

**Washington State University - Pullman
Environmental Management System
Annual Report for Calendar Year 2011**

1. A statement indicating the time period covered by the report.

January 1, 2011 through December 31, 2011

2. A statement which indicates that the EMS elements described in the original application are still operative. The facility should indicate that an assessment of these elements has been completed, and describe the results of the assessment.

All elements of Washington State University's Environmental Management System described in the original application remain operative.

3. A description of any significant changes in the EMS elements, or any relevant changes to the overall EMS of the facility.

None.

4. Report on progress towards objectives and targets, including any problems encountered. When possible, include or reference quantitative data on hazardous substance and hazardous waste reduction, air or water pollutant reduction.

See below.

WATER

Objective 1: Improve stormwater management on campus

Target 1: Complete marking all catch basins with "No Dumping, Drains to River" labels.

- Target 1 was met
 - WSU completed marking all catch basins with "No Dumping, Drains to River" labels.

Target 2: Evaluate the feasibility of using snow shelves in parking lots.

- Target 2 was met.
 - Students in the Chemical and Environmental Engineering Department evaluated the feasibility of using snow shelves in eastern Washington.

They used internet research to find information regarding similar areas currently using snow shelves.

Target 3: Create and maintain a water quality website.

- Target 3 was met.
 - WSU gathered information, photos and graphics and created a water quality website with the assistance of students from the Environmental Science/Regional Planning 490/590 class. See <http://ehs.wsu.edu/ph/WaterPolluteWetlands.html>
 - WSU also created a stormwater website. See <http://ehs.wsu.edu/ph/StormwaterManagement.html>

AIR

Objective 1: Continue to develop greenhouse gas reduction strategies

Target 1: Complete a greenhouse gas emissions inventory for CY2010.

- Target 1 was met.
 - Completed and submitted a greenhouse gas emissions inventory for CY 2010 to EPA, Ecology and the American College and University President's Climate Commitment

Target 2: Create and maintain an air quality website.

- Target 2 was partially met.
 - WSU gathered information, photos and graphics and created an air quality website with the assistance of students from the Environmental Science/Regional Planning 490/590 class.

Target 3: Complete a commuter survey

- Target 3 was met.
 - WSU completed a commuter survey of WSU Statewide facilities. WSU commuting accounts for 7% of WSU greenhouse gas emissions.

HAZARDOUS MATERIALS

Objective 1: Investigate used oil collection system upgrades at various locations.

Target 1: Evaluate economic feasibility of converting temporary used oil collection containers to a permanent hands free system at all dining facilities.

- Target 1 was met.
 - WSU had Baker Commodities provide estimate of installing system into all WSU Dining Services locations. The cost estimate was evaluated by Housing and Dining Services and it was determined to be economically feasible.

Target 2: Upgrade used oil collection containers at farms to further limit potential for used oil releases.

- Target 2 was met.
 - WSU replaced old used oil collection containers with 55-gallon drums and secondary containment units to improve used oil collecting and recycling practices at farm shop locations.

Objective 2: Begin work on cleaning up Model Toxics Control Act (MTCA) contaminated sites.

Target 1: Reduce liability by initiating cleanup of mercury contamination in the Fulmer Hall crawl space.

- Target 1 was met.
 - WSU initiated and completed the cleanup of mercury contaminated soils in the Fulmer Hall crawl space.

Objective 3: Expand recycling opportunities of hazardous materials from non-regulated sources.

Target 1: Environmental Health and Safety, Facilities Operations and the student's Environmental Task Force are working together to establish voluntary battery recycling locations for students at the Compton Union Building.

- Target 1 was met.
 - A battery collection container was located in the Compton Union Building for the collection of non-WSU owned (student "household") batteries. Batteries are managed for recycling by Environmental Health and Safety and are paid for by the Environmental Task Force.

FACILITY DESIGN, CONSTRUCTION AND MAINTENANCE

Objective 1: Continue supporting green/sustainable design, construction and maintenance activities on campus.

Target 1: Continue to research and construct experimental sections of permeable concrete in sidewalks.

- Target 1 was met.
 - WSU Facilities Services and faculty from the College of Engineering collaborated to install test sections of permeable concrete at three locations on campus.

Target 2: Research potential design and construction standards for low impact development.

- Target 2 was partially met.

- Design and construction standards for low impact development have not been written. However, in new construction different types of LID are being constructed to determine practicality in eastern Washington.

FOOD

Objective 1: Continue to create stronger partnerships with local farmers and businesses

Target 1: Using Farm-to-Fork concept to increase percentage of split peas, barley, garbanzo beans and lentils purchased locally instead of from national vendor.

- Target 1 was partially met.
 - Dining Services buys all of its garbanzo beans and lentils from local sources within the Palouse region. They are still working to identify a local supplier of split peas and barley.

Target 2: Work with vendor to investigate the feasibility of purchasing local organic juice and energy bars.

- Target 2 was met.
 - Dining Services currently purchases Columbia Gorge CoGo energy bars. They are still working to identify a source of local organic juices which fit within the parameters of the University wide beverage contract with Coca-Cola.

Objective 2: Continue to look for partnership opportunities within WSU

Target 1: Use memo of understanding with Facilities Operations to expand the organic herb garden adjacent to the Southside Dining Center. Plant established garden in order to use entire growing season. Herbs to be used in the Dining Centers.

- Target 1 was met.
 - The garden was established and is growing herbs for use in the Southside Cafe.

Target 2: Continue to strengthen and expand the partnership with WSU Organic Farm.

- Target 2 was met.
 - Discussion continues with the WSU Organic Farm and products are purchases based on availability.

ENERGY

Objective 1: Continue to identify and implement energy use avoidance projects

Target 1: Install new energy saving equipment in Student Recreation Center.

- Target 1 was met. The ESPC Phase 1.22a and 1.22b SRC Energy Upgrade projects were completed in 2011.

- Phase 1.22a installed new energy efficient washers and dryers at the Student Recreation Center. The new units reduced annual energy usage for washers and dryers by 38% or 98,000 kWh.
- Phase 1.22b involved upgrades to the HVAC, lighting, and pool/spa heaters at the Student Recreation Center. The upgrades reduced annual energy use by 214,600 kWh of electricity and 17,200 therms of natural gas.

Target 2: Install new energy saving air handling system in Sloan Hall.

- Target 2 implementation was delayed.
 - The ESPC Phase 13.7 Sloan Hall HVAC Restoration Part 2 project is in construction now and will be completed in CY2012.

Target 3: Save energy by putting the Information Technology Building on the redundant chilled water loop and removing dedicated chillers.

- Target 3 was met.
 - The ESPC Phase 2.9a IT Bldg CHW Upgrade project was completed in CY2012, reducing the annual electrical energy use in the Information Technology building by 927,615 kWh.

Objective 2: Initiate use of new innovative Department of Energy Pacific Northwest Smart Grid.

Target 1: Save energy by implementing the smart grid.

- Target 1 was met.
 - The ESPC Phase 13.6 Smart Grid project contract was approved in Sept. 2011 and most of the effort in 2011 was on determining the network architecture necessary for the internal and external data communications. The project includes HVAC and CHW Load Shed capabilities, networked energy metering system and Enterprise Energy Management System software, Generator dispatch, and some power system reliability upgrades.

WASTE MANAGEMENT

Objective 1: Continue to explore diversion of waste streams to compost

Target 1: Design and begin construction of in-vessel composting facility with grant money received from the State Commerce Department.

- Target 1 was partially met.
 - The in-vessel composting facility was designed in 2011 and construction is scheduled to start in mid-2012.

Target 2: Reduce carbon foot print by ceasing to ship medical waste off-site for disposal.

- Target 2 was met.

- WSU's pathological incinerator is being used to burn medical waste on site from the research facilities. Extra incinerator operators were trained in order to utilize the full permitted loading time. This procedural change reduced the total number of days in operation which minimized the loss of efficiency during the warm up and cool down phases.

Objective 2: Continue to promote recycling to reduce the amount of waste going to landfill.

Target 1: Increase the amount of waste recycled from residence halls by 5% resulting in a decrease of 5% of the waste stream going to the landfill.

- Target 1 was not met.
 - Collection sites at apartments and dorms have limited space which restricted access to recycling trucks. New front loading trucks were purchased in an effort to allow for expanded collection. The new bins will be located at these facilities in the summer of 2012.

Target 2: Evaluate the purchase of a bailer to determine if bailing plastic is economically feasible. This will allow for direct recycling to vendors.

- Target 2 was met.
 - A Max Pack Automatic Tie Bailer was purchased and installed. The bailer eliminated the need to transport certain recyclable waste streams to the Whitman County Transfer Station. In addition, the bailer allows WSU to more effectively package recyclable computer scrap (plastics and metal) and comingled (paper, plastic bottles, cardboard) waste streams minimizing the number of shipments to recycling outlets.

PROCUREMENT

Objective 1: Continue to promote green purchasing policies

Target 1: Increase the purchase of remanufactured toner cartridges from our primary vendors by 20%.

- Target 1 was partially met.
 - Our three primary suppliers for ink and toner provided data for 2010 and 2011: Office Depot, Officemax and CartridgeWorld Pullman. Demand for product increased in 2011 by approx. 10%, remanufactured and OEM combined. Percentage of remanufactured ink and toner cartridges purchased from these suppliers increased 17.65% in 2011, whereas number of OEM units purchased increased by only 8.78%. Remanufactured ink and toner cartridges comprised 19% of the units purchased from these three suppliers, a 1% increase over 2010. Office Depot became the preferred provider of office products on July 1, 2011. Included in the contract implementation plan was promotion of

remanufactured ink and toner cartridges. The result was a net increase of by 6% in units purchased from Office Depot in 2011. CartridgeWorld Pullman supplied 89% of the remanufactured product purchased, steady over 2010 and 2011.

Officemax supplied just 2% of remanufactured products purchased in 2010 and 2011.

Target 2: Continue to evaluate purchasing options for energy saving equipment.

- Target 2 was met.
 - Two 6-passenger electric vehicles and one 4-passenger electric vehicle for new neighborhood vehicle fleet at Pullman campus,
 - Eight passenger cars with super fuel economy (combination fuels) which were unavailable on state contract.
 - Fifteen Energy Star rated flat panel televisions for Athletics,
 - Copiers acquired from the state contract supplier all have Energy Star rating.
 - Computers and printers with energy saving features were purchased.
 - Bicycles were purchased for the Pullman campus “Green Bike” program.

New Objectives and Targets for 2012:

WATER

Objective 1: Improve stormwater management on campus

- Target 1: Maintain and improve the water quality and stormwater websites.
- Target 2: Install Low Impact Development technologies at new facilities to determine feasibility in eastern Washington.

AIR

Objective 1: Continue to develop greenhouse gas reduction strategies

- Target 1: Submit a greenhouse gas emissions inventory to the American College and University Presidents Climate Commitment organization.
- Target 2: Submit an update to the existing Climate Action Plan to the American College and University Presidents Climate Commitment organization.
- Target 3: Maintain and improve the air quality website.

HAZARDOUS MATERIALS

Objective 1: Investigate used oil collection system upgrades

- Target 1: Select contractor to install permanent hands free used oil collection system at all WSU dining facilities.

Objective 2: Evaluate Universal Waste streams for on-site recycling opportunities

- Target 1: Determine economic feasibility of using employees to take apart used computer printers. Individual components would be recycled using various established outlets

FACILITY DESIGN, CONSTRUCTION AND MAINTENANCE

Objective 1: Continue supporting green/sustainable design, construction and maintenance activities on campus.

- Target 1: Green fund project
- Target 2: Construct new facilities to Silver LEED standards
 - Northside Residence Hall
 - Duncan Dunn and Community Hall Renovations and Addition
 - Veterinary Medical Research Building
- Target 3: Begin LEED silver certification process for the Paul G. Allen Global Animal Health building

FOOD

Objective 1: Continue to create stronger partnerships with local farmers and businesses

- Target 1: Work with primary food vendor (Food Services of America) to identify a local source of split peas and barley.

Objective 2: Continue to look for partnerships opportunities within WSU

- Target 1: Help to educate students how to cook nutritional meals while using local ingredients.

ENERGY

Objective 1: Continue to identify and implement energy use avoidance projects

- Target 1: Implement HVAC Load Sheds and Integral Volt-Var Control measures as part of the ESPC Phase 13.6 Smart Grid Demonstration Project to reduce annual energy use by 1,390,897 kWh of electricity and 7,041 therms of natural gas.

- Target 2: Install new energy saving air handling system in Sloan Hall with the ESPC Phase 13.7 Sloan Hall HVAC Restoration Part 2 project to reduce annual energy use by 331,600 kWh of electricity and 2,217 k-lbs of steam.
- Target 3: Install an In-Vessel Composter at the compost facility on the ESPC Phase 1.23 IVC project to reduce annual Incinerator energy use by 16,365 kWh of electricity and 24,386 therms of natural gas.

WASTE MANAGEMENT

Objective 1: Continue to explore diversion of waste streams to compost

- Target 1: Begin construction of in-vessel composting facility with grant money received from the State Commerce Department. Vessel will be installed utilizing an existing building.

Objective 2: Continue to promote recycling to reduce amount of waste going to landfill.

- Target 1: Set up recycling program with the Athletic Department and Beasley Coliseum to encourage recycling at WSU sporting events. Continue to encourage recycling at RV lots during WSU home sporting events.
- Target 2: Create and promote Facebook page promoting recycling and surplus equipment sales.

PROCUREMENT

Objective 1: Continue to promote green purchasing policies

- Target 1: Increase the purchase of remanufactured ink and toner cartridges from the preferred provider of office supplies by 10% in 2012.
- Target 2: Develop strategy and plan for collection of data around green purchasing with five major suppliers. Vendor transaction reports will provide data needed.

Management Signature and Date

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Dwight Hagihara	Date
Executive Director, Environmental Health, Safety and Risk Management Services	