2019–2021 Strategic Plan

DEPARTMENT OF
ECOLOGY
State of Washington

Publication # 18-01-007

Our Vision

Innovative partnerships that sustain healthy land, air,
and water in harmony with a strong economy.

Our Mission

To protect, preserve and enhance Washington's environment
for current and future generations.

Our Commitments

Perform our work in a professional and respectful manner.
Listen carefully and communicate in a responsive and timely manner.
Solve problems through innovative ways.
Build and maintain cooperative relationships.
Practice continuous improvement.

Our Goals

Protect and restore land, air, and water.
Prevent pollution.
Promote healthy communities and natural resources.
Deliver efficient and effective services.

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I. Introduction and Overview

This strategic plan describes the work we are doing to face the challenges in the 2019–2021 biennium and beyond. It is both aspirational and practical, builds on past work, and supports Results Washington's focus on performance management and continuous improvement.

Our strategic framework

Vision

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

Mission

To protect, preserve, and enhance Washington's environment for future and current generations.

Commitment

- Perform our work in a professional and respectful manner.
- Listen carefully and communicate in a responsive and timely manner.
- Solve problems through innovative ways.
- Build and maintain cooperative relationships.
- Practice continuous improvement.

Goals

- Protect and restore air, land, and water.
- Prevent pollution.
- Promote healthy communities and natural resources.
- Deliver efficient and effective services.

Strategic priorities

- Reduce and prepare for climate impacts.
- Prevent and reduce toxic threats.
- Deliver integrated water solutions.
- Protect and restore Puget Sound.

Our environmental programs

Headquartered in Lacey, WA, with regional offices across the state, Ecology employees maintain high standards of transparency, professionalism, and accountability.

The employees in our environmental programs exhibit leadership in scientific research, creative problem-solving, complex project management, and innovative partnerships. We balance the resource demands of today's growing population and economy, preventing and cleaning up polluted places, and planning for future generations of people, fish, and wildlife.

Air Quality

We protect, preserve, and enhance the air quality of Washington to safeguard public health and the environment, and support high quality of life for current and future citizens.

Environmental Assessment

We measure, assess, and communicate environmental conditions in Washington State.

Hazardous Waste and Toxics Reduction

We foster sustainability, prevent pollution and promote safe waste management.

Nuclear Waste:

We lead the effective and efficient cleanup of the U.S. 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.

Shorelands and Environmental Assistance

We support community conservation efforts for our shorelands, wetlands, and floodplains.

Spill Prevention, Preparedness,and Response

We protect Washington's environment, public health, and safety throug a comprehensive spill prevention, preparedness, and response program.

Toxics Cleanup

We protect Washington's human health and environment by preventing and cleaning up pollution and supporting sustainable communities and natural resources for the benefit of current and future generations.

Solid Waste Management

We reduce waste through prevention and reuse; keep toxins out of the environment; and safely manage what remains.

Water Quality

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

Water Resources

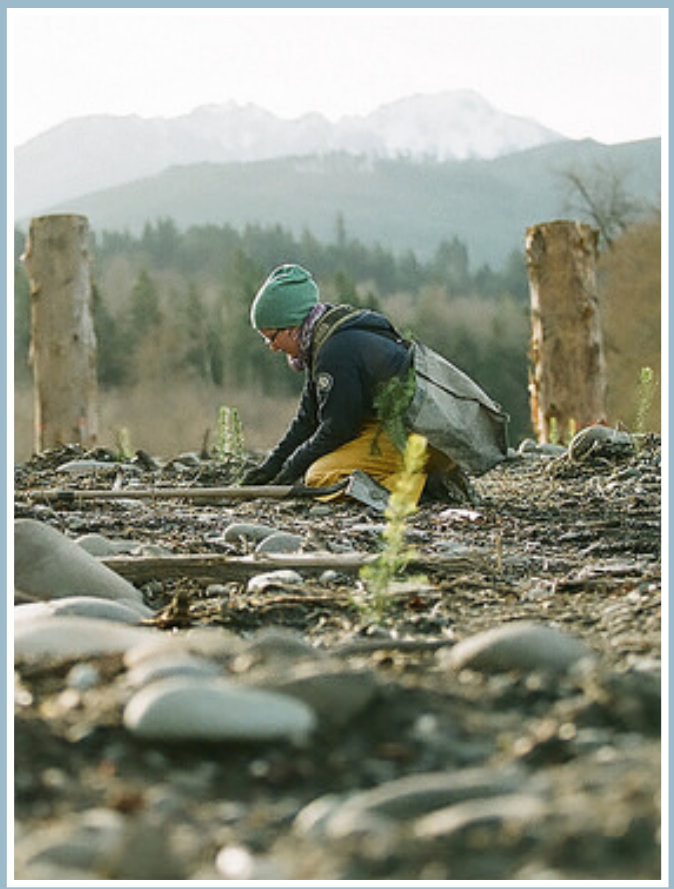
We manage water resources to meet the needs of people and the natural environment, in partnership with Washington communities.

Collaboration and coordination

All of our work involves partners. We value our working relationships and partnerships with tribes, local governments, state and federal agencies, citizen groups, and the business community. These relationships reflect our commitment to the people of Washington.

- We value and build partnerships to achieve common goals.
- We see ourselves as a committed partner to tribes, communities, businesses, local governments, and global neighbors.

We are committed to improving coordination between Ecology programs and regulatory partners, so that permit applicants have an efficient, predictable, and consistent regulatory experience.



Ecology's Washington Conservation Corps member plants trees as part of our commitment to conserve and enhance natural resources.

Human resources

Our Human Resources Office acts as a strategic business partner to our environmental and administrative programs. We recruit great talent committed to achieving Ecology's mission. We value engaged and successful employees, a diverse workforce, and a safe and healthy work environment.

Objectives

- Increase employee satisfaction and engagement.
- Support equity, diversity, and inclusion.
- Increase the availability and use of workforce data and metrics in business planning and decision-making.
- Build and implement workforce, succession, and leadership development plans that anticipate future business needs.

Records management

Our records management strategy addresses the entire life cycle of records – from creation, through their active phases, to disposition.

Objectives

- Modernize our record management processes and implement an Enterprise Content Management (ECM) solution designed to meet agency business needs.
- Centralize public disclosure activities to streamline processing, improve response quality, and meet legal reporting requirements.
- Manage records to meet statutory requirements, customer expectations, and agency business needs.
- Provide timely responses to public records requests and ensure our records are secure.

Business technology and information management

Our Information Technology Services Office is responsible for protecting, preserving, enhancing, and transforming our business processes and technology solutions to support the agency's data-driven decision-making. We operate in a collaborative, transparent, and nimble fashion with our environmental and administrative program partners. We provide timely, high-quality and partner-centric technical support services.

Objectives

- Preserve and protect Ecology's data and information assets by proactively improving our security practices and technologies.
- Modernize and standardize agency wide business processes and business technology solutions, including but not limited to:
  - Financial management systems.
  - Web-based information and service delivery.
  - Enterprise content management.
  - Environmental tracking systems.
  - Application and infrastructure portfolio management.
- Develop a strategy and implementation roadmap for leveraging secure, integrated, cloud-based technical services.
- Develop improved enterprise data management, business analytics, and reporting capabilities, and increase public access to data.
- Improve accessibility to electronic data and information for individuals with disabilities.
- Develop and provide technical solutions that support an increasingly collaborative and mobile workforce.
- Develop and implement improved technical infrastructure services that provide high-speed access to data and information.

Financial management and oversight

Our Financial Services Office works closely with environmental programs to provide accounting, payroll, contracts and purchasing, centralized budget support, and fund management services. Ecology has over 50 unique fund sources that support our work. Seventy percent of our budget passes through to local communities in the form of grants, loans, contracts, and on-the-ground project work. The proper use and oversight of these resources helps to ensure we continue to receive funding for our core mission and strategic priorities.

Objectives

- Provide credible, timely, and accurate financial data to support continued investment in our work.
- Analyze and report on financial performance each quarter, alert managers to problems and opportunities, and help them find solutions.
- Maintain and enhance the integrity of data in all agency financial systems.
  - Integrated Grant and Revenue System. We are currently using three outdated and inefficient systems to collect, manage, and track federal grant revenue and cost recovery on cleanup activities,and to manage pass-through grants and loans.Our revenue management scope includes $75 million each fiscal year from federal sources and $9.7 million each biennium in cleanup cost recovery. Our current biennial pass-through budget is over $900 million. We are requesting funds in the 2019-21 Biennium to replace these three systems. A new system will help meet business needs, reduce the risk of audit findings, increase the quality and security of data, and gain efficiencies through standard processes.
- Provide up-to-date policies, procedures, and guidance on financial and budget matters.
- Develop strategies to link financial resources to environmental activities, priorities, and outcomes.
- Ensure control and accountability over Ecology's assets and compliance with financial laws and regulations.
- Maintain positive cash and fund balances for the dedicated environmental funds we manage.

Staff services and facilities

Efficient, well-maintained, and sustainable infrastructure and operational support help us conduct our work to protect, preserve, and enhance the environment for current and future generations.

Objectives

- Maintain headquarters, regional, and field offices that support staff in meeting current business needs.
- Deliver shared services (for example, transportation, surplus disposal, and mail) in an efficient and customer-focused manner.
- Monitor the efficiency and environmental performance of facilities and engage staff in targeted improvements that contribute to the sustainability of our operations.
- Provide leadership on sustainable energy efficiency and environmental performance in accordance with Executive Order 18-01 by:
  - Improving the energy efficiency of our facilities.
  - Adopting renewable energy sources.
  - Reducing greenhouse gas emissions and toxins from our business operations.
  - Increasing the number of electric vehicles in our fleet.

Risk management

We evaluate risk on an ongoing basis, within the framework established by Executive Order 16-06 - State Agency Enterprise Risk Management. Feedback from our Executive Leadership Team and environmental programs is incorporated into our risk planning to ensure alignment with our mission and current business activities.

Objectives

- Identify and proactively address any risks related to achieving our mission.
- Establish and maintain guidelines, standards, and procedures for Enterprise Risk Management.
- Collaborate with managers, employees, partners, and customers to reduce risks related to the services we provide.
- Update and exercise our Continuity of Operations Plan (COOP) on an annual basis, so that we can efficiently resume our core services following a disaster or emergency.

Strategic planning, performance management, and continuous improvement

We are focusing our efforts on improving performance to achieve planned results. Our performance management approach includes:

Program planning and collaboration

- Environmental and administrative programs engage in robust planning discussions with their management teams, employees and with our Executive Leadership Team.
- Program plans integrate customer feedback, budget priorities, and resource availability.
- Our management teams share information within their programs and between programs. This promotes collaborative discussions and decision making by our Executive Leadership Team.

Budget review and development

- Our budget managers track activities, allotments, and spending plans. This iterative process involves input from employees and from the Executive Leadership Team.
- Our two-year and supplemental budgets show how we manage and use our financial resources to invest in environmental activities.

Using data to make decisions

- Employees track project progress and provide regular reports on data trends to their program planners who work with program management teams on data based decision making.

Understanding and working with our customers

- Public involvement is part of everything we do. We continuously seek out, welcome, and use feedback to improve how we deliver services to Washingtonians.
- We are committed to environmental justice in all our work and are currently emphasizing improving language access.
- We survey our permitted and inspected customers about their experiences with our employees, and we use this information to target improvement efforts. We are evaluating how to gather and use point-of-service feedback to hear from a larger pool of customers.

Employee engagement and feedback

- We support a professional and dedicated workforce.
- The annual survey of state employees, with additional

questions focused on our employees' experience, provides information to agency leaders regarding areas where more focus is needed.

- We build a culture of inclusion and collaboration where employees have the opportunity to grow in their careers and contribute to our goals and priorities.
- We regularly seek opportunities for employees to engage in meaningful dialogue regarding our performance and priorities.

For more information about the Department of Ecology please visit our website: Ecology.wa.gov.

For information on performance measures refer to our Budget & Program Overview, 2017-2019 (Ecology Publication Number 18-01-004).

II. Reduce and Prepare for Climate Impacts

Washington is preparing for the future. This means understanding and reducing the impacts from climate change to our communities, natural resources, and economy. Ecology is committed to working with tribes and local, state, and federal partners and our Canadian neighbors to protect our resources and prepare for tomorrow.

Outcomes

- A comprehensive regulatory framework to limit carbon pollution.
- Natural and built communities resilient to climate change impacts.
- Research that guides actions to mitigate ocean acidification.

Objectives

1. Reduce carbon pollution.
2. Increase resiliency of natural and built communities.
3. Understand impacts to natural systems.
4. Prioritize drought preparedness.
5. Understand, prepare for, and mitigate ocean acidification.

Key strategies

Implement and improve tools to track and reduce greenhouse gases.

Pursue integrated planning and adaptive management.

Improve people's understanding of the science behind climate change to support reduction and adaptation planning.

Collect data and provide analysis to support formation-based decision-making.

Develop scientific models to predict the extent and greatest risks to state waters due to climate changes.

Background

Our region is vulnerable, and increases in global temperatures will affect fish, farms, and communities across Washington. Our approach is progressive, and we are tracking progress and continuing to look for practical and responsible solutions to reduce greenhouse gas emission levels according to state law adopted in 2008.

The impacts of climate change are significant.

Increased water temperatures add stress on already struggling fish populations and increase the urgency to restore habitat.

Sea level rise will have negative impacts on coastal communities.

Wildfires blanket communities in hazardous smoke, destroy homes and infrastructure, deplete state and local resources, and require a strong commitment to working with tribes and local, state, and federal partners to develop integrated, community-based response plans.

Drought increases demand on limited groundwater and surface water supplies.

Addressing climate change is a priority for us, and we are working to limit carbon pollution and protect our state from its effects. We remain committed to working with our partners to slow the effects of climate change and build a resilient Washington.

Sea-level rise due to climate change threatens coastal communities.

Objective 1: Reduce carbon pollution

Establish regulatory limits on carbon pollution

- Support the Washington Clean Air Rule that establishes a regulatory cap on carbon emissions.
- Reduce carbon pollution from transportation, energy use, and electricity production through a coordinated set of policy, regulatory, and incentive programs.

Develop practical and coordinated approaches for reducing carbon pollution to targets required by Washington law

- Track and report greenhouse gas emissions.
- Support clean and green energy technologies.
- Promote transportation alternatives and fuel-conservation opportunities.
- Support sustainable materials management to reduce pollution and greenhouse gas emissions from the production, use, and end-of-life management of products and materials.
- Reduce our environmental footprint when developing remedies for toxic cleanup sites.

Objective 2: Increase resiliency of natural and built communities

Build resilient communities that can withstand and adapt to changing climate conditions

- Protect shorelines, reduce flood risks, and improve or restore habitat on major rivers.
- Identify, protect, and restore cold-water refuges for salmon.
- Consider climate change impacts when evaluating proposals under the State Environmental Policy Act (SEPA).
- Ensure sustainable wastewater treatment infrastructure.
- Relocate chemical storage and disposal facilities from areas facing significant risk of coastal flooding.
- Support efforts to sequester carbon in working lands and soils.
- Help Washingtonians reduce exposure to wildfire smoke.

Support local emergency and disaster planning efforts

- Increase drought relief and flood damage reduction-funding options.
- Assist communities in preparing for impacts from current and future hazards.
- Improve access to data for communities, first responders, and project partners.
- Identify toxic cleanup sites that are vulnerable to climate impacts; cleanup and restore those sites in a way that improves their ability to overcome those impacts.

Objective 3: Understand impacts to natural systems

Monitor trends

- Identify, collect, and share baseline and trend data to help inform climate change related risk planning.
- Collect data to predict responses of freshwater resources in times of stress.
- Track groundwater responses to climate change.

Increase understanding of ecosystem responses to climate stress

- Research how climate stress affects benthic life, nutrients, and food webs in Puget Sound.
- Investigate potential connections between stream flow and water quality.

Objective 4: Prioritize drought preparedness

Lead statewide drought planning efforts

- Develop a new statewide drought response plan by working with a task force of state and federal agencies, local governments, conservation districts, and irrigation districts.
- Implement enhanced water conservation and efficiency programs to reduce the amount of water required for irrigation, municipal, and industrial users, and improve basin water supply.
- In partnership with the Washington Conservation Commission, review irrigation efficiency to verify that water diversions have decreased and stream flows are improved.

Implement integrated water solutions in basins vulnerable to climate change impacts

- Support collaborative approaches to decisions around tradeoffs between instream and out-of-stream uses for water.

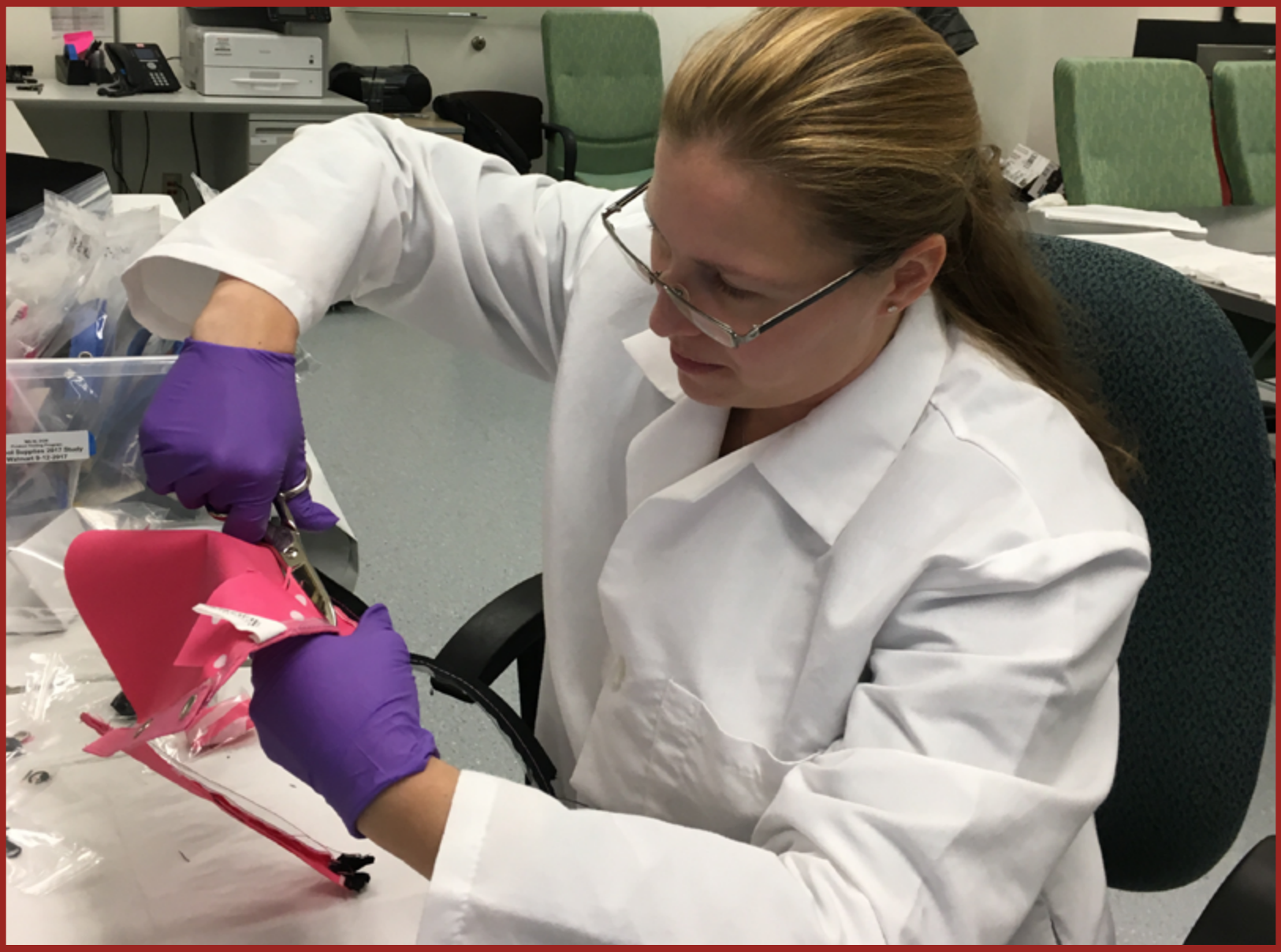
- Develop water banks in the Dungeness, Walla Walla, Spokane, and Yakima Basins to help facilitate transfer of water to higher value uses.
- Support tribal and local governments, watershed and regional groups, water managers, and communities in identifying and assessing risks and implementing solutions, including increasing water storage capacity of soils using compost, biochar, and biosolids.

Objective 5: Understand, prepare for, and mitigate ocean acidification

Understand, monitor, and reduce the impact of ocean acidification to Washington waters

- Estimate the global and regional impact of ocean acidification for state waters using the Salish Sea Model to simulate environmental responses to increased carbon dioxide.
- Identify water quality trends (seasonal and annual) and investigate areas of concern.

Ocean acidification is a global problem that threatens Washington's marine wildlife and economy.



III. Prevent and Reduce Toxic Threats

Effectively reducing threats from the use of toxic substances requires cleaning up existing contamination, managing current uses, and reducing or eliminating future use. Toxic substances are found in some consumer products, and in many manufacturing processes. They end up in the air, water, land and in our bodies.

Ecology, through the Governor's Orca Recovery Task Force, will be implementing toxic reduction strategies affecting orca and the salmon they depend on.

In addition, our state is facing new challenges around sustainable recycling of reusable wastes.

Outcomes

- Healthy people and environments.
- Safer consumer products in Washington.
- Prevent pollution and toxic runoff to our environment.
- Existing contamination cleaned up or remediated.

Objectives

1. Reduce the release of toxins into the environment.
2. Increase the visibility of prevention activities.
3. Integrate prevention, permitting, compliance and cleanup efforts.
4. Hanford tank waste treatment.

Key strategies

Support a flexible and effective regulatory framework for preventing and reducing the release of and exposure to toxic substances.

Develop opportunities to encourage the recycling of reusable wastes.

Reduce the use of toxic materials and prevent them from entering into homes and industry.

Reduce toxic products purchased through state purchase contracts.

Improve knowledge of where and how toxic substances get into products, people, and the environment.

Integrate Chemical Action Plan recommendations into activities for cleanup, protecting water quality, and preventing spills.

Promptly respond to releases of oil and hazardous materials to minimize environmental and public health impacts.

Increase safe handling, storage, and disposal of waste through compliance efforts.

Develop and issue construction and operating permits for the facilities that will treat Hanford tank waste.

Background

Our work supports Washington's strong and ongoing efforts to ensure safe management of wastes and cleanup of legacy contamination.

- We oversee permitting, facility closures, and cleanup of spills and contaminated sites.
- We oversee treatment of mixed radioactive and chemical tank waste at the Hanford Nuclear Reservation.
- We monitor and provide technical assistance to businesses and manufacturing facilities to help them comply with state law and prevent release of toxins to the environment.

Much of the pollution that enters our environment comes from the steady releases of toxic substances found in everyday products. Toxic substances get into stormwater and into waterways. Once in waterways, they enter the food web, get into fish, and into people. Effects on humans from these toxins can include cancer, developmental problems, effects to the nervous system, endocrine disruption, and immune-response suppression.

We collaborate with other states and with local and federal government partners on our multi-step approach to prevent and reduce toxic threats to humans, fish, and the environment. Some parts are regulatory, such as Washington State's individual product laws and Children's Safe Products Act, while other parts are voluntary, such as offering technical assistance to companies regarding use of safer chemical alternatives. The information we gather about toxic substances through environmental monitoring, product testing, and required disclosure of certain chemicals in consumer products helps us in our decision making related to preventing and reducing toxic threats.

While much of our work in preventing toxics exposure has relevance statewide, some actions related to toxic substances pertain to large and small localized areas. Examples are:

- Cleanup efforts underway in Bellingham Bay.
- Removing area-wide contamination from the Tacoma Smelter plume.
- Cleanup of soil and groundwater from leaking underground storage tanks.

Moving forward, we believe embracing sustainable practices is the best option for preventing pollution and delivering a healthy environment to future generations.

Objective 1: Reduce the release of toxins into the environment

Strengthen toxics reduction and compliance efforts

- Protect those at greatest risk, such as children, from exposures to toxic substances in consumer products.
- Continue our strong state program while working with the U.S. Environmental Protection Agency as they implement recent reforms to the federal Toxic Substance Control Act.
- Where necessary and appropriate, eliminate or phase out use of specific substances or products.
- Reduce and prevent exposure to airborne toxics.

Decrease use of known toxic substances

- Support alternative assessments where manufacturers look for safer alternatives to toxic substances.
- Complete Chemical Action Plans for priority toxic substances, including for per- and poly-fluorinated alkyl substances (PFASs) (chemicals prevalent in consumer products like carpeting and waterproof fabric).
- Improve the process for developing Chemical Action Plans based on experience gained developing the first five plans.
- Implement actions identified in existing Chemical Action Plans.
- Update our understanding of priority toxic substances to reflect new science.

Our toxics monitoring program collects environmental samples to assess whether toxic chemicals in soil, fish tissue, and the water column are increasing, decreasing, or staying the same in Washington.

Implement Chemical Action Plan recommendations

- Implement existing Chemical Action Plan recommendations for:
  - Mercury.
  - Flame-retardants.
  - Lead.
  - Polycyclic aromatic hydrocarbons (PAHs)
  - Polychlorinated biphenyls (PCBs).
- Implement the 2015 PCBs Chemical Action Plan recommendations to prevent additional PCBs from reaching the Spokane and Duwamish Rivers.
- Integrate Chemical Action Plan recommendations into cleanup projects, stormwater management, and permitting decisions.

Seek out innovative approaches

- Explore options for combining federal and state regulations and for using existing authorities to support additional toxics reduction efforts.
- Support product stewardship policies.
- Direct interested Washingtonians to consumer protection information available through the Office of the Attorney General.

Increase use of safer alternatives

- Offer technical assistance to hazardous waste generators for identifying safer alternatives and green chemistry options that will significantly reduce toxic chemical use in Washington.
- Build partnerships to find safer alternatives that remove toxic substances from products and keep them out of the environment. For example, multiple entities continue working together to find safer alternatives to copper-containing boat paint.
- Advocate for creating Technology Innovation Grants to fund marketable, safer chemical alternatives to common toxic substances used to develop consumer products.
- Assist customers in finding safer alternatives by

supporting credible labels, such as the United States Environmental Protection Agency's Safer Choice voluntary program.

Advocate for green purchasing

- Support the state of Washington, local governments, and others in using their purchasing power to influence use of safer alternatives and other environmentally preferred products
- Participate in developing state environmentally preferred purchasing contracts.

Objective 2: Increase the visibility of prevention activities

Identify specific connections between cleanup activities, stormwater management, and prevention efforts

- Estimate costs associated with removing contaminants compared to preventing contamination.
- Use examples of situations where future costs were avoided to describe the value of prevention activities. Examples include specific chemicals (copper, mercury, phthalates, and PCBs) and preventing oil spills.

Objective 3: Integrate prevention, permitting, compliance, and cleanup efforts

Protect water quality

- Coordinate cleanup of contaminated water bodies with source control planning so decisions acknowledge multiple regulatory authorities and the goals, priorities, and mechanisms of each.
- Increase the number of partners in municipalities and health districts providing pollution prevention assistance to small businesses.

Avoid health and environmental costs associated with pollution

- Reduce urban stormwater pollution.
- Prevent oil spills.
- Address nonpoint sources contributing to water pollution.
- Support infrastructure projects like wastewater treatment facilities to keep pace with a growing population.
- Encourage the use of safer alternatives in place of more toxic substances.
- Encourage the safe handling, storage, treatment, and disposal of wastes through compliance efforts.
- Reduce toxic diesel emissions.
- Encourage responsible use of residential woodstoves to reduce emissions of dangerous fine particulates in wood smoke.

Identify data gaps around emerging toxic substances in products and the environment

- Engage in long-term monitoring of priority toxic substances to identify trends in the environment.
- Collaborate with other states so businesses can submit information in one place.
- Develop standardized procedures for testing toxic substances in consumer products.

Analyze reported data required by the Children's Safe Product Act

- Review and analyze data on substances in products to identify priorities for reducing exposures to children.
- Provide publically available data and information in context and in a manner useful for consumers.

Objective 4: Hanford tank waste treatment

Perform all Ecology activities necessary to support treatment of Hanford tank waste by 2023

- Maintain a strong working relationship between Ecology and the US Department of Energy.
- Ensure active management and project level interaction on all phases of project activities.
- Continuously evaluate design, construction, and operation of tank waste treatment facilities to ensure timely issuance of comprehensive regulatory permit documents.
- Perform active oversight of US Department of Energy construction activities to validate and verify that facilities are constructed as designed and permitted.
- Ensure compliance with Consent Decree and Tri-Party Agreement requirements.

Sustainable recycling: a new challenge

Introduction

A key issue facing Washingtonians is the disruptions in the market for recycled materials. To continue protecting the environment we must reassess our recycling system and find new opportunities, strategies, and markets.

Recycling has many benefits: it conserves natural resources, creates jobs, and reduces pollution, including greenhouse gases. Washington has been a national leader in recycling. Overall our recycling rates are approaching 50 percent. However, recent changes to global markets for recycled commodities have created a crisis for our long established recycling programs. We are working with our partners to address this unprecedented challenge.

Outcomes

- Higher quality, less contaminated, more valuable recycling streams.
- Improved markets for recyclables.
- Recycled commodities replace virgin materials in manufacturing.

Objectives

Work with our partners to:

1. Educate the public on how to avoid contaminating recyclables.
2. Encourage new markets for our state's recyclable commodities.
3. Identify long-term strategies to build a more sustainable recycling system.

Key strategies

Work with partners that represent the full life-cycle of products, including manufacturers, packagers, recycling facilities, solid waste collection companies, and local governments.

Create and distribute effective educational messages targeted to reducing contamination in recyclables.

Support research into the structure of recycling systems to inform decision-making. This includes market development, collection and processing options, and types of materials.

Background

For years, China has been the dominant destination for the world's exported recyclable commodities. While these materials fueled China's industries, they also created huge amounts of waste and pollution. The Chinese government has cracked down on the problem with new regulations that no longer allow importing low-grade post-consumer plastics (plastic codes 3–7) and unsorted paper (mixed waste paper). China has also imposed a strict 0.5 percent limit on the amount of contamination allowed in imported recyclables, which is near impossible to meet. Most recently, China has stated they will stop importing all recyclable materials by 2020.

Workers sort through recycled paper products.

Objective 1: Educate the public on how to avoid contaminating recyclables

- Based on research, conduct a statewide public education and outreach campaign to provide best management practices to Washingtonians for what materials should be included in curbside recycling programs.
- Seek out expertise to create effective educational messages targeting the biggest contamination issues.
- Provide tools and resources to local governments to educate their communities.
- Propose legislation to require state and local governments to have contamination reduction outreach plans.

Objective 2: Encourage new markets for our state's recyclable commodities

- Research the possibilities of establishing a secondary processor or plastic recycling facility in the Northwest.
- Promote recycled content purchasing, including in state government, as applicable.
- Study effective market development organizations and tools.
- Work with the Washington State Department of Commerce and others to establish a recycling development center for Washington and the Northwest.

Objective 3: Identify long-term strategies to build a more sustainable recycling system

- Continually work with stakeholders along the entire packaging and products life cycle, to enable the end goal of using recyclable commodities to replace virgin materials in manufacturing.
- Research and build on successes around the United States and beyond.
- Identify and address challenging materials and products, such as certain single use plastics.
- Continue to promote the environmental and economic benefits of recycling, while also using this opportunity to increase emphasis on waste reduction.
- Work with stakeholders to examine the recycling systems and identify opportunities for improvements in collection, processing, and system design.

Developing and promoting responsible recycling programs in Washington is one of our priorities to protect the environment from toxics.

IV. Deliver Integrated Water Solutions

Integrated water solutions provide a coordinated and collaborative approach to delivering clean, cool water. This approach ensures Washington has clean, adequate water supplies that meet current and future drinking water needs, commercial and agricultural uses, and sustains fish and the natural environment.

Outcomes

- Sufficient water for agricultural, commercial, environmental, municipal, and recreational uses.
- Clean water to meet the present and future water needs of Washington.
- Cool waters and healthy streams that support fish and wildlife.

Objectives

1. Protect water resources, through streamflow restoration, while providing water for rural Washingtonians.
2. Secure sufficient water addressing multiple needs.
3. Coordinate strategic water project investments.
4. Address discrepancies between watershed cleanup plans and discharge permits.
5. Advance the use of reclaimed water.

Key strategies

Build strong partnerships with tribes; local, state, and federal governments; water users; and other interested stakeholders in water resource management decision making.

Pursue innovative approaches to developing water supplies and appropriating and transferring water rights. Examples include water banking for mitigation purposes, and where feasible, using reclaimed water to help protect instream flows.

Collaboratively complete and implement high priority water quality improvement plans (Total Maximum Daily Loads, TMDLs).

Expand monitoring to evaluate the effectiveness of innovative solutions. For example, using streamflow data to influence permitting decisions that will reduce toxics loading to water bodies.

Seize opportunities provided by projects that simultaneously improve both water supply and water quality. For example, flood hazard reduction projects.

Prevent and reduce water pollution from point and nonpoint sources, and from stormwater runoff.

Background

Factors such as a changing climate, an increasing population, declining groundwater, and a growing economy have converged to increase water demand and decrease water supply. As traditional water supplies become increasingly scarce in rural areas, water users need solutions that provide water for out-of-stream use while protecting surface waters.

We continue to invest in and complete large-scale water infrastructure projects like the Odessa Groundwater Replacement Program and the Yakima Integrated Plan. In addition, we are seeking new opportunities to use integrated water resource management techniques in the Icicle Creek and Walla Walla basins.

We are working with local planning groups to update and develop plans, and provide funding for projects that mitigate the impacts of new domestic water use. We are also working to reduce pending water right applications through innovative approaches to water right appropriations and transfers.

To improve water management, we are:

- Increasing water use metering and reporting.
- Evaluating new techniques and technologies.
- Maintaining the statewide stream gauging network.
- Ensuring compliance with water laws.
- Measuring groundwater resources across the state.
- Refining our statewide drought response plan to prepare for future droughts.

Our work to ensure water quality remains a high priority, including updating Washington's National Pollutant Discharge Elimination System (NPDES) general permits and water quality standards.

Water is pumped into the White Salmon Aquifer and retrieved in the summer when needed.

Streamflow restoration

Introduction

Washington has a new streamflow restoration law. The new law helps protect water resources; it provides water for families in rural Washington and directs local planning groups to develop streamflow restoration plans. It focuses on 15 watersheds that were impacted by the 2016 Washington State Supreme Court Hirst decision and establishes standards for rural residential permit-exempt wells in the rest of the state for areas without a rural domestic groundwater mitigation program in place.

The new law:

- Divides the 15 impacted basins into those that previously adopted watershed plan and those that did not.
- Allows counties to rely on our instream flow rules when they prepare comprehensive plans, develop regulations, and determine water availability.
- Allows rural residents access to water from permit-exempt wells to build a home.
- Sets interim standards that will apply until local committees develop plans to be adopted into rule.
- Retains the current maximum of 5,000 gallons per day limit for permit-exempt domestic water use in watersheds that do not have existing instream flow rules.
- Invests $300 million over the next 15 years in projects that will help fish and streamflows.

Objective 1: Protect water resources, through streamflow restoration, while providing water for rural Washingtonians

Support streamflow restoration and watershed planning

- Work with communities to help find water supply solutions for homes and to protect streamflows for fish.
- Develop flexible water mitigation strategies statewide.
- Find solutions to support homes, farms, and other businesses in the Skagit River Watershed by developing mitigation programs that balance instream and out-of-stream benefits. This includes projects to develop a water exchange and public infrastructure investments.
- Acquire water rights to protect and restore instream flows by working with water rights holders who volunteer to sell, lease, or donate all or part of their water rights to the Washington State Trust Water Rights program.

Objective 2: Secure sufficient water addressing multiple needs

Support projects through the Office of the Columbia River

- Develop long-term water solutions for both economic purposes and environmental benefits for Eastern and Central Washington's farmers, communities, industries, and fish.
- Pursue water supplies for both instream and out of-stream uses, including securing alternatives to groundwater for the Odessa Subarea and updating aging infrastructure in the Yakima, Methow, Wenatchee and Walla Walla basins.
- Secure reliable water supplies for pending water right applications, drought relief, and interruptible water users.

Implement the Yakima Basin Integrated Plan

- Support the Yakima River Basin Integrated Water Resource Management Plan projects to address the region's water and aquatic resource needs.
- Continue conservation, infrastructure, and fish passage projects along parallel paths through planning, design, permitting, funding, and construction.
- Build on an extraordinary collaboration and holistic approach to water management in the Yakima River basin.
- Work with partners to obtain federal support to complement the significant investments made by the state of Washington.

Objective 3: Coordinate strategic water project investments

Invest in partnerships and projects in the Chehalis Basin

- Through the Office of the Chehalis Basin's collaborative and integrated approach, develop and implement strategies to reduce flood damage and restore habitat for aquatic species.
- Pursue multi-benefit solutions that achieve both economic and environmental benefits for Chehalis Basin communities, farmers, industries, and fish.
- Support community consensus building during the development of watershed planning updates that address out-of-stream water needs while providing net ecological benefit.

Address long-term funding needs

- Collaborate with our partners to identify and secure funding for priority stormwater infrastructure projects.
- Provide funding to local governments to implement stormwater infrastructure retrofits.
- Target funds towards coordinated cleanup efforts around sensitive water supplies.
- Fund projects that reduce flood hazards and damage from catastrophic flooding, enhance ecological preservation, and address community needs while protecting the natural and beneficial functions of floodplains.
- Use funds to support shoreline and growth management planning that allows appropriate economic development while protecting critical habitat.

Objective 4: Address discrepancies between watershed cleanup plans and discharge permits

Coordinate discharge permit restrictions

- Coordinate decisions around discharge limits in National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge permits so when water supplies are low, permit restrictions do not result in insufficient stream flows.
- Establish structured and regular communication among our permitting programs to identify how and where stream flows influence site-specific water discharge permitting decisions.

Objective 5: Advance the use of reclaimed water

- Provide cross program technical assistance to help facilities interested in using reclaimed water with questions about water quality and downstream water rights.
- Complete the Reclaimed Water Facilities Manual to guide implementation of the new reclaimed water rule, adopted in 2018.

What are integrated water solutions?

A number of principles contribute to an interconnected and multifaceted approach to managing water:

- Strategic and coordinated investments for infrastructure.
- Innovative partnerships – with local communities, and other interested entities.
- Open and transparent decision making.
- Commitment to expand and improve access to data.
- Plan for the needs of current and future generations.
- Balance multiple interests and needs.
- Sharing data and resources – within Ecology, with other agencies, with local partners, and with Washingtonians.
- Innovative approaches to problem solving.

V. Protect and Restore Puget Sound

Puget Sound requires our continued attention. We are building partnerships and making investments to restore, protect, and preserve the health of Puget Sound, now and for future generations. When collaborating with local and tribal governments, other state and federal agencies, non-profit organizations, and private sector partners, we use the best available science and research to advance our understanding about the challenges facing Puget Sound.

Outcomes

- A healthy and resilient ecosystem.
- Economic prosperity in harmony with environmental stewardship.

Objectives

1. Protect orca and salmon, and restore salmon habitat.
2. Accelerate innovative solutions for managing stormwater, reducing nutrients, and preventing toxic pollution.
3. Increase shellfish health and abundance.
4. Prevent oil spills and enhance our response capacity.
5. Increase coordination among funding programs to improve outcomes.

Key strategies

Coordinate infrastructure investments and bring interdisciplinary teams into early planning.

Collaborate through Puget Sound Salmon Recovery Council and watersheds to protect and restore habitat.

Improve understanding of the link between nutrient pollution and food web impacts.

Support innovative approaches to removing toxics and nutrients from wastewater.

Work collaboratively with communities and stakeholders to address human sources of nutrients.

Collaborate through the Puget Sound Partnership's Ecosystem Coordination Board to advance the Action Agenda's three Strategic Initiatives: stormwater, shellfish, and habitat.

Prioritize cleanup sites to reduce ongoing pollution.

Leverage cleanup of contaminated properties to improve the environment and spur economic opportunity.

Evaluate methods to incentivize re-development over development of new land.

Background

More than a century of development has affected Puget Sound. Its waters accumulate excessive nutrients, toxic substances, and particulates that flow from stormwater, rivers, streams, and estuaries, impacting the health of aquatic ecosystems.

- Increasing development converts land cover from natural conditions to impermeable surfaces, reducing the ability for water to be filtered through soils and vegetation before flowing into our waterways and toward Puget Sound.
- Increased demand for water makes it harder to maintain cool, clean water in the streams that feed into Puget Sound.
- Climate change is altering the timing and availability of water supplies and contributing to ocean acidification, impacting shellfish and other fishery resources, and potentially altering the marine food web.
- Shifting transportation methods increase risk of oil spills.

Restoring and protecting habitat is one of our priorities for salmon, orcas, and shellfish.

Contributing to Orca recovery

Puget Sound's southern resident orca population has seriously declined. The orca face multiple threats, especially:

- Fewer Chinook salmon.
- Toxic contaminants in the environment.
- Disturbances from noise and vessel traffic.

Our work to protect the environment and restore Puget Sound directly benefits orca.

- We are protecting and restoring salmon habitat.
- We are reducing toxics substances in the environment.
- We are improving oil spill response capabilities.
- We are cleaning up contaminated sites in Puget Sound.

In support of Governor Inslee's Executive Order 18-02, we are leading a Southern Resident Killer Whale Task Force workgroup focused on toxic contaminants. Our team is working to identify how the state can help reduce the impacts of human-caused contamination on the orcas.

We created a curriculum to train boat operators in the whale watching industry on techniques to safely deter orcas from oil spills. We are looking to involve our Canadian neighbors and plan to have this program operating in 2019.

Objective 1: Protect orca and salmon and restore salmon habitat

Support orca recovery efforts

- Support the Southern Resident Killer Whale Task Force.
- Prioritize stormwater projects that benefit orca recovery.
- Coordinate water quality improvement and shoreline management so that waste water treatment systems are located consistent with good shoreline stewardship.

Work with partners to protect habitat

- Collaborate with communities and the Washington Department of Fish and Wildlife to improve implementation of shoreline protection regulations.
- Consistent with existing law, ensure no net loss of wetlands and shoreline function.

Continue Floodplains by Design grants

- Implement multi-benefit projects that meet community needs, restore habitat, and improve water quality.

Objective 2: Accelerate innovative solutions for managing stormwater infiltration, reducing nutrients, and preventing pollution

Promote best practices for addressing impacts of development

- Identify and obtain sustainable funding options for coordinating stormwater treatment, cleanup, pollution prevention, and source control activities.
- Collaborate with local governments to evaluate effectiveness of control measures through SAM (Stormwater Action Monitoring), the Western Washington regional stormwater monitoring program.
- Support the collaborative, multi-organization Puget Sound Starts Here public awareness campaign to help prevent pollution from reaching Puget Sound.
- Apply scientific models to guide decision making to reduce nutrient inputs into Puget Sound.
- Educate and provide outreach and technical assistance to prevent releases from both point and non-point sources.

Objective 3: Increase shellfish health and abundance

Ensure clean water

- Continue support for the Washington Shellfish initiative.
- Support local clean water programs with watershed inspectors to ensure compliance with clean water law.
- Prohibit wastewater discharge from vessels through the Puget Sound No Discharge Zone to prevent pollution that can harm shellfish beds and swimming beaches.

Research and mitigate ocean acidification impacts

- Secure funding to research and monitor ocean acidification in Puget Sound.
- Determine how ocean acidification is impacting the food web in Puget Sound, including impacts to fisheries and other resources.

Objective 4: Prevent oil spills and enhance our response capacity

Communicate planning, risk, and awareness

- Actively inform tribes, first responders, communities, stakeholders, and the public about the changes in the oil-transportation industry and associated impacts.
- Maintain a clear understanding of the changing spill risks that face Washington State.

Prevent accidental and deliberate release of contaminants that damage fragile Puget Sound ecosystems

- Use education and outreach as tools to increase awareness and prevent oil and hazardous materials spills.

Enhance response capacity

- Provide local governments, tribes, and first responders with the necessary information, tools, and training to effectively respond to spills.
- Use the best available technology and techniques when responding to oil spills.

Ensure a high level of preparedness

- Notify local communities, tribes, and the public about key information on oil movement.
- Develop and update Geographic Response Plans to ensure swift and effective response throughout the state to protect sensitive resources should spills occur.

We require industry to practice their oil spill contingency plans.

Objective 5: Increase coordination among funding programs to improve outcomes

Secure sustainable funding for cleanup and prevention

- Work with public and private partners to identify and secure stable, long-term funding sources for preventing pollution, cleaning up contaminated sites, stormwater programs, source control, and effectiveness monitoring.

Identify and monitor progress

- Conduct effectiveness monitoring on programs with significant investments, such as Floodplains by Design and watershed cleanup plans (also called Total Maximum Daily Loads (TMDLs)).
- Use our Water Quality Index to better understand which Puget Sound basins might respond to a focused investment effort to improve water quality.
- Assess how best management practices and restoration projects improve water quality and fish habitat, monitoring projects and the environment to track progress, find workable solutions, and make informed decisions.
- Enhance and leverage our regionally comprehensive water quality and sediment quality monitoring programs.

Align grant opportunities

- Coordinate grant and loan funding with other investments, including incentives, regulatory authorities, technical assistance, and science.
- Focus on grant and loan programs that benefit water quality and salmon recovery efforts.
- Improve collaboration among state funding programs by increasing flexibility for recipients and maximizing opportunity for environmental outcomes.
- Develop a coordinated strategy so decisions makers can take into account related investments, projects, and timing.
- Consider upstream investments when addressing downstream effects.

Support coordinated cleanup and source control activities

- Plan, coordinate, and implement multi-agency federal, state, and local efforts and actions to facilitate clean up, prevent recontamination, and improve water quality.
- Work with partners to continue progress in the Lower Duwamish Waterway, Bellingham Bay, and other priority bays throughout Puget Sound.

Evaluating an algae bloom in Puget Sound, summer 2018.