

# GOAL 3: Land Preservation and Restoration

*Preserve and restore the land by using innovative waste management practices and cleaning up contaminated properties to reduce risks posed by releases of harmful substances.*

## **Objective 3.1: Preserve Land.**

### **Sub-objective 3.1.1: Reduce Waste Generation and Increase Recycling.**

**Current State/Major Problems to be Addressed:** States and local municipal corporations regulate and operate solid waste disposal sites. Most efforts to reduce waste generation and increase recycling are likewise State and municipal efforts. We believe, based on our partnerships, the states and local agencies will continue waste generation reduction and recycling programs. Region 10 will focus on two categories of solid waste reduction and recycling (electronic products and medical industry waste), as well as solid waste disposal in Indian Country. Region 10 has established as a priority, rural Alaska and the Alaskan Native Villages' unique solid waste challenge, which is due to the remote location of the villages, frigid temperatures, historic practices, and complex governmental relationships. In addition, each reservation in Idaho, Oregon and Washington may have one or more open dump sites that need to be addressed.

Sub-objective 3.1.1 establishes goals and tracking of 1) municipal solid waste generation on a per capita basis, and 2) municipal solid waste recycling rates. Region 10 does not track per capita municipal solid waste generation or recycling rates. Each state independently tracks this information and each state has a different system using different assumptions and criteria. There is no requirement for states to uniformly track and report this information.

### **Strategy Highlights:**

#### **Promoting the Resource Conservation Challenge (RCC):**

RCC is a "three pronged" approach in Region 10: 1) provide financial support to state, local and Tribal government pollution prevention, waste reduction and recycling programs; 2) implement industry-specific product stewardship programs; and 3) provide specific, useful outreach and education to regional stakeholders. RCC implementation uses strategies that include product stewardship, pollution prevention, recycling/market development, industry-specific initiatives, and reduction of priority chemicals. A description of several of the programs is below:

#### **Recycling:**

Region 10 is a WasteWise program partner and will continue to use partnerships and voluntary efforts to reduce waste and increase recycling. We will continue to assist HQ with any Regional Forums held in Region 10.

**Stimulating Infrastructure Development, Product Stewardship, and New Technology:** Product Stewardship/Extended Product Responsibility (EPR) is a priority for Region 10.

Our Product Stewardship program utilizes the following tools: outreach and education, stakeholder dialogue and partnership, business assistance, green design, and state and local government support. Region 10 has chosen to focus primarily on two sectors, the electronics industry and medical products.

Region 10 works with both national and regional partners to develop needed infrastructure, promote

green purchasing, support green design and partner with stakeholders in addressing electronic product management. We continue to support state Electronics Product Stewardship Initiatives and host a multi-stakeholder electronics dialogue for the western states, WEPSI.

Region 10 is actively involved in the Medical Industry Waste Prevention Roundtable and the Hospitals for Healthy Environment (H2E) program. We are also in partnership with Northwest hospitals, governments and non-governmental organizations to provide technical assistance and education on many environmental topics including: mercury, solid waste, chemical, and pharmaceutical issues. We plan to expand medical community outreach to state and local governments to include bulletins and conferences in conjunction with the NW Product Stewardship Council. Also under development is an expanded H2E partnership which will focus on solid waste and mercury reduction, as well as establish an EPA/American Hospital Association Recognition Program. Finally, in conjunction with H2E program in the Northwest, we promote a mini-grant program for hospital partners wanting to support mercury reduction in their community.

Region 10 serves as the national lead for the electronics focus area cluster group under the RCC. Projects include:

- 1) support the national development of the Green Design for the Environment (DfE) assessment tool for electronics. This activity relates to strategies under Goal 5, Objective 5.2, Sub-objective 5.2.2 which addresses pollution prevention using the Design for Environment Industry Partnership Program.
- 2) lead role in the Federal Electronics Challenge, which supports federal agencies in implementing sustainable practices for electronic product management and uses federal purchasing power to encourage green design and development of infrastructure for recycling.
- 3) coordinate the Northwest response to the WEPSI which includes a pilot project for retailer “take-back” of electronic products (the Take-It-Back Network), a Green Design Assessment Tool, and regional coordination on electronic waste disposal issues.

**Provide Education, Outreach, Training, and Technical Assistance:**

As a member of the Northwest Product Stewardship Council, Region 10 partners with state and local governments in the Pacific Northwest to provide outreach and education, policy bulletins and other outreach materials, and to collaborate on projects addressing medical waste, tires, electronics, paint and pesticides.

WasteWise materials are distributed at all outreach events, including those for Earth Day and America Recycles Day, as well as at Tribal environmental/health fairs. We provide Tribes with program materials, and plan to expand the Tribal Casino Waste Training developed by our Region. Region 10 will also continue to recruit new partners in other business sectors via outreach activities and events.

Region 10 continues to participate in the Jobs Through Recycling (JTR) program and assist in the implementation of the JTR outreach plan by attending state government or economic development conferences in the region to promote JTR. We also promote the Comprehensive Procurement Guidelines (CPG) and inform federal agencies about CPG through groups such as the Federal Network for Sustainability, Federal Pollution Prevention Roundtable, and Federal Executive Board. We coordinate efforts with OSW and the White House Task Force on Recycling whenever possible, to assist agencies in implementing these guidelines.

**Relation to Regional Priorities:** Tribal environmental health is one of Region 10's Six Priorities. Region 10's Tribal Strategy (See Goal 5, sub-objective 5.3) emphasizes increasing the level of resources in each Region 10 office committed to tribal work and strengthening tribal partnerships. Region 10 has two objectives: 1) build capacity by providing financial and technical assistance to create basic environmental protection programs within each tribal government; and 2) direct implementation of environmental protection programs.

One of the environmental health challenges facing tribes is the large number of unregulated solid and hazardous waste disposal sites on tribal lands. Using the Indian Lands Open Dumps grants program and technical assistance, our goal is to assist tribes to develop integrated waste management programs.

Further discussion of the Region's priority to support and assist tribes can be found in Goals 4 and 5, particularly Objective 5.3.

Strategy	Tools & Programs	Measures & Targets
Promote pollution prevention, waste reduction and recycling through education, outreach, technical assistance, and training	<ul style="list-style-type: none"> <li>- Medical Industry Waste Prevention Roundtables</li> <li>- Federal Electronics Challenge Partnerships</li> <li>- Regional Conference Calls on Electronics management and strategies.</li> <li>- Region 10 Website</li> </ul>	<ul style="list-style-type: none"> <li>- # of outreach events</li> <li>- Participation in Educational Conference Calls and Roundtables</li> <li>- # of Federal Electronics Challenge Partners</li> <li>- Major upgrade to regional solid waste/product stewardship website.</li> </ul>
Tribal Solid Waste 1) Tribal Capacity Building  2) Direct Implementation	<ul style="list-style-type: none"> <li>- GAP grant funding to develop Tribal program and technical capabilities</li> <li>- technical assistance</li> <li>- outreach and education efforts</li> <li>- pilot and demonstration projects</li> <li>- technical assistance</li> </ul>	<ul style="list-style-type: none"> <li>- # of Tribal governments with environmental programs and staff</li> <li>- % increase in GAP grant funding</li> <li>- # of pilot and/or demonstration projects undertaken</li> <li>- # of waste disposal sites permitted and/or closed and cleaned up</li> </ul>

Strategy	Tools & Programs	Measures & Targets
<p>Promote a Product Stewardship approach to product management.</p>	<p><u>Tools:</u></p> <ul style="list-style-type: none"> <li>- Multi-stakeholder dialogues to solve environmental problems</li> <li>- Grants</li> <li>- Incentive to change purchasing or End-of-Life (EOL) management.</li> <li>- Government to Government Partnerships</li> </ul> <p><u>Programs:</u></p> <p>Electronics Initiatives</p> <ul style="list-style-type: none"> <li>• Electronic Products Environmental Assessment Tool (EPEAT)</li> <li>• Federal Electronics Challenge (FEC)</li> <li>• WEPSI/NEPSI</li> <li>• Take-It-Back Network</li> </ul> <p><u>Medical Initiatives</u></p> <ul style="list-style-type: none"> <li>• Medical Industry Waste Prevention Roundtable</li> <li>• Hospitals for a Healthy Environment</li> <li>• Mercury Outreach</li> </ul> <p>Retail Initiative</p> <ul style="list-style-type: none"> <li>• Take-It-Back Network</li> <li>• Retailer partnerships and technical assistance</li> </ul>	<ul style="list-style-type: none"> <li>- Number of hospitals doing waste reduction/mercury reduction activities.</li> <li>- Number of H2E Partners</li> <li>- % of dialogues resulting in outcomes that benefit the environment.</li> <li>- Number of grants awarded (funding dependent) that support the Product Stewardship approach.</li> <li>- % of Federal Electronics Challenge partners purchasing green electronic products and services.</li> <li>- Pounds of products collected in the retail pilot.</li> <li>- Lead activities for EPEAT, FEC and Take-it-back Pilot</li> </ul>

### **Sub-objective 3.1.2: Manage Hazardous Wastes and Petroleum Products Properly.**

**Current State/Major Problems to be Addressed:** Region 10 has a total of 40 operating permit facilities and 46 post closure facilities on the hazardous waste management facility baseline. Region 10 has authorized Idaho, Oregon, and Washington to implement the RCRA hazardous waste permit program. Alaska is not, nor desires to be, authorized for the RCRA program. Thus, Region 10 directly implements the permit program in Alaska. Distance and remote locations are a major factor in effectively implementing the hazardous waste program in Alaska. Significant resource constraints (FTE and travel) limit not only implementation in Alaska, but also technical assistance to the other three states. In light of ever-shrinking state budgets, these resource constraints significantly impact the work we can collectively accomplish.

Region 10's Office of Waste and Chemicals Management is, and will continue to coordinate with the Region 10 Air program and state programs to implement the HW Combustor MACT regulations promulgated on September 30, 1999. These regulations currently apply to only one facility in Region 10. This coordination includes planning for trial burns and compliance testing, as well as review and comment on plans for testing (i.e., operating parameters, operating limits, etc.). Emission testing includes generating data for risk assessment. No MACT Compliance Schedule extension requests, or requests to upgrade incinerators to meet MACT Standards, have been submitted or are currently anticipated.

Region 10's Underground Storage Tank program uses a measure called Significant Operational Compliance (SOC). SOC is a percentage measure of compliance found at inspected facilities. SOC is reported in three categories: Release Prevention, Release Detection, and a combination of the two. The overall compliance rates in Region 10 for Release Prevention and Release Detection are 75.6% and 48.6%, respectively. Our goal is to increase SOC percentages by 1% each year.

**Strategy Highlights:** Together with our states, we will continue to work toward the HQ goal for the number of RCRA hazardous waste facilities with approved controls in place and attempt to increase this percentage as close as possible to 98% by 2008. However, although steady progress is being achieved, two of our 40 facilities (US DOE INEEL in Idaho and US DOE Hanford in Washington) will not meet the 2008 goal due to the complexity and scope of the facilities.

Eight incinerator trial burns are projected for FY 2003-2005. Two trial burns were accomplished in FY 2003. These trial burns address RCRA Permit requirements, HWC MACT, and generate data for emission reduction determinations and risk assessment. Two Notifications of Compliance are expected by August 2004 which will achieve the target emission reductions of dioxin/furans, particulate matter, and acid gases.

R10's UST program will continue to promote the adoption of UST regulations in Idaho, and increase our own inspector field presence in Oregon and Washington. Through compliance assistance and inspections, we hope to improve compliance rates and knowledge of owners and operators managing petroleum products underground. Through increased compliance, we should naturally see fewer releases of petroleum products into the environment.

Strategies	Tools & Programs	Measures & Targets
Ensure RCRA facilities have controls in place to reduce/prevent releases	Work with Region 10 authorized states to implement RCRA permitting program: issue RCRA operating permits, post closure permits, permit modifications and permit renewals.	Measures: % of RCRA facilities with approved controls in place % of RCRA facility permit renewals
	Directly implement the RCRA hazardous waste program in the State of Alaska by issuing: RCRA operating permits, post closure permits, permit modifications and permit renewals	Measures: # of RCRA facilities with approved controls in place # of RCRA facility permit renewals
	Trial burns and emissions testing at hazardous waste combustion facilities	- Notices of Compliance issued for each trial burn - Source test result show emission reductions of dioxins/furans, particulate matter and acid gases
Increase inspections and field presence in states	EPA staff, state staff, targeted resource allocations, innovation	SOC percentages in Release Prevention, Release Detection, and a combination; fewer reported confirmed releases

**Objective 3.2: Restore Land.**

**Sub-Objective 3.2.1: Prepare for and respond to Accidental and Intentional Releases**

**Current State/Major problems to be Addressed:** Region 10 has an active program for oil spill response and oil spill prevention (SPCC). An oil storage facility that has an oil spill is investigated by a federal On-Scene coordinator (OSC). An average of 80 to 90 SPCC inspection are conducted each year. Region 10 has just started an expedited enforcement program, which should result in quicker compliance for facilities not in compliance with the oil spill prevention regulations.

With the recent increase of 5 On-Scene Coordinators, EPA has greatly increased outreach and planning efforts with all response partners at the federal, state, and local level. Region 10 has integrated it's Counter Terrorism efforts into the emergency response program. All existing response plans are being revised to accommodate and define response to terrorism incidents.

Region 10's emergency response program has significantly increased its response to hazardous materials spills over the last 5 years. Region 10 currently responds to approximately 30 emergencies per year. This level will remain constant over the next 5 years. EPA coordinates with local and state counterparts to ensure they understand EPA's capabilities and criteria for response.

Strategies	Tools & Programs	Measures and Targets
Emergency Preparedness	Core Emergency Response Program (Core ER)	National system that tracks 11 elements of EPA emergency response readiness.
Obtain and maintain common equipment & training among Regions:		- Common monitoring and detection equipment
Increase coordination with both the States' Environmental and Health Departments	- More active communication and coordination with State Environmental and Health Departments	- Increase standing agreements with State agencies.
Hazardous Substances Releases and Oil Spills & Prevent Oil Spills	<ul style="list-style-type: none"> <li>- SPCC Outreach and compliance assistance to oil storage industry</li> <li>- Expedited enforcement program</li> <li>- Build partnerships with States, Tribes and others</li> </ul>	<ul style="list-style-type: none"> <li>- # of SPCC compliance inspections</li> <li>- # of facilities with plans</li> <li>- # audits</li> <li>- # oil spill cleanups completed, monitored, or directed by EPA</li> </ul>

**Sub-Objective 3.2.2: Clean Up and Reuse Contaminated Land.**

**Current State/Major Problems to be Addressed:**

**LUST:** Leaking underground petroleum storage tanks represent roughly 5,600 contaminated sites in Region 10. Generally these sites pose less risk than other contaminated sites. However, leaking underground storage tanks have contaminated more drinking water wells than any other single source. Oregon, Washington, and Idaho have a large percentage of groundwater clean ups that are resource intensive. Oregon and Washington increased the rate of clean-up two years before clean-up goals were finalized. This increase resulted in a large number of completed cleanups. As most of the remaining contaminated LUST sites are under state jurisdiction, EPA R10 staff will work closely with State officials to accelerate the rate of cleanups completed through innovation and targeted resource allocations. Over the next three years, the national goal is to reduce the number of sites needing cleanup completion by half.

**RCRA Corrective Action:** Sites contaminated by poorly designed or poorly implemented waste management practices, or by improper use or storage of hazardous materials can be cleaned up under the RCRA Corrective Action Program or the Superfund Program. Generally, active facilities are cleaned up under either federal or state RCRA programs. Nationally, there are 3831 RCRA corrective action sites with 128 of those sites existing in Region 10. Of the Region 10 sites, 48 are considered high priority and are the primary focus of current cleanup efforts.

**Superfund:** Abandoned sites or those contaminated by historic practices are cleaned up through the federal Superfund program. Nationally, there are 1,572 sites on the National Priorities List, of which 99 sites are in Region 10. In addition, there are 10,403 more potential Superfund sites nationally listed on the CERCLIS database, of which 447 are in Region 10. These sites await further assessment before being considered for inclusion on the NPL or are being cleaned up under other federal or state/tribal cleanup programs.

**Regional Challenge:** Under the Endangered Species Act, 19 salmonids have been listed as threatened or endangered in Region 10. This results in the potential need for consultation and coordination with the National Fish and Wildlife Service and the National Marine Fisheries Service for any action which would jeopardize the threatened or endangered species. This affects assessment, cleanup options and implementation of cleanup actions.

**Strategy Highlights**

Specifically, in partnership with states, tribes and local government, over the next three years, implement the following strategies:

Strategies	Tools & Programs	Measures and Targets
Assess Superfund Sites and high priority RCRA corrective action sites	EPA Staff, State staff Contract funding	# of Superfund sites # of Brownfield sites # of High Priority RCRA Corrective Action Sites
Control human health exposure from contamination at Superfund and high priority RCRA corrective action sites	EPA staff, State staff, Contract \$	# of sites achieving the environmental indicator
Control contaminated ground water migration at superfund and high priority RCRA corrective action sites	EPA staff, State staff, Contract \$	# of sites achieving the environmental indicator
Final remedies selected at superfund and high priority RCRA corrective action sites	EPA staff, State staff, Contract \$	# of Superfund sites # of high priority RCRA corrective action sites
Complete clean-up at superfund sites and high priority RCRA corrective action sites	EPA staff, State staff, Contract or PRP \$	# of sites with construction complete # of sites with removal complete
Complete clean-up of leaking UST sites	EPA Staff, State staff, contract or PRP \$	# of sites cleaned up
Conduct “final decision” superfund site assessments	EPA Staff, State staff	# of final decision assessments



We will facilitate cleanup at less risky sites by the following strategies:

- Manage and provide technical support to 23 current and at least 10 new Brownfields pilots as they work to assess, cleanup and reuse sites
- Make grants of roughly \$4M/year that support state and tribal response program (including voluntary clean up programs) establishment and enhancement, and expect those programs to assess at least 25 sites and facilitate cleanup of at least 200 sites
- Require all states and tribes receiving those grants to establish and share an annual public record of response actions in their jurisdictions and establish and maintain an inventory of Brownfields sites

Strategies	Tools & Programs	Measures& Targets
Manage and provide technical support to existing and new Brownfields pilot sites		
Provide financial support to states and Tribes to establish and enhance response programs	Grant \$	# of assessments # of clean-ups
States and Tribes establish and share an annual public record of response actions and establish and maintain an inventory of Brownfields sites	Grant \$	# of response actions records # of States and Tribes

**Sub-Objective 3.2.3: Maximize Potentially Responsible Party (PRP) Participation at Superfund Sites.**

**Current State/Major Problems to be Addressed:** Region 10 has 100 sites on the National Priorities List, and additional NPL-caliber sites that are managed under the Superfund Alternative Sites process. The regional removal program conducts time-critical and non-time critical removal actions. PRP participation is pursued in all of these site actions.

**Strategy Highlights:**

To maximize PRP participation, EPA nationally has established two targets:

- *Settlement or Enforcement Action by time of RA start at 90% of sites with known non-Federal, viable, liable parties .*

This target reflects standard practice for Region 10 and the Superfund program as a whole. HQ's Office of Enforcement and Compliance Assurance (OECA) will be tracking our progress nationally and regionally, but we do not foresee any problems meeting this target.

- *Addressing all Statute of Limitations (SOL) Cases with Unaddressed Total Past Costs Equal to or Greater Than \$200,000.*

This is standard practice and Region 10 has never missed a Superfund SOL in this cost range. The Region and HQ conduct a thorough check each year for possible cases to ensure they are addressed. Historically, Region 10 has, on average, about three of SOL cases per year.

Strategies	Tools & Programs	Measures & Targets
Settle or take enforcement action by the time of RA for sites with known non-Federal, viable, liable parties	Regulations and staff resources	# of Settlement or Enforcement Actions by time of RA start
Address all Statute of Limitation cases with unaddressed total past costs equal to or greater than \$200,000.	Regulations and staff resources	# of Statute of Limitations (SOL) Cases with Unaddressed Total Past Costs Equal to or Greater Than \$200,000.

**Objective 3.3: Enhance Science and Research.** Through 2008, provide sound science for protecting and restoring land by conducting leading-edge research and developing a of better understanding and characterization of environmental outcomes under Goal 3.

**Sub-objective 3.3.1: Provide Science to Preserve and Remediate Land.** Through 2008, sound science and continuously integrate smarter technical solutions and protection strategies that enhance our ability to preserve land quality and remediate contaminated land for beneficial reuse.

Strategies	Tools & Programs	Measures & Targets
Biosensor technology development for detection of TNT and RDX.	Method development and field trials of using flow-through biosensor technology for the detection of TNT and RDX continues.	Aid in the characterization of contaminated groundwater prior to cleanup and, in the contemporaneous monitoring of cleanup activities at Department of Defense sites.
Develop methodology that determines risk-based soil lead concentrations at non-residential, non-commercial sites.	A screening methodology is under development that will support remedial decision-making at sites where soil is contaminated with lead and site uses are limited to non-residential, primarily recreational purposes.	Assist decision-makers in selecting appropriate remediation measures where elevated levels of environmental lead are found in soil and sediment at beaches and other common use areas.  This method is used throughout the Coeur d'Alene River Basin in northern Idaho and will be applied at other contaminated sites in the Region.

<b>Strategies</b>	<b>Tools &amp; Programs</b>	<b>Measures &amp; Targets</b>
<p>Apply mineralogical methods toward the evaluation of metal mobility.</p>	<p>A combination of mineralogical tools, useful for characterizing compound identity, and morphological and chemical texture, will be utilized for the evaluation of fate of environmental contaminants. Tools to be used are powder x-ray diffraction, microscopy and x-ray fluorescence analysis.</p>	<p>Inform decision-makers in the hazardous waste and mining programs in their efforts to determine appropriate environmental remediation measures based on knowledge of fate and transport of contaminants.</p> <p>This methodology has been used at hazardous waste sites and mining sites for NPDES and NEPA (e.g., Holden Mine, Tulsequah Chief project).</p> <p>The mineralogical methods are also applied to asbestos- containing materials to support the regional asbestos programs.</p>
<p>Develop a low-level analytical method for co-planar PCB congeners in soil/sediment matrices using GC/ECD.</p>	<p>Method development is on-going at Region 10's Manchester Laboratory. The method will allow individual PCB congener determination. Knowledge of certain congeners is particularly critical when their chemical configuration and toxicity are similar to dioxin.</p>	<p>Enhance accuracy of risk assessments and consequently risk management decisions. Expand EPA's toxics list to those which may pose the highest risks.</p> <p>This method is under evaluation by the sediments program to reduce the cost of hazardous waste investigations.</p>