Facilities Services Sustainability Work Group

University of Oregon
Campus Operations, Growing Sustainability

Volume 1, Issue 9 Winter 2011

Message From F.S. Sustainability Work Group

Feedback, Please

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In This Issue

Sustainability Facts

- 43% of the federally listed species (Endangered Species Act) rely directly, or indirectly, on wetlands for their survival.
- Blueberries, cranberries, mints, and wild rice are produced in wetlands.
- Wetlands provide natural flood control. They store and slowly release surface water. Their vegetation impedes the movement of flood water. Wetlands reduce erosion downstream and on adjacent lands.

Sources:
http://geochange.er.usgs.gov/sw/impacts/hydrology/wetlands/

Newsweek's Top 10 Fixes For The Planet

1. Zero waste: Recycling paper, plastic and aluminum is a start, but products should be designed so that materials can be easily recaptured.

2. LED light bulbs: Always a good idea as since the bulb efficiency continues to improve.

3. Greener fairways: Not all golf courses are bad for the environment.

4. Kite sails: The world's oldest form of propulsion may soon return to shipping.

5. Plastic solar cells: Lightweight and inexpensive, they could be very practical.

6. Climate counts: You can vote with your dollars to support green companies.

7. The Aptera: A funky new hybrid-electric car gets 300 miles per gallon of gas.*

8. Stoves for the masses: Inefficient cooking methods are not a trivial problem.

9. New roots for old crops: Perennials could have advantages over annuals.

10. Democratize green: Ecofriendly products need to go mainstream.

For full story go to: *newsweek.com*

** In addition to the Aptera, and other hybrid-electrics, there is also an increase in the reliability and efficiency of all-electric vehicles. The Tesla Roadster and Model S, the Nissan Leaf, and some "extended range" electrics such as the Chevy Volt and Fisker Karma which are purely electric, but feature a gasoline generator to recharge the battery on-the-go on trips exceeding the battery's capacity.*

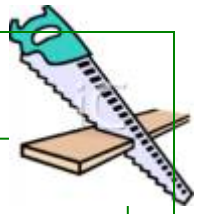
EPA 40th Anniversary

10 Ways the EPA Has Improved Our Lives

The United States Environmental Protection Agency was founded on December 2nd, 1970.

1. Banning Widespread Use of DDT - EPA held hearings and defied industry opposition to ban a ubiquitous pesticide that disrupted the reproductive cycles of bald eagles, peregrine falcons, osprey, brown pelicans, and other iconic native birds, beating back one significant threat of extinction.
2. Removing the Acid from Rain - Using both traditional regulation and market-based trading of sulfur dioxide (SO2) and nitrogen oxides (NOx) from power plants, EPA reversed an acidification trend that was affecting fish populations and freshwater chemistry of lakes and streams, decreasing soil nutrients, causing regional haze, and damaging historical monuments.
3. Rethinking Waste as Materials - "Under the Resource Conservation and Recovery Act of 1976, working with state and local governments, EPA succeeded in driving a change in thinking about the nature of waste, how it is managed, and its effect on our environment," write report authors.
4. Removing Lead from Gasoline and from the Air - "Between 1984 and 1995, airborne lead concentrations throughout the country decreased 89 percent, directly due to the phase-out of leaded gasoline, as well as to the majority of cars equipped with pollution control devices that require using unleaded fuel. Average blood lead levels for both children and adults in the US today have dropped more than 80 percent since the late 1970s," according to the report.
5. Clearing Secondhand Smoke - EPA's classification of secondhand smoke as a known cause of cancer was instrumental in the movement to ban smoking from indoor public places.
6. Vehicle Efficiency and Emissions Control - EPA's progressively more stringent pollution standards for cars and trucks prompted manufacturers to build vehicles that emit 75-90% less pollution for each mile driven than their 1970s counterparts.
7. A Clean Environment for All/Environmental Justice - EPA's analysis and acknowledgement that minority and low-income populations tend to bear the brunt of pollution prompted the agency to incorporate environmental justice considerations into many of its initiatives, bringing needed attention to communities previously underserved by environmental protections.
8. Controlling Toxic Substances - While there is widespread agreement that the underlying law is in desperate need of strengthening, EPA has used the Toxic Substances Control Act to compile an inventory of roughly 84,000 chemicals that have been produced in, or imported into the United States and taken more than 4,000 regulatory or voluntary actions to gather data or restrict use of chemicals before they were introduced on the market.
9. Cleaner Water - "The percentage of fishable and swimmable US rivers and lakes has increased from approximately 36% in 1972 to nearly 62% by 1998. Also, 74% of the population was served by sewage treatment plants in 1998, as opposed to 32% twenty-six years before," write Aspen Institute report authors.
10. The "Community Right to Know" Act - The Toxics Release Inventory (TRI) established under the Emergency Planning and Community Right-to-Know Act (EPCRA) is still wildly controversial with polluters. Why? It allows ordinary citizens and policy advocates to simply look up their pollution records - a simple concept, but incredibly powerful tool.

"Over its 40-year history, EPA has evolved into the world's preeminent environmental regulatory agency through a balanced, three-pronged strategy, combining excellent science, regulatory enforcement, and engagement of all stakeholders in developing new solutions to environmental problems. EPA's balanced, multifaceted structure and operation sets the standard around the world for applying strong science, as well as economic incentives and disincentives, to achieve positive environmental outcomes while allowing businesses to grow and prosper," said Aspen Institute President and CEO Walter Isaacson at an event unveiling the list. Happy Birthday EPA! Thanks to the Aspen Institute for providing the EPA Anniversary Retrospective. Let's hope the next 40 years bring us continued improvement on environmental initiatives in this country.



UO currently competing in RecycleMania 2011

2011 marks the 8th year that the UO is participating in the RecycleMania, a nationwide iintercollegiate recycling competition along with over 600 schools. Schools compete by reporting campus recycling and trash data to compete in various categories such as recycling rate, waste minimization, per capita recycling and targeted recycling materials. The competition began on January 23rd and runs until April 2nd.

Running parallel to the national competition is RecycleMania's Civil War between the UO and OSU. Each school reports a weekly per capita average based on recycling and composting totals divided by the campus FTE. Paper, corrugated cardboard, bottles and cans, and food service organics from campus dining halls, cafes and the EMU make up the per capita average. The school with the highest cumulative per capita total wins bragging rights and the Civil War Trophy for the coming year. All faculty, students and staff are encouraged to show their Duck pride by getting any and all recyclables and compostables generated on campus into the appropriate collection bin.

As of Week 3, OSU has the advantage, but plenty of time remains for the UO to pull ahead. The latest competition standings can be seen on the UO Campus Recycling website, http://recycle.uoregon.edu.

Solar Lumber Kiln

Campus Operations/Facilities Services has just finished creating a Passive Solar Lumber Kiln. This kiln will be used to slow dry the lumber that is harvested from trees that are removed from campus. The container is heated passively by the sun and vented continuously with a 400 cfm electric fan. The kiln is filled now with wood milled last month, mostly red oak, which should be dry enough to use next fall. There is enough additional capacity to handle the milled wood from any and all trees that are sustainably harvested from campus. The milling is provided by a local portable saw mill.

In addition to the red oak that is drying, there is also leftover maple that was milled over a year ago that is dry now and could be used right away and there is also birch and fir that is dry and some pine and cedar that is still green.

Thanks to Deaton Love for this information, and for his continued dedication to providing sustainable materials for campus projects.

Sustainability Superstar of the Month:

Congratulations Eric Blachly!

Eric runs a crew of student workers that change all the lights on campus. He recycles all of the old lamps, even though many of them are eco-friendly, with less mercury, and are legally allowed to be thrown into landfills. He also recycles all the ballasts and wiring that could also be thrown in the trash. He also has built a mass re-lamping system that is more efficient and cost effective than the usual system of changing lights when they burn out. His work, and that of his crew, has helped divert hundreds of thousands of fluorescent tubes from the waste stream, and also helped save the University hundreds of thousands of dollars over the past 15 years. The company that he works with, based in Arizona, literally recycles every single component of the tubes he sends them and recovers important raw materials to be reused in the manufacturing of new products.

Congratulations and Keep up the good work!!!

UO LEEDs the way with New Construction

Lillis:

Upon construction, the Lillis Business Complex ranked higher than any business school in the US on the LEED scales. It features a design that uses natural breezes to provide cooling, and sunlight to provide heating and electricity. It is home to one of the largest solar installations in the Northwest and is a pioneer in the use of photovoltaic solar glass.

Features include an east-west orientation and sitting, window placement and glazing, thermal mass, operable vents and interior finishes which maximize daylighting and natural ventilation. The atrium passively pulls fresh air through the building at night to cool the building's thermal mass. Lillis has state-of-the-art lighting equipment features: T-5 lamps with electronic dimming ballasts; T-8 and compact fluorescent lamps. Controls integrate shading elements with light dimming. Half of the faculty offices are cooled only by natural ventilation and ceiling fans, providing faculty an alternative to mechanical cooling. There is a five-story building-integrated (BIPV) curtain wall for the south façade of the building and “Electric glass” designed with a varying density of solar cells to limit unwanted solar glare and gain in the upper areas, while preserving transparency at the floor level. Electric glass was also employed in the skylights to reduce glare while generating electricity. To maximize solar harvest, all available roof area is fitted with solar panels. The builders used materials salvaged from the previous building, certified hardwoods and other sustainable resources and the plants on the "eco-roof" filter contaminants from rain run-off.

http://www.eweb.org/newsletter/lillis
http://www.solardesign.com/projects/project_display.php?id=25

Matthew Knight Arena:

Targeted site planning helped reduce materials usage in the arena’s skin and will mitigate storm water runoff, encourage walking and biking to and from the area and provide access to public transportation lines.

The building also sports heat recovery systems in the air handling units to reclaim heat before it is released outside, underground parking to reduce the heat island effect and conserve the built site area, use of local and recycled building materials, light control and motion sensors to energy, water reclamation features, electrical and roof infrastructure to accommodate future on-site renewable energy generation, locally-sourced concrete and fans to reduce air stagnation and energy use. 90% of construction waste was recycled.

Other features include photovoltaic solar panels that will generate electricity for the arena; a roof that captures rain water and channels it to the bioswale planters in the front of the building, and white roof surfaces that reflect sunlight and reduce the building’s heating costs.

The Ford Alumni center is designed with similar elements, including placement, the use of solar energy, and emphasis on reducing the costs of heating and lighting.

http://www.greenbuildingnews.com/articles/2011/01/4/basketball-arena-shoots-leed-gold

http://www.sustainablebusinessoregon.com/articles/2010/09/uo_buildings_leed_the_way.html

LEED Certification

In 2005, Lillis received the LEED-NC Silver designation, ranking higher than any business school in the US. It is also among the most environmentally conscious buildings on any US college campus.

So what is LEED? LEED stands for Leadership in Energy and Environmental Design. LEED was created as a rating system for green building.

Green building refers to the design, construction, and operation of buildings in an environmentally friendly way. LEED recognizes performance in five key areas: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. The rating system is specific to the type of project being worked on. Some of these programs are LEED-New Construction, LEED-Existing Buildings, and LEED-Schools. The rating systems are broken down in to points for each type of credit, shown here:

Minimum points: Certified
Second highest points: Silver
Third highest points: Gold
Fourth/Maximum points: Platinum

http://missourifamilies.org/quick/housingqa/housingqa42.htm