts have failed to fix and stop the damage and mold growth from water seeping into the wall. The 2008 Legislature authorized the agency to sell Certificates of Participation up to \$11 million to cover costs to design, engineer, and make needed repairs.

We also need to replace our Northwest Regional Office in Bellevue with a more efficient and sustainable facility that will meet our long-term business needs. We have outgrown the facility, and it cannot be remodeled to accommodate more staff. The current building is also prone to flooding during heavy rains, and mold growth is affecting indoor air quality.

### Information Management and Communication

Ecology has a risk management and strategic plan for improving our data management and making information more available to citizens and stakeholders. We are focused on the following issues:

- Improved Internet applications that will allow customers to do more on-line business with the agency.
- Improved Internet use to engage the public in commenting on and shaping policy proposals, and to streamline paperwork and reports for those we regulate.
- Improved availability and accessibility to information so citizens can evaluate the state of their environment and consider ways to make a meaningful contribution toward protecting and improving it.
- Information and educational resources that are easier for people, businesses, and communities to access and understand. These resources are developed to help people reduce their contributions to global climate change and to prepare for the changes that cannot be avoided, and to protect Washington's waters, including Puget Sound.

### Human Resource Management

Ecology will be developing a new strategic plan for managing the workforce for optimal performance and achieving agency and programmatic goals. The plan will:

- Identify and implement human resources management best practices that foster solutions for managers and supervisors.
- Develop strategies to effectively recruit and retain a highly qualified, diverse work force.
- Design a human resources risk management plan to provide guidance in risk identification, assessment, prevention and mitigation.



## 2009 – 2011 Department of Ecology Strategic Plan

# Provide Efficient and Effective Administrative Support

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### **Long-term Financial Stability**

Ecology will be closely monitoring the State Toxics Control Account revenues that are highly variable depending on the price of crude oil. We will be updating strategies to manage the impact of revenue volatility. We will also identify long-term funding options for ongoing water related functions that have been initiated using temporary fund sources.

## **Activities & Results**

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

### **Office of Communication and Education**

This office gives advice and guidance to management and staff on effective communication, education, and public involvement strategies related to environmental issues.

### **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.

### **Human Resources**

The Human Resources Office provides a full scope of human resources support, including safety, equal employment opportunity, labor relations, and training and development. Human Resources ensures that appointments, recruitment, classification and pay, corrective/disciplinary actions, reduction-in-force actions, complaints, and grievances comply with federal and state employment laws, civil service rules, and agency policy. The Human Resources Office also helps implement collective bargaining agreements. The Office 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.

### **Regional and Field Offices**

Each of Ecology's four regional offices (Lacey, Yakima, Spokane, Bellevue) and field offices (Bellingham, Richland, Vancouver) has executive management representatives and provides core administrative support to regional office staff. This support includes areas of reception, mail, records management, complaint tracking, and central library 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. *(Note: Although these offices are budgeted in agency Administration, their work is mostly connected with environmental priorities.)*





## 2009 – 2011 Department of Ecology Strategic Plan Provide Efficient and Effective Administrative Support

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### **Executive, Financial, and Administrative Services**

Ecology leadership comes from the Executive Offices.

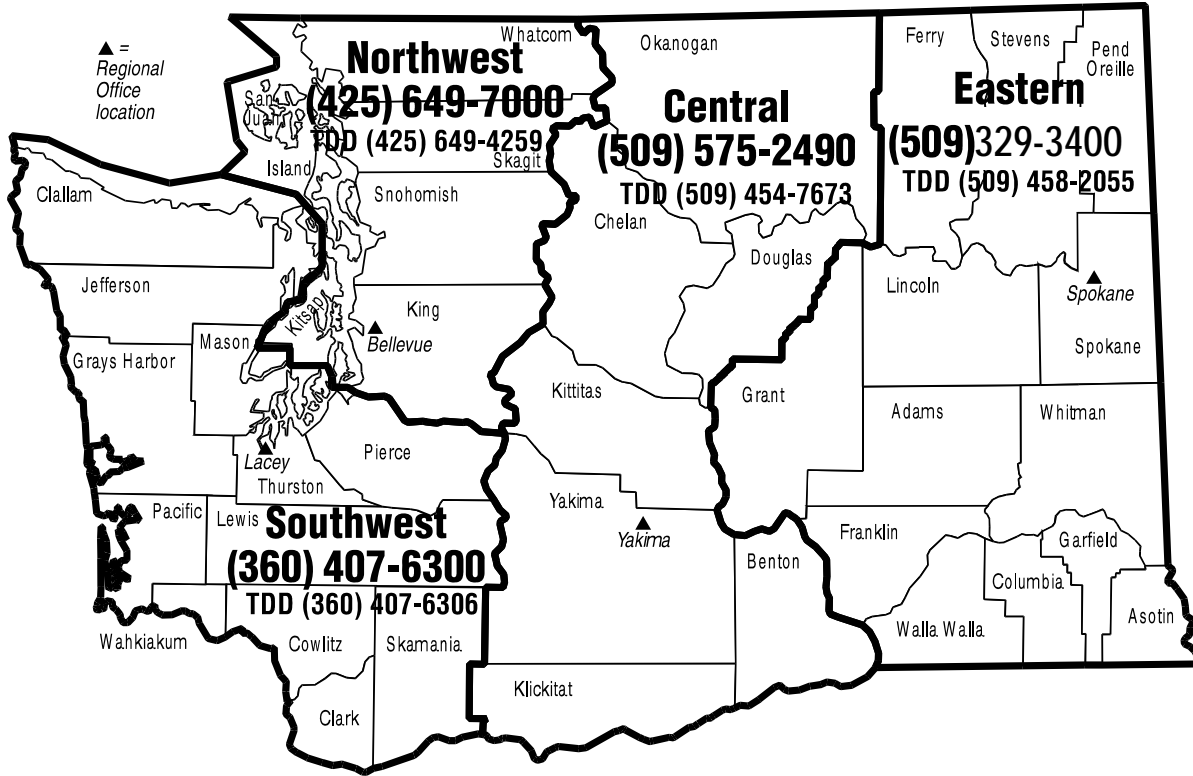
Financial Services provides centralized financial support in accounting, budget, contracts, purchasing, and inventory. This office also manages and coordinates strategic planning for Ecology, coordinates performances measurement, and develops environmental indicators.

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.

Agency Administration is supported by each fund source available to the Department of Ecology. Each fund contributes to Administration in the same percentage that each fund contributes to the total of the environmental programs' salaries and benefits.

#### **Expected Results**

- Ecology managers, the Governor, State Auditor, Office of Financial Management, and the Legislature have confidence in Ecology and our financial information, and can use it to make crucial decisions affecting the environment.
- The public is informed about the work Ecology does, is educated about its role in environmental protection, and understands the policies we are developing and the opportunities available to influence our decisions.
- Washington's environmental laws and rules are improved through Ecology's relationships with legislators, local governments, businesses, Native American tribes, and environmental and citizen groups.
- Ecology managers and supervisors have the highest-quality communication, performance management, hiring, and leadership skills.
- Ecology's work environment reflects the diversity of the community we serve.
- Ecology staff get reliable, secure, and high-quality desktop support and network services.
- Customers have easy access to Ecology information.
- Facilities and vehicles are well-maintained, safe, and efficient.



## Ecology Headquarters & Regional Offices

### Headquarters

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

### Northwest Regional Office

3190 160<sup>th</sup> 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      PO Box 47775  
 Lacey, WA                      Olympia, WA 98504-7775  
 360.407.6300

### 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

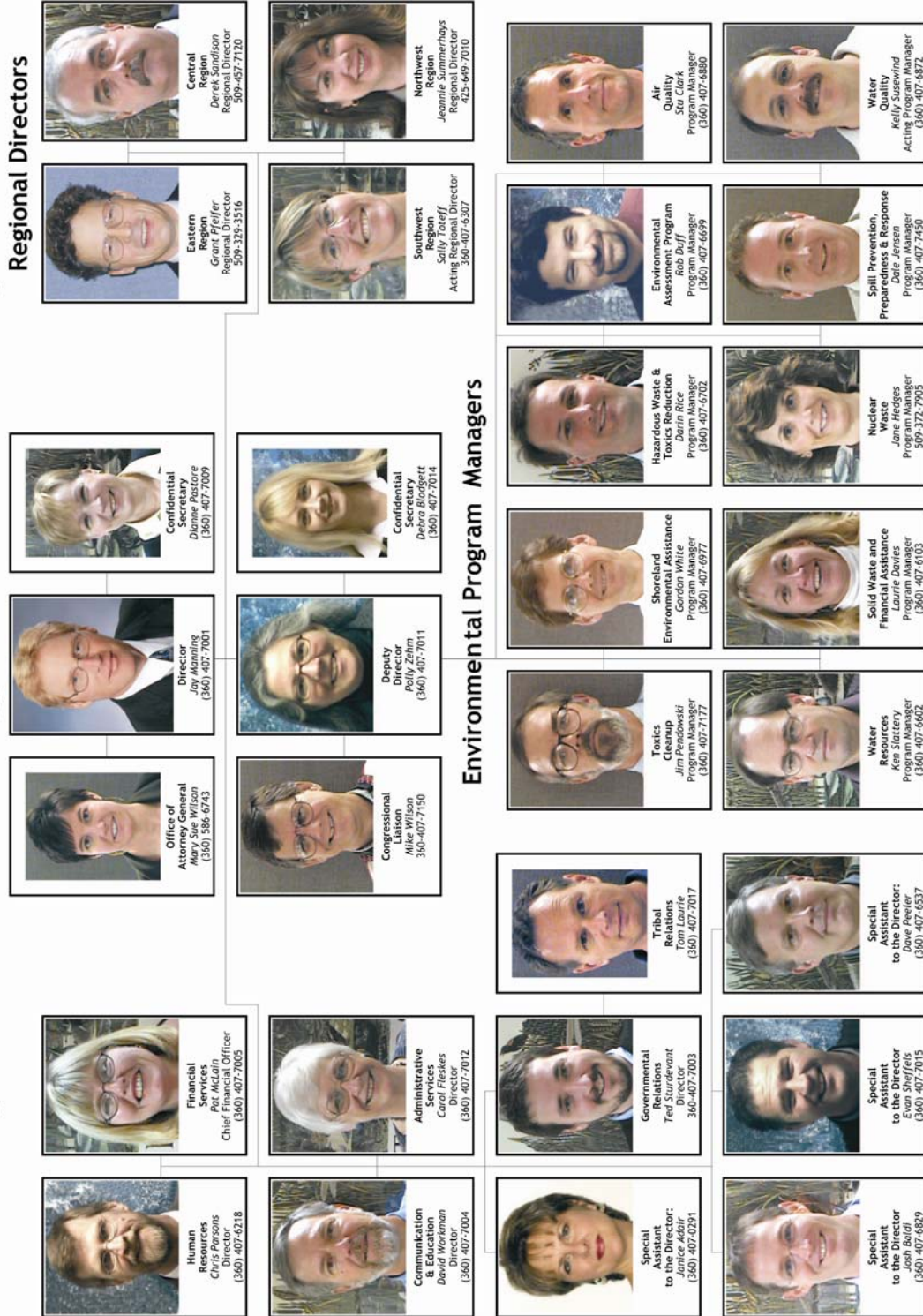
### **Walla Walla Field Office**

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



# 2009 - 2011 Department of Ecology Strategic Plan Ecology's Organization Chart

## Department of Ecology - Executive Management



revised April, 2008