

Toward a Sustainable



Spring 2008 Edition

Published by the Clackamas County Office of Sustainability

www.clackamas.us/sustainability



Sustainability may be described as a thought process that leads to sound, long-term decisions. A sustainable action “stands the test of time.” It rejects “out of sight, out of mind” schemes and accepts the necessity of providing for future generations.

Sustainability acknowledges that we have the resources of just one planet to meet our needs, and that healthy natural systems are the basis for sustainable communities and economies.

A plan has a better chance of being sustainable when people collaborate and seek consensus. A project has a better chance of being sustainable when adequate time and energy are spent on design; in other words, when we plan ahead well.

Achieving sustainability will challenge our traditional thought processes. Sustainable actions will move forward only with increased awareness and education. We must acknowledge that we are all in this together.

Clackamas County Office of Sustainability

To support these principles, the Clackamas County Board of Commissioners created its own Office of Sustainability in 2007. It then adopted a “Resolution for a Sustainable Clackamas County” in February 2008.

Share your sustainable practices!

What have you done at your home or workplace to become more sustainable? We are looking for information to pass along. E-mail us at sustainability@co.clackamas.or.us or call 503-557-6363.

Resolution for a Sustainable Clackamas County

WHEREAS, Sustainability means meeting current economic, social and environmental needs while ensuring that future generations can meet their needs,

WHEREAS, Protection, preservation and restoration of the natural environment is a high priority;

WHEREAS, Water is essential for life and plays a vital role in the Earth’s ecosystems;

WHEREAS, Healthy urban and rural communities are an integral part of a sustainable Clackamas County;

WHEREAS, Community awareness, responsibility, participation and education are key to creating and maintaining a sustainable Clackamas County;

WHEREAS, We are connected to the regional, national and global community;

WHEREAS, As a county, we play an essential role in mitigating climate change through our regional jurisdiction over policy areas including land use planning, agriculture, transportation, zoning, forest preservation, water conservation, and wastewater and solid waste management;

WHEREAS, Sustainable development can secure a community’s future by creating family-wage jobs, improving the environment and quality of life, and strengthening the economy;

WHEREAS, As described in the 2007 report of the Clackamas County Green Ribbon Committee, we are committed to sustainable economic development, building practices and products, and agricultural and forest products;

WHEREAS, For sustainability to be successfully integrated into Clackamas County, commitment to action is required at all levels;

THEREFORE, We, the Clackamas County Board of Commissioners, hereby resolve that the concept of sustainability shall guide County policy now and in the future. We further commit the County to follow the principles of The Oregon Natural Step Network to support and enhance sustainability within County operations and throughout the larger community.

THEREFORE, We are committed to meeting or exceeding global targets for mitigating climate change by taking actions in our own operations and communities, including the following:

- a. Create an action plan for reducing global warming emissions in County operations;
- b. Increase the average fuel efficiency of County fleet vehicles;
- c. Increase recycling rates in County operations and in the community;
- d. Make County procurement decisions that minimize negative environmental and social impacts;
- e. Continue to practice and promote sustainable building practices using the U.S. Green Building Council’s LEED™ program;
- f. Adopt and enforce land-use policies that reduce sprawl; preserve open space; create compact, walkable urban communities, and
- g. Protect and foster productive and healthy agriculture and natural resource lands;
- h. Make energy efficiency a priority, and increase the use of clean, alternative energy;
- i. Promote transportation options;
- j. Preserve water resources through education, planning and water supply coordination;
- k. Help educate the public, schools, other jurisdictions, professional associations, businesses and industry about reducing the negative impacts of climate change.

Dated this 28th day of February, 2008

Chair Lynn Peterson
Vice Chair Bill Kennemer
Commissioner Martha Schrader

Water is essential to our physical and economic health

“Water, water everywhere and not a drop to drink . . .”

It's difficult to imagine in a region that receives year-round rainfall, but for a number of reasons, we have a limited supply of fresh drinking water. Much of it is still being used for irrigation, flushing toilets, and washing cars. Our once pristine rivers and streams are becoming polluted with pesticides, fertilizers, and industrial wastes. In addition, our ground water is being threatened by increased growth, long-term declining snow packs, and man-made structures such as wells and mines. Inquiring minds want to know:

- How do I conserve water?
- Where does the water I use in my household go?
- How can I reduce pollution?

In this issue, we look at one very important aspect of sustainability: **Water.**

Save water, energy, and \$ in your home

As the need for water conservation has become more important to consumers, the marketplace has responded with plenty of options for the water-smart buyer. If your home is older than 1992, chances are you have high-water-use fixtures. Replace these older fixtures to save energy, money and water — up to 30 percent on indoor water use alone.



Tip: Turning the water off while you're using the sink can save up to 20 gallons per use.

How does water efficiency save energy?

If one out of every 100 American homes retrofitted with water-efficient fixtures, we could save about 100 million kWh of electricity per year and avoid adding 80,000 tons of greenhouse gas to the atmosphere. EPA's WaterSense program can help you choose water-efficient products. Visit www.epa.gov/WaterSense.

Clothes Washers

Energy Star* qualifying clothes washers save more than half the energy and water of conventional machines of the same size. In one year you save more water than you will drink in a lifetime. Because the spin speeds are faster, you reduce drying time, saving even more energy. An Energy Star-rated clothes washer can save you up to \$90 a year compared to a five-year old washer.

Some new clothes washers are eligible for an Oregon residential tax credit. For details, check www.energy.state.or.us or call 800-221-8035. Your water provider may also offer you a rebate.

If you have an older clothes washer, use cold wash/rinse settings if possible. This will reduce the washing load cost to about 4 cents (from 62 cents at hot wash/ rinse).



Tip: The average dishwasher uses about 10 gallons of water per load. Washing the same number of dishes by hand takes about 16 gallons. New, efficient dishwashers use as little as 5 gallons per cycle.

Dishwashers

An Energy Star-rated dishwasher saves water by eliminating the need for rinsing before loading. Smart sensors adjust wash cycles and water to a specific load. Internal water heaters boost the temperature without affecting your main water heater. Replacing a 10-year old dishwasher can save up to \$44 a year.

If you have an older dishwasher, run it only when it is full. If it has an “energy saver” mode, use it.

*Energy Star is the national symbol for energy efficiency, developed by the U.S. Environmental protection Agency and the U.S. Department of Energy. Appliances that carry the Energy Star label exceed federal standards for energy efficiency. Visit www.energystar.gov.

New toilets conserve water, work well

Homeowners are finding it cost-effective to replace pre-1993 toilets with ultra-low flush toilets. Toilets installed between 1980 and 1993 use 3.5 gallons per flush and the new ones use only 1.6 gallons. A family of four can save about \$78 a year on water, which makes the payback time 3.3 years for the average \$260 installation charge (labor and materials).

Concerns about clogging and double-flushing of earlier ultra-low flush models have been addressed by manufacturers, and today's toilets have been redesigned to improve performance.

Keeping any toilet in good repair is important. Toilets are the largest user of water from a direct source and often the largest source of leakage in a household.



Tip: Did you know that a leaking toilet can waste up to 2,700 gallons of water a month?

One small leak from a faucet can waste 50 gallons of water a day.

Find a leak

Your toilet may have a silent leak, or sporadically run without flushing. Ask your water district for a leak detection kit or drop a little food coloring in the tank. Wait about 10 minutes without flushing. If color appears in the bowl, you have a leak.

Natural Step framework to guide county decision making

A number of key county staff members have received training from the Oregon Natural Step Network. Plans are in the works for all county employees to receive basic sustainability training. The Network is part of the international network of The Natural Step, a non-profit, research, education and advisory organization that uses a science-based framework to help organizations, individuals and communities move toward sustainability.

The Oregon Natural Step network was formed to support Oregon business, governmental, and educational organizations. The framework encourages dialogue, consensus building, and systems-thinking (key processes of organizational learning) and creates the conditions for profound change to occur.

From a business perspective, The Natural Step framework enables organizations to intelligently, and profitably, integrate environmental considerations into strategic decisions and daily operations.

The Natural Step's Four System Conditions are summarized below. Organizations measure their actions against these conditions.

In a sustainable society:

1. Fossil fuels, metals, and other minerals cannot be extracted at a faster rate than they can be re-deposited.
2. Toxic substances must not be produced at a faster rate than they can be broken down in nature, and synthetic compounds that do not break down must be systematically eliminated.
3. We critically examine how we harvest renewable resources and adjust our consumption and land-use practices to fall well within the regenerative capacities of ecosystems;
4. There must be a fair and efficient use of resources to meet human needs (locally and globally).

<http://www.ortns.org/>

Resource-efficiency measures earn Salmon-Safe certification for nursery

Northwoods Nursery/One Green World in Molalla illustrates the connection between energy savings and natural resource stewardship strategies. It recently became the first nursery in Oregon to attain Salmon-Safe certification, earned through sustainable agricultural practices that protect water quality and salmon habitat, and save energy.

“We’re proud of the things we have done to protect and conserve natural resources. Many of these practices not only benefit natural resources, they save us money and, because of the certification, may also provide marketing benefits,” said owner Jim Gilbert.

Northwoods is particularly proud of its recycling program. It recycles all plastic pots thanks to agricultural recycler Agri-Plas, Inc, in Brooks, and it uses biodegradable packing peanuts for shipping.



Making compost pays off

Plant material and other organic matter is composted onsite and used as nutrient-rich mulch in the fields. Soon, used potting medium will be pasteurized and used for transplanting.

What does composting have to do with energy savings?

“Oregon’s growers know fertilizer costs are tied to energy prices,” said Stephanie Page, Renewable Energy Specialist with Oregon Department of Agriculture. “Natural gas is required to produce fertilizer, and fuel is required to transport it to the United States and to the grower. Northwoods is helping save energy and reduce input costs tied to energy by producing its own compost.”

High propane costs have been a challenge. Small steps can make a difference. “One of our employees has been busy sealing gaps in the greenhouses,” said employee Laura O’Leary. The nursery also has installed double poly sheeting on the outside, creating an air gap that helps prevent heat loss.

Northwoods switched from diesel to biodiesel. The price is nearly competitive, and it’s cleaner. “Our employees often work around the equipment while it’s running. Now they don’t have to breathe the diesel exhaust,” said O’Leary.

Irrigation innovation

Northwoods reduced energy needed to pump water and apply it to plants. The nursery’s small rainwater storage tank is fed from the gutters of the composting facility. Supplemented with well water, it is applied to plants through a drip irrigation system. In addition to applying water efficiently, drip systems save energy.

Northwoods Nursery and the Clackamas County Soil and Water Conservation District have jointly applied for an agricultural scale rainwater harvesting demonstration at the nursery, to collect and store approximately one acre-foot of rainwater for irrigation. The site will also showcase run-off water recovery and reuse during dry summer months.



Rainwater storage tank

Lawn program tees up good conservation practices

Golf Course Quality Lawns. Most people conjure up images of an emerald green, well-manicured grass carpet. Others imagine chemicals oozing into wetlands — but it doesn’t have to be that way.

Golf Course Quality Lawns™ is the brain child of Clackamas County Soil and Water Conservation District’s (SWCD) Director of Rural Conservation, Clair Klock. Landowners are attracted to the catchy name. Then they learn how to produce lovely lawns that make their neighbors turn green with envy – all by carefully reducing their use of lawn products and water.

Attention to detail

According to SWCD Director of Community Conservation Jeffrey Kee, it takes attention to detail to create the perfect golf course-like lawn. “Soil tests coupled with the proper application rates and frequency for water, fertilizers, pesticides and herbicides will create the desired results,” says Kee. “Over application wastes money and causes trouble.”

SWCD staff built community buzz for the concept by offering the course at multiple locations around the county and producing a video, “Golf Course Quality Lawns,” which aired frequently on the county’s cable channel for two years. The effort impressed some local municipalities who now hope to sponsor some lawn workshops every year as part of their regulatory requirement to reduce pollution from non-point sources.

Practices improve water quality

Stone Creek Golf Course Superintendent Dave Phipps shares some impressive results with conservation management techniques developed by the Oregon Golf Course Superintendents Association. Creek water leaving his course is cleaner than the water entering it. To achieve this, Phipps used Best Management Practices, Integrated Pest Management, wildlife habitat protection, and he monitored water quality.

Urban conservation is a new endeavor for many Conservation Districts. The Clackamas County SWCD hit a hole-in-one by expanding resource protection to new, non-traditional customers through *Golf Course Quality Lawns™*. For more information call 503-656-3499 or visit www.cc-swcd.org.



Grow a golf course-quality lawn

Saturday, July 26, 2008

10:00 am to 11:00 am

Dennis’ Seven Dees

1090 McVey Ave., Lake Oswego

Speakers: David Phipps, Stone Creek Golf Club superintendent
Jeffrey Kee, Clackamas County Soil and Water Conservation District

Golf course superintendents will share the latest techniques and strategies for growing the best lawn in the least time at the lowest cost. Get tips on efficient approaches to irrigation, soil fertility, mowing, top-dressing and effective pest and weed management. Tools, timing, product choices and application will be highlighted.

Registration and cost: Free. Advance registration required; call Metro Recycling Information at 503-234-3000.

Where does wastewater go?

What happens to the water after you wash your car, rinse out your garbage can, hose off the driveway, or apply pesticides and fertilizers to your lawn? You may be far from a river but your run-off either gets into the ground water or a storm drain which sends it into the nearest creek and eventually to the river, according to Clackamas County water experts. This water rarely receives treatment.

What can you do to prevent oil and chemicals from polluting the water? First, take your car to a car wash, where the water is treated and reused, and treated again before it reaches a wastewater treatment plant.

As for your garbage can, the rinse water should be poured into a sink or toilet, if possible. Drain it into a smaller container first. If that is not feasible, rinse it out in a vegetated area.

Tip: By sweeping your driveway and sidewalks instead of hosing them down, you can save 150 gallons or more of water.



Learn more about natural gardening so you can avoid using toxic fertilizers and pesticides. Once they get into the water, pesticides dissolve, dilute or combine with other chemicals to create harmful combinations that can kill fish and aquatic life, limit beneficial plants and animals, and increase the growth of algae.

Unfortunately, dozens of chemical compounds are showing up in the once pristine Clackamas River, the source of drinking water for many residents. Water treatment plants can reduce the level of contaminants, but cannot completely eliminate them.



Call **503-557-6363** for a free copy of Metro's **Natural Gardening** booklet.

Crush, Don't Flush

The Pharmaceutical Research and Manufacturers of America recently signed a formal agreement with the U.S. Fish and Wildlife Service and the American Pharmacists Association, to help protect fish and aquatic resources from the improper disposal of medication.

Consumers were once advised to flush their expired or unused medications, but recent environmental impact studies report that this practice could be having an adverse impact on the environment.



Instead, the currently approved way to handle most medications is: "Don't flush those medicines, crush the medicines in a plastic bag; add coffee-grounds, sawdust or kitty-litter; seal the bag and put it in the trash. In other words, crush . . . don't flush."

"Trace amounts of chemical compounds often associated with medications have been increasingly detected in our waters, the very waters that support our nation's fish and other wildlife," said Gary Frazer, with the Fish and Wildlife Service.

Also, consumers are advised to remove and destroy all identifying personal information, including the prescription label, from discarded medication containers.

Metro Nature in the Neighborhood

www.metro-region.org/nature, 503-797-1700
Grants, restoration projects, workshops

www.REIN.org

Information sharing and networking groups that are working to protect, restore and monitor the region's natural resources.

Energy Tax Credits for efficient washers

www.energy.state.or.us
Oregon Department of Energy at 800-221-8035

Classes/Resources

Free Japanese Knotweed Control Workshop

April 24, 2008, Camp Onhalee, 15706 S Hwy 211, Molalla
5 - 6 p.m. Knotweed Control demonstration site tour and
6 - 7:30 p.m. workshop, incentive programs, control methods

Japanese Knotweed has quietly slipped into the Molalla River, choking out native vegetation, destabilizing riverbanks and altering the food chain. It has spread to over 24 miles of the main stem Molalla River and many side channels and tributaries.
Clackamas Soil and Water Conservation District, 503-656-3499

Waste not, want not

Free Natural gardening seminar: Why waste the rain?

Saturday, April 26, 2008, 10 a.m. to noon
Water Conservation Demonstration Garden
Clackamas Community College
19600 Molalla Ave, Oregon City

Learn the basics of bioswales, downspout disconnections, rain barrels, rain gardens and permeable paving. Then see some of these systems in action. You can save on your water bill, help conserve one of our most valuable resources and reduce run-off into our local rivers and streams. All the while, you'll be helping your trees, shrubs and flowers thrive.

Advance registration required; call Metro Recycling Information at 503-234-3000.

Free Composting Workshop



Saturday, May 3, 9 - 11 a.m.
Compost Demonstration Site
Clackamas Community College,
Oregon City
Registration is not required.
503-657-6958, ext. 2246

Let Nature Work for You!

Free Landscaping for Conservation

Session III: Stormwater Management

Learn about invasive weeds and stormwater management
Saturday, May 3, 2008, 9 a.m. - noon
Tryon Creek State Park, 11321 SW Terwilliger Blvd., Portland
Pre-registration recommended - space limited, 503-636-4398
New participants start at 9:00 a.m. Returning start at 10:00 a.m.

Educational Recreational Adventures

www.edurecadv.org or 503-750-2416
Aquatic education programs in the schools and in the field.
Professional, hands-on programs, funded by the Clackamas River Water Providers. Field trip transportation may also be covered.

We love lawns, but they require a lot of water. In fact, lawns use about 2-3 times as much water as other plants in the landscape. Watering your lawn can result in as much as 50 percent water waste through evaporation, run-off, over-spray and over-watering.



Regional Water Providers Consortium

www.conserveH2o.org; 503-823-7528

Tips and resources for wise use of our water supply. Find your "Water Footprint," check out the classes, sign up for the newsletter.

Plan a wiser water schedule with the **Weekly Watering Number**. From March - October, the Consortium publishes a weekly watering number each Thursday. This number is the amount of water in inches that you will need to water that week.

Clackamas Soil and Water Conservation District

www.cc-swcd.org; 503-656-3499

Workshops, habitat enhancement partnerships, and one-on-one technical assistance including water conservation, water-quality monitoring, rain-water harvesting, and natural resource management.