

# PNWA members and the environment



PNWA and its members contribute to a clean environment while providing for a strong regional economy



Nearly every decision, process and project undertaken by PNWA and our members now includes an environmental component, ranging from reducing the use of natural resources, recycling, environmental restoration projects, and upgrading to more efficient technologies in their buildings, land development and equipment. The following is an overview of how PNWA and its members are working to reduce impacts and improve the environment.

## PNWA Towboat Members

Bernert, Foss, Shaver and Tidewater are investing millions of dollars to upgrade equipment to ensure a cleaner environment and conservation of natural resources. New and older tugs repowered with EPA Tier II compliant clean burn diesel engines cut fuel consumption by 32%, oil consumption by 90%, and emissions by up to 50%. In addition, each barge line is focusing on individual projects as well:

Foss Maritime most recently received the prestigious ISO 14001 environmental certification, which they will use as a blueprint to achieve their “zero trace” corporate goal. Foss has also built the world’s first true hybrid tug boat, which significantly reduces harmful nitrogen oxide, particulate matter, sulfur dioxide, and carbon emissions.

Shaver Transportation has built and installed a cold iron barge at Port of Portland’s Terminal 6 to allow vessels to plug in rather than run engines while awaiting assignments. This eliminates emissions and greatly reduces fuel consumption.

Tidewater Barge Lines has instituted a comprehensive program of behavior based safety training to further ensure protection of the environment. They also plan to replace all fuel barges with double hull barges by 2011, four years ahead of regulatory requirements

## PNWA Member Ports

The region’s ports are taking the lead in environmental protection, wetland habitat and ecosystem restoration, airshed emission reduction, and water efficiency. The following are examples of individual projects they are undertaking:

Port of Garibaldi, OR. With a grant from DEQ’s Clean Water Program, the Port of Garibaldi updated its catch basins, directing water from parking lots and streets to new basins where solids and oil are separated before flowing into the bay. The Port also provides an oil recycling center for boaters, and maintains a response center to supply the necessary equipment to meet the needs of oil spill emergencies.

Port of Benton, WA. The Port of Benton successfully converted over 60 tons of biomass from grape pomace, mint slug, spent hops, wheat straw and sawdust into pellets, proving that converting biomass into energy/heat could be a source of green power for our region’s utilities in the future.

Port of Portland, OR. In 2008, the Port of Portland was awarded a ninth consecutive environmental achievement award from the American Association of Port Authorities (AAPA). Honored projects include enhanced habitat for streaked horned larks, invasive species monitoring stations, and a wildlife undercrossing that helps native animals access wetland areas without having to cross a busy road. The port has also initiated numerous strategies to reduce vehicle idling and improve air quality, reduce energy use, and minimize waste. In April 2010, the Port consolidated its headquarters to the Portland Airport, incorporating numerous green building techniques such as eeroofs, high-efficiency energy and plumbing systems, and recycled, regional, and renewable building materials.

Port of Seattle, WA. The Port of Seattle has a goal of being the cleanest, greenest, most energy efficient port in the nation. They are a founding reporter with the Climate Registry, and work proactively to improve water quality in Puget Sound and Elliott Bay. They organically maintain 19 acres of waterfront parks, have removed over 70,000 creosote pilings and building almost four acres of habitat on the Duwamish River, and are the only cruise port in the country to provide shorepower at 2 berths.

Port of Skagit. The Port of Skagit has a long track record of proactive environmental stewardship. As the result of Skagit Wetlands and Industrial Negotiations program, there are now approximately 477 acres of high functioning, protected wetlands and wetland buffers on Port property. The Port has also developed a Stormwater Management Program that includes approximately 1,800 acres of Port-owned land and is intended to protect downstream water quality. In 2010, the Port of Skagit enacted a new Resource Conservation Plan with a goal of reducing energy consumption in port-occupied facilities by 10 percent from 2008 levels within two years. The Port also plays a leading role in the ongoing effort to keep the Swinomish Channel open, thus addressing carbon footprint/green house gas savings by maintaining a shorter travel route for marine traffic on Puget Sound.

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## PNWA Port Members *(continued)*

Port of Tacoma. A \$1.5M federal grant will add shore power infrastructure this year to the Port of Tacoma's Totem Ocean Trailer Express (TOTE) terminal. TOTE matched the grant by investing \$1M to adapt two ships with plug-in capabilities, eliminating approximately 1,400 tons of greenhouse gas emissions and 2 tons of diesel particulate emissions each year. In addition, the Port's 2008-09 demolition program provided incentives to contractors who reused or recycled more than 65 percent of removed material. On average, contractors diverted 87% (7,071 tons) of the material from landfills - enough to fill about 275 dump trucks. The Port owns 60 acres of forested hillside that creates a natural buffer between the industrial operations and nearby neighborhoods, and it has also restored an additional 75 acres of habitat to support salmon and a wide variety of plants and other wildlife. The Port is also pioneering low impact development technologies to prevent water pollution. Pilot "tree in a box" results show native trees can filter out 90 percent of zinc from stormwater runoff.

Port of Vancouver, WA. The Port of Vancouver, USA continues to undertake major environmental advances. They have moved forward on plans to create a 157 acre wetland mitigation bank on port-owned property, and installed a pump-and-treat "air stripping" system to remove trichloroethylene and solvent contaminants from West Vancouver's Fruit Valley neighborhood. Over 200 acres of land, newly named Port of Vancouver Terminal 5, has been certified clean by Washington Department of Ecology and is already being used to store wind energy parts. The port has also joined the Columbia River Clean Diesel Project to reduce diesel particulate matter in the Portland/Vancouver area along the Columbia River and has received, along with two of their tenants, \$379,000 in WA State Clean Diesel Grants to retrofit equipment at the port and ultimately reduce particulate matter up to 50%. The Port also treats 99% of all stormwater on its industrial property and continues to research additional ways to incorporate sustainable, low impact development technology on future development projects.

Oregon and Washington Clean Marina Programs. The Clean Marina programs in Oregon and Washington are voluntary port initiatives to protect and improve local water quality by promoting the use of environmentally sensitive practices at marinas. If a facility is in compliance with existing environmental regulations and uses a high percentage of the recommended best management practices, it can be certified as an Oregon or Washington Clean Marina. Many PNWA member ports are working to become certified, or have already done so.

Northwest Ports Clean Air Strategy. To improve air quality in their harbors, the Ports of Tacoma and Seattle, and Port Metro Vancouver (CA), have formed a landmark partnership through the Northwest Ports Clean Air Strategy. In this agreement, they set shared goals for reduction of diesel emissions and greenhouse gases for 2010 and 2015.

Puget Sound Marine Emissions Inventory. The Ports of Tacoma and Seattle, along with many partners (including the American Lung Association, EPA, U.S. Coast Guard, U.S. Navy), are funding the Puget Sound Marine Emissions Inventory, and have already committed \$318,000 to replace and retrofit cargo handling equipment at the two ports. They are developing and implementing air pollution control strategies for vessels and on the docks. The ports are also modifying equipment to operate on clean propane, switching to ultra-low-emission fuels, using bio-diesel and working with cargo and cruise vessels to reduce air emissions.

Many PNWA member ports are also working to develop environmental initiatives that enhance the economic value they currently provide their communities. In addition to the examples listed above, ports like Woodland, WA have retrofitted buildings with energy saving light fixtures to make their properties more energy efficient. Upriver, ports like Walla Walla, WA are engaging in watershed restoration projects. Many are also planning biofuels facilities to produce cleaner energy and reduce use of fossil fuels. PNWA ports are making great strides to improve environmental quality in the Pacific Northwest.

## Other PNWA Organizations

PNGC Power. PNGC Power supports creation of a wave energy pilot project in Reedsport, OR. A wave energy park is currently being developed and it is anticipated to sell electricity commercially with PNGC Power's participation. A demonstration buoy is expected to be fabricated and launched in the Pacific Ocean near Reedsport in 2010. PNGC Power also provides operational and management expertise at the Coffin Butte Resource Project located north of Corvallis, OR. The project generates 5.66 megawatts of clean, renewable power from landfill gas, a natural by-product of solid waste. Coffin Butte, which began operation in 1995, allows several electric cooperatives to offer customers "green power" as a way to support renewable resources.

Weyerhaeuser. Weyerhaeuser is reducing its greenhouse gas emissions 40% by 2020 while reducing its reliance on fossil fuels. The company is accomplishing this goal by generating 72% of their energy from renewable biomass, and installing cleaner boilers to generate steam and electrical energy in their mills. Weyerhaeuser has also sequestered 2.6 times more carbon, primarily in wood products, than it emitted last year, reduced air and water emissions, recovered 6.7 million tons of used paper (13% of the total recycled in the U.S.), and has obtained independent certification that all of the forests it manages or owns in North America meet the Sustainable Forestry Initiative Standard or the Canadian Standards Association sustainable forest management standard. Their environmental sustainability report is available online at [www.wy.com/environment/sustainability](http://www.wy.com/environment/sustainability).

*For more information on PNWA's 2010 climate change agenda, please visit our website at [www.pnwa.net/new/articles/PNWA and Climate Change.pdf](http://www.pnwa.net/new/articles/PNWA%20and%20Climate%20Change.pdf).*