



The Closed-Loop Scoop

Washington State Department of Ecology, Solid Waste & Financial Assistance Program

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Worms Work for Free and Make No Noise

City employees join in the effort

City of Olympia employees are looking to worms as one way to help reduce the amount of waste they send to the landfill. So far, 3 out of 15 buildings occupied by City employees are using worm bins to compost leftover food scraps from lunches and breaks. Currently, the City has roughly 600 employees spread across various buildings and locations. It is the goal of the Public Works Department's Waste ReSources Line of Business to eventually have worm bin composting available to all City employees.

Inspired by Department of Ecology's food composting project and a desire to "walk their talk," Waste ReSources staff decided it was time to enlist the help of worms to help turn their waste into a resource. They constructed a wooden bin for their building and began using it. The appearance of this one bin and a timely waste reduction message about the effects of organics in landfills is all it took to cause a stir. Soon employees began asking when they were getting a bin for their building, as well as how to do it at home.

For now, employee work groups receive a 26-gallon plastic storage tub bedded with straw as a starter bin for their building. The starter bin, along with worms and kitchen collectors, is delivered in ready-to-use fashion. A brief and interactive training for the team of building champions helps them understand what foods worms like, how to feed them, and just how easy it is to compost this way. The building champions work with the rest of the employees in the building.

In order to improve program exposure, staff are working to add interpretive signs next to each bin, put information on the City intranet, and find or have built a more aesthetic looking bin. While the plastic



City employee feeding worms

starter bins work okay, staff believe that a more aesthetic and cohesive look will improve the program by adding an air of professionalism.

At this time, no one is recording the pounds or volume of food waste diverted; however, building champions report that all fruit and vegetable waste is being diverted from the garbage—making the effort a success. They are also learning a lot about people's behaviors and perceptions of waste, especially the "ick" factor, and that you really need a team of dedicated champions to help the cause.

Submitted by City of Olympia Waste ReSources Line of Business. To learn more, e-mail Ron Jones at rjones@ci.olympia.wa.us/.

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Graduation of Sustainable Building Class

Cool advisors turned loose upon the world

On June 23, 2007, Spokane graduated its first class of Sustainable Building Advisors. This milestone resulted from efforts by staff at the Department of Ecology and their partners at Community Colleges of Spokane (CCS), and by the program developers, O'Brien and Co. and Seattle City Light. Two employees at Ecology's Eastern Regional Office, Jim Wavada, lead instructor, and Allison Gray, green building specialist, played key roles.

The 25 students in the inaugural class learned all the intricacies of sustainable design and construction over a period of nine weekend meetings spread over nine months. The class helps spread green building knowledge into Eastern Washington, which is also a goal in Ecology's Green Building Initiative. Wavada and Gray are earlier graduates of this training, which Seattle Central Community College has presented in the past. Vicki Colgan of Ecology's Northwest Regional Office is also an earlier graduate. In fact, Colgan now serves on the steering committee overseeing the continuous development of sustainable building advisor training, particularly the new national certification examination.

For the Spokane class, Wavada agreed to take responsibility of lead instructor to organize the Spokane trainings. Allison Gray played a crucial part in making the class possible by recruiting students from the ranks of the Spokane Steering Committee of the Cascadia Green Building Chapter. She also helped with marketing and planning an open house for the training.

The Institute for Extended Learning of CCS Community Colleges of Spokane is the educational institution sponsor for the training program. The Spokane location joins nine others across the country—from Bucks County Community College in Pennsylvania to the Pacific Environmental Center in San Francisco—who are embracing the National Sustainable Building Advisor Program. They see this as a way to quickly get their local design and construction communities up to speed on green building theory and practice. Congratulations to the class of 2007!

Contact Jim Wavada, jwav461@ecy.wa.gov, or Allison Gray, agra461@ecy.wa.gov, for details. Below is a class photo taken by Wavada with an infrared camera used to detect insulation gaps in the classroom building during the indoor air quality unit. Notice how "cool" this class was at 87.3 degrees Fahrenheit mean temperature.



Calendar of Events

September 16-19, 2007, National Recycling Coalition's Annual Congress & Exposition. Denver. For details, visit the Web site at <http://events.jspargo.com/nrc07/public/enter.aspx>.

September 20-22, 2007, West Coast Green Residential Building Conference & Expo, San Francisco. For details, call 1-800-724-4880 or visit the Web site at <http://www.westcoastgreen.com>.

October 8-12, 2007, Hazardous Materials Management Conference on Household and Small Business Waste, San Diego. For more information, visit the Web site at <http://www.nahmma.org/displayconvention.cfm> or call 1-877-292-1403.

October 16-18, 2007, Wastecon 200 will take place in Reno. For details, contact SWANA at 1-800-467-9262 or visit their Web site at <http://www.swana.org/sections/wastecon/>.

October 23-26, 2007, Designing a Sustainable Future, 2007 Business for Social Responsibility Conference, San Francisco. To learn more, call 415-984-3201 or visit <http://www.bsr.org/BSRConferences/2007/index.cfm>.

November 9-11, 2007, Tilth Producers Conference will be held in Yakima. To learn more, call 206-442-7620, or visit the conference Web site at <http://www.tilthproducers.org/conference.htm>.

Washington Schools Honored at Capitol

Schools earn cash awards for environmental stewardship and to fund new programs

This year, 25 Washington schools shared nearly \$40,000 in cash awards for their outstanding environmental programs.

The Terry Husseman School Awards recognize schools for their innovative curricula, ongoing waste reduction efforts, or new environmental programs. The Department of Ecology presents these awards annually. Many of this year's winning programs include habitat restoration, alternative energy projects, and recycling.

"It's more important than ever that the school-age generation understands how their actions directly affect the environment," said Cullen Stephenson, manager of Ecology's Solid Waste Program. "These awards recognize practical, hands-on projects that not only teach important lessons, but help all of us by reducing waste and creating a more sustainable future."

Students and staff from the winning schools celebrated their exceptional efforts and received their awards at a ceremony in the Capitol Rotunda. Several legislative representatives and Mrs. Husseman joined the festivities. Ecology provided refreshments that included organic fruit and juice from a local apple orchard. On display were posters that each school brought to depict its program.

During the ceremony, recipients posed for photographs with Ecology Director Jay Manning and Cullen Stephenson. Afterwards, everyone networked with each other while perusing educational booths on composting and litter. The Hands On Children's Museum was back again this year to entertain the students with a recycled art activity.

The three categories of awards are Seed Award, Sustainable School Award, and Environmental Curriculum Award. The Seed Award helps schools with the cost of starting up programs. This year, Ecology

presented 18 such awards, totaling \$29,400. The Sustainable School Award acknowledges schools with ongoing waste-reduction or recycling programs. Seven schools shared \$6,000 in awards.

The Environmental Curriculum category encourages schools to develop curricula to teach environmental awareness in Washington schools. No school submitted an eligible application for this award this year, so the money was used to provide additional awards under the other two categories. Award amounts ranged from \$375 to \$5,000.

This year, the state Office of Superintendent of Public Instruction contributed \$10,000 toward the cash awards. Winners for the 2006-07 school year are listed below.

Seed Award

Dayton Middle and High Schools, Columbia County
Cowlitz County Youth Services, Cowlitz County
Olympic Elementary, Lewis County
Aberdeen High School, Grays Harbor County
Taholah High School, Grays Harbor County
Edison Elementary, King County
Tukwila Elementary, King County
Snoqualmie Elementary, King County
Lawton Elementary, West Woodland Elementary, and
Laurelhurst Elementary, King County
John Muir Elementary, King County
Sonoji Sakai Intermediate School, Kitsap County
Omak High School, Okanogan County
Tonasket High School, Okanogan County
Anacortes Home Education Partnership, Skagit
County
Darrington High School, Snohomish County
Cascade High School, Snohomish County
Contract Based Education Alternative Programs,
Spokane
Madison Elementary, Spokane County

Sustainable School

Asotin Elementary, Asotin County
West Valley City Middle School, Spokane County
Acme Elementary, Whatcom County
Mt. Baker Junior and Senior High, Whatcom County
Kendall Elementary, Whatcom County
Harmony Elementary, Whatcom County
Lopez Island Elementary, San Juan County



Students from Lawton Elementary

For more information, visit the Sustainable schools awards site:
<http://www.ecy.wa.gov/programs/swfa/terryhusseman.html>.

Deconstruction and Recycling at Fort Lewis

Old buildings prove they're all that they can be

As a cornerstone of the state's 30-year Beyond Waste plan, Ecology's Green Building Group is encouraging the deconstruction of buildings and the salvage and reuse of building materials and fixtures. Traditionally performed largely by hand, deconstruction has struggled to be time- and cost-competitive with demolition. For large-scale projects, the deconstruction industry has moved toward the use of heavy equipment. This approach increases worker safety and reduces the time needed to remove buildings from a site, while still salvaging building materials for reuse.

Fort Lewis recently received a Recycler of the Year award from the Washington State Recycling Association for successfully using "hybrid" mechanical-manual deconstruction techniques. Ecology's Solid Waste and Financial Assistance Program had nominated Fort Lewis and the Seattle District of the U.S. Army Corps of Engineers (USACE) for the award. The nomination cited them for "demonstrating that mechanically assisted deconstruction can be feasible for large-scale building removal projects." Based on the success of this project, Fort Lewis and USACE are integrating use of deconstruction for future building removal projects at the base.

MCS Environmental, the general contractor on the deconstruction of 12 buildings in the Battle Simulation Complex, diverted 100 percent (3583 tons) of nonhazardous materials from disposal. This diversion avoided an estimated \$296,880 in transportation and disposal costs, while the total estimated value of



De-nailing station for lumber

salvaged materials was \$207,000. The use of local subcontractors created jobs resulting in more than \$80,000 in economic impact. Some of the salvaged and recovered materials (landscaping plants, lumber, and plywood) went into use for projects around the base. Such projects included picnic tables and planters, which are part of rehabilitation activities for soldiers recovering from injuries.

Fort Lewis' 25-year sustainability plan has 12 goals designed to ensure long-term viability of the mission while minimizing impacts to the environment. One of these goals is "Cycle all material use to achieve zero net waste by the year 2025." This goal has direct implications for the Fort's need to provide military housing and operations facilities for a force that will add 32,000 soldiers by 2011. To make room for more efficient facilities over the next four years, the Fort needs to remove more than 250 wood-framed buildings from the World War II era. Prior to 2005, building removal on Fort Lewis was done primarily through demolition and disposal. However, Fort Lewis' Installation Sustainability Program has received support from commanders for a more sustainable approach to building removal and solid waste management.

Prior to starting work, the buildings were examined to identify salvageable materials and local markets were found for the materials. Work crews from Olympia Salvage removed salvageable materials for resale and collected remaining materials for recycling or donation to alternative markets for reuse.



Reach forklift removes roof "panel"

**(Deconstruction and Recycling
at Fort Lewis, continued.)**

Finally, MCS Environmental employed several innovative hybrid manual-mechanical techniques to improve material recovery and reduce the time spent on deconstruction. These techniques included:

- Use of scissor lifts to improve worker access and safety while preparing roofing trusses and wall panels for removal.
- Use of reach forklifts to remove “panels” or large intact sections of the building.
- Pushing the two-story gymnasium over to easily access roofing materials and intact trusses.
- Setting up an onsite de-nailing and material recovery station.

Project Managers Ken Smith and Elizabeth Chien now receive calls from Army sites around the country for information on how Fort Lewis accomplished this project. This interest may lead to a transformation in how the Army approaches building removal and management of construction and demolition materials. With several base-modernization projects planned

around the country, the efforts of Fort Lewis and USACE have national significance. The project achieved success by gaining support from top management, setting goals, and creating an integrated project team willing to try innovative approaches.



Gymnasium is tipped to provide easy access to trusses

E-Waste Rule Language Now Available for Comment

Starting July 11, 2007, the Department of Ecology began accepting comments on a rule proposal affecting the Electronic Product Recycling Program (WAC 173-900) and Dangerous Waste Regulations (WAC 173-303). The formal comment period ends August 30, 2007.

To download a copy of the rule and other related documents go to <http://www.ecy.wa.gov/laws-rules/activity/wac173900.html>.

The rule proposal includes the following amendments to WAC 173-900:

- Electronic Product Recycling Plan content and submission requirements.
- Performance standards for electronic product processors used directly by plan operators, collectors, and transporters.
- Recycling service-level standards.
- Reporting processes and requirements for plan operators, local governments, local communities, processors, collectors, and transporters.
- Registration process and requirements for processors.
- Collector standards.
- Process for establishing return share and equivalent share of responsibility for manufacturers.
- A sampling methodology to be used by all plan operators to provide Ecology data to establish return shares.
- Requirements for the Materials Management and Finance Authority.
- Warnings, penalties, and violations associated with these requirements.
- Other requirements necessary to implement Chapter 70.95N RCW.

Teamwork Solves Yard Waste Problem

Small towns in Spokane County unite

In less than a month, a team of local and state agencies, representatives from five small municipalities, and a regional waste hauler organized a successful yard waste collection event. The four-hour event took place May 5, 2007, in southeast Spokane County.

Volunteers collected approximately 50 cubic yards of woody debris and grass clippings at the event location, the Spokane County gravel pit on the outskirts of Waverly. The team selected Waverly because of its proximity to all five of the small towns that requested the event.

Sunshine Disposal offered two containers, a tractor-trailer combination, and a driver for the day to haul the collected yard waste to Canon Hill Recycling in Post Falls, Idaho.

Planning for the event started when Ecology's Eastern Regional Office (ERO) got a request for help from Mayor Ed Crockett of Latah. Grant officer Nancy Lucas and environmental planner Jim Wavada, brought together a multiagency team on short notice to respond to Mayor Crockett's request.



Mayor Crockett, county's Bill Wedlake help citizen unload

The team included members from Spokane County's Solid Waste Advisory Committee, Spokane Regional Solid Waste Services, Spokane County Air Pollution Control Authority, Sunshine Disposal, and the towns of Spangle, Waverly, Latah, Fairfield, and Rockford for some quick problem solving.

The small towns were caught unprepared for the expansion of the state yard waste burning ban in 2007. This year the ban expanded to include smaller communities.



Pitching in from several angles

"It just wasn't on our radar," Mayor Crockett admitted, "and we knew people just weren't going to drive 40 miles into Spokane to dispose of yard waste they could burn in their yards last year. I didn't want to see a bunch of illegal dumping either."

ERO staff organized the early meetings to plan a response, but the logistical and operational efforts came mostly from Bill Wedlake of Spokane County Utilities and Suzanne Tresko from Spokane Regional Solid Waste Services.

Lucas and Wavada have promised to work with the smaller communities this year to put together a plan for a longer-term solution to their yard waste management challenges. This solution may find its way into Spokane County's Coordinated Prevention Grant application for the next cycle of funding.



E-Waste Is Edgy, Man!

Sharp commentary from Ecology's Miles Kuntz

Washington is one of a handful of "cool" states that are taking steps to better manage used computers, monitors, and televisions. Commonly called E-waste, old electronics may be the fastest growing solid waste stream on the entire planet. And Washington's being on the leading edge of this issue really is pretty cool.

Ecology's Solid Waste and Financial Assistance Program is in the midst of setting up a recycling program for unwanted electronic products, as mandated by state law (RCW 70.95N). Product manufacturers must establish a free-of-charge system to collect and recycle used computers, monitors, and televisions. This system will be available to households, small businesses, small governments, school districts, and charities in Washington.

Working together, Ecology and manufacturers have already accomplished several important tasks that will help get a statewide electronic-product recycling system in place no later than January 1, 2009.

- Nearly 99 percent of the fees billed have been collected from over 200 manufacturers who are required to register and participate in the new system for recycling electronics.

- Ecology has convened the Washington Materials Management and Financing Authority (MMFA), which will develop and put into action a collection, transportation, and recycling system for electronic products.

- Ecology has provided a \$500,000 loan to the MMFA for start-up costs as they develop the electronic-product recycling system.

- Manufacturers have been notified what they can expect their share will be of the electronic products returned for recycling in the first year of the system.

- A comprehensive set of rules have been developed to guide manufacturers, retailers, collectors, transporters, and processors of electronics covered by this program.

New programs such as electronic-product recycling are always very exciting and often very challenging. One of the biggest challenges for this program is the implementation of a state law when many of the manufacturers and retailers do not even have a physical presence in Washington. So far, we have had a very good response from manufacturers and retailers that are both out-of-state and out-of-country.

The result is that Ecology is thinking and acting globally. For a government agency, that's pretty cool!

For more information on the electronic-product recycling program, check out Ecology's Web site at <http://www.ecy.wa.gov/programs/swfa/eproductrecycle/>.

E-Waste Program Registration Now Online

Online registration for collectors and transporters of electronic products for recycling is now available through the Washington State Department of Ecology's (Ecology) *Washington Recycles: Electronics* Web site. Businesses who wish to perform collection or transportation services for compensation under a manufacturer's plan must:

- Submit an initial registration to Ecology.
- Update the registration information within 14 days of any changes.
- Renew registration annually between June 1 and September 1.
- Meet certain performance standards defined in *Chapter 173-900 WAC*.

To register or to find more information, go to <http://www.ecy.wa.gov/programs/swfa/eproductrecycle/>.

The registration is part of Ecology's efforts to carry out the Electronic Product Recycling law that was passed in 2006. Electronic products covered by the law include computers, monitors, laptops, and televisions used by households, small businesses, school districts, small governments, and charities. This law requires manufacturers of those products to implement and finance plans to collect, transport, and recycle their products.

Collectors and transporters approved to provide services for recycling plans are listed on the above Web site. Businesses that do not complete this process will not be able to collect or transport covered electronic products for electronic product recycling plans.

If you need a paper version of the registration form or have any questions relating to electronic product registration, please contact Margo Thompson at 360-407-6999 or math461@ecy.wa.gov.



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Newsletter Editor:

Jim Bill
SWFAP
Dept. of Ecology
P.O. Box 47600
Olympia, WA 98504-7600
360-407-6125
jbil461@ecy.wa.gov