

Jackson Soil & Water Conservation District's

Urban Living Handbook

A Resource for Jackson County
Living and Stewardship



Prepared and distributed by the Jackson Soil & Water Conservation District
89 Alder Street, Central Point OR 97502
(541) 423-6165
www.jswcd.org

Resource Directory

Jackson Soil & Water Conservation District
(541) 423-6165
www.jswcd.org

Please note:
Some contact
information may
be outdated.

Jackson County Cities

Ashland
www.ashland.or.us (541) 488-6002
Butte Falls
www.oregoncities.us/buttefalls.....(541) 865-3262
Central Point
www.centralpointoregon.gov.... (541) 664-3321
Eagle Point
www.cityofeaglepoint.org (541) 826-4212
Gold Hill
www.ci.goldhill.or.us (541) 855-1525
Jacksonville
www.cityofjacksonvilleoregon.com
..... (541) 899-1231
Medford
www.ci.medford.or.us..... (541)774-2000
Phoenix
www.phoenixoregon.net (541) 535-1955
Rogue River
www.rogueriver.org..... (541) 582-4401
Shady Cove
www.shadycove.net..... (541) 878-2225
Talent
www.cityoftalent.org (541) 535-1566

Jackson County Fire Depts.

Ashland (541) 488-6009
Butte Falls (541) 865-4383
Central Point (541) 826-7100
Eagle Point..... (541) 826-7100
Evans Valley (541) 582-0678
Gold Hill..... (541) 826-7100
Jacksonville..... (541) 899-7246
Medford (541) 774-2300
Phoenix..... (541) 535-1113
Rogue River Rural..... (541) 582-4411
Talent..... (541) 535-4222
White City..... (541) 826-7100
Burning Information (541) 776-7007
Wildfire and Smoke Hotline (541) 552-2490
www.co.jackson.or.us/page.asp?navid=1458

Jackson County Depts.

Animal Control..... (541) 774-6655
Exposition Park (541) 774-8270
Health and Human Services (541) 774-8200
Planning & Zoning (541) 774-6907
Building and Septic (541) 774-6900
Roads..... (541) 774-8184
Surveyor (541) 774-6191
Vector Control..... (541) 826-2199
Website www.jacksoncounty.org.us

Watershed Councils

Applegate..... (541) 899-9982
Seven Basins (541) 261-7796
Rogue River (541) 664-1070
Website www.oregonwatershed.com

Oregon State Agencies

Dept. of Environmental Quality. (541) 776-6010
Dept. of Fish and Wildlife..... (503) 947-6000
Dept. of Forestry..... (541) 664-3320
Dept. of Transportation..... (888) 275-6368
Water Resources Dept..... (503) 986-0900
Website www.oregon.gov

Other

Jackson County Library Services
www.jcls.org..... (541) 774-8679
Jackson County Recycling
www.jcrecycle.org..... (541) 608-1023
Rogue Valley Council of Governments
www.rvcog.org (541) 664-6674
Southern Oregon Historical Society
www.sohs.org..... (541) 899-8123
Southern Oregon Research and Extension Center
extension.oregonstate.edu (541) 776-7371
Southern Oregon Land Conservancy
landconserve.org..... (541) 482-3069

Jackson Soil & Water
Conservation District's

Urban Living Handbook

Prepared by



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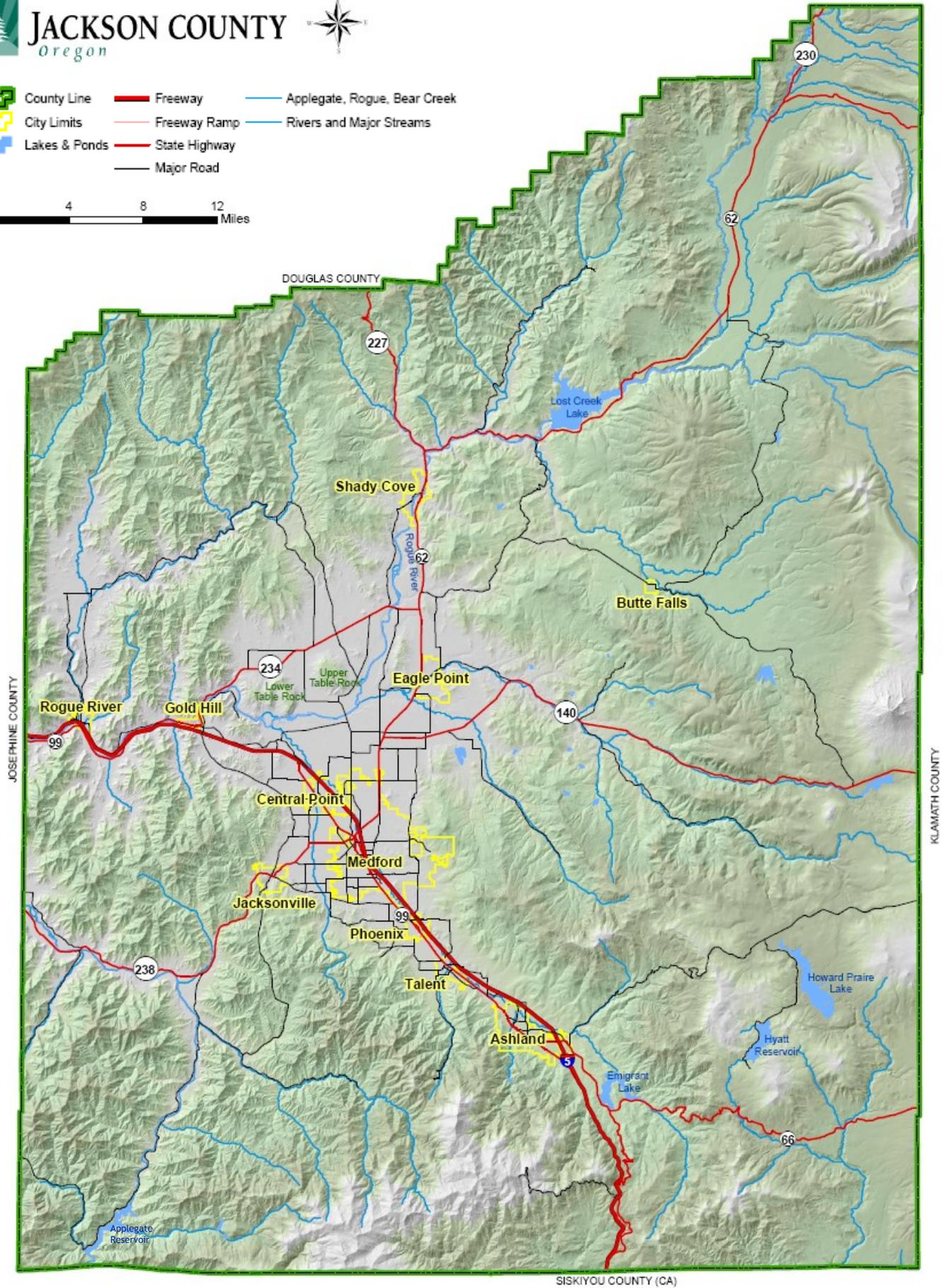
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JACKSON COUNTY *Oregon*



-  County Line
-  City Limits
-  Lakes & Ponds
-  Freeway
-  Freeway Ramp
-  State Highway
-  Major Road
-  Applegate, Rogue, Bear Creek
-  Rivers and Major Streams

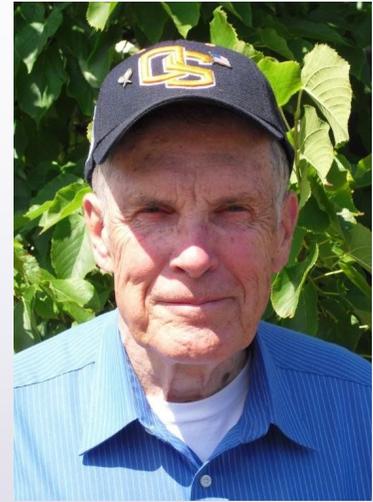


Introduction - A Letter from our Director

Let's Work Together

Dear citizens of Jackson County,

All of us who call Jackson County our home share this environment and want our area to be a clean, beautiful, and united place to live. We can each do our part to conserve the soil, water, forests, wildlife, and energy of this special place. This handbook aims to provide concrete and practical ideas that we can each use to help with stewardship efforts. The sustainability of our urban environment depends on what we do for, and with, each other. Whether you rent or own your property, just moved here, or were born and raised in Jackson County, the ideas in this handbook will help you save money, conserve resources, and protect our natural areas. Together we can help keep Jackson County a wonderful place to live.



I look forward to working with you.

Sincerely,

A handwritten signature in blue ink that reads "Allan Campbell".

Allan Campbell

Director, JSWCD Board (2006-2014)



Purpose of the Urban Living Handbook

The Urban Living Handbook introduces Jackson County citizens to conservation techniques and available resources. It provides information on planning, gardening, energy, and wildlife concerns as well as hints about how each of us can help save money and resources through conservation. We hope that you find ideas that will be beneficial for your budget, family, community, and environment. If you have questions or want more information, contact the Jackson Soil & Water Conservation District (JSWCD).

This handbook was developed and funded by the JSWCD. We would like to thank the numerous contributors from different groups in the region for their support and ideas. Please see the *Contributors* page inside the back cover for a detailed listing.

Resource Directory

Inside the front cover of this handbook is the *Resource Directory* which provides the contact information for agencies and organizations listed within the handbook. Also look for the yellow *Getting Local* boxes throughout the handbook for ideas on whom to contact locally for more information.

Getting Local:

The topics in this handbook can be explored further through other organizations, including those that are locally based and focused. We will note references and ideas about where to find more information in these yellow boxes. Please also visit the JSWCD website at www.jswcd.org for links.

The Jackson Soil & Water Conservation District

Be a Natural Resources Steward

Dear Jackson County,

The Jackson Soil & Water Conservation District (JSWCD) is many things to many people. We are a leader in providing scientifically-based technical assistance and financial resources that support both rural and urban landowners in implementing best management practices. We strive to enhance the natural environment while protecting Jackson County's cultural, social, and economic values. We also provide education to citizens within the county, helping to ensure conservation of our local natural resources.

The JSWCD is dedicated to protecting and enhancing soil and water quality so that our lands can continue to take care of us. Good stewardship is just as vital in urban settings as it is on rural lands. JSWCD provides site visits and guidance to urban and rural citizens. Our staff helps our constituents identify natural resource concerns and opportunities to develop management plans for property they own or lease.

We offer scientifically-based stewardship tools, techniques, and assistance to all members of our community. Our workshops and classes include information on best management practices to grow crops, raise livestock, use rainwater as an asset, select native and appropriate plants for habitat enhancement, and more.

We are interested in successful solutions, large and small. To this aim, we cooperate and share expertise with other agencies such as the USDA Natural Resources Conservation Service, Farm Service Agency, OSU Extension Service, Jackson County, the Bureau of Land Management, Oregon Department of Forestry, Watershed Councils, and many others.

With this handbook, we invite you to manage your own property using solutions that are effective and rewarding. We can also help you and your neighbors transform small actions into a neighborhood and community movement.

Sincerely,



Randy White

District Manager, JSWCD

Getting Local:

The JSWCD can help turn natural resource concerns into opportunities. For more information, or for help on your conservation journey, please call us at (541) 423-6165, or go to our web-site at www.jswcd.org



Jackson County Facts

Jackson County is arguably one of the most beautiful and livable areas of the Pacific Northwest, if not the country. Located in Southern Oregon, our county is surrounded by the majestic Cascade and Siskiyou Mountain ranges and includes 2,801 square miles (1,792,640 acres). It extends south to California, west to Josephine County, north to Douglas County, and east to Klamath County. It is centrally-located along Interstate 5, between Portland and San Francisco, just hours from the Pacific Ocean.

Its major points of interest include the Oregon Shakespeare Festival, the historic town of Jacksonville, Southern Oregon University, the Britt Music Festival, the Rogue River, Lithia Park, and the Table Rock Mountains.

Jackson County is the sixth largest county in the State of Oregon in population. Approximately 70 percent of Jackson County residents live in the 11 incorporated cities (see chart below). The county's principal industries are wood products, agriculture, manufacturing, health care, and recreation.

Medford is the largest city within Jackson County and serves as its County seat. The Rogue Valley is known throughout the country and the world for its pear orchards and roses.

The second largest city in our county, Ashland, is home of the internationally famous Oregon Shakespeare Festival which runs from February through October and sells



Fichtner-Mainwaring Park in Medford is off of Steward and Holy St. Photo by Sue A. McKenna.

more than 350,000 tickets each season. Ashland is also the location of Southern Oregon University.

Another tourist destination in Jackson County is Jacksonville, just five miles west of Medford. The entire city is on the National Historic Registry and is home to the Britt Festival, one of the largest summer music festivals in the United States.

The county's other wonderful towns are popular locations for accessing nearby recreation and wilderness areas.

Our region has moderate weather. Unlike many western regions in Oregon, Jackson County receives only around 19 inches of rainfall a year. The average temperature in January is 39.1°F and 72.7°F in July. There are four distinct seasons, but the weather is relatively mild.

Jackson County offers breathtaking scenery in every direction, moderate weather, and superior quality of life.

Adapted from: Jackson County Homepage
www.co.jackson.or.us

Jackson County—2009

Total Jackson County population 207,010

Ashland 21,505	Butte Falls 445
Central Point 17,165	Eagle Point 8,790
Gold Hill 1,080	Jacksonville 2,655
Medford 77,240	Phoenix 4,855
Rogue River 2,090	Shady Cove 2,865
Talent 6,680	

Getting Local:

Contact Jackson County at (541) 774-6029 or www.co.jackson.or.us

Jackson County History

The natural and cultural history of Jackson County is diverse and fascinating. The landscapes we see today were formed over millions of years by glacial ice migrations, massive floods, and lava flows and are deeply tied to the cultural history.

Native peoples, including the Modoc, Shasta, and Rogue River tribes, lived in the region now defined as Jackson County. They were primarily hunter-gatherers. The men were experts in the use of bow and arrow as well as a fork tipped harpoon for fishing. Women harvested berries, fruits, nuts, and roots. Acorns were collected to produce flour used in bread, puddings, and soup.

The discovery of gold in the Rogue and Illinois River valleys lead to a flood of non-native settlers into the region. Soon a wagon road was completed that connected the remote region to California and Douglas County, Oregon. In the 1850s, tensions over land lead to a period of conflict and war, resulting in hundreds of casualties and the removal of the Rogue River tribe to the Siletz Reservation. During the next two years, several small bands of Native Americans were moved to the Grande Ronde Reservation west of Salem.

Chinese immigration was considerable from 1850 to the 1870s. The Chinese worked in some of the most labor intensive industries and they faced virulent discrimination.

The agricultural history of Jackson County details how the industry grew to today's value of \$76.2 million. The first commercial orchards were planted in 1885. They rapidly expanded and included pears, apples, cherries, peaches, and prunes. Recently, the number of acres in commercial orchards has declined from it's peak of about 12,000 acres in the mid 1930's to fewer than 6,000 acres in 2009. However, the region continues to set the standard of quality for Bosc and Comice pears.

The Territorial Legislature created Jackson County – named after President Andrew Jackson – on January 12, 1852, from the southwestern portion of Lane County and the unorganized area south of Douglas and Umpqua Counties. In 1853, Jacksonville became the first county seat. In the 1880's, the construction of the Oregon and California Railroad bypassed the city. Medford, located five miles east of Jacksonville, benefited from development following construction of the rail line. In 1927, Medford became the county seat.



Historic McKee Bridge, Applegate River Valley – built in 1917 by Jason Hartman of Jacksonville.

Since its incorporation into the United States, our region has exhibited an independent nature, trying several times to break ties with Oregon and California and even the United States. The area is geographically, topographically, and emotionally a domain unto itself and therefore has seen eruptions toward separation in *The State of Shasta* (1852), *The State of Klamath* (1853), *The Pacific Republic* (early 1860's), and *The State of Siskiyou* (1909). To this day, the area is frequently called the *State of Jefferson* by residents, a reference to the last effort toward carving out a separate state in 1941.

Getting Local:

The Southern Oregon Historical Society can help you with historical research and questions: www.sohs.org



Your House:

Everything we do, every choice we make, affects the water, soil, air, plants, and animals where we live. Making your home a greener place is a commitment to yourself, your family, your community, and your world. But, more than that, it is a learning process.

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Green Building and Remodeling

Green building and remodeling can reduce your impact on the environment and save you cash.

A Cost-Efficient Home

Energy efficiency and water conservation are realized over the lifetime of the home. On average, green homes use about 40% less energy than comparably sized standard homes. Additionally, energy efficient homes are in high demand and often go for thousands of dollars more than conventional homes. Green homes also have reduced maintenance costs because the high quality materials selected for the home are intended to last. The landscape of a green home is often designed to conserve water and reduce lawn maintenance. Finally, there are many financial incentives available, such as rebates and low interest loans, for green building and remodeling.

An Environmentally Friendly Home

Green homes are often designed to use multiple alternative energy sources like the sun, wind, biomass, or geothermal energy. Using alternative energy sources, along with energy and water conservation and sustainable materials, creates a home that uses fewer natural resources. Efficient appliances, bathroom fixtures, plumbing, and irrigation systems work together to save energy and water. Many construction materials, such as pavement or wood, can be salvaged. New materials that contain partially recycled content can be selected to reduce waste.

A Healthier Home

In conventional homes, off-gassing of toxins from building materials and poor ventilation can combine to trap stale, polluted air in living spaces. A green home design places special focus on selecting toxin-free materials while increasing natural ventilation. The result is a home that allows residents to breathe easier.

Elements of a Green Home

When “greening” your home, consider:

- **Sustainable Materials:** Consider the lifecycle and recyclability of materials. Look for: reused and recycled content, low off-gassing, low toxicity, and local and sustainably harvested materials. Certifications can help guide you. For example, the Forest Stewardship Council Certification means the product originated from forests that were sustainably managed and harvested.
- **Energy Efficiency:** Strive to surpass energy standards. Look for: efficient heating and cooling systems (consider solar heating or passive solar), energy efficient windows, high R-value insulation, computerized lighting systems, and alternative energy systems. Energy Star qualified products typically exceed standards.
- **Water Efficiency:** Practice water conservation. Look for: landscaping plants that have low water and pesticide needs, low flow fixtures, and gray water systems. See the EPA’s WaterSense website at www.epa.gov/WaterSense/.
- **Measuring Success:** *Leadership in Energy and Environmental Design* (LEED) has become an industry standard and offers a method of measuring and certifying your green design. To find out more see *Measuring Sustainability* on page 27.

Getting Local:

Check with the Oregon Department of Energy for incentives and products at: www.oregon.gov/ENERGY/

Contact the Earth Advantage Institute at www.earthadvantage.org for programs, resources, and incentives.

For more on LEED, visit the Green Building Council at: www.usgbc.org

Reduce, Reuse, then Recycle

When it comes to using resources, once is not enough!

Reduce: One of the easiest ways to conserve is to cut back on what you use daily. Think before you buy something. Ask yourself, 'Can I do without this? Can I borrow this from someone else? Or can I rent this?' Reducing waste starts in the store. Buy less, think more, be resourceful! Try taking your own coffee cup, cloth lunch bag, or shopping bags.

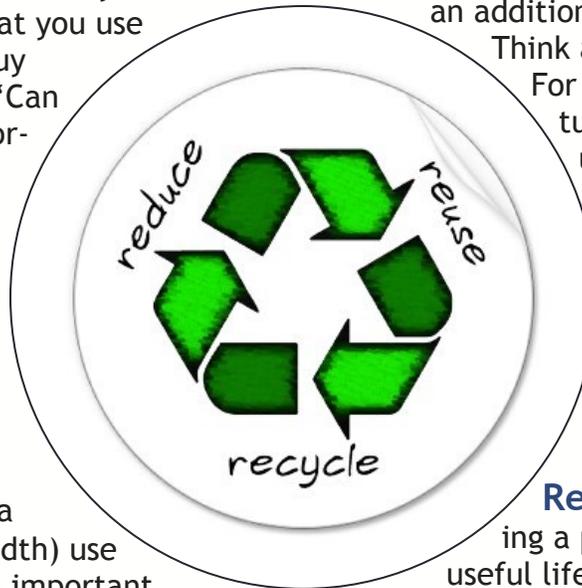
Reuse: Reuse is finding a second (or third or hundredth) use for something. Reuse is an important step after you've already reduced, but before you recycle. Consider what can be re-

paired rather than replaced. Any time you buy or sell an item second-hand using resources like garage sales, online classifieds, auctions, or thrift stores, you are providing an additional use for a product.

Think about reuse creatively!

For example, look for opportunities to be thrifty by reusing what you already have for new, innovative purposes. Can your old clothes become a scarecrow for your garden? Can you refurbish old furniture rather than getting new?

Recycle: Recycling is taking a product at the end of its useful life and using all (or part) of it to make another product. It saves material resources but is listed after reducing and reusing since it takes energy.



Solid Waste Disposal and Recycling Options

Recycling in Jackson County

Each transfer station and sanitation service in Jackson County provides different recycling options. Use the chart on the facing page and visit your provider's website to get current information on what is accepted for recycling in your area. For more details on waste disposal and other services go to www.jcrecycle.org.

Rogue Disposal & Recycling, Inc.

www.roguedisposal.com

(541) 779-4161

Service Area: Medford, Central Point, Phoenix, White City, Jacksonville, Applegate, and surrounding rural areas.



Recology Ashland Sanitary Service

www.recologyashlandssanitaryservice.com

(541) 482-1471

Service Area: Ashland, Talent, and surrounding rural areas.



Southern Oregon Sanitation

www.sosanitation.com

Eagle Point office: (541) 826-5691

Service Area: Eagle Point, Sam's Valley, Gold Hill, Shady Cove, Butte Falls, Prospect, and surrounding rural areas.



Adapted from: Rogue Disposal & Recycling, Inc.
www.roguedisposal.com

Where to take Recyclables

Where to Recycle

Your comingled recycling bin offers you the opportunity to recycle right from your home. Also, recycling centers provide free, or low-cost, recycling for many common items (see the *What to Recycle* chart below for details).

Southern Oregon Sanitation

(541) 826-5691. 42 Ball Road, Eagle Point.

Ashland Sanitary Water Street Depot

(541) 482-1471. Water Street and Van Ness Street, Ashland.

Valley View Transfer Station

(541) 482-1471. 3000 Valley View Road, Ashland.

Rogue Transfer and Recycling

(541) 779-4161, 8001 Table Rock Road, White City.

Getting Local:

Household Hazardous Waste Collection, Latex Paint Drop Off, Plastic Roundups, and Leaf Drop Off events are scheduled periodically. For details see the Jackson County Recycling Partnership at: www.jcrecycle.org.

To find a directory of where to recycle almost anything (shoes, toys, etc.) in Jackson County visit: www.jcsmartworks.org/directory.

Consider becoming a Master Recycler and work in your community to reduce waste. Information is available at: www.jcmasterrecyclers.org.

What to Recycle

Recycling Options	Southern Oregon Sanitation	Ashland Sanitary Water Street Depot	Valley View Transfer Station	Rogue Transfer & Recycling
Newsprint				
Magazines				
Cardboard				
Glass				
Aluminum				
Tinned Cans				
Mixed Paper				
Phone Books				
Yard Debris				
Plastic Bottles				
Plastic Tubs				
Plastic Bags/Grocery Bags				
Shrink Wrap				
Motor Oil				
Tires				
Appliances				
Fluorescent Tubes				
Lead Acid Car Batteries				
Electronic Waste				

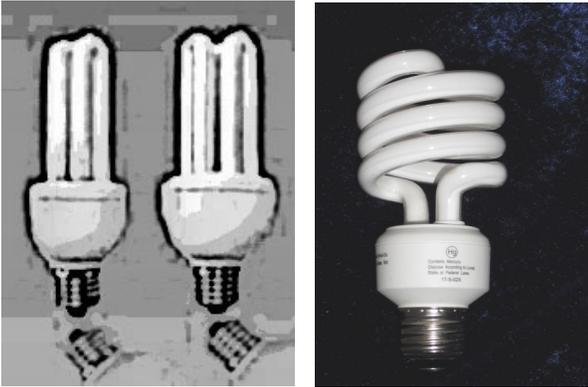
Chart courtesy of Rogue Disposal & Recycling, Inc.

Energy Conservation

Taking a whole-house approach to energy conservation saves you money and saves resources.

Fight the Light

Keep lights off when no one is in a room. If you are going to be out of the room for more than five minutes, turn off the light. For lights frequently left on, make a sticker or a sign to hang next to the switch that says "Lights Out."



Try energy-saving compact fluorescent light bulbs.

When possible, use compact fluorescent light bulbs. Those funny-looking bulbs produce the same amount of light but use 1/4 of the electricity as incandescent bulbs. Plus, they last for years and years without burning out. For an even more progressive option consider LED lighting, which is even more energy efficient, contains no mercury, and lasts longer.

Turn it Off

Turn off the TV when no one is watching. The same goes for computers, stereos, and appliances – if no one is using it, turn it off.

Some devices draw small amounts of power all the time. Plug them into a surge protector then turn off the surge protector to avoid that energy drain.



In the Bathroom

About 75 percent of the water we use inside our homes is used in the bathroom. Unless you have a low flush toilet, for example, you use about three to five gallons of water with every flush! A leaky toilet can waste more than 10,000 gallons of water a year.

Wasting water also wastes electricity because electricity is required for supplying water and cleaning it after it's been used.

Fix leaks in your shower, faucet, or toilet. A faucet that leaks enough water to fill a liter soda bottle every 30 minutes will waste 2,192 gallons of water a year.

Another simple way to save water and energy is to take shorter showers. You'll use less hot water, which is a good thing since water heaters can account for nearly 1/4 of your home's energy use.

Shocking News About Batteries

Did you know that Americans use an average of eight batteries a year per person?

Batteries that are thrown away can release toxic heavy metals - dangerous substances like lead, arsenic, zinc, cadmium, copper, and mercury. When discarded batteries from our trash wind up in landfills, these dangerous metals can seep into the ground water. Instead of throwing batteries in the trash take them to a toxic waste disposal area (see www.jcrecycle.org for sites that recycle batteries). Home Recycling Kits and Mail-in Recycling services are available online and will take many toxic items.

You can also lessen the impact of batteries by giving gifts that do not require batteries and using rechargeable batteries.

Energy Conservation

In the Kitchen

A load of dishes cleaned in a dishwasher can use 37 percent less water than washing dishes by hand. However, if you fill up one side of the sink with soapy water and the other side with rinse water – and then keep the faucet off – you'll use half as much water as a dishwasher does.

If you need to warm up small amounts of food, use a microwave to save energy. Microwave ovens use around 50 percent less energy than conventional ovens. For large meals, however, the stove is usually more efficient. In the summer, using a microwave causes less heat in the kitchen, which also saves money on air conditioning.

Keep the refrigerator door closed as much as possible to keep the cold air inside and make sure the door closes securely. There is a rubber-like seal around the door that you can test. Just close the door on a dollar bill, and then see how easy it is to pull the bill out. If the dollar slides out easily, the door is probably leaking cold air from inside.

Is there an old refrigerator sitting in the garage or someplace else at home? Old refrigerators are real energy hogs. An old refrigerator could be costing your family as much as \$120 a year to operate. Don't replace it if you don't need it... One large refrigerator is cheaper to run than two smaller ones.

Outside the House

Using a broom instead of a hose to clean off the driveway, patio, or deck can save hundreds of gallons of water each year.

If you have a small lawn, consider getting a manual push mower. It doesn't use any energy except your own. Pushing the mower spins the rotating wheels, which spins the cutter. When possible use a rake instead of electric or gasoline leaf blowers. You'll use less energy – plus, it's good exercise.

If you need to leave a security light on over night, change the incandescent bulb to a compact fluorescent. It will last months, maybe years, and save energy and money. Some compact fluorescent bulbs come in yellow so they won't attract bugs.

Think About What Your Family Buys

Being a conscious consumer is a great way to start reducing waste and energy. Look for products that use minimal packaging. You can also use your own containers and buy in bulk. Buying things that can be re-used instead of buying disposable items saves natural resources. You'll save the energy used to make the items and save landfill space.

Those same savings happen when you buy products that will last instead of breaking right away. Well-made items may cost a little more to begin with, but they are usually worth the money because you don't have to replace them.

When your family goes shopping, take reusable bags with you. Only about 700 paper bags can be made from one 15-year-old tree. A large grocery store can use that many bags before lunch! Plastic bags are made from non-renewable resources. Some stores offer discounts for people who use their own bags. For every bag reused they give money back – usually about five cents per bag.

Adapted from: The California Energy Commission
www.energy.ca.gov

Getting Local:

For more on energy conservation and incentive programs check with your energy company, your city, or the Oregon Dept of Energy. See the Jackson County SMARTworks' Regional Links page at: www.jcsmartworks.org/conservation_links.html#energy

Heating and Cooling

Many of us use twice as much energy as necessary to heat our homes. With a few simple changes you can realize big savings.

No-cost / Low-cost Improvements

- Use a programmable thermostat and set it to automatically fit your schedule. If no one is home during the day, don't heat your house.
- In Winter, wear a sweater and set your thermostat at 65-68 degrees in the daytime and 58-60 degrees at night.
- In warm weather set your thermostat to 78 degrees. (Don't do this if it will cause health problems for anyone in your family.) When no one is home, set the thermostat at 85 degrees.
- In summer, turn on ceiling fans or other fans. Blowing air can make you feel 5 degrees cooler without running the air conditioner. Fans use a lot less electricity than air conditioners.
- Replace or clean your furnace filters monthly during high-operating season (a minimum of four times a year). Keep your furnace clean, lubricated and properly adjusted.
- Seal your ductwork to save energy and improve air quality. Leaking ducts can waste as much as 30 percent of the heat produced.
- Adjust vents to keep specific rooms in your home at a desired temperature. Heat rises, so you can partially close upstairs vents. However, do not close more than two vents in an average sized house so you don't overwork your furnace.
- Use bathroom or kitchen fans only as long as needed to vent moisture or fumes. In just one hour, these fans can blow away a houseful of warm air.
- Caulk small holes and cracks around plumbing pipes, fans, vents, and fireplaces.
- Take a ribbon and hold it to the edges of all doors and windows. If the ribbon blows, you've found a leak! Seal it with caulk or weatherstripping. Use spray foam to seal air leaks in and around your basement, attic, and crawl space.
- Keep heating vents and air returns clear.
- Cover hot water pipes – and the first six feet of cold water pipes – with pipe insulation.

- Use draperies, awnings, or blinds to slow the loss of heat through windows. In winter, keep window coverings open on sunny days to let in the sun's warmth and close them at night to insulate against cold outside temperatures.
- Close dampers when the fireplace or woodstove is not in use, but wait several hours after the fire dies down. In the summer, an open fireplace damper can let cool air escape.
- Have your furnace and gas appliances serviced annually by a qualified contractor to ensure efficiency and safety. For a list of certified contractors call (877) 243-5855.

Smart Investments

Some improvements qualify for cash incentives through the Energy Trust of Oregon as well as state or federal tax credits. Look for the Energy Star label for help determining the energy savings of products.

- Upgrade insulation in the attic, walls, and floors to meet current building codes and reduce total energy costs up to 20 percent.
- Replace older water heaters with high-efficiency gas water heaters to reduce water heating costs up to 35 percent. Or, install a solar water heating system, and cut costs up to 70 percent.
- Hire a contractor to pinpoint air leakage and professionally air seal your home.
- Upgrade to a high-efficiency gas furnace.
- Replace inefficient windows with high-efficiency double or triple-pane windows and save up to 30 percent on heating and cooling.

Adapted from: NW Natural
www.nwnatural.com.

Getting Local:

Energy Star offers online tools and resources: www.energystar.gov

Also, visit Energy Trust of Oregon for more ideas: <http://energytrust.org/>

Alternative Energy

With alternative energy we can use a number of renewable resources instead of non-renewable resources. No single answer will solve all of our problems, but diversifying and using what is available from the sun, wind, and plants can reduce our impact on the environment and save money.

Solar Energy

Step outside on a hot, sunny day and you'll experience the power of the sun's heat and light. That's solar energy. You can use solar energy to do the following:

- Heat your home through passive solar. This technique does not require any fancy equipment. Instead, the orientation of the house itself along with strategically placed windows, skylights, and plants heat and light your home.
- Use an active or passive solar heating system to heat up water in your home or pool.
- Generate your own electricity with solar panels.
- Light your home with skylights.
- Dry your clothes using a clothesline.
- Install solar powered gates and fences.
- Try solar garden lanterns or holiday lights.
- Use an outdoor solar oven and experience cooking using the power of the sun.



Passive Solar housing design takes advantage of the sun's energy by the way the structure is oriented and the strategic placement of windows and trees.

Wind Energy

Human beings have harnessed the wind's energy for hundreds of years – from windmills that pumped water or ground grain to today's wind turbines that generate electricity. If you live in an area with an ample wind resource – typically 10 mph – you might be able to generate your own electricity using a small wind electric system or vertical wind turbine. You can also use a wind turbine for pumping water.

Ways to Use Biomass Energy

Ever since humans started burning wood to keep warm and cook, we've been using biomass energy, or bioenergy. Today we can also use biomass (plant material and animal waste) to fuel vehicles, generate electricity, and develop biobased products.

Biofuels: Biofuels can be used to fuel your vehicle! Biomass can be converted directly into liquid fuels – biofuels – for use in our vehicles. The two most common types of biofuels are ethanol and biodiesel. The largest U.S. automobile manufacturers each offer several models as flexible fuel vehicles, at little or no additional cost.

Biopower: You can buy clean electricity generated from biomass. Ask your utility company for options.

Bioproducts: You can buy products made from biomass at www.biopreferred.gov.

Adapted from: The US Department of Energy
www.energy.gov

Getting Local:

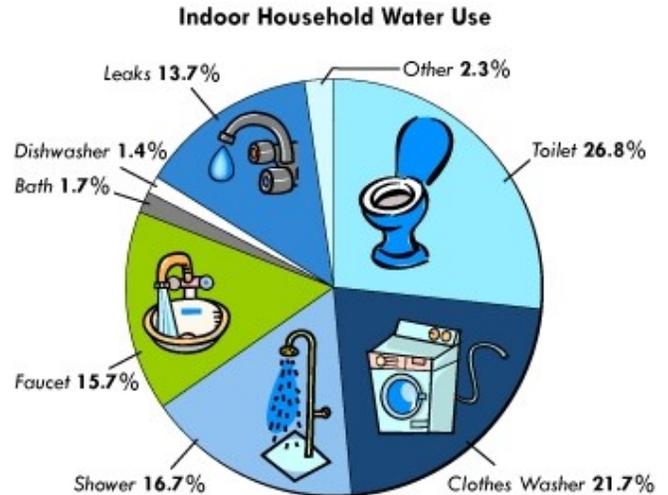
Learn more at the Oregon Department of Energy's Renewable Energy Resources page at: www.oregon.gov/ENERGY/RENEW/index.shtml

Water Conservation in your Home

Water is a precious resource. Even though it flows readily whenever we turn on a faucet, it's important to conserve. Our area is growing in population and we need to think long term to make sure that there is enough to go around for the next generation. Only about .05 percent of water on Earth is available for drinking, and it must be shared. Water is vital to the environment and saving water also saves money. You don't have to make major lifestyle changes to conserve water in your home; there are easy ways to accomplish the environmentally friendly task.

- 1. Check faucets and pipes for leaks.** A small drip from a worn faucet washer can waste 20 gallons of water per day. Larger leaks can waste hundreds of gallons. Find and fix leaks to save water and money!
- 2. Use your water meter to check for hidden water leaks.** Read the house water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, there is a leak to find!
- 3. Install faucet aerators.** All household faucets can be fit with aerators. This is one of the best home water conservation methods and it is also the cheapest. Aerators can cut your water flow from a faucet by up to 50 percent and they cost less than \$5-10.

4. Install water-saving shower heads. Inexpensive, water-saving, shower heads are easy to install. Showers can use five to ten gallons every unneeded minute. Modern showerheads use less than 2.5 gallons per minute and WaterSense models use even less. Look for showerheads that automatically pause a running shower once it gets warm.



Source: Arwa Research Foundation (1999)

This indoor household water use chart shows the highest consumption of water is used by flushing the toilet, followed by washing clothes.

- 5. Don't use the toilet as an ashtray or wastebasket.** Every time you flush a cigarette butt, or other bit of trash, three to five gallons of water is wasted.
- 6. Check your toilets for leaks.** Put a bit of food coloring in your toilet tank. If, without flushing, the color begins to appear in the bowl within 30 minutes, you have a leak that should be repaired. Most replacement parts are inexpensive and easy to install.
- 7. Increase toilet efficiency.** Put an inch or two of sand or pebbles inside two plastic bottles to weigh them down. Fill the bottles with water, screw the lids on, and put them in your toilet tank, safely away from the operating mechanisms. Or, buy an inexpensive tank ball or float booster. This can save ten or more gallons of water per day. Be sure at least 3 gallons of water remain in the tank so it will flush properly. Also, consider replacing older toilets with newer ones which use 1/2 to 1/4 the water and work well. Replacing an 18 liter per flush toilet with an ultra-low volume 6 liter flush model will cut indoor water use by about 30 percent. Several local cities offer rebates and incentives to replace older, inefficient appliances and toilets. Check with yours!

Water Conservation in your Home

8. Insulate your water pipes. It's easy and inexpensive to insulate your water pipes with pre-slit foam pipe insulation. You'll get hot water faster plus avoid wasting water.

9. Take shorter showers. Turn off the shower after soaping up, then turn it back on to rinse. You can also keep a timer in the bathroom to remind yourself of shorter showers.

10. Turn off the water while you brush. There is no need to keep the water running while brushing your teeth. Just wet your brush and fill a glass for rinsing.

11. Rinse your razor in the sink. Fill the sink with a few inches of warm water to use for rinsing.

12. Do full loads. Automatic dishwashers and clothes washers should be fully loaded for optimum water conservation. Most automatic dishwasher soaps recommend not pre-rinsing dishes.

With clothes washers, avoid the permanent press cycle, which uses an added 5 gallons for the extra rinse. For partial loads, adjust water levels to match the size of the load. Replace old clothes washers. If you're in the market for a new clothes washer, consider buying a water-saving, frontload washer.

13. Minimize use of kitchen sink garbage disposal units. They require lots of water to operate. Start a compost pile as an alternate method of disposing food waste. See the *Composting* article on page 24 for ideas.

14. When washing dishes by hand, turn off the water when rinsing. If you have a double-basin, fill one with soapy water and one with rinse water. If you have a single-basin sink, gather washed dishes in a dish rack and rinse them with a spray device or a pan full of hot water. Dual-swivel aerators are available to make this easier.

15. Turn off the faucet while cleaning fruits and vegetables. Rinse them in a stoppered sink or a pan of clean water.

16. Keep a bottle of drinking water cool. Running tap water to cool it uses more water than storing drinking water in the fridge in a safe drinking bottle.

17. Check your water bill. It's motivating to see how much water and cash you are saving over time by monitoring your monthly bill.

18. Use graywater or rainwater. Water from your sink or shower (graywater) can be directed into your toilet to flush. Rainwater collected from your roof can also be used to water your landscaping. Check with your city for permit requirements.

19. Work on saving water in your yard too. Outdoor water use is a significant drain on our water supply. There are many ways to cut back on water used for irrigation, from rain barrels to native plantings. See the *Your Yard* section starting on page 18 for ideas.

Adapted from: Greg Seaman, www.eartheasy.com

Getting Local:

Contact JSWCD, Oregon's Water Resource Department, your water company, or your city's conservation department for more water saving tips. See the *Resource Page* for listings.

Find more tips, updates, and ideas about efficient products at:
www.epa.gov/WaterSense

Check out Bonneville Environmental Program's Water Calculator at:
www.b-e-f.org



Photo courtesy of Karen Taylor.

Your Yard:

In this section, you will find activities and landscape design ideas that you can start right now to save water, improve soil, cut down on pollution, and beautify your yard. You can get started without much money or experience. The results will be beautiful and you can have fun while you are working outdoors.

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Stormwater Management

As we create more impervious surfaces, such as buildings, roads, and parking lots, much of the rain can no longer enter the soil. Instead, water sweeps over surfaces, carrying trash, oil, leaves, and other pollutants into our streams and rivers. What if it were possible to filter these pollutants? Now we can!

Conventional Stormwater Systems

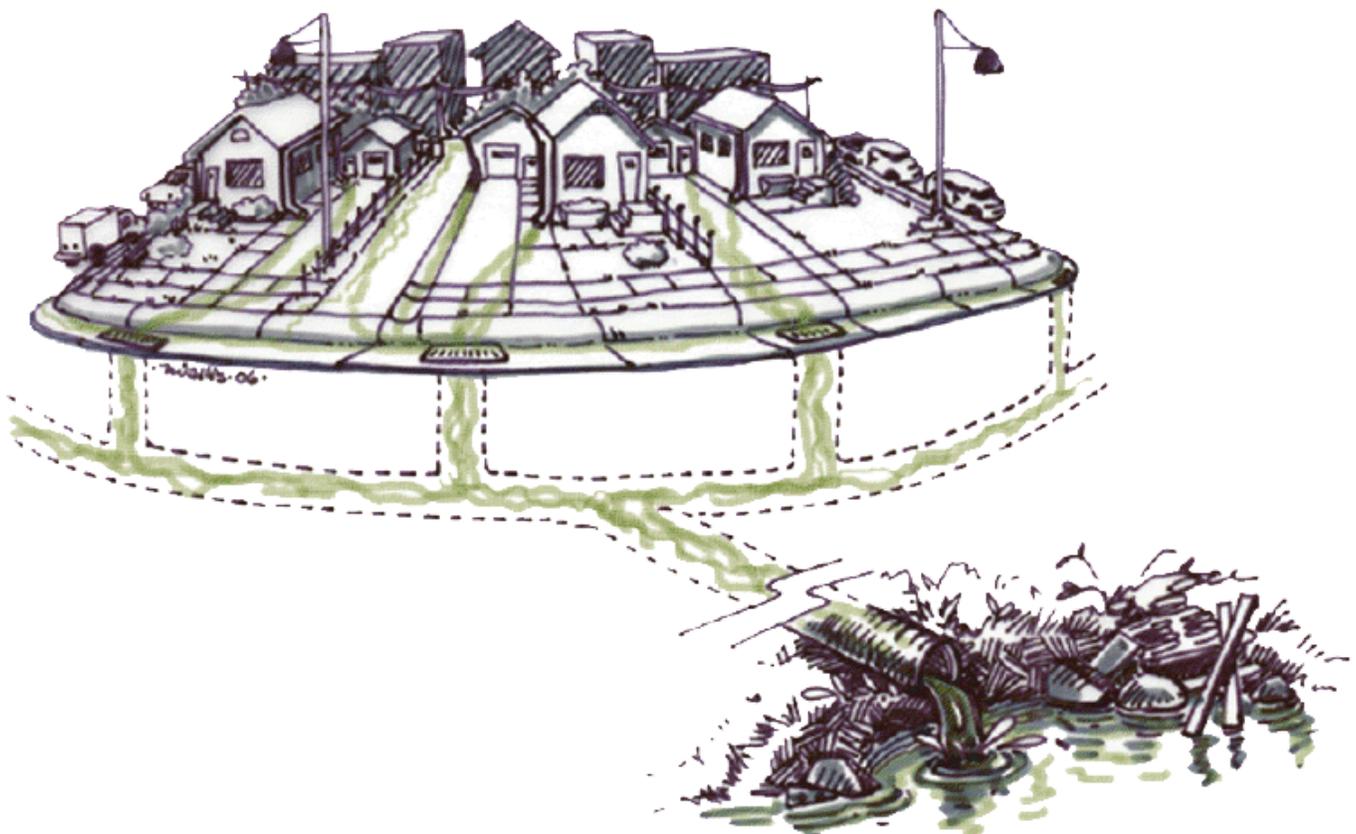
In the past, rain has been seen as a nuisance so the aim has been to collect it, convey it, and discharge it somewhere off our properties through a storm drain. Many people believe that storm drains lead to water treatment plants and that the water is cleaned. Actually, trash, dirt, and the chemicals used on lawns and cars can be carried by stormwater directly into the nearest streams, rivers, and lakes. This pollution overwhelms the ecological balance necessary to keep the waterways healthy and intact. The speed of so much water pouring off roofs, sidewalks and roadways through the storm drain gouges the sides of waterways, eroding the banks



Stormwater goes into gutters and down storm drains and directly to our creeks—without being cleaned.

and carrying the soil downstream. See the *Water Quality* article on page 40 to learn more.

Innovations in stormwater management have led to a series of design strategies called Best Management Practices (BMP), and Low Impact Development (LID) principles. Read on to learn more about how we can help lessen non-point source pollution from our homes, before it enters our streams.



Conventional Stormwater Systems convey water directly into our creeks, causing pollution and erosion. Illustration by Lynda Wallis of freelanceillustrations.com, used with permission from CNT.org.

Keeping Rain Where it Falls

Rain is clean water delivered free to our homes. Instead of letting this resource escape off our properties and down the storm drain, we can keep it where it falls by shaping the soil next to our houses, sidewalks, and driveways to allow the water to slow down, spread out, and soak in. Allowing rainwater to infiltrate into the ground can help improve water quality, replenish groundwater, reduce flooding, and provide a source of water for your yard.

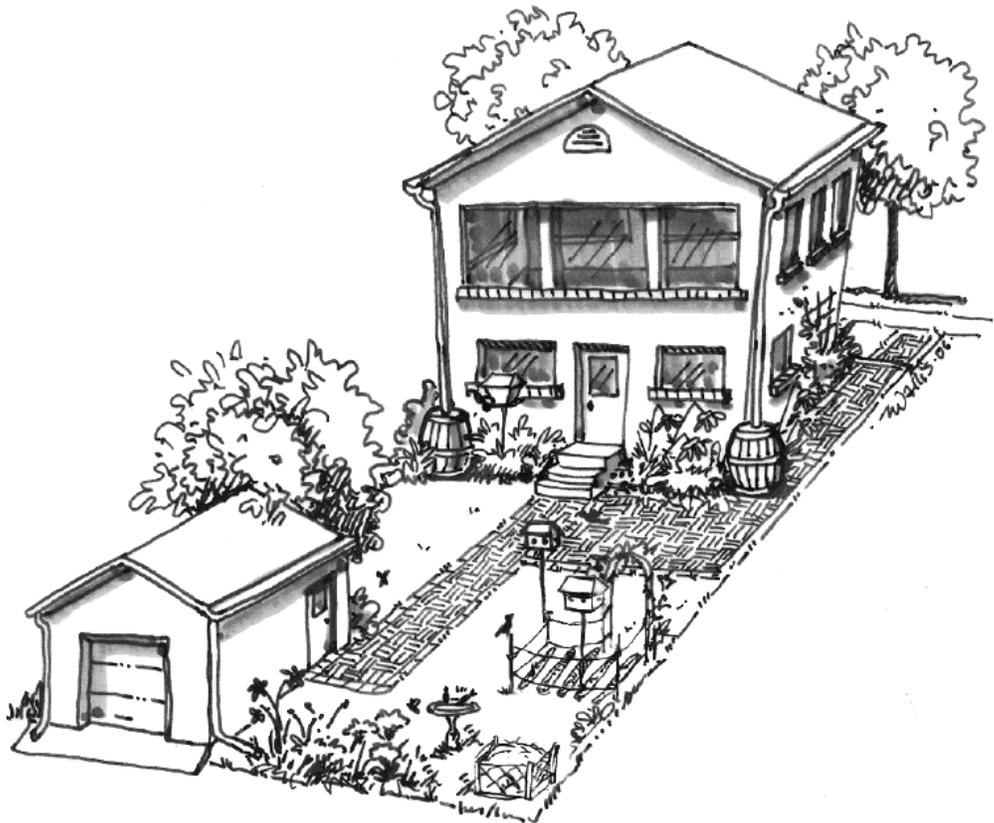
Innovations in Stormwater Systems

Many new stormwater management designs are using water as a resource, on-site, where it falls. Instead of conveying all the water away in a network of pipes, new design techniques work to restore the natural hydrologic cycle as much as possible. In the natural cycle, water seeps into the ground close to where it falls, recharges the groundwater, and then slowly filters into streams. Low Impact Development (LID) strategies have been developed to help us reduce flooding problems. They include permeable pavers, porous concrete, rain gardens, plantings, bioswales, rain barrels, and green roofs.

Consider using a combination of these practices at your own home. If all households and businesses were to direct rainwater to rain gardens and swales, and catch rain in barrels for the dry season, we could help lessen local water problems at low cost and have a positive impact on our environment.

LID: Permeable Paving

Paved surfaces, such as sidewalks and driveways, are one of the biggest contributors to stormwater runoff because they are solid material that does not let water enter the ground. New types of paving options are made of materials that allow water to percolate into the ground instead of sheeting off toward the nearest creek. Porous concrete looks similar to regular concrete, however, in a storm, it will allow rainwater to soak through, infiltrating through small voids into a gravel layer below. This process helps to slow and clean the runoff. Permeable pavers work in a similar way and are made in a myriad of designs and colors, allowing for intricate patios, parking areas and walkways. Consider using porous concrete and asphalt, or permeable pavers in your next home improvement project. Check with your local contractor or JSWCD for more information.



Native plants, permeable pavers, and rain barrels work together to allow rain water to enter into the ground. Illustration by Lynda Wallis of freelanceillustrations.com, re-used with permission from CNT.org.

Keeping Rain Where it Falls

LID: Rain Gardens and Native Plants

Rain gardens are a beautiful way to encourage rain to soak into the ground. They reduce the amount of pollution that gets into our creeks, rivers, and wetlands by filtering and slowing runoff.

How They Work

Rain gardens are slightly sunken areas filled with native plants. They work as catch basins during rainstorms when water directed to them slows down and soaks into the ground. They hold water, meaning more cool, clean water in our creeks in the summer. They also filter pollutants and recharge ground water supplies with the help of the plants' roots. They beautify yards and attract pollinators and people. Rain gardens are just one example of earthworks that will soak up rainwater and conserve soil. Also consider bio-swales, a long skinny version of a rain garden, to help soak up rain in narrower areas.

Always Call-Before-You-Dig: 1-800-332-2344

Important considerations in rain garden and bioswale construction are soil type, infiltration rate, slope, location, and plant selection. To learn how to build a rain garden download a copy of *The Oregon Rain Garden Guide* on JSWCD's website or at: <http://seagrant.oregonstate.edu/sgpubs/onlinepubs.html>.



Example of an urban rain garden. See the Oregon Rain Garden Guide for more ideas.

LID: Rain Barrels

Rain water is a resource, and we can use it for free in our homes, yards, and communities. Instead of turning on the hose to water your lawn, try using water from your rain barrels first.

How They Work

Rain barrels can attach directly to your downspout and collect rain, storing it for the dry season. The more barrels and tanks you have, the more you can store to use for your garden. When installing a rain barrel, make sure it's covered, has a spigot, allows for overflow, is on an elevated, stable surface, and has a system to remove leaves and debris.



Rain Barrel demonstration at North Mountain Park in Ashland.

Currently, you do not need a permit for rainwater harvesting in Oregon. However check with your city for permit requirements if you will be disconnecting downspouts.

Getting Local:

For LID ideas, including do-it-yourself guides, visit the Oregon Environment Council at: www.oeconline.org

Stop by our local Nature Centers (listed on page 46) to see these techniques at work and contact the JSWCD for more information.

Understanding Soil

Rich, healthy soil is teeming with life. Creatures as large as pill bugs, beetles, and earthworms, down to microscopic bacteria, protozoa, and fungi, live out their lives shredding organic matter and eating each other. One teaspoon of fertile soil contains over 1 billion bacteria. One handful of soil can contain more creatures than there are people on the earth. It is important to protect this living resource. Without healthy topsoil we could find ourselves in a wasteland of dustbowl-like conditions, unable to grow plants that provide food and medicine.

Why Learn about Soil?

Understanding your soil can help you to grow a thriving garden, conserve water, and prevent erosion. Knowing your soil type is the first step for making important decisions on your property, such as where to build a house or plant a garden. The depth to the water table or bedrock often limits land use. Soil type is also a key factor in beginning to solve problems on your property, such as compaction, erosion, or water ponding.

In Jackson County, there are at least 110 different types of soil originating from a diversity of parent rock material. Soil type determines how fast water will infiltrate to deliver moisture to your plant, tree, and shrub roots. It also affects what nutrients are available and in what quantity. Most soils are not pure sand, silt, or clay; they are a mixture of the three. Soils also contain varying amounts of organic matter.

Soil Maps

There are several ways to discover what kind of soil you have on your property. You can look up information about your soil online. Soils of our area have been mapped and details are available at the NRCS Web Soil Survey (see the *Getting Local* box). You can type in your street address or your property description to access your soil description. Additional soil information is available in the JSWCD office.

In the urban environment, where years of construction have occurred, it is very possible that the soils you have do not match the original maps of the landscape. There may be pockets of buried construction debris in your soil or you may be situated on an old farm field with excellent soil. To determine soil type in a built landscape, use basic soil testing and create your own soils map.

Basic Soil Testing

You can learn a lot about your soil by adding water to it! Collect a sample of soil from below the organic layer of the surface. Sample several places in your yard and mark the results of these simple tests on a map.

Feel Test: Rub moist soil between your finger tips. Sand will feel gritty, silt will be smooth, and clay soils are sticky.

Ribbon Test: Moisten soil to a putty-like consistency and make a soil ribbon, or rolled strand, using your fingers. Sand will not form a ribbon while silt will make a weak ribbon. Clay ribbons will be long and strong.

Advanced Soil Testing

Simple, do-it-yourself soil test kits are useful. More specific tests are available which involve sending soil samples to a certified lab for analysis. Lists of certified labs are available in the JSWCD office.

Working With Your Soil

Soils have different textures classified as silts, sands, and clays. The combination of these textures determines the characteristics of a soil, and how you take care of it.

Sandy Soils absorb water quickly without puddles forming on the surface. Plants growing in sandy soil need to be watered more often than in other soils because they dry out quickly. Too much water all at once will leach out nutrients so you need to water frequently with less water.

Understanding Soil

Silt Soil particles are much smaller than sand particles and silt will hold onto nutrients more easily than sandy soil. Silt soil drains well and holds moisture well.

Clay Soil particles are different from sand and silt. They are tiny and close together so water takes much longer to infiltrate clay. With clay, you will need to water less frequently to allow soil to partly dry out. Water slowly to allow infiltration. Overwatering plants in clay soil can subject them to rot and diseases. There are plants and trees that are best suited to this type of soil.

Loam Soil is a rather balanced combination of 40 percent sand, 40 percent silt, and 20 percent clay. Loam absorbs water evenly with little puddling or runoff. It holds moisture longer than sand. Many plants will thrive in this rich soil.

Soil pH

If you garden, you are probably aware that different plants like acidic conditions and others like it basic. For example, blueberries and azaleas like more acidic soils, while peas and beans prefer more basic soil. Use a soil pH kit to test your soil. Once you know the pH, there are many ways to adjust the levels. Consult a professional for advice.

Soil Problems and Solutions

Compacted soil from construction or foot traffic leaves little space for air and water in soil. Plants will have difficulty accessing nutrients unless the soil is loosened or amended with nutrient rich materials. An alternative to digging out compacted soil is to add layers of mulch and organic matter, in order to plant on top of compacted areas.

Overwatering is the reason for many landscape problems. Grouping plants with similar water needs will reduce the amount of water needed. Installing a properly designed irrigation system can reduce water use significantly and save soil nutrients.

Overuse of fertilizers wastes money and can eradicate the soil organisms that make soil rich with nutrients. When possible, instead of synthetic fertilizers, use compost or other organic nutrients to feed your soil. Compost will not only add nutrients to the soil but will help your soil retain moisture. See *Composting* on page 24 to get started.

Erosion can occur on any type of soil when it is not adequately protected. Without the intricate support of plant roots and organisms below the surface, stormwater will wash away soil particles with each rain. Keeping soil vegetated or mulched will help to reduce erosion, and improve water quality and soil productivity.



What kind of soil do you have?

Getting Local:

Find out what type of soil you have on the NRCS Web Soil Survey at: <http://websoilsurvey.nrcs.usda.gov>

Jackson County Property Data and Maps (Front Counter) can also be found at: www.co.jackson.or.us/

For more information on erosion and sediment control techniques contact the JSWCD or visit Rogue Valley Sewer at: www.rvss.us/SWQAll.html

Composting

Composting is a great way to enhance your garden while also reducing the waste that would otherwise end up in our landfills. There are many different types of composting. Choose one that matches the materials you are using and how much time you would like to spend creating soil amendment. Compost can be used for enriching potted plants or enhancing soil in your landscape by using it as top dressing, similar to mulch.

Composting happens naturally all around us. For example, leaves fall off the trees and are layered with organic material on the forest floor. It can take hundreds of years to create a single inch of soil. By composting you are actually speeding up the process of soil building by creating habitat for all of the microorganisms that make decomposition possible. Worms and insects chew the material so that is small enough for the microorganisms to eat. Then, bacteria and fungus utilize the leftovers. The compost pile creates the perfect setting for all these important soil creatures to interact in a way that makes decomposition happen faster and more effectively. When you compost vegetable scraps and yard clippings, you are feeding the soil food web which, in turn, makes nutrients available to plants.

A Balance of Carbon and Nitrogen

Each time you add material to the compost pile you add lots of carbon and some nitrogen, since these are the basic building blocks of organic matter. Think of the *green materials* (such as grasses, fruits, and vegetables) as nitrogen rich, and the *brown materials* (such as leaves and woodchips) as carbon rich. As you add materials to your pile try to balance each green material with 2 or 3 times as much brown material (see the chart to the right). For example, for every 5-gallon bucket of food waste add three 5-gallon buckets full of dry leaves or shredded newspaper. Too much carbon will slow down decomposition, and too much nitrogen creates an unpleasant odor.

What to Compost, What to Avoid*

Green Materials (High Nitrogen)

- Vegetable scraps
- Garden waste
- Freshly cut grass, flowers, and leaves
- Coffee and tea
- Fresh manure from horses or chickens
- Most kitchen scraps

Brown Materials (High Carbon)

- Dried leaves
- Straw or hay
- Wood chips from shrubs and trees
- Sawdust
- Newspaper (shredded)
- Cardboard

Materials to Avoid

- Black Walnut leaves and bark
- Meat bones and dairy products
- Sugary foods
- Pet waste and plastics
- Invasive plants or their seeds

* List is not all-inclusive



Demonstration of a multi-compost bin system at North Mountain Park Nature Center in Ashland.

Composting

How to Start a Compost Pile

1. Make a Bin. A simple way to contain your compost is to make a cylinder, about 3 feet in diameter, out of 3 foot tall chicken wire. Fasten the ends together with wire or string to make a circle. Fashion a lid from a light-weight material. Add interior support stakes if using a heavier lid. Stand the circle on end and you are ready to add your compost material.

2. Layer. Begin with a layer several inches thick of the carbon rich *brown* material (dead leaves, sawdust, and small twigs). Then add about 1 inch of nitrogen rich *green* material (fresh grass cuttings, vegetable scraps, or fresh manure) into the bin. Add another foot or so of *brown* material on top of the second layer. Chopping the material into smaller pieces will allow decomposition to occur faster.

3. Add Compost. A few shovelfuls of finished compost to your layered pile will speed up the process because you are adding helpful bacteria and fungi that are necessary for decomposition. You can buy finished compost at your local nursery.

4. Sprinkle Water. Lightly sprinkle water so that the compost pile is as damp as a wrung-out sponge (not wet enough to squeeze out a drop of water, but moist to the touch).

5. Cover. Use a layer of straw, cloth, or a lid to retain moisture in the pile and prevent rain from washing out nutrients.

6. Turn the pile. Once a week, or once the temperature at the center of the pile reaches about 140° - 150° F (takes 10 to 14 days), remove the cover and turn the pile with a pitch fork. You can also push the compost pile over and re-layer it back into a pile. The process of turning a compost provides oxygen (which is essential to microorganisms) and will speed-up decomposition.

7. Replace the Cover. Remember to replace the cover each time you turn the pile.

8. Wait and Turn. Once the pile reaches 130° -140° F, or once a week, turn it again.

9. Keep Turning the Pile. Turning three or more times within the next 4 to 6 weeks will help maintain high temperatures and a consistent rate of decomposition.

10. Check on the Pile. Each week, take a handful of compost out of the middle of the pile (careful, it might be hot) and smell the sample. When the compost is ready, the material in the middle of the pile will be dark brown to black and will have an earthy (not rotting) smell. It should be crumbly and moist, and materials that went into the layers should not be recognizable. Add water slowly if the pile starts to dry out.

11. Spread the Compost. Add at least one inch of the compost throughout your garden, like a layer of mulch, and enjoy the results!



A rotating bin is one of many options for composting.

Getting Local:

OSU Extension offers compost classes locally. Visit: <http://extension.oregonstate.edu>

Permaculture

Many topics discussed in this handbook, from water conservation and alternative energy to gardening and recycling, fall under the framework of permaculture. This discipline is an integration of many fields including horticulture, agriculture, architecture, forestry, and planning. The tools and design concepts presented by permaculture can be applied to your home or community.

What is Permaculture?

The term permaculture refers to a combination of "permanent agriculture" and "permanent culture." Permaculture is a philosophy for sustainable living and presents ecological design strategies for every scale – from backyards to watersheds. Solutions are derived from nature, science, and traditional cultural knowledge. The design strategies are often practical, tailored to the local environment, and easy to install.

Permaculture design aims to create a way of living that reduces our carbon footprint, uses resources efficiently, and reconnects people to community. As a whole-systems approach to living, permaculture includes economic, social, and environmental concerns, emphasizing interconnections.

The discipline of permaculture seeks solutions that allow for a human culture to persist on this landscape indefinitely. Drawing on values common to many indigenous cultures, the permaculture vision of urban liv-

ing includes healthy, non-toxic dwellings, use of local materials, and passive heating and cooling. The vision for the landscape is based on a horticultural surrounding with diverse fruits, vegetables, and medicinal plants. Permaculture also encourages community and working together.

How it Works

Design techniques from lessons observed in the functioning of natural systems are applied to the designing and building of human ecosystems. Permaculture strategies can be implemented at your home and in your community. For example, in the home, permaculture ideas relate to creative rainwater catchment, water conservation, garden design, alternative building materials, alternative energy, and more. At the community level, permaculture principles include smart use of resources, walking-distance neighborhoods, alternative transit, and supporting local food producers. Each project is informed by the site's unique conditions.

One of the first steps in applying permaculture is to practice careful observation of your home, office or community. For more information check out the writings of Bill Mollison, David Holmgren, and Toby Hemenway.



An edible urban yard. Image by Karen Taylor.

Getting Local:

Local resources can be found on the Ashland Sustainability Inventory at <http://sites.google.com/a/mind.net/sustainabilityinventory/sustainability-index/permaculture>

Permaculture Design Courses are available locally, as are permaculture designers.

Measuring Sustainability

The Sustainable Sites Initiative (SITES) and Leadership in Energy and Environmental Design (LEED) are programs that measure and reward projects that preserve ecological function and lessen the impacts of development.

Sustainable Sites Initiative

This initiative rewards and guides projects that are voluntarily creating sustainable landscape sites. The tools can be used by anyone working on the landscape, including homeowners, contractors, and developers. Project sites include residential developments, corporate campuses, streetscapes, parks, and more. The principles can be applied to sites with or without buildings.

The Sustainable Sites Initiative began as a cooperative effort to promote best management practices and ecological design of the landscape. Many of the best management practices are listed in this handbook (see *Keeping Rain Where it Falls* on page 20). Examples include rainwater catchment, permeable pavers, invasive species management, native plantings, and more.

The American Society of Landscape Architects (ASLA), the Ladybird Johnson Wildflower Center, the United States Botanical Gardens, along with many other stakeholders helped to create this set of tools to encourage landscapes that mimic and protect the natural world. This voluntary ranking system uses credits and points as a way to measure positive design approaches.

The SITES guidelines provide an excellent starting point for making landscape decisions that improve ecosystem health. There are many practices that can lessen our impact on the landscape, from salvaging plants on construction sites to restoring soils after development. The complete Guidelines and Performance Benchmarks are available at the Sustainable Sites Initiative's website: www.sustainablesites.org.

LEED Design Certification

Leadership in Energy and Environmental Design (LEED) is similar to the Sustainable Sites Initiative. LEED is a system for measuring the sustainable design of buildings and communities. The two programs compliment one another. The Sustainable Sites Initiative focuses on sustainable practices in landscapes with or without buildings while LEED focuses on the built environment.

LEED has become an industry standard, with companies and homeowners striving to achieve the Silver, Gold, or Platinum certifications for green buildings. The more points you rack up in your project the higher your score. The certification can also make your home more marketable. The focus tends to be in the materials of the building with points awarded for recycled content, renewable materials, certified wood, use of regional suppliers, etc.

The program also awards points for landscape choices. Some of the landscape goals that LEED encourages are providing access to bike paths, open spaces, and trails, connecting the community, and reducing dependence on automobiles. LEED also strives to promote stormwater management and to prevent soil erosion.

Many of these principles can be applied to landscape projects in your home, business and community. Check out the standards, rating system and checklists for LEED development for homes at the US Green Building Council's website: www.usgbc.org.

Getting Local:

Look for other certifications that reward green design projects. See listings at the Earth Advantage Institute at: www.earthadvantage.org

Native Plants

Our urban landscape is made up of the plants we choose to put in our gardens, parks, and cityscapes. Including native plants can help conserve water and soil, provide food for wildlife, and reduce pollution, all while reducing maintenance costs.

A New Ethic in Landscaping

The quest for sustainability has called into question our traditional concepts of landscaping. The need for clean water and healthy soil has challenged us to reconsider the impacts of conventional lawns and heavily maintained and manicured shrubs. A landscape centered on native plants can help reduce irrigation, and fertilizer use, while enhancing wildlife habitat. Landscape design that works with the regional climate typically requires fewer resources.

Why Natives

Native plants are ideally suited for the climate, weather, and soils. They can take both rainy seasons and long periods of drought once they are established. This means they often require less care than plants from another region. Native plants require less maintenance than lawns and typically don't need fertilizers or pesticides to keep them healthy.

Experience has shown that some favorite non-native garden varieties can escape cultivation and take over our streams and roadways, becoming invasive weeds. In some cases only one invasive plant dominates an entire area. These plants are expensive to control, can increase the risk of fire, and can threaten the region's ecology.

Native plants have had time to grow together and have developed an ecological balance with other plants and animals in our area. Many pollinators, such as birds and butterflies, are reliant on native plants for their survival. If we choose to plant the beautiful species native to Jackson County we will save resources and support wildlife.

How to Get Started

With native plants, you can create a beautiful landscape that is easier to care for.

- Give native plants care for the first 2 or 3 years while they get established. This includes watering, mulching, and weeding the area.
- You can shrink the size of your lawn from the edges of your yard inward to make a focal point of lawn surrounded by lush native drought-tolerant trees and shrubs with varying textures and colors.
- You can save spaces nearer the house for a vegetable garden and annual flowers.
- Try planting multiple plants of the same species in a group, then return to see which one is thriving the best from the clump and transplant the others.
- You can buy a few native plants to begin with and add more later. If a neighbor is dividing plants or thinning out their garden, ask for some of their cast-offs.
- Cover your soil around the plants with 3 inches of mulch, such as shredded bark or leaves, which will stay in place and keep in moisture.
- Jackson County has a variety of soils. Get to know your soils and pick plants that favor them.
- Match plants with the right growing conditions. Group together the plants that require full sun throughout the day, those that need sunlight only part of the day, and those which prefer shade most or all of the day.
- Moisture requirements are important also. Putting plants in their preferred locations gives them the best chance for success. Also, a plant on the edge of its climate zone can succumb to an especially cold or hot spell.
- Space the plants according to the size they will be when mature.

Getting Local:

Contact the Native Plant Society of Oregon at: www.npsoregon.org/

Weed Management

Invasive plants, or weeds, can not only ruin a garden, they can spread out of control to creeks, parks and your neighbors property. Help control weeds in your community by knowing what you're up against.

What is a Weed?

A weed is defined as a plant growing in a place in which it is not wanted. Most plants classified as weeds are persistent and hard to keep out of a garden, lawn, or field. Plants that are harmful to animals, water, or humans are referred to as noxious weeds. Plants that spread aggressively outside of their range, outcompeting native plants, are called invasive. Invasive and noxious weeds threaten ecosystems. If native plants are displaced, the ecology of the area changes, impacting wildlife, soil quality, water availability, and the fire regime.

Prevention

Prevention is the most effective and least costly form of weed control. Homeowners have a big influence on weed control by carefully choosing what plants are grown in the garden. Some of the most persistent weeds of our time were planted intentionally. Once they escape cultivation they are very expensive to control. To learn about alternatives to invasive garden plants, pick up a copy of *Garden Smart Oregon: A Guide to Non-Invasive Plants* at the JSWCD office.

The best way to combat weeds is to provide strong competition from desirable plants. Having healthy, vigorous perennial plants that provide competition for the space, moisture, and nutrients will help reduce weeds. Another strategy is to keep your garden planted throughout the year. Annual gardens are difficult to manage because they do not maintain a stable population of plants to compete with weeds. Planting perennials will help to keep the soil and water in use by desirable species. Mulching your garden will also make it more difficult for unwanted seeds to grow.

Weed Control

Most weeds can be controlled by either mowing or pulling them before they go to seed. The use of herbicides to control weeds should be the last resort, as it is only a short term solution. Many organic methods are available. Consider teaming up with your neighbors to control weeds in your area. JSWCD can help you create a plan of attack.

Learn the Most (Not) Wanted List:

Educating yourself on the most invasive plants will help you spot them if they appear on your property. Some of the most aggressive weeds to be on the lookout for are: Purple Loosestrife, Canada Thistle, Scotch Broom, Japanese Knotweed, Spotted Knapweed, Puncture Vine, and Garlic Mustard. If you find invasive plants on your property please call the JSWCD for advice for removing them. You can also call the Oregon Department of Agriculture's (ODA) Invasive Species Hotline at 1-866-INVADER.



Puncture Vine's seeds are sharp enough to poke a hole in bicycle tires. Image from the Medford BLM.

Getting Local:

Information on invasive plants is readily available from local land management organizations.

View images and invasive plant lists at the Oregon Dept of Agriculture's Plant Division website: www.oregon.gov/ODA/PLANT/WEEDS/lists.shtml

Xeriscapes - Water Conserving Landscapes

Over 50 percent of the average home's water use goes to irrigating lawns and landscaping. With some planning, xeriscaping can reduce the water used for landscaping and potentially increase property values.

What is Xeriscaping?

"Xeri" means "dry." A xeriscaped landscape design aims to use less water than a traditional yard. Xeriscapes can look many different ways. They can mimic a dry desert-like environment, or be lush, colorful, and diverse gardens that still conserve water. These beautiful yards are the result of applying seven principles. Note that these are principles, not steps to be taken in a particular order.

Principle 1 – Plan and Design

Many of us gardeners are tinkerers – try this plant here, move this plant over there... The results may be beautiful, but may not conserve water! A good garden plan will minimize water use and maximize color and form through each season.

The first step is to make a skeleton map of the area to be landscaped. (See *Making a Site Plan for your Property* on page 36). Next, consider how you use each area. Finally, begin placing plants on your skeleton map. Group plants according to their light needs and water requirements. Plants that need lots of water should not be placed near plants that prefer or tolerate dry conditions because water is wasted when watering a plant that does not require it. From a design perspective, taller plants should be in the back and shorter plants in the front. Be as specific as possible when recording the type and number of each plant on your map. Remember to give each plant room to grow.

Principle 2: Create Practical Turf

Xeriscaping does NOT mean that you cannot have lawn in your yard. In the interest of saving water and minimizing labor and gas use, xeriscaped yards have smaller, well-

placed, practical areas of turf that beautify the landscape and allow the family and their pets to enjoy the area.

For example, consider shady lawn areas in your yard – would shade-loving plants perform better, use less irrigation water and improve texture and color? Could you use stepping stones and steppable vegetation in the walkway instead of lawn? Could the border between the street and sidewalk be planted in drought-tolerant, colorful plants that your neighbors would enjoy? Could steep hillsides be covered in bushes and flowers that would attract native pollinators and birds instead of your lawnmower every weekend? Speaking of lawnmowers, you may want to look into the "no-mow" turf varieties that are now available. Always choose the variety of turf that suits your needs but requires the fewest inputs in terms of water, mowing (think air-quality), fertilizers, and pesticides.

Principle 3: Group Similar Plants

There are many plants that will do well in our climate with just a little supplemental irrigation. Many natives may be able to go all summer without irrigation at all! It is important to put these plants in the right place and to group like plants together.

Within your yard there are many microclimates – areas that differ in terms of light, soil, and natural moisture levels. Similarly, plants have different requirements for light, soil, and water. Put plants where they will be happiest! For example, put plants that have higher water needs next to downspouts, in low-lying areas, or areas that don't drain as quickly. Put plants that prefer sunlight and dry conditions on south or west exposures.

Principle 4: Improve the Soil

In Jackson County, where many of us struggle with clay, it may take some work to provide good soils. Although many of us curse

Xeriscapes - Water Conserving Landscapes

the clay, it has benefits too. Clay soils tend to hold moisture longer than sandy or silty soils. Clay is slow to absorb water so be careful to irrigate correctly. Amending the soil with organic matter will do wonders. Good amendments include composted manure and general mixed compost. However, if using native plants, research their fertility preference; many native plants do better in low fertility, even clay, soils. Try planting in the fall to give drought tolerant plants a chance to establish before the heat of summer. Plan to water native plantings for the first 2-3 years, until they are established.

Principle 5: Mulch

In a xeriscape garden, mulch is essential for keeping the soil and roots cool, reducing how much water plants lose through evapotranspiration. Mulch helps prevent weeds and, because it covers the soil, it also helps prevent erosion.

Principle 6: Efficient Irrigation

All this planning would go to waste without an appropriate irrigation system! Although this step can take some time, and may involve some expense, it will save you hours of labor and countless gallons of water if done correctly. To minimize your water use:

- Water in the morning or evening when the wind is still and evaporation rates are lowest. Keep the water as close to the ground as possible. Use drip, micro-sprays, bubblers, or emitters to deliver water. When sprinklers are necessary, use sprinklers that keep the water close to the ground, and use rotary (side-to-side) or stationary sprinkler heads.
- Inspect the irrigation system regularly for leaks, broken emitters, or sprinklers that aren't adjusted properly.
- Change your irrigation schedule with the weather. Generally, you should do this at least once a month. Turn off your irrigation if a storm moves in, and don't turn it back on until plants need to be watered.



Before and After examples of a xeriscaped yard.

Principle 7: Maintain the Landscape

Although planning will reduce the amount of labor required in your yard, regular maintenance will keep it looking its best! Weeding is important. At least seasonally, you will need to trim shrubs and trees, deadhead perennials, maintain any turf areas, etc. Most shrubs need to be pruned in winter to early spring. Deadheading prevents seedlings, improves the appearance of the yard, and can encourage repeat blooms. Remember, some plants will provide food for native insects and birds if left without pruning.

Getting Local:

For tips on xeriscaping contact the JSWCD or your local nursery. The Medford Water Commission provides sprinkler system analyses for the Medford area, and is available at: www.medfordwater.org

Trees and Urban Forests

Even in the city we are still in a forest – an urban forest! All of the trees in our neighborhoods, parks, and backyards comprise what is called the urban forest, or a community forest. The trees and plants we include in our homes and parks are an invaluable part of our urban landscape.

Benefits of Urban Trees:

- **Water Quality** - Street trees intercept thousands of gallons of rainwater per tree, reducing storm-water runoff and removing pollutants.
- **Air Quality** - Trees work to remove major pollutants from the air, such as dust and other particulates that cause respiratory illnesses.
- **Wildlife Habitat** - Urban forests provide food and cover for hundreds of species, including birds, insects, and mammals.
- **Reducing Heat Island Effect** - Summer temperatures can be abnormally high as concrete and rooftops warm in urban areas. Temperatures can be significantly reduced by the shade and evaporative cooling provided by trees.
- **Increased Economic Return** - Maintaining an urban forest has initial costs but the economic return in ecological services (such as air and water quality) outweighs the initial investment.
- **Higher Property Values** - Trees, parks, and open space are often key selling features of homes. Research suggests a direct correlation between healthy neighborhood trees and the value of the surrounding homes.
- **Combating Climate Change**- Trees absorb atmospheric carbon dioxide in their tissue, reducing the amount of emissions in the air.
- **Sense of Community** - Green space, parks, and old trees add character, increasing community pride and identity.
- **Health Benefits** - Trails, walking paths, and inviting landscapes can encourage physical activity.
- **Improved Business** - Research from the University of Washington suggests that people are willing to linger longer and spend more in downtown areas that have healthy trees.

Energy Savings Using Trees

Planting deciduous trees on the southwest side of the home will provide energy savings all year long. Shade provided from the deciduous trees in the summer, combined with the extra sunlight allowed in during the winter, can provide reduced energy costs for buildings. Planting evergreen trees on the north side of the house can block cold winds in the winter, conserving energy and heating costs.



Planting trees in the right place can save energy by providing protection and shade.

The Right Tree in the Right Place

Traffic, heat, concrete, and pollutants are just a few of the challenges to urban trees. Matching the best tree species to a site will go a long way in ensuring the long-term survival of the tree and will reduce maintenance. Some considerations for planting:

- Plant a diversity of species. This will help the trees resist disease, and attract more wildlife.
- Consider the tree's moisture, soil, and heat requirements.
- Look for species that are appropriate for the site and are proven to be non-invasive.
- Pay attention to the types of fruits and seeds your tree will produce. Fruits attract wildlife but can be messy in high use areas .
- Consider what the plant will look like in different seasons. Will it have bright fall color?
- Know the tree's mature height and shape and plan to give it plenty of room to grow.
- Look for long-lived and strong trees.

Trees and Urban Forests

What You Can Do

Urban forests have many environmental, economic, and social benefits. To help grow the urban forest:

Plant a Tree

One of the best places to start is your own backyard. Visit local nurseries and pick out your favorite tree to plant... Make sure it is one that will work for your site!

Participate in a Restoration Project

There are many projects going on in Jackson County to restore stream banks, wetlands, and forest habitat. Check out your local Watershed Council or nonprofit group to volunteer on projects in your area.

Neighborhood Street Tree Program

Your neighborhood is an excellent place to build the urban forest. The space between the curb and sidewalk, medians, or shared islands can often use healthy trees (check for any city restriction first). Ask your neighbors to participate in a Neighborhood Planting Project. For Medford residents, the Neighborhood Street Tree Partnership program can help you organize, fund, and design your project. Contact the City of Medford for more information. For those not in Medford, contact Jackson Soil and Water for assistance on getting started. These collaborative projects are a fun way to meet neighbors and have a great time.



Haven Neighborhood Tree Planting in Medford.

Trees for Water Filtration

Trees can also be used in bio-filtration systems where trees are combined with an underground stormwater filter to clean water.



Example of a bio-filtration system. For information contact the JSWCD. Image courtesy of Peter Evans.

Learn More

On the Oregon Department of Forestry's *Urban Forestry* webpage you can find articles and handouts about tree care, tree first aid, and maintenance. Go to: http://egov.oregon.gov/ODF/URBAN_FORESTS/urban_forests.shtml. City governments also often have recommendations and guidelines for street tree planting. Check with yours.

Learn more about urban trees by visiting the following websites: www.treesaregood.com, www.treelink.org, and www.pnwsa.org.

Getting Local:

For technical assistance contact your City Arborist, JSWCD, OSU Extension Master Gardener Program, or the Oregon Department of Forestry (ODF).

Use the *Tree Calculator* to learn the economic benefits of your trees: www.treebenefits.com/calculator/index.cfm

Backyard Wildlife

Just about every landscape, from apartment patios to parking lots, can be designed to attract wildlife. Using the variety of native plants that occur in your area will provide benefits to organisms large and small.

Creating Good Wildlife Habitat

You can help increase the amount of wildlife habitat by making a few simple changes to your backyard environment. Remember Good Habitat = Food + Water + Cover + Space. Most of these needs can be met by growing a diversity of native vegetation types. The plants you use to provide food and cover will determine the type of wildlife species you attract. Food requirements will naturally vary by wildlife species, from seeds and berries for birds to the forbs and shrubs preferred by butterflies. Water near your property, in the form of a pond or stream, will increase the variety of wildlife you will attract. Chances are water already exists nearby in your neighborhood.

Dead or Downed Trees and Logs

Dead, dying, and hollow trees and logs were once a common part of the landscape and are very important for wildlife. The cover they provide is needed for hiding from predators and for nesting and shelter. Over 80 species of birds, mammals, reptiles, and amphibians use downed wood in our area for habitat or food. Consider leaving snags and downed, woody material on your property — unless they pose a safety hazard.

Tips to Support Urban Wildlife

- Plant species that rely on pollinators.
- Plant a diversity of vegetative types and sizes.
- Select plants that flower and bear fruit at different times of the year.
- Increase the size and health of riparian zones.
- Install bat boxes and bird houses.
- Leave downed wood and rock piles.
- Create a wildlife plan for your house.

Habitat Fragmentation

One of the greatest challenges to wildlife is habitat fragmentation. The crisscrossing roads and fences of our urban land results in the carving away of native habitats, leaving behind isolated patches, or fragments, of land. As a forest is divided into small pieces the ecology changes and is vulnerable to edge effects. Edge effects include change in temperature, plant composition, and increased predation on species that require the safety of the protected interior forest habitat. Many animals can no longer survive in these small patches of habitat. Migratory birds are one of the most notable groups in decline. Wild animals need space away from people, where they can be undisturbed. Large acreages (100 or more) of interior habitat are necessary for many species to reproduce and should be protected.

One of the best ways to help wildlife is to link these large chunks of habitat together, like a patchwork quilt. Open spaces can be linked using trees and plants as pathways to provide cover. Streams are also very important wildlife corridors. The wider the protected passageway the better. Consider teaming up with your neighbors to improve wildlife corridors in your area.

Pollinators

Butterflies, bees, and moths are just a few examples of what may be the most under appreciated contributors to our society — pollinators. Almost every plant, including 1/3 of our food sources, depends on pollination to survive. Each plant has its own specific set of pollinators it requires to reproduce. This role is very important. The bad news is many of our native pollinators are in decline! You can help by providing nesting sites, choosing plants for your yard that benefit native pollinators, leaving hedgerows, or planting a butterfly garden. For more information contact the Xerces Society (at www.xerces.org), JSWCD, NRCS, or the OSU extension.

Backyard Wildlife

Predators

Please remember Jackson County is home to cougar, bear, coyote, fox, and other, perhaps unwanted, backyard visitors. There are steps you can take to minimize the chance of attracting these animals. Keep in mind that many species have “territory” and you may be moving in on their turf. Precautions should be taken to minimize conflict.

Tips to Minimize Conflict:

- Feed your pets inside.
- Pick up fallen fruit from trees.
- Remove accumulated bird seed.
- Bring trash outside in the morning.
- Control odors from compost bins and trash.
- Consider fencing options for garden areas.
- Do not provide feed for prey animals, like deer.

Managing Urban-Wildlife Conflict

Deer are beautiful to watch but they are also known to dine in our gardens. You can select plants that deer do not prefer (ask your nursery for lists of such varieties). Foul tasting products are also available on the market as a deterrent. A tall 7' fence around a vegetable garden is recommended.

Raccoons and opossums are some of our most common nighttime scavenging visitors. Keep trashcans secured away and tightened with metal screws. Check your house to see



Deer munch on a living fence in Ashland.

if there are loose boards or other tempting hideaways you can seal to prevent them from making a home.

Prevent Disease

It is important to make sure we improve habitat without being detrimental to the wildlife or inviting unwanted animals. Homeowners should take precautions to prevent the spread of disease. For example, one of the most common types of backyard wildlife to attract is birds. Using a metal or plastic feeder, and cleaning it with a diluted (10%) bleach solution, will help keep birds healthy. Prevent the food from becoming contaminated with feces on the ground by using a wire cloth attached to two by fours, or use a tarp to catch and remove fallen waste.

Providing supplemental feed to larger types of wildlife may seem like a good way to improve the food component of habitat. Unfortunately, unnatural food sources often increase wildlife damage, disease problems, and can cause harm to animals.

Safety of Wildlife

Providing a safe environment for wildlife is an important responsibility. Avoid attracting predators and pests by keeping pet food indoors. Also, keep pets in at night. It is best to keep cats indoors for their safety and for the sake of declining bird populations.

Getting Local:

For wildlife questions contact the Oregon Department of Fish and Wildlife (541) 826-8774 or Jackson County Wildlife Services (541) 326-5401.

For a no-cost consultation about creating wildlife habitat in your backyard contact the JSWCD.

Making a Site Plan for Your Property

Many of the concepts in this handbook may be a perfect fit for your home or garden. However, it is important to prioritize your conservation goals, and match them with what is possible with your site conditions. A site plan is a good way to get your ideas on paper and to start visualizing how to make conservation happen on your property.

Introduction to Site Plans

A site plan begins with a map that will help you see how your land is working, problem areas, and where you can improve. Your plan doesn't have to be complicated. An overall site plan for your property will put you in the best position to make decisions about stewardship techniques that will save you money and enhance resources right where you live.

1. Make a Base Map

Start with a sheet of paper lined with a $\frac{1}{4}$ inch or $\frac{1}{2}$ inch grid and map your house and constructed surfaces. You can use an aerial photo or a blueprint to get you started. Walk around your house and measure, or pace out, the distances of physical features.

Buildings – Begin your map by drawing the outline of your house where it sits on the property. Use a tape measure to find the distance from house to property lines. If you don't know the dimensions of your house (and some are more complicated than others) measure the outside length and width including eave overhangs. Mark these measurements on your map. Place other buildings (such as a garages or sheds) and their dimensions on the map in relation to your house and property boundaries.

Downspouts – Mark all downspouts on your site map and note whether they drain to the storm drain by way of an underground pipe or send rainwater out into the yard.

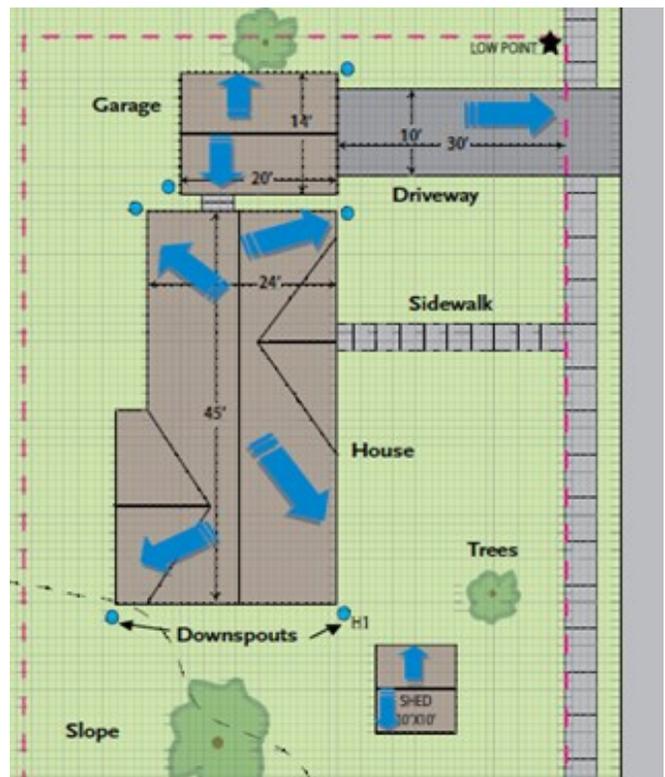
Paved Areas – Look for any paved areas on your property such as walkways, driveways and city sidewalks. Draw each of these on your site map with dimensions.

2. Add Layers and Physical Features:

Next add layers of trace paper over the map and begin recording other features of the landscape. You can also make photocopies of your base map, allowing you to record different information on each copy.

Soils – Note permeability and soil type on the map. Use soil tests and maps to determine soil type (see page 22, *Understanding Soil*, for instructions).

Slopes and Low Spots – Walk around your property and notice the grade of the land as it changes. You can lightly shade sloped areas, high spots, and low spots on the map to indicate shape. If there are low areas that stay wet for long periods note that on the plan.



Example Site Plan showing water flow, downspouts, and measurements of structures.

Making a Site Plan for Your Property

Trees and Plants – Draw the outline of significant trees and plantings on the map and identify them. Also note significant trees or features located on adjacent properties.

3. Map the Conditions of your area:

Cardinal Directions – Mark NORTH on your site plan to give information about the arc of the sun as the seasons go by.

Sunny and Shady Areas – Mark the areas that get full sun and those that remain shady during most of the day.

Rain Flow – Record the direction that rain-water runs off your roofs, paved or hardened surfaces, and each of the slopes, hills, or low spots on your land, by drawing arrows on each feature. A rainy day is a good time to watch the flow of rain off these different features. Using a garden hose to simulate rain also works.

4. Start to Plan Improvements

Now that you have made a map you can consider the goals and uses that you have in mind for your property and get to work! Additions that help conserve resources and money can be found throughout this handbook. Choose strategies that will have a positive impact on our water and environment, and that will match your budget.

Planning may take a lot of thought and energy but it is worth the time spent. Brainstorm on paper first so that when you are ready to go to work you can take it one project at a time. Your energy, wallet, and resourcefulness determine your schedule. Begin by thinking about your lifestyle and personal tastes. For example, what is your style? (Do you want a formal garden with lots of flowers? Or a backyard homestead with chickens, vegetables, and bees?) Also consider how you use your yard. (Do you garden? Will pets be using the yard? Is there a play area for children?)

Here is a list of things to consider as you plan:

- Determine average rainfall for your area.
- Look for flooding and erosion problems.
- Permits, laws, local codes, and regulations.
- Preserve views from house, porches, and decks.
- Know the depth to the water table.
- Mark septic system location if not on city sewer.
- Record well location if not on city water.
- Distance to forest or surrounding properties.
- Seasonal changes in sunlight.
- Direction of prevailing winds.
- Entertainment areas (seating or play areas).
- Privacy screen(s) and fences.
- Rain gardens or rain barrel locations.
- Ideal viewing areas for watching wildlife.



JSWCD staff helps a landowner create a site plan. Call today to get started on your own plan.

Getting Local:

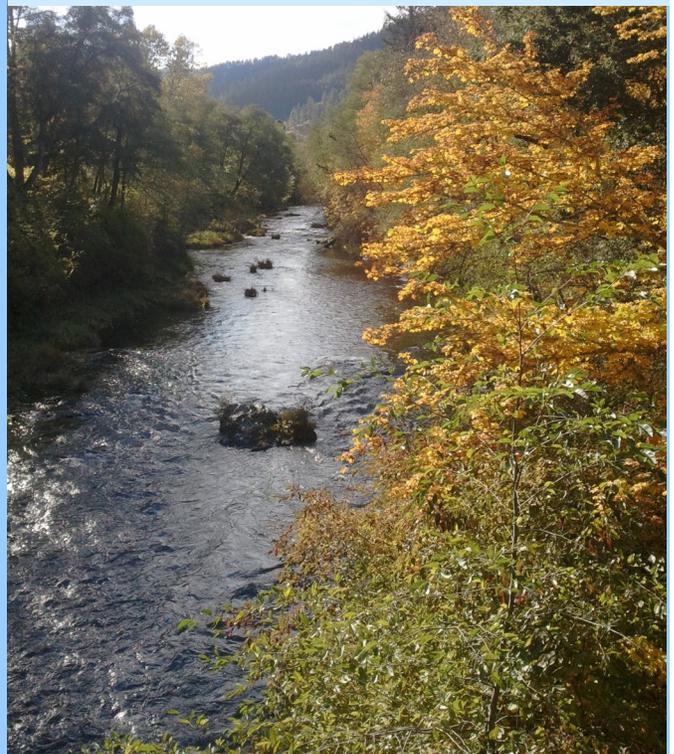
Contact the JSWCD for more information and ideas on your conservation journey. We can be found at (541) 776-4270 ext. 3 or online at www.jswcd.org



Your Community and Surroundings

As strong communities, we in Jackson County have the ability to work together and conserve. Find ways to support your neighborhood, community, and the environment at the same time using the tools and resources in this section.

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Transportation

There are countless ways to conserve resources (and your money) by using different transportation options.

Walk or ride your bike (or scooter... or roller blades...)

Breaking the driving habit will help you get exercise, save money, save resources, and protect our water and air quality.

Greenways and Bike Paths:

We are lucky here in Jackson County to have many bike and pedestrian friendly routes. For example, the Bear Creek Greenway is a narrow corridor of land that follows Bear Creek from Ashland to Central Point. The Greenway is spread over 600 acres and will one day include a continuous 21-mile paved path from Oak Street in Ashland to the Seven Oaks Interchange in Central Point. You can also explore the Gold Hill Bike Path that follows the Rogue River. These routes are ideal for pedestrians, cyclists, runners, and others who want to explore our area.

Join a Carpool

Find a carpool partner; it's fast, free, and easy! Log onto Carpool Match Northwest at www.carpoolmatchnw.org. This free online service is provided for Oregon as well as parts of Washington and California.

Ideas to Conserve on the Go!

- Walk, Skate, or Stroll.
- Carpool or Vanpool.
- Bike and Explore Greenways.
- Support Bike Repair Co-ops.
- Use and Support Mass Transit.
- Plan Walkable Neighborhoods.

Join a Vanpool

Call (541) 608-2411 for vanpool information within Jackson (and Josephine) Counties.

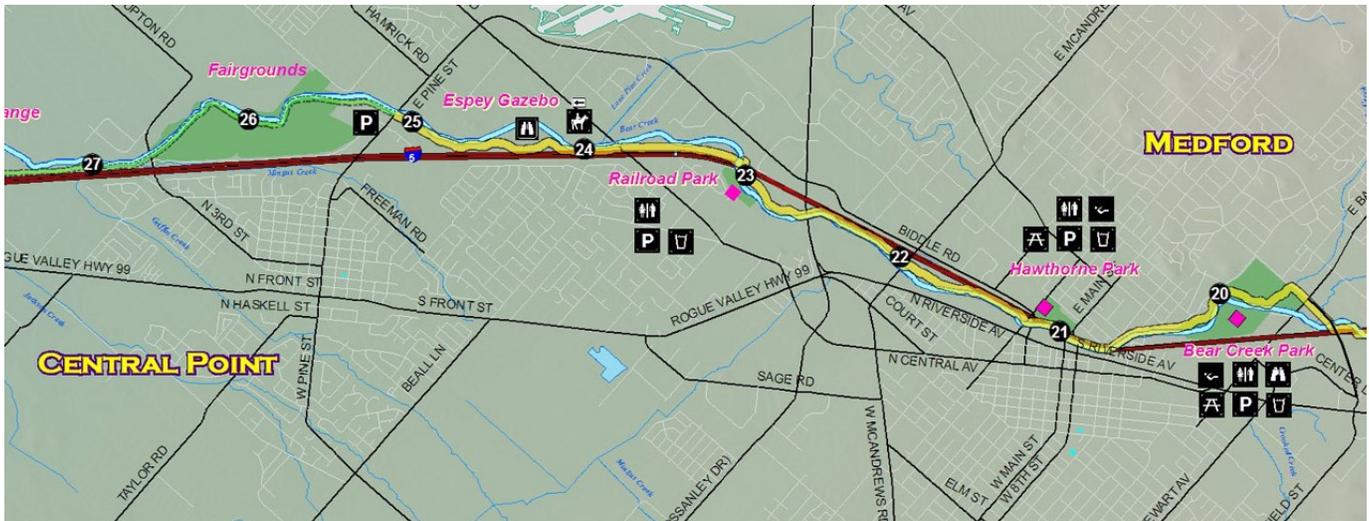
Find a Park & Ride Lot

Park & Ride lots provide free automobile parking for those riding the bus or carpooling. Most also provide bicycle parking facilities. Overnight parking is prohibited.

Take the Bus

Rogue Valley Transportation District (RVTD) connects the communities of the Rogue Valley and is currently serving Medford, Phoenix, Talent, Ashland, Jacksonville, Central Point, and White City. Schedules, routes, fares, and other information can be found at www.rvtd.org.

Adapted from: Rogue Valley Transportation District
www.rvtd.org



A section of the Bear Creek Greenway. A complete map is available at www.bearcreekgreenway.com.

Water Quality

We can all take steps to protect and preserve the water quality around us.

Pollution Types

As water moves through our urban areas, it picks up soil, fertilizers, pesticides, metals, animal waste, motor oil, and other pollutants. This type of pollution is called non-point source pollution. Although individual homes contribute only minor amounts, the combined effect of a neighborhood – or a whole city – adds up. Point-source pollution comes from an identifiable source, like a drainage outlet from a factory for example. Non-point source pollution is harder to identify, because it is coming from many places collectively; we all contribute.

Help Keep Runoff Clean

Following these principles will help improve the water quality of our streams:

Limit Paved Surfaces

Paved and other impervious surfaces prevent water from percolating into the ground and instead cause runoff to flow into storm drains, then to our creeks. You can reduce runoff from the solid surfaces around your home by replacing them with porous surfaces. (See the article, *Keeping Rain Where it Falls* on page 20 for more ideas.)

Use Household Chemicals Carefully

- Use non-toxic, biodegradable, and water-based substitutes whenever possible.
- Buy chemicals only in the amount you expect to use and use them only as directed. Store chemicals properly to prevent leaks.
- Take unwanted chemicals to hazardous waste collection centers. Do not pour them down the drain. Pouring chemicals down the drain can corrode pipes and may disrupt your septic system or sewage treatment plant. Never pour chemicals on the ground; they could reach our waterways.
- Use low-phosphate or phosphate-free detergents to prevent algae growth in waterways.

Landscape with Nature

- Minimize lawns and select plants that have low requirements for water, fertilizers, and pesticides to help use less water and chemicals.
- Build a Rain Garden or Bioswale to filter runoff.

Prevent Automobile Pollution

- Regular tune-ups and inspections for your car can help keep automotive waste and by-products from contaminating runoff.
- Clean up any spilled automobile fluids.
- Wash your car at a commercial carwash where the dirty water is treated properly.
- Take motor oil and antifreeze to recycling centers (see page 11 *Where to take Recyclables.*)



Symbols like these mark stormdrains. If you don't see them, you can call your public works department and volunteer to put up the markers yourself.

Pick up after your Pet

Pet waste left to decompose may wash into storm drains that flow into local waters. The nutrients it contains encourages algae growth and the bacteria it may carry makes water unsafe. Use Pet Waste Disposal Stations, or bring along your own bag.

Community Action

- Participate in stream clean-up activities.
- Get involved in local planning workshops.
- Help educate others about water quality.
- Work together with your neighbors to create a plan to protect streams and reduce runoff.

Adapted from: National Environmental Service Center
www.nesc.wvu.edu

Riparian Areas

What is a Riparian Area?

Riparian areas are the green, vegetated borders found along streams, lakes, and wetlands. These areas make up a small part of the landscape but are critical habitat for many animals and plants. They define the health of the stream and watershed.



Jackson County landowners take advantage of a hands-on training to determine riparian health.

Healthy Riparian Areas

A healthy riparian area has lush and diverse vegetation along the water's edge. Vegetation reduces water pollution by filtering out sediments, chemicals, and nutrients from runoff while reducing stream bank erosion. In a healthy riparian area, water is retained in the soil like a sponge and is slowly released, enhancing stream flows and groundwater recharge in the summer when it's needed. Slower, more consistent flows of water can reduce erosion and flooding, preventing property loss. A healthy stream provides habitat, food, and breeding areas for fish, birds, and wildlife. The trees help keep water cool in the summertime by shading the stream.

Floodplains

Flooding is a natural stream process that human beings cannot stop, but we can prepare for. A floodplain is the land that is inundated with water during high water events. Flood plains allow flood waters to spread out and slow, reducing their erosive force. This process encourages groundwater recharge as

water seeps into the soil. Often, without active floodplains, there is nowhere for flood waters to go without causing damage to the human built environment. Without them stream velocity is increased, resulting in more erosion and property loss. Where possible, floodplains should be protected and allowed to function as "pressure release areas" for floodwaters.

Practices to Enhance Riparian Areas

- Increase buffer width around open water. 50 feet of buffer traps eroded soils while 200-300 feet provides wildlife corridors.
- Remove noxious weeds along stream banks by mechanical means, or by hand if possible, and limit chemical use near water.
- Restore and protect native riparian plants.



Bear Creek riparian area. Image from the RVCOG.

Getting Local:

Classes on riparian health are available through the OSU Extension.

Check with your local Planning Department or Watershed Council for information on permit requirements and support for working in riparian areas.

For more resources visit the Rogue Valley Council of Government's Natural Resources page at: www.rvcog.org

Local Eating and Food

In Jackson County we have a strong tradition of farming and community agriculture. By including foods in your diet that are grown locally, you can help support local farmers, protect open space, and improve the local economy — all while getting healthy, fresh, great-tasting food for your family.

Why Eat Local Food?

- Supporting local providers can promote responsible land development. You give those with local open space — farms and pastures — an economic reason to stay open.
- Look for farms that have taken steps to lessen their impact on the environment.
- Supporting area farmers by buying their products helps our local dollars stay local.
- Locally grown produce is often fresher. Produce that you purchase at your local farmer's market has often been picked within 24 hours of your purchase. This freshness not only affects the taste of your food but also the nutritional value.
- Locally grown fruits and vegetables have longer to ripen on the vine. Because the produce will be handled less, locally grown fruit does not have to be "rugged" or to stand up to the rigors of shipping so you are getting riper produce.
- Eating local can also be better for air quality and pollution (depending on the resources used to grow the food and how it was transported).
- Buying local food keeps us in touch with the seasons. By eating with the seasons, we are eating foods when they are at their peak taste, are the most abundant, and the least expensive.
- Getting to know local food producers and learning about where your food comes from can connect you to your environment and make for a wonderful story. Knowing part of the story about your food is a powerful part of enjoying a meal.
- Local food translates to more variety. Local farmers are free to try small crops of varied fruits and vegetables that would probably not make it to large supermarkets.

Community Gardens

One of the best ways to garden if you have limited space is to join a community garden. Each year you can rent and be responsible for your own gardening plot. These programs often have communal tools to share and even the occasional potluck! If there isn't a garden in your area, consider starting one in your neighborhood or a park.

Grow Your Own Garden

Whether you live in an apartment or a large residential home, you can take advantage of the benefits of growing your own food. Suggestions for growing gardens in smaller spaces include hanging tomato planters, herb gardens, window planter boxes, and planting in pots or barrels. Larger gardens can take advantage of a wider vegetable pallet, from berries and fruit trees to homegrown squash and carrots. Consider a deer fence for best results. See the *Your Yard* section starting on page 18 for more ideas.



Discover the rewards of your own vegetable garden.

Getting Local:

The OSU Master Gardener's program offers classes in home gardening at: <http://extension.oregonstate.edu/sorec/mg>

Local Eating and Food

Ways You Can Support Local Food

- Shop at your local farmers' market.
- Join a CSA (Community Supported Agriculture) where individuals buy a share of a farm's produce and get weekly deliveries of the season's harvest.
- Buy from local grocers and co-ops committed to stocking local food.
- Support restaurants and food vendors that buy locally produced food.
- Preserve food from the season – freeze, can, dry – to eat later in the year.
- Throw a "Locally-Grown Party" and serve local food.
- Grow your own food in your yard or community garden plot.
- Visit local farms and "u-picks".
- Ask your grocer or favorite restaurant what local foods they carry.
- Save and share open pollinated seeds.
- Form food co-ops with neighbors by each specializing in certain types of produce (trading eggs for veggies, etc.)
- Look for online organizations and social networking sites that connect local produce buyers with sellers.
- Try agri-tourism – local producers have produce stores, u-picks, tourist work experience opportunities, on-site bakeries, etc. to attract buyers to the farm or ranch.
- Seek out education programs in which school children tour and do projects on local farms to encourage understanding of agricultural processes. Check with Rogue Valley Farm to School for ideas- www.rvfarm2school.org.
- Encourage and support local foods in school cafeterias.
- Attend Farm to Fork: a dining event in which local chefs create and serve local produce and meat to customers at a local farm, ranch, or winery – once a month.
- Support land trusts for agriculture.
- Get involved with Rent-A-Farmer programs, where an individual or business can contract with homeowners to plant produce seedlings at home. The gardens can be tended throughout the growing season by the homeowner or the buyer, depending on the agreement.



Produce at the Rogue Growers' and Crafters' Market.
Photo courtesy of Heidi Dawn.

Adapted from: J. Maiser,
www.EatLocalChallenge.com

Getting Local:

There are many farmer's market locations in our area, including Ashland, Medford, Grant's Pass, Rogue River, and Talent.

You can find listings throughout the state, including all of southern Oregon, using the Oregon Farmers' Markets Association's market directory at: www.oregonfarmersmarkets.org

For the location and times of your local farmers' market, contact the Rogue Valley Growers' and Crafters' Market at, (888) 826-9868 or online at: www.rvgrowersmarket.com

Being Neighborly

Living in the communities of Jackson County offers the opportunity to know and work with your neighborhood closely. Neighbors play an important role in our community and our lives. Good neighbors' actions support and build community.

Meeting Your Neighbors

By definition a neighbor is someone who lives close by you, but "close" is a relative term. For the city-dweller, the neighbor might be someone in the next apartment, but for others, the closest neighbor can be a bit further away. Neighbors are not necessarily limited to those people living on your street. They may include the shop owners and people who work or go to school nearby.

Age old strategies can still come into play when you'd like to meet your neighbors. Welcoming newcomers to the street is a good technique. If you're new to the neighborhood, it is perfectly acceptable to introduce yourself. Find out if there are neighborhood activities, meetings, or groups to join. If you're involved in a project, performance, benefit, or volunteer effort, extend an invitation to those around you. The easiest approach is to take advantage of opportunities to interact as they arise – when you are shoveling snow, walking the dog, or working in the garden. A wave of the hand or a smile can go along way in establishing trust and approachability.

How to be a Good Neighbor

But what's a *good* neighbor? A good neighbor is friendly and considerate. Though good neighbors may live close, they respect each other's space and privacy. Good neighbors wave at you, may stop to pet your dog and chat, and buy lemonade from your children. Good neighbors take time to talk and smile. They reach out to connect to you.

Most important, good neighbors are respectful. They consider the others who live around them. They avoid keeping others

Building Community:

- Get to know your neighbors.
- Plan time together as a neighborhood by organizing a BBQ or social event.
- Take pride in your community – learn about its history and be active in helping to shape its future development.
- Keep your neighbors informed if you are doing projects that will affect them.
- Be a good neighbor yourself.

awake with loud parties and barking dogs. They consider how their actions might affect those around them, both in their day to day activities and when starting new projects. For example: How is the drainage of your roof affecting your neighbor's yard? Will your new tree shade out the neighbor's vegetable garden? As you read the conservation practices in this handbook, think about your neighborhood and how you can make a positive difference. You might find a strategy to help solve a collective problem. For example: Are there flooding issues in your neighborhood? Perhaps you can set an example as you take on conservation minded actions: cleaning up after your pets, recycling, starting a rain garden, biking to work...

Working Together

Good neighbors help and look out for others. This idea is illustrated in communities throughout the United States who have developed Neighborhood Watches. Their goal is to keep watch on each other's homes and if something suspicious arises a watchful neighbor calls the proper authorities.

Some problems are too big for one person to solve but there is strength in numbers. Consider forming a neighborhood coalition to tackle challenges such as traffic, weed control, street plantings, or flooding issues. Often, the JSWCD can help you organize meetings and plan your project.

Communities

Building community helps us feel connected, enjoy our urban areas, and work together. There are many ways that we can each contribute to building and maintaining strong communities here in Jackson County.

Ideas to Develop Community:

- Go to or view local city council meetings to participate in your city's decisions and direction.
- Share your mechanical or food preserving skills with neighbors and create skill-sharing centers.
- Look for volunteering and community service opportunities that address issues you care about.
- Take time to develop a sense of place by learning the area's natural and cultural history.
- Support local businesses and services.
- Be a leader in your community and take steps to make things happen.
- Participate in or help plan events like potlucks and festivals.



Medford Residents at a block Party in 2007.

Block Parties

Block parties are an easy and fun way to get to know your neighbors. The City of Medford offers resources on how to put together your own block party. They provide step-by-step instructions on what to do and when to do it. Close off your street, invite the neighbors, and throw a party with food, music and activities!

Neighborhood Plans

Neighborhood plans are being developed by residents throughout the County. The plans are action oriented and outline steps to be taken by each person involved. In Medford, the Neighborhood Resource Division of the City Manager's office is eager to help work with you to improve your neighborhood. Past projects have included neighborhood parks, street light improvements, sidewalks, creating recreational centers, and even providing a facility for homeless youth. You can also contact the JSWCD for assistance in planning and implementing your project.

Neighborhood Improvement Grants

In Medford, funding is available for neighborhood improvement projects that encourage community and neighborhood participation. Community building or the process of bringing together neighborhood residents and building relationships is a key factor in all matching fund grant projects. Projects can include Neighborhood Street Tree Partnerships where neighbors come together to plant and maintain street trees. Other projects focus on physical improvement projects for recreation, public safety features, public spaces, and community gardens. Check with your city for similar programs.

Adapted from: City of Medford
www.ci.medford.or.us

Getting Local:

For an idea kit on starting a block party and for a Special Event Permit see: www.ci.medford.or.us

If you are interested in developing a Neighborhood Improvement Plan in Medford contact the City Manager's office at (541) 774-2000 or citymanager@cityofmedford.org

Nature Centers

Visit Jackson County's nature centers to learn about the natural history of our region. Nature centers are set up to help educate and interpret the environment to the public. They offer special programs and classes for residents, youth, and schools. Learning about the environment is a great first step in becoming better stewards of the land.

Coyote Trails Nature Center

Learn about the unique ecology of the Rogue Valley region at the Jefferson Nature Center located in Medford. Programs, classes, and events are available for adults and children throughout the year.

North Mountain Park Nature Center

Visit North Mountain Park to see demonstration gardens, wildlife areas, and beautiful Bear Creek. The parks hosts classes and events for adults and children, including local natural and cultural history, gardening, nature crafts, and sustainability.



Students learn about nature by acting it out in a game at North Mountain Park Nature Center.

Getting Local:

Coyote Trails Nature Center, Medford (541) 282-8577. Or online at www.coyotetrails.org

North Mountain Park Nature Center, Ashland (541) 488-6606. Or online at www.northmountainpark.org

Festivals and Activities

Festivals and activities are a great way to learn more about the environment and to make local connections. Look for:

Bear Creek Festival

This all ages festival focuses on educating participants about the ecological and cultural significance of Bear Creek and its tributaries through hands on experiences, storytelling, and entertainment.

Rogue Valley Earth Day

Learn about and experience energy conservation, solid waste reduction, local food and farms, green products and building materials, renewable electricity sources, transportation alternatives, and more.

Rogue Valley Bird Day Celebration

This event, coordinated by the Klamath Bird Observatory, Rogue Valley Audubon, and the City of Ashland, offers outdoor learning opportunities for birders.

JSWCD Natural Resources Day Camp

Jackson Soil & Water Conservation District hosts the Natural Resource Day Camp in June for students entering grades 5- 7.

Getting Local:

See your city's website for more listings of activities. Also visit www.jswcd.org for links to events.

The Chambers of Commerce in Jackson County

Chambers of Commerce are excellent starting points for learning about community resources. You can find information about your representatives, area businesses, recreation, employment, and more. While each city has its own chamber, the Medford Chamber represents all of Jackson County.

The Chamber of Jackson County

Medford's location midway between Portland and San Francisco has made it the commercial, medical, and retail hub of southern Oregon. The valley's diverse industry is a mixture of tourism, agriculture, senior living, light manufacturing, and timber. Through it all, The Chamber of Medford/Jackson County has been there to support changes in markets, communication technology, public values, regulations, and adjacent urban growth.

Organized in 1895 as the Medford Board of Trade, the Chamber is a group of more than 1,500 businessmen and women dedicated to promoting the region's standards of livability and its civic, commercial, and industrial progress. As a voice for business, the Chamber defends the interests of southern Oregon businesses through legislative advocacy. Through facilitating the exchange of information, the Chamber offers members productive networking opportunities.

The Chamber's support centers on maintaining an environment of success for current business owners while making the area attractive to new business.

The Medford Visitors and Convention Bureau (VCB) is a particularly exciting Chamber success story. In 1975, the Chamber helped pass the authorization of a transient occupancy tax, which partially funds the Bureau. The Chamber also protects southern Oregon tourism interests by organizing collective marketing power and promoting events and attractions such as the Medford Jazz Jubilee, the Art in Bloom Festival, the Craterian



Commercial district in downtown Ashland.

Ginger Rogers Theater in downtown Medford, nearby Crater Lake, the Tony Award-winning Oregon Shakespeare Festival in Ashland, and the Britt Festival in Jacksonville.

The Chamber of Medford/Jackson County will continue to address the issues affecting its growing community by focusing on infrastructure development, workforce training, information exchange, and regional coalitions—measures that will positively impact the viability of the region's business structure while maintaining its quality of life.

Getting Local:

Visit your community's Chamber of Commerce to find listings for local services, businesses, events, and more:

Ashland: www.ashlandchamber.com

Central Point:

www.centralpointchamber.org

Eagle Point: www.eaglepointoregon.org

Jacksonville: www.jacksonvilleoregon.org

Medford: www.medfordchamber.com

Phoenix: www.phoenixoregonchamber.org

Rogue River: www.rrchamber.cc

Talent: talentchamber.org

Fire Prevention

Recent fire seasons have shown us the importance of preventing fires in our urban areas — especially where houses and wildlands meet. To protect your home think about:

Defensible Space

If your home and landscape are properly maintained, your home has a better chance of surviving a fire. A defensible space area is 30 to 200 feet around your home where firefighters can safely make a stand to protect your house during a fire. The exact size of your defensible space zone depends on the slope of the land and the type of vegetation around your home.

Firebreaks

Creating a firebreak around your home and along your driveway can be one of the most effective ways to protect your property. Initially, this can be a major undertaking, so start small and do a little at a time. Once complete, annual maintenance is much less demanding. Since protecting your home is the primary concern, start there and work outward. Fire burns 16 times faster uphill so start on the downhill side of your home. Firebreaks do not have to sacrifice the scenic beauty or natural setting of your land.

Simple Fire Prevention Measures

- Maintain 30' of green lawn or fire-resistant plants around your home. Mow grass to less than 6".
- Prune the lower branches of trees within 12' of the ground to remove "ladder fuels" that help ground fires become crown fires.
- Protect large trees by removing fuels under them.
- Trim branches away from your roof and house.
- Keep gutters clean of debris.
- Replace wood shake roofs with Class A or B roofing material.
- Screen vents and areas under decks with metal mesh.
- Store firewood at least 20 feet away from your house or enclose it in a shed.
- Water and firefighting tools should be available and ready.
- Maintain good access to your home and ensure that your address is visible and easy to read.

Free online courses are available at the National Fire Protection Associations' Firewise Learning Center, www.firewise.org.



Example of how to create Defensible Space. From the Firewise Safety Guide www.firewise.org.

Fire Prevention

Fire Ecology

Fire is a fundamental component of a healthy forest ecosystem. The forests of southern Oregon have co-adapted with fire as an integral part of forest regeneration, cleansing and renewal, and the maintenance of plant and animal diversity.

Away from homes and communities, fire is essential to the health of our forests. Fire removes undergrowth that chokes trees and facilitates disease. Burned trees replenish nutrients to the soil. Standing burned snags and downed trees in streams create habitat for wildlife. A significant number of local plants require fire as part of their life cycle. You may have noticed prescribed burns in your area. These managed burns, monitored by forestry professionals, can reduce the risk of a larger fire by reducing fuels (like debris). They also can control weeds and improve forest health. Prescribed burns must meet air quality standards and permits from the Oregon Department of Forestry and the Fire Protection District are required.

Burning on Your Property

Under the laws of the State, a person must have a valid burning permit obtained from the Oregon Department of Forestry and the local Fire Protection District to burn on private lands in unincorporated Jackson County. No open burning of vegetation debris piles are allowed in Jackson County during fire season. Burn barrels are allowed until the end of June with a permit from ODF and the Fire Protection District.

In urban areas, anyone in the Air Quality Maintenance Area, including Ashland, Phoenix, Talent, Medford, Jacksonville, Central Point, White City, and Eagle Point, are not able to burn on their property from November 1st through the end of February. Burning is typically **not allowed** within city limits. Check with your Fire Protection District for permits (See the *Resource Directory* on the inside cover for Fire Departments).

On the day you plan to light a fire, call (541) 776-7007 for air quality information specific to that day and location **before** lighting.

Tips to Prevent a Fire in Your Home

- Make sure that the electrical wiring and breakers in your home and out buildings are up to code and in good condition.
- Don't store any flammable liquids or highly flammable material in your home or garage.
- Keep matches and lighters from children.
- Keep the lint filters and vent piping of clothes dryers clean.
- Keep multi-purpose fire extinguishers in areas of fire risk (kitchen, laundry room, garage). Know how to operate them **before** a fire occurs.
- If you must use them, don't leave portable heaters unattended. Keep the area around them clear of flammable materials.
- Be sure that your heating system is properly installed and cleaned regularly. Wood stoves and chimneys for wood stoves must be properly installed and cleaned often.
- Install at least one smoke detector outside every bedroom and on every level of your home. Install them according to building codes. Follow the instructions to regularly test the detectors.
- If possible, provide access for firefighters to large supplies of water (swimming pools, ponds, streams, or water tanks).

If a Fire Occurs in Your Home

- Crawl low, under the smoke. Feel closed doors with the back of your hand. If hot, do not open and use another escape route. If not hot, open slowly and check for fire and smoke.
- Except for very few fires, such as one in a frying pan, don't attempt to fight a fire. Smoke can render you unconscious in just a few minutes.
- Never re-enter a home that is on fire or filled with smoke.
- **Call 911 for all fire emergencies.**

Natural Splendor of Jackson County

All of the suggestions in this book are aimed at enhancing our quality of life as a community and protecting natural resources for ourselves and our children. To appreciate what we are protecting get out and enjoy the beautiful landscape and natural resources of Jackson County (and surroundings!)

Places to Visit:



Hikers cross the Rogue on the scenic Rogue Gorge Trail near the Natural Bridge overlook. Find this hike just outside the community of Prospect.



Beautiful Lithia Park in Ashland was designed by John McLaren, the architect of Golden Gate Park.



The Applegate River meanders under the McKee Bridge. To get here, travel through Jacksonville just beyond the town of Ruch.



Accessible from Jackson County is the majestic Crater Lake National Park. Travel about 80 miles northeast of Medford to see the deepest lake in the United States.

Your Notes

Your Notes

Contributors to this Publication

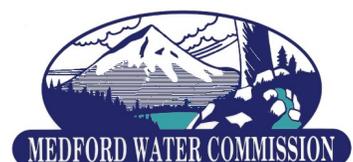
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Note: While every attempt has been made to correctly paraphrase and/or quote laws, codes, and regulations, if any discrepancy between this handbook and the official wording should arise, the official wording should prevail.

Jackson SWCD prohibits discrimination in its programs on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or familial status. (Not all prohibited bases apply to all programs.) Jackson SWCD is an equal opportunity employer.



Jackson Soil & Water Conservation District

Vision Statement

Jackson Soil & Water Conservation District is a leader in providing scientifically based technical assistance and financial resources in a manner that supports urban and rural landowner abilities to implement best management practices, enhancing the natural environment while protecting Jackson County's cultural, social, and economic values.



Mission Statement

Jackson Soil & Water Conservation District will maintain an actively involved board, employ a professional staff, and utilize volunteers, natural resource experts, interested organizations, and federal, state, and local governments to help urban and rural landowners improve the management of their land by:

- Providing technical support.
- Seeking grants and other financial assistance.
- Providing one-on-one, on-the-ground site visits.
- Developing workshops and classes.
- Assisting in the development of individual landowner management plans and projects.

Enhanced management of urban and rural lands will reduce soil erosion, improve water quality, air quality, fish and wildlife habitat, and improve the quality of life for all Jackson County citizens.

Contact us at (541) 423-6165, 89 Alder Street in Central Point, or at www.jswcd.org.

Jackson County



**JACKSON
COUNTY**
Oregon

Jackson County is governed by an elected three-member Board of Commissioners responsible for many broad issues in the region, such as forest planning, water supply issues, land use, air quality, transportation, emergency management and economic development.

The board works with the county's 11 cities on matters of mutual concern and serves the citizens of Jackson County by resolving complaints and legislating where necessary.

Services under Jackson County jurisdiction include the library system, the airport, the fairgrounds and expo center, county roads and parks, health and human services, voting and voter registration, and the Sheriff and community justice programs.