Hood River County Rural Living Handbook

A Resource for Country Living and Land Stewardship



Resource Directory

Hood River Soil & Water Conservation District 386-4588

*All numbers listed have a (541) area code.

Federal Agencies

Columbia Gorge National Scenic Area308-1700
USDA Farm Services Agency298-8559
Natural Resources Conservation Service
USDA Forest Service (Mt. Hood Ranger District)352
-6002

Oregon State Agencies

Dept. of Agriculture	617-0017
Dept. of State Lands	388-6112
Dept. of Environmental Quality	298-7255
Dept. of Fish & Wildlife	296-4628
Dept. of Forestry	296-4626
Water Resources Dept. (Watermaster C	Office)
	506-2650

Hood River County Depts.

Animal Control	386-2098
Records & Assessment Dept.	386-4522
Building Department	386-1306
Environmental Health/Sanitation	387-6885
Forestry Department	387-6888
Library	386-2535
Parks & Recreation	386-1303
Planning Department	387-6840
Public Works	386-2616
Sheriff (non-emergency)	386-2711
Weed & Pest Control	387-7075

Irrigation Districts

Fire Districts

Cascade Locks	374-8510
City of Hood River	386-3939
Dee	354-1820
Odell	354-1648
Parkdale	352-6092
Pine Grove	386-2900
Westside	386-5551

Water Districts

City of Hood River	386-5216
Crystal Springs	354-1818
Ice Fountain	386-4299

Other Local Contacts

Columbia Gorge Fruit Growers	387-4769
Community Dispute Resolution Center.	296-5220
Confederated Tribes of Warm Springs	352-9326
Hood River Garbage Service	386-2272
Hood River Watershed Group	386-6063
OSU Extension Service	386-3343

Enter Your Own

Hood River County Rural Living Handbook

Prepared by the

Hood River Soil & Water Conservation District



February 2008

Funded through a grant from the

Oregon Watershed Enhancement Board



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Introduction

What is the Hood River County Rural Living Handbook?

he Hood River County Rural Living Handbook is intended to introduce current and prospective rural landowners to available resources in our county. It will address general questions on land use planning, gardening, livestock management and other land management concerns. The increased independence and self-sufficiency of rural life demands a heightened need for self-reliance and good relationships with neighbors. Often, newcomers accustomed to readily-available services offered in urban environments are surprised by the hard work required to manage rural property. This can lie in stark contrast to idyllic images of country living.

Is rural living for you?

Encountering the unexpected can be disheartening:

- You discover that you don't have access to the irrigation water that runs across your own land.
- You lose a pet or livestock to a predator.
- You are responsible for a fire that starts on your land and spreads to other properties.
- The deer, voles and gophers eat everything you just planted.
- You wake at 3 a.m. to the sound of frost fans in the surrounding orchards.
- You don't have enough time or energy to mow fields, maintain fences, spray weeds, feed livestock, deal with muddy facilities, doctor sick animals, vaccinate healthy animals, etc.
- Your neighbor sprays his orchard in the middle of the night to avoid winds during the daylight hours.
- You spend more time and money driving to town than you ever expected.
- You must spend time learning about and maintaining pumps, septic systems, irrigation systems, ditches, handlines, etc.
- You discover that your property's access road is not publicly maintained and is your responsibility.
- You learn that the forested land next to yours will be logged.

Management Plan

Whether you are still in the process of deciding if rural life is for you or have already acquired land, developing a management plan can help you. It can be easy to design, starting by simply spending time on the property looking around, making a sketch and taking notes as you inventory the features on property. The Hood River Soil and Water Conservation District (SWCD) and the Natural Resource Conservation Service (NRCS) staff can assist you in developing forestry, range, farm, wildlife and wetland management plans.



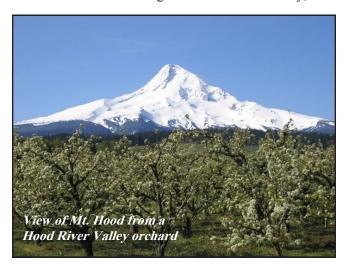
WHAT IS YOUR IDEA OF "RURAL LIVING"?



Questions or comments about this handbook should be directed to the Hood River SWCD. The handbook is meant to serve as a reference for everyone, so please pass it around and share its information. There is also a resource directory with the agency contact information on the inside cover of this guide.

Hood River County Facts

nce a corner of the nation's largest county, Hood River County is now the second smallest in the state, at 522 square miles. With the Columbia River forming its northern boundary, the



county rises from 51 feet above sea level on the river, to its southern tip on the top of Mt. Hood, at 11,245 feet. Its western boundary lies in the Cascade Range and its eastern boundary is roughly marked by Fir Mountain, Bald Butte and Surveyor's Ridge.

Over half of the land base in the county is under federal ownership through the Mt. Hood National Forest and the Columbia River Gorge National Scenic Area. Hood River County owns and manages 31,000 acres of forest and there are another 28,000 acres of private forest land, all managed for timber production.

Hood River County's population has been growing by leaps and bounds in recent years. In 2000 the county's population was 20,411, a 21% increase over 1990. Of those, 5,831 live in the City of Hood River,

1,100 live in the City of Cascade Locks and the rest are dispersed throughout the county.

Principal industries in the county include agriculture, recreation and tourism. Hood River County produces more winter pears than any other county in the United States. There are 15,000 acres of irrigated cropland, mainly planted to pears, cherries, apples and wine grapes, earning over \$56 million in gross sales in 2006. There are 350 fruit growers in the county; 12 have orchards larger than 200 acres, while the average size is 59 acres.

Recreational activities include windsurfing, skiing, snowboarding, biking, kayaking, kiteboarding and

Resources

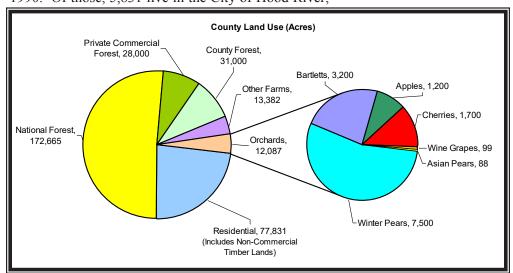
Hood River County Chamber of Commerce & Visitors Information Center www.hoodriver.org

hiking. Regional tourist destinations include Multnomah Falls, Timberline Lodge, Mt. Hood Meadows, the Gorge Discovery Center, the historic Mount Hood Railroad and the Sternwheeler Columbia Gorge. The growing season is celebrated twice each year, with the Hood River Valley Blossom Festival occurring the third full weekend in April and the Hood River Valley Harvest Festival occurring the third full weekend in October. There are numerous other local festivals and events, with destination weddings drawing an increasing number of visitors each year.

With its proximity to Portland, excellent weather and easy-going ambiance, it's no wonder that Hood River

County has seen a marked influx of new residents. Like earlier settlers before them, the new residents are seeking their bit of paradise in which to live, work and play.

Article written in cooperation with: Genevieve Scholl-Erdmann and Melanee Gillette, Hood River County Chamber of Commerce & Visitors Council and Jean Godfrey, Columbia Gorge Fruit Growers



2002 Census of Agriculture County Data, USDA National Agricultural Statistics Service, OSU Extension Service, Hood River County

Hood River County History

ood River County has been populated for thousands of years. Native tribes such as the Wasco and Klickitat fished the rivers and hunted for game in the forests that covered what is now known as Hood River County. Huckleberries, camas, cedar bark and other food and fiber were gathered for use and bartered with other tribes that gathered at nearby Celilo Falls.

Under the Treaty of 1855, tribal members were relocated to reservations but retained the rights to hunt, fish and gather in their usual and accustomed places. Members of the Confederated Tribes of the Warm Springs Reservation (CTWS) currently harvest spring Chinook salmon from the West Fork Hood River at Punchbowl Falls during the spring and early summer. The CTWS establishes and monitors the fishery. There are also huckleberry fields around Mt. Hood that are reserved for tribal use.

Although Lewis and Clark traveled by Hood River in the early 1800s, the area was not settled until the mid-1850s. Nathaniel Coe was the first European settler and he brought the first fruit trees with him. Logging was an early and important industry; the land cleared was then planted to crops, primarily apple trees and strawberries. After a devastating freeze in 1919



Crating apples in Hood River County c. 1910-1919 Courtesy of the Oregon Historical Society

killed most of the apple trees, farmers started planting the pear trees for which the area is now known.

In the late 1890s, Finnish settlers from North and South Dakota began relocating to the Hood River



Child rides the tractor as father sprays orchard in Hood River County c. 1930 ~Courtesy of the Oregon Historical Society

Valley. They were followed by Japanese immigrants in the early 20^{th} century and Mexican immigrants, beginning in the mid-1930s.

Originally part of Wasco County, Hood River County was established in 1908. The Columbia River Highway was completed in 1922, improving access between Hood River and Portland, as well as points east. Highway 35 (the state's most recently designated National Scenic Byway) was paved in mid-1900s; however wagon trains carrying settlers to the Oregon Territory traveled parts of it as early as the mid-1800s.

Visit the Hood River County History Museum for more information about our county's heritage.

Article written in cooperation with: Connie Nice, Hood River County History Museum and Joe McCanna, Confederated Tribes of the Warm Springs Reservation

Resources

Aakki-Daakki to Zoomorphic: An Encyclopedia About Hood River County. J. Patricia Krussow, Editor. 1994

Hood River County History Museum (541) 386-6772

Buying Country Property

re you considering or have you recently purchased land in the country? It can be a really wonderful transition from city to country living, but before you buy, you might want to consider some of the following "realities" that come along with your new piece of rural paradise.

Winter weather: Snow, ice and downed trees happen here just like in the city. The difference is your driveway or road may be your responsibility to maintain. In other words, you have to plow it to get out.

Land Maintenance: Is your new country property a size that you can reasonably manage yourself? Do you have and know how to safely operate the equipment necessary to maintain it?

Water: Where does your drinking water come from? We are very fortunate in Hood River County in that most properties are served by a domestic water district or private water company. If the property has a well, be sure to have it tested for quality and obtain a copy of the well log.

Septic: Most rural properties have a septic system to handle waste water. In what condition are your septic tank and drain field? Before buying the property, have the tank

pumped and inspected. If the tank has failed or is in poor condition it should be replaced prior to purchase.

Communications: Have you checked into the availability of internet, email and TV in the area you are planning to move? Does your cell phone work there?

Livestock: Do you have the resources and time needed to care for farm animals, fences, pasture, water and outbuildings? Do you have adequate space for the number and size of animals you want to keep? How will you manage odors and waste?

Orchards: If you live outside the city, chances are you will live close to a commercial orchard. Are you prepared to coexist with your neighbor's farming activities? If you are buying orchard land, how will you manage it? Are there any existing agreements with neighbors about which you should know? See the chapter on "Living Among Orchards" for details.

Timberlands: Are you considering property adjacent to a forest? Be aware that logging may occur on the parcel next to you. There is no guarantee the trees will

remain for your enjoyment. Review the chapters entitled "Living Among Timberlands" and "Small Woodland Management" for more information.

Building: Buying vacant land parcels requires a bit more homework. You need to be certain that the parcel was created legally and that access and utilities are available. The parcel must be approved for a septic system by County Environmental Health. You must also understand the land use laws that pertain to

the property. Is the use you are

proposing allowed?

Title Insurance: Title insurance provides you with protection against loss arising from problems connected to the title to your property. Before you purchase your property, it's a good idea (and in many cases a requirement) to obtain title insurance. Title insurance covers the insured party for any claims and legal fees that arise out of problems with past transfers of the title.

Neighboring Land Use: Like many rural places, Hood River County is constantly growing and changing. Your neighbor might be planning to develop homes on his property. Talk to your potential neighbors about their plans for the future.

All of these questions should be answered to your satisfaction prior to purchasing the property.

Article written in cooperation with: Tim Donahue, Windermere/Glenn Taylor Real Estate, Denise McCravey, RE/MAX Results, Inc. Realtors, Don Nunamaker, Nunamaker Realtors and Anne Debbaut, Hood River County Planning Department

Before you buy ask yourself or a knowledgeable Realtor®:

- Is it a legal parcel?
- What is the zoning of the property?
- Is it in the National Scenic Area?
- Are there any easements on the parcel?
- Have the property lines been surveyed?
- Can I use the property as intended?
- Have all new buildings, additions, remodels and/or alterations of structures been permitted by the County Building Department? Check to be sure.

Resources

Hood River County: www.co.hood-river.or.us

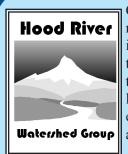
Living in the Hood River Watershed

f you are a new rural resident in Hood River County, welcome to the watershed. A watershed is the land area that drains to the same lake. stream or river. The Hood River drainage basin, or watershed, covers about 340 square miles between Mt. Hood and the Columbia River. Its west boundary is the Cascade mountain's Waucoma Ridge, and its east boundary is Surveyors Ridge and Fir Mountain. The Hood River has 3 main branches - the East Fork, Middle Fork and West Fork. These forks converge on the west side of the Hood River Valley to form the mainstem Hood River, which joins the Columbia River just east of the City of Hood River.

The Hood River watershed is in a transition area between the temperate marine and semi-arid continental zones. The elevation and climate vary widely within the watershed. The City of Hood River lies at about 160 feet above sea level while just 25 miles away, the peak of Mt. Hood reaches 11,245 feet high. Precipitation ranges from an average of 130 inches per year along the crest of the Cascade mountains to less than 30 inches along the eastern ridgelines, with most precipitation falling November through March. Snowfall is heavy at high elevations and can reach 30 feet deep at timberline on Mt. Hood. The Hood River is a dynamic, glacially-influenced system with steep terrain.

Summer and winter steelhead, spring and fall Chinook, coho salmon, bull trout, rainbow and cutthroat trout inhabit the Hood River and many of its tributaries. See the chapter entitled "Water Resources" for more information on the fish in the Hood River.

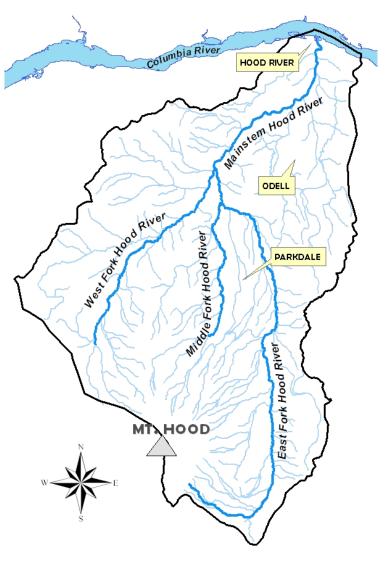
By virtue of living in the watershed, you are now a member of an active and supportive group of water-



Call the HRWG Coordinator at (541) 386-6063 if you have any questions or thoughts related to water quality, habitat, land management or other natural resource man-Watershed Group agement issues or project ideas involving your

land. Also, the website see www.hoodriverswcd.org/hrwg.htm for information on Watershed Group meeting topics, dates, locations and articles related to your watershed.

Hood River Watershed



shed enthusiasts called the Hood River Watershed Group (HRWG). The Group is neither a government agency nor an environmental organization. It is a local forum of landowners, irrigation and water districts, fruit growers, sport fishers, businesses and agencies interested in working cooperatively to address watershed restoration, enhancement and sustainable use of natural resources. The group uses four approaches including science-based planning, doing on-the-ground restoration projects, promoting education and providing assistance to the public.

> This article was written in cooperation with Steve Stampfli, Hood River Watershed Group

Being Neighborly

ftentimes, the importance of neighbors is heightened in rural areas. It's a good idea to get to know your community a bit before you move to an area. Conflicts, both real and perceived, between new and existing rural landowners are always possible. By getting a better understanding of the causes of these conflicts, some may be avoided.

Advice on Being a Good Neighbor

- Recognize that being good neighbors is a two way street.
- Respect your neighbors' endeavors including their right to farm.
- Realize that fences usually belong to one or the other neighbor. Clarify fence ownership with neighbors before altering them.
- Control your pets and livestock to ensure that they do not harass or harm your neighbors' animals or property.
- Recognize that moving farm machinery and/or livestock on country roads is necessary. Be cautious and prepare for delays.
- Understand that some practices, such as running frost fans, applying orchard sprays and running machinery after dark are common farming practices during certain times of the year.
- Prevent noxious weeds from moving from your property to your neighbors' land by wind, water or other means. See the "Weed Management" chapter for more information.
- Avoid growing plants in your yard that could harbor pests for commercial orchards. See the "Living Among Orchards" chapter for more information.
- Realize that people who live in rural areas prize their privacy and their space.
- Realize that your trees may impact your neighbors, and vice versa. Work cooperatively when managing vegetation on property borders.

Dogs

Dogs must be under control and on your property at all times. Free roaming dogs are a threat to livestock and wildlife. Landowners have the right to protect their livestock and may legally kill dogs that are caught chasing, killing or otherwise injuring livestock. If your dog is responsible for the injury or death of livestock, you will be held financially re-

sponsible and your pet may be euthanized. It is also your responsibility to license and vaccinate your dog against rabies. Your pet should also have a collar and identification tags.

Fences

Fences and property lines are potential sites of conflict. Yet by working with your neigh-

bors to maintain these areas, there is an opportunity to improve cooperation and build a relationship with neighbors. Properly maintained fences are important for the protection of livestock and wildlife, which may become entangled, injured or killed. Remember, fences do not always indicate property lines. Know where your lot lines are.

Resolving Conflict

Of course, the best approach is to avoid an issue before it arises. If something does come up, talk to your neighbor. Try taking some of these proactive steps towards a good outcome:

Talk directly.
Choose an appropriate time.
Plan ahead.
Don't blame or name call.
Give information.
Actively listen.
Talk it through.
Work on a solution.
Follow through.

Private Property and Privacy

People are often unaware of private property delineations when first moving to a rural area. Yet it is always the responsibility of the individual to know whose land they are on regardless of whether it is fenced. Always ask permission to be on someone's property. Remember, orchards are private property too.

Article written in cooperation with: Marti Kantola, Six Rivers Community Mediation Services, Steve Castagnoli, OSU Extension Service and Casey DePriest, Hood River County Animal Control



Living Among Orchards

ver 200,000 tons of apples, pears and cherries are produced annually in this valley, making the tree fruit industry the largest economic sector in the county. In short, this is a farming community. So now that you own land in orchard country, what can you expect?

These activities are all part of normal farm operations, protected by the Oregon Right to Farm Bill.

Winter (November through February): Pruning time. There will be workers in the orchards. In February you may hear the high pitched whine of orchard sprayers as they cover the trees with oil and sulfur to control insects and diseases. There also may be loud helicopter-like sounds of frost fans as they and hefore frost season.

are tested before frost season.

Spring (March through June): Frost control, bloom time and insect/disease control season. From dusk until past dawn you may hear the fans moving the cold air out of the orchard to protect the blossoms from frost. On those frosty mornings, clouds of smoke from smudge pots may hang low over the valley. You may hear the whine of the orchard sprayers just before, during and after bloom, protecting the fruit from insects and diseases.

Summer (July and August): Irrigation, growing and harvest time. The orchard sprayers may be applying more sprays for insects and diseases. You may hear bird control devices (cannons and bird distress calls) near harvest. Harvest begins with cherries in late June or early July and continues with early pear varieties in August. Orchard workers will be picking fruit into bins to be loaded onto trucks. Traffic may be slowed by trucks hauling fruit to the packing houses.

Fall (September and October): Harvest time continues with winter pears and apples. Allow more time to get to your destination as you will be sharing the road with slow-moving trucks. After harvest you will again hear the orchard sprayers applying oil and sulfur to control over-wintering insects. Other fertilizers including dusty, white lime are applied to the ground.

Orchards are private property on which the orchardist is dependent for making his living. Like any private property, access to your neighbor's orchard or vine-yard is not permitted unless you and your neighbor have an agreement. Unauthorized access is trespassing and can be dangerous during certain activities, especially around powered orchard equipment.

ow Might You Affect a Commercial Orchard? If you have backyard fruit trees, you can do yourself and your neighbors a big favor by controlling insects and diseases. If you do not manage your fruit trees, they may be acting as a host for the spread of pests and diseases to neighboring commercial orchards. In Hood River County, controlling fruit pests is the law. County Ordinance #263 requires that fruit tree diseases and pests be controlled on host plants. If they are not, the county may require destruction of the crop or trees at the owner's expense.

If you are willing to remove your fruit trees, call the Columbia Gorge Fruit Growers (formerly the Hood River Grower-Shipper Association) and register for their "Backyard Tree Program." Once they confirm that you have removed the trees, they will send you a coupon to purchase alternate plants at a local nursery. If you intend to keep your home fruit trees, contact the Oregon State University (OSU) Extension Service for information on pest control methods.

You should also know that growth regulator herbicides, sometimes referred to as phenoxy-type herbicides, (such as Crossbow®) often used for residential weed control can be devastating to orchards and vineyards. Many growth regulator herbicides may volatilize during high temperatures and be carried on the wind for miles. If the herbicide application can be traced, the applicator can be fined by the Oregon Department of Agriculture.

We can all work together to ensure that agriculture continues to be a vital part of our local economy. For more information contact the OSU Extension Service.

Article written in cooperation with:

Jean Godfrey, Columbia Gorge Fruit Growers and Steve Castagnoli, OSU Extension Service



Living Among Timberlands

ood River County contains over 284,000 acres of forestland; so chances are that you live close to some timberlands. Of this forested area the USDA Forest Service owns 70%, Hood River County 11%, Longview Timber Company 10% and the remaining 9% is in smaller privately and publicly held tracts.

Management

How the timberlands around you are managed depends largely on who owns them and what rules they have to follow.

Regulation of USDA Forest Service lands is guided by the 1994 Northwest Forest Plan and other federal environmental laws. The Plan is an overall vision for the Pacific Northwest that allows for some production of timber products while protecting natural resources.

Private and non-federal public lands are regulated by the Oregon Forest Practices Act. The goal of the Act is to offer opportunities for the continued growth and harvest of forest tree species as the leading use while protecting soil, air, water, scenic, fish and wildlife resources.

So what can you expect?

Common forest management activities in Hood River County may include preparation of the land for planting, vegetation control with herbicides, reforestation, pre-commercial thinning, road construction, commercial thinning, clearcut harvesting and slash treatment. During the harvest you can expect to hear chainsaws, see logging trucks, smell burning slash and see a changed landscape. Remember, just because there are trees next to you when you move in, does not mean they will be there forever, especially if you don't own them

Economic Contribution

The forests in Hood River County contribute significantly to the local economy by providing raw wood products and a haven for recreational activity. Hood River County forests alone contribute nearly 44% of the county's general fund through sustainable harvest management of its 31,000 acres. There are two forest products mills in the county and two more just outside its boundaries. Additionally, there is a thriving

Resources

Hood River County: www.co.hood-river.or.us

WSU Extension Forester: (509) 427-3930

Oregon Dept. of Forestry: www.oregon.gov/ODF/



retail sector devoted to forest recreation activities such as trail use and hunting.

What are your rights?

Regardless of who owns the land, forest products may not be harvested without written permission or a permit from the landowner. Also, a transport permit from the landowner is required to transport special forest products including firewood, plants, rock and Christmas trees.

Some landowners may allow public access on their private forestland. However, landowners or the Oregon Department of Forestry may prohibit certain activities or control access during times of high fire danger to prevent wildfires.

How can you find out about upcoming timber harvests? You can maintain a subscription from the Oregon Department of Forestry to notify you when operations may occur on specified lands for an annual fee. Otherwise, maintaining communication with neighbors may provide sufficient information regarding their plans and activities.

Article written in cooperation with: Doug Thiesies of the Oregon Department of Forestry and Henry Buckalew of the Hood River County Forestry Department

Soils

ood River County has about 30 different kinds of soil. While most of the soils in the Hood River Valley are good for growing a variety of crops, a soil survey and a soil test can be very useful tools for learning how best to use and manage your land.

The Dirt on Soil

Soils are developed over geologic time. Climate, water, temperature, vegetation and parent materials all contribute to soil formation. Parent material can include bedrock, volcanic ash and glacial outwash.

Soils are complex and fragile. They are susceptible to erosion by wind and water when not adequately protected. Soils form the basis of most ecosystems, including our own. Without productive soils we would not be able to grow the plants we need to survive.

Soils have different textures including silts, sands and clays. The combination of these textures determines the characteristics of your soils. The depths of the soil to bedrock or a water table are factors that can determine how land is used. The steepness of slope and its aspect can also affect soil stability and sustainability.

The Hood River County soil survey is a great place to start when you want to know more about the soils that make up your land. The Soil Conservation Service (now the Natural Resources Conservation Service (NRCS)) completed a soil survey of Hood River County in 1981. This survey includes most of Hood River County, but does not include the Cascade Locks area or any of the National Forest land. These free surveys are available to landowners at your Hood River SWCD or OSU Extension Service offices. There is also an interactive web-based soil survey available through the **NRCS** http://websoilsurvey.nrcs.usda.gov.

If you don't have a soil survey, a quick way to determine your soil type is to get a hand full of moist soil from the yard and squeeze it.

Did You Know?

It can take up to 500 years for natural processes to create one inch of top soil, and under the wrong conditions, one storm to remove it. Civilizations have been lost because soil sustainability was either not understood or practiced.

- *Clay soil* feels sticky, holds together well and forms an imprint of your fingers.
- Sandy soil slips through your fingers, feels gritty and will not hold together well.
- Loamy soil feels spongy and will be brown or black in color. It is a mix of sand, silt, clay and organic matter, and is the best soil for plants.

Soil Safety

The nutrition of food reflects the health of the soil in which it is grown. Soils (and crops) can be contaminated by bacteria and other elements such as lead and arsenic. These chemicals can occur naturally in soils but are potentially toxic at high concentrations. The soil in the vegetable garden and in areas where children might inadvertently consume it presents the greatest risk.

Past human activities have increased the lead and arsenic content of some soils, particularly those around older homes containing lead-based paints, along roadways and in former orchard sites. Many parts of the Hood River Valley, including many subdivisions, were planted in orchards in the early 1900s and were likely treated with lead and arsenic sprays to control fruit pests. Soil testing can confirm higher than natural background concentrations and should be done by landowners who suspect their garden plot may have been exposed to lead or arsenic.

Soils Testing

Not only can soil testing reveal high levels of contaminants, it can also provide information on the available nutrient content of your soil. The test can help guide you in choosing the right amendments to improve the soil. The Hood River SWCD and OSU Extension office can provide a list of soil testing labs where soil samples can be examined. The OSU Extension staff can help you interpret your test results.

Article written in cooperation with: Carly Heron, NRCS, Steve Castagnoli, OSU Extension Service and John Dodd, USDA Forest Service

Improvements on Your Land

o maintain the quality of life that attracted us all to this area, we need to follow certain rules, regulations and best management practices. This is especially true when you consider making changes to your land. Thankfully, there are many resources available to help ensure that your planned improvements are safe and legal. In this chapter we discuss some of the types of improvements you may consider making to your land, some of the guidelines to follow, and resources available to help you make the right decisions for your land and our county.

Buildings/Structures

Before you build new structures (and in some cases even alter old ones), it's a good idea to check with the Hood River County Planning and Building Services Department at (541) 387-6840. Their staff can help you figure out what uses and activities are allowed in your area, the zoning for your property and what permits, if any, are required. In most situations, proposed development, including changes of use on your property, must be reviewed and approved via a permit application to the County Planning Department and the County Building Official. This includes culvert installation, streambank stabilization and any other instream or near stream work.

Fortunately, there are many services available to help you determine the procedures you should follow when planning to build or make changes to your existing infrastructure.

• Hood River County website: (www.co.hood-river.or.us) Select the "Planning Department" on the drop down menu to link to the Hood River

TIP:

If you

don't

have

access

to the internet

in your home,

each branch of

the Hood River

County Library

System pro-

vides free in-

ternet work-

stations for

public use.

County Zoning Ordinances (HRCZO) and much more.

• Tax maps and tax assessment records may be obtained from the County Records and Assessments Department, at (541) 386-4522.

• Property surveys, aerial photos and tax maps can be explored on a computer at the County Public Works Department located at 918 18th Street in Hood River or call ahead at (541) 386-2616.

Creating Parcels

New parcels (created by dividing established parcels) must be approved by the County Planning Department. They can

approve development applications only for properties that comply with the definition of a parcel (defined in Article 3 of the HRCZO). A property that complies with this definition is considered a legally established parcel.



Before you start work, make sure your planned activities are permitted. Remember to call before you dig!

Setbacks

As you plan to build, alter structures or even develop your landscape, it is important to make sure your planned improvements comply with the site development standards (including setbacks) of the zone in which they are located. There may be additional buffer setbacks required if the property is located in or adjacent to a farm, forest or stream zone. Again, the best option is to check with your local resources before you begin work.

Streams, Wetlands and Floodplains

One commonly overlooked setback is the buffer required around all streams, wetlands and other waterways. You are required to maintain a 50-75 foot buffer from the bank of all streams and/or wetlands designated within the Stream Protection Overlay (SPO) zone on the county zoning maps. A 100 foot setback is also required from the ordinary high water line of a stream designated within the Floodplain (FP) zone on the county zoning maps.

Activities that are not allowed within the SPO zone in Hood River County include:

• Cutting, clearing or removing native vegetation.

Resources

Hood River County Planning Information: www.HoodRiverProspector.com

State of Oregon Building Codes Division: www.cbs.state.or.us/bcd/

- Ground alteration, grading, excavation or the placement of fill material in streamside areas.
- Construction, installation or placement of new structures or solid surfaces in streamside areas.
- Dumping, disposal or storage of materials, including but not limited to, garbage, yard debris, construction debris, vehicles or hazardous materials.
- Construction activity or creation of temporary roads in streamside areas.
- Creation of a parcel that would be wholly within the SPO zone, unless the parcel is included in a conservation easement that prohibits development on the site.

Fire Safety and Fuelbreak

New homes in the Forest and Primary Forest zones have specific siting, road and fire standards. Fire standards include clearing and maintaining a fuel break surrounding all dwellings and structures. A minimum of a 30 foot primary fuel break and a 100 foot secondary fuel break will be required. Questions regarding how to create a fuel break should be directed to your local fire district. More information can be found in the "Fire Prevention" chapter.

Wetland or Streambank Enhancements

Are you thinking about restoring or enhancing your wetland or streambank? Although your intentions



Planning work near a waterway? It's a good idea to check with local authorities before you start work.

may be to improve the habitat in the area, it is important to make sure you are working within the limitations of county ordinances and state and regional standards. Your Hood River SWCD technician or Department of State Lands resource coordinator can help you move forward in the right direction.

Conservation Easements

One way you might consider conserving natural resources on your land is through a conservation easement. This is a legal agreement between a landowner and a land trust or government agency that permanently limits uses of the land in order to protect its conservation values. It allows you to continue to own and use your land and to sell it or pass it on to heirs. When you donate a conservation easement to a land trust, you give up some of the rights associated with the land. For example, you might give up the right to

build additional structures, while retaining the right to grow crops. Future owners also will be bound by the easement's terms. The land trust is responsible for making sure the easement's terms are followed. A landowner sometimes sells a conservation easement, but usually easements are donated. If the donation benefits the public by permanently protecting important conservation resources and meets other federal tax code requirements. the property may be able to qualify as a tax-deductible charitable donation.

This article was written in cooperation with: Anne Debbaut, Hood River County Planning Department and Jess Jordan, Department of State

TIP: Call before you dig! Remember to call the **Oregon Utility Notification Cen**ter at least two business days before you start ground breaking work to have vour utilities identified and marked for free. The number is 811.

Lands

Water Resources

I flood River County were a body, the Hood River and its many tributaries would be its circulation system. The topography, recreation, economy and culture of our community have been shaped by these water bodies. Whether skiing, irrigating our orchards, windsurfing, fishing, brewing beer or bathing our children, nearly everything we do is somehow tied to our water resources. In all likelihood, these resources also played a role in your decision to move to this county. The health and availability of these resources have a direct effect on the quality of life we can expect as members of this community, now and in the future. That is why we all have a responsibility to care for these resources - for the sake of the members of our community, its wildlife and those living downstream.

Rules for Water Resource Protection

Because the water resources in our community are so valued, many rules and regulations have been formed to protect them. They range from federal laws such as the Clean Water Act to state laws like the Oregon Agriculture Water Quality Management Act. Water resources as they relate to irrigation and agriculture are discussed in the chapters "Agricultural Water Quality Rules" and "Irrigation Water Management."

The Water Code

Under Oregon law, all water is publicly owned. With some exceptions, cities, farmers, factory owners and other water users must obtain a permit or water right from the Water Resources Department to use water from any source, whether it is underground or from lakes or streams. Generally speaking, landowners with water flowing past, through or under their property do not automatically have the right to use that water without a permit. Check out the chapter entitled, "Irrigation Water Management" for more details on your water

rights.

Remember, we all live downstream.

Fish Passage Requirements

Native migratory fish exist throughout many streams in Hood River County. Activities that hinder or prevent passage of fish are discouraged and in most cases illegal. If you are involved in activities that may affect fish passage such as installing culverts or creating irrigation diversions, please call the Oregon Department of Fish and Wildlife (ODFW) before starting work. Oregon's fish passage rules can be found online at www.dfw.state.or.us/fish/passage.

Flooding

If you live near a waterway, chances are you will face the natural rise and fall of the water level in that waterway. Flooding is a natural stream process. A floodplain is the land that is inundated with water during floods. This area allows flood waters to spread out and slow down, reducing their erosive force. When a stream is able to naturally expand into its floodplain, it rejuvenates the ecosystem by replenish-



Because our watershed is heavily influenced by Mt. Hood's glaciers and snow packs, our rivers are susceptible to flashy debris torrents as seen in November 2006.

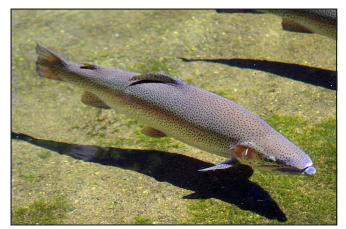
ing nutrients and recharging aquifers. However, many of the streams in the Hood River Watershed have lost their connection to their floodplain by being confined into canals, ditches and culverts for development purposes. When this happens, property-damaging flood events are often the result, and houses and buildings in the floodplain fall victim.

The "perfect storm" of steep topography, low-level snowpacks and marine storm systems moving across our region in winter can result in "rain-on-snow" storm events, with devastating results. Flow changes can be driven by alterations in type and density of vegetation, roads and buildings as well as in soil infiltration rates (how quickly water can seep into the ground). These changes can affect the magnitude, duration and impact of floods.

So what does it mean? Maintaining floodplain connectivity and vegetation along your reach of stream can drastically reduce chances of sustaining damage from a flood event. Building above the floodplain will greatly reduce flood damage to structures. Check out the chapter called "Riparian Areas, Wetlands and Water Quality Management" for more details on caring for waterways on you land.

Important Fish Species in the Hood River

Due to its geographic location between semi-arid eastern Oregon and marine-influenced western Oregon, Hood River County has a mixture of fish species from both regions.



Rainbow trout are one of the Hood River's common resident fish species.

The Confederated Tribes of the Warm Springs Reservation (CTWS), ODFW and USDA Forest Service are trying to restore wild salmon, steelhead and other native fish in the Hood River through habitat restoration and protection as well as water quality/quantity improvements. The state, tribal and federal agencies work collaboratively with the county, local landowners, irrigation districts and the Hood River Watershed Group to protect and enhance native fish and aquatic habitat in the Hood River.

Important salmon and trout species present in the Hood River and surrounding streams include:

- Resident rainbow trout: common and widely distributed throughout the Hood River system.
- Coastal cutthroat trout: distributed throughout much of the headwater areas and tributaries of Hood River and Phelps Creek. They are listed with the state as a sensitive species.
- Bull trout: exist primarily in the Middle Fork of the Hood River and its tributaries. They are federally listed under the Endangered Species Act as threatened and are the only remaining stock of bull trout in the Mt. Hood National Forest.
- Mountain whitefish: fairly common on the mainstem of the Hood River. Little is known about their life cycle or abundance in the Hood River.
- Chinook salmon: found in the Hood River. Both the spring and fall runs of this species are present. The native run of spring Chinook in the Hood River is extinct. CTWS and ODFW are working

- to re-establish this run in the basin.
- Coho salmon: found in the Hood River and are federally listed under the Endangered Species Act as threatened.
- Steelhead trout: Both the summer and winter runs of this anadromous (ocean-going) form of rainbow trout are present in the Hood River. Steelhead are listed as threatened under the Endangered Species Act.

Fishing opportunities in Hood River County

The Hood River is currently open all year to steelhead angling from the Columbia River to Powerdale Dam (the lowest 4 miles of river). The river has both a summer run and a winter run of steelhead, both popular with anglers. The summer run of steelhead typically peaks in mid-September, while the winter run of steelhead peaks in late March.

Opportunities to angle for salmon in the Hood River vary on an annual basis based on estimated run sizes. Anglers are encouraged to check for updated fishing regulation changes on the ODFW website at www.dfw.state.or.us. Tribal harvest of spring Chinook salmon remains an important source of subsistence for members of the CTWS. For information regarding the Hood River tribal fishery contact the Hood River Production Program at (541) 352-9326.

Article written in cooperation with: Chris Brun and Joe McCanna, Confederated Tribes of the Warm Springs Reservation, Jason Seals, Oregon Department of Fish and Wildlife, Ellen Hammond, Oregon Department of Agriculture, Steve Stampfli, Hood River Watershed Group and Gary Asbridge, USDA Forest Service

Resources

Oregon Department of Fish and Wildlife www.dfw.state.or.us

Oregon Department of Environmental Quality www.oregon.gov/DEQ/WQ/

Oregon Water Resources Department www.oregon.gov/OWRD/

Agricultural Water Quality Rules

aving clean water is vital to sustain your livestock, and water your lawn, garden and crops. To insure that agricultural activities don't impair water quality, Oregon has a statutory agricultural water quality program, administered by the Oregon Department of Agriculture (ODA).

Many of our actions can pollute local waterways. Elevated water temperature is considered a pollutant according to the Oregon Department of Environmental Quality (ODEQ). Water temperatures can increase dramatically when the tree or shrub shade canopy is removed along waterways, threatening the fish in the system. Bacteria and nutrients from improperly managed manure, septic systems or unrestricted livestock access to streams, as well as chemicals from pesticides, fertilizers and herbicides, can easily make their way into the stream or into groundwater.

Oregon's agricultural water quality management laws require landowners to prevent these kinds of water pollution

"Streamside"
vegetation is a
vital part of
good water
quality."

by using good agricultural management practices. Under the direction of a local advisory committee, ODA developed an agricultural water quality management plan and administrative rules for our area. Copies of the plan and rules are available

online at

<u>www.oregon.gov/ODA/NRD/water_agplans.shtml</u> or from the Hood River SWCD office.

The plan addresses water quality concerns and provides recommended management practices to prevent and control pollution. The area rules have requirements for streamside vegetation and waste management. These two rules were established because many stream reaches in our watershed have water temperatures and nutrient levels that exceed state standards.

Streamside Vegetation – Establish, Maintain, Protect

Adequate riparian (streamside) vegetation is a vital part of good water quality. Vegetation controls water pollution by providing cooling shade, minimizing streambank erosion and filtering sediments and nutrients from overland flows. It also slows water flowing across the land so that it has an opportunity to soak into the soil rather than running off into the stream.



Covered manure storage facilities like this one protect nearby waterways from contamination while providing landowners with valuable compost for pastures.

In the Hood River Valley, agricultural activities must allow the establishment, growth and maintenance of sufficient streamside vegetation to provide these functions. This requirement also applies to agricultural lands lying vacant or unused for an agricultural purpose. Planting with appropriate native vegetation, including deep rooted shrubs, trees, sedges and grasses, controlling invasive plants and fencing livestock away from the riparian area are all excellent ways to maintain streamside vegetation.

Waste Management

Nobody wants to swim in, or irrigate with, a stream contaminated by livestock manure. Fencing cows, horses or other animals out of the streamside area is a smart thing to do for yourself and for your neighbors downstream. Piled manure and animal bedding can leach nutrients and bacteria into groundwater or nearby streams if not covered and located away from waterways (wet or dry). Soil, grass clippings and other organic materials can also pollute water if allowed to wash into streams.

The SWCD staff and local ODA water quality specialist are available to provide advice and technical assistance on managing streamside vegetation and agricultural waste. In some instances, financial assistance may be available. See the "Raising Animals in Hood River County" chapter for more ideas.

Article written in cooperation with: Weisha Mize and Ellen Hammond, Oregon Department of Agriculture

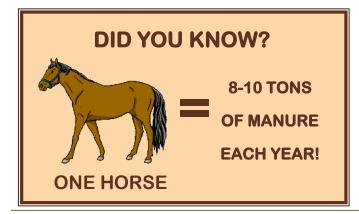
Raising Animals in Hood River County

ne of the draws to rural living is the opportunity to raise farm animals, to keep horses, and to have a source of eggs, milk, meat or fiber right in your own backyard. Maybe your kids want to join the local 4-H chapter or get involved with Future Farmers of America. Or perhaps you are hoping to supplement your income by selling eggs, cheese or specialty animal products.

Keeping livestock and poultry can be fun, rewarding and challenging. And like any activity, there are some impacts and responsibilities you should understand. As a good steward and neighbor, and as a citizen and community member, you want to do the right thing. Here is some information that will help.

What goes in as food comes out as manure. No matter the animal it came from, manure and used bedding should be gathered regularly and stored away from natural waterways. Ideally, manure should be kept on a solid surface and under cover (a tarp is fine), particularly during the rainy season, to avoid leaching nutrients and bacteria into the soil or running off into a nearby waterway. An added benefit of storing manure this way is that you can compost it at the same time and create valuable soil amendments for your garden or pastures. Through proper storage and application, you will protect water quality and be in compliance with Oregon's water quality rules. You can learn more about the rules for Hood River County in the chapter "Agricultural Water Quality Rules."

Manage grazing to increase animal health, maintain pasture vitality and protect water quality. If you plan to keep your animals in a fenced area, be sure that you have enough pasture per head. Just like you don't like to eat at an overcrowded table fighting for a limited amount of food, neither do your animals. Check with the Hood River SWCD or OSU Extension Service for guidelines on the amount of space needed per animal. With enough pasture and





Before you acquire your animals, ask yourself if you and your land can accommodate the number and type of livestock you are planning to raise.

cross fencing, you can provide nutritious grazing for your animals without destroying the grasses. When establishing the area where you will be keeping your animals, it is important to fence the animals away from streams and provide off-stream watering facilities. This protects the streamside vegetation, maintains water quality, and once again, keeps you in compliance with Oregon's water quality laws. Check out the chapter on "Pasture Management" for more information on how to maintain healthy pastures.

If you have a lot of animals, plan to confine them in a pen or barn and feed them on a concrete surface, you may need a Confined Animal Feeding Operation (CAFO) permit. Oregon requires a CAFO permit when animals are held or fed in a confined area, such as a feedlot or barn, and wet waste is produced. An animal waste management plan and land use approval are also required. If you are planning on having a large number of animals on your property, or if you think you would be exceeding the recommended number of animals per acre, we recommend consulting with the ODA CAFO specialist at (541) 617-0055 or our ODA water quality specialist at (541) 617-0017 to find out about the requirements for your operation.

Article written in cooperation with: Weisha Mize and Ellen Hammond, Oregon Department of Agriculture



Riparian Areas, Wetlands and Water Quality Management

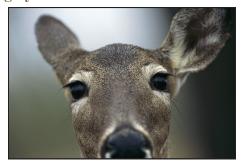
f you have a creek, stream, wetland or ditch on your property, then you have something special in your care. Cool, clean water in our local waterways is essential to sustain balanced ecosystems for fish and wildlife. Healthy streams benefit landowners too – in terms of aesthetics, erosion control, and enhanced property values.

A riparian zone is the interface between land and a flowing surface water body. It can often be identified by the water-loving vegetation that lives in this habitat. Wetlands are ecosystems that remain saturated for extended periods of time. Wetlands temporarily store water and release it slowly to streams and aquifers, thereby moderating flood events. More information can be found in the "Water Resources" chapter.

A Healthy System

A healthy riparian area has lush and diverse native vegetation along the water's edge. Vegetation reduces water pollution by filtering out sediments, chemicals and nutrients from runoff. Water running through the area is slowed, reducing the risk of erosion and property loss. The habitat provides food and breeding areas for fish, birds and wildlife as well as keeping water cool in the summer time.

Living by Water



A study in Washington found that 60% of all wildlife were living in wooded riparian habitats which make up only 10% of the total habitat types in the state.

Don't judge your waterway by its size or configuration. A "ditch" is just a small stream. Many local creeks, springs and wetlands were converted years ago to drainage ditches. Those that flow year-round often have fish and other aquatic life in them. Surprisingly, many intermittent and ephemeral creeks are also extremely important to fish, wildlife and aquatic insect species. Stream care guidelines also apply to flowing ditches. Remember that even fishless ditches and seasonal creeks flow into fish-bearing streams. So what can you do to preserve good water quality?

- Keep new buildings as far away from creeks as possible. This will help reduce erosion and flooding problems.
- Neep a buffer strip of native trees and shrubs along the creek. Streamside plants can help filter contaminants, shade the creek, protect against erosion and flood damage and offer excellent fish and wildlife habitat.
- Do not install rock, riprap or gabions along your stream bank. While these fea-

Riparian
buffers 50 feet
wide trap
eroded soils,
100 feet wide
filter pollutants
and 200-300
feet wide
provide wildlife corridors.

tures may give your streamside a more landscaped appearance, these features can reduce the water quality in your stream and damage your downstream neighbor's property. If you have erosion issues, try planting native riparian plants. Their roots will hold the soil in place much better than any rock structure.

- Preserve the natural features of the creek. Fallen logs and meanders in the stream are essential physical structures that maintain food and habitat for fish and wildlife. There is no need to clean up this natural debris unless it is threatening you or your property. If so, be sure to consult ODFW or the county before going to work.
- Keep pasture and animal pens away from streams. Animals break down stream banks causing erosion and stream widening as well as adding pollutants to the waterway.
- Do not divert a spring or creek to build a pond (even for irrigation use) without a permit. Ponds raise water temperatures and promote algal growth. Impounding water without a permit is illegal. See the chapters on "Ponds" and "Irrigation Water Management" for more details.
- Avoid filling ravines or slopes above creeks with dirt, grass clippings or other debris.
 Storms will carry this debris down slopes and into

the waterways.

- Remove noxious weeds with mechanical rather than chemical means. Replace them with native plants. Check out the "Weed Management" chapter for more details.
- Delay mowing grassy areas until late July.
 Ground birds such as quail and pheasants use these areas to nest.
- Remember, water flows downstream. How you treat the section of stream on your property affects water quality on your neighbors' property downstream, just as the actions of your neighbors upstream affect you and your property.

Working in Wetlands or Riparian Areas

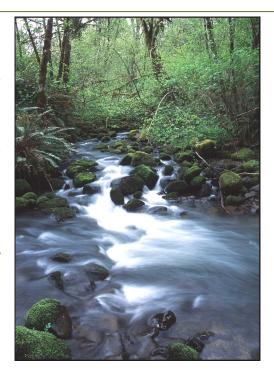
To provide for the best possible use of water resources in this state, we must strike a balance between protection and human use. This is the purpose of Oregon's regulations governing activities in waterways, wetlands and their riparian areas.

When planning a project in wetlands or waterways, you should check first with the Hood River County Planning Department and the Department of State Lands (DSL) to determine what, if any, regulations may apply. Staff will be able to help you understand the range of permits that may be required for your water-related project. If you are unsure about the need for a permit, your regional DSL coordinator is available to provide guidance. You can also find more detailed information on types of permits on the DSL website at: www.oregonstatelands.us. The permitting process can take time. Remember to allow up to 120 days for DSL to process your application for a permit.

TIP: If you're not sure if the water flowing through your property is regulated by the state, just ask! Your DSL natural resource coordinator would be happy to help you make that determination.

In Oregon, the Removal-Fill Permit, administered by the DSL, is the most common state requirement for projects in wetlands or waterways. It often links you to other water-related requirements that may apply to your project. The permit is required for all projects removing and/or filling 50 cubic yards or more of material in any calendar year in a wetland or waterway; or for any project in a state scenic waterway or essential salmonid habitat. This law includes installation of bank stabilizing structures as well. Any installation of rock, riprap or gabions without a permit is a violation of the removal/fill law and may result in a fine from state and federal agencies.

This creek
has a healthy
riparian area
of wellestablished,
water-loving
plants. This
vegetation
helps stabilize the soil,
filter pollutants and
shade the
stream.



While it may seem cumbersome to go through this step, you will be glad you did. There are both criminal and civil procedures for violations. Removing or filling without a permit or contrary to the conditions of a permit is a criminal misdemeanor punishable by a fine of up to \$2,500 and one year in jail. Violations are also subject to a civil penalty of up to \$10,000 per day of violation. DSL's resource coordinators work with landowners to find ways to correct activities that may have occurred without a permit and to resolve issues without taking legal action. But, the best plan of action is to play it safe and ask for guidance before you dig or dump.

Article written in cooperation with: Jess Jordan, Department of State Lands

Did You Know?

It's not just the right thing to do; it's the law! According to County Ordinance 253, cutting, clearing or removal of live native vegetation within 50 feet of a designated waterway is not allowed and may be subject to enforcement.

Irrigation Water Management

hanks to the foresight of early settlers, the Hood River Valley is served by a network of ditches and pipes that provide irrigation water to most of the countryside. Dug by hand in the late 1880s, these ditches carry irrigation water from streams and rivers located higher in the basin to farms and rural residences. A large percentage of all irrigation water in the Hood River Valley is delivered by one of the local irrigation districts.

Irrigation water rights are appurtenant (attached) to individual parcels of land. Irrigation districts provide the infrastructure to deliver the water, and therefore assess annual charges to maintain their systems. Hood River County has five main irrigation districts: the Middle Fork, East Fork, Mt. Hood, Dee and Farmers. If you have water rights, find out which district delivers your irrigation water.

Water Rights and Management

Irrigation water rights should be disclosed on the sale of a property. You can also contact the local Watermaster to verify a water right. He can tell you which irrigation district provides your irrigation water and answer other questions related to your water rights.

If your land does <u>not</u> have an irrigation water right, you can apply for a permit through the Oregon Water Resources Department (WRD). Some activities are exempt from the water right permitting process, such as using a well (groundwater) for domestic use and the irrigation of no more than ½ acre of lawn or noncommercial garden. However, you need to obtain a water right before you divert any water from a stream, even if the stream crosses your property.

Beyond the ins and outs of having irrigation water is the important topic of irrigation water management. Surface water for irrigation can only be applied during irrigation season – April 15 to October 1. There may be other restrictions specific to a water right, such as the rate at which water can be diverted, the duty (total volume that can be applied during the irrigation season), metering and water use reporting requirements. Read your water right permit or certificate carefully. Contact your irrigation district or the

Resources

Strategies for Reducing Irrigation Water Use: http://extension.oregonstate.edu/catalog/html/em/em8783

Oregon Water Resources Department: www.oregon.gov/OWRD/

Workers install a 6 foot diameter pipe to replace the East Fork Irrigation District's central canal. This pipe will deliver irrigation water diverted from the East Fork Hood River to valley orchards.



Watermaster if you have any questions.

Water Conservation

For small acreages, these limitations often mean that you cannot use impact sprinklers or water large sections of your property without exceeding your allotment. Assistance is available at each irrigation district to help you determine how much water you can apply at any one time. The local irrigation suppliers can also guide you to efficient micro-sprinklers or drip systems that apply water at low rates.

Many sections of local streams and rivers exceed state water temperature standards in the summer and fall, in large part due to irrigation diversions. It is vitally important to endangered fish species that irrigation water be used judiciously.

How can you determine if your trees, shrubs and lawn need water? There are guides available through OSU Extension Service that can help you determine how much water different plants need and how much water is lost to evaporation. Soil moisture sensors or probes can help you determine if there is water available in the soil to meet plant needs. More information on water conservation techniques can be found in the "Gardens and Landscaping" chapter.

This article written in cooperation with Steve Castagnoli, OSU Extension Service, Bob Wood, Water Resources Department, Dave Compton, Middle Fork Irrigation District, John Buckley, East Fork Irrigation District and Jeff Cook, Farmers Irrigation District

Ponds

Ponds come in many sizes and types – from the vernal pool that dries up in the summer to the beaver pond that backs up a stream to that "golden pond" of our memories. Ponds provide critical habitat for numerous species of plants and animals, as well as recreational, agricultural and aesthetic benefits to landowners.

But what a beaver builds instinctively is not so easy to replicate by man.



Ponds can provide habitat for countless species of plants and animals. If you are building a pond, have you thought about what might be attracted to it?

For starters, you must have a primary permit to construct a reservoir or pond of any size to store water. If you are intending to use the stored water for an "out of reservoir" use, such as irrigation, you must have a secondary permit to do so. Reservoirs with a dam 10 feet or more in height and that store 9.2 acrefeet or more of water require engineering plans and specifications approved by the Oregon WRD prior to construction.

There is an alternate review process for reservoirs with a dam less than 10 feet high or storing less than 9.2 acre-feet of water. The process is expedited and the fees are generally lower. To learn more about permits for ponds, contact the Watermaster's office.



For further information on ponds, or anything relating to water rights, check out WRD's "Water Rights in Oregon" alias the "Aquabook" at

www.wrd.state.or.us/OWRD/PUBS/aquabook.shtml

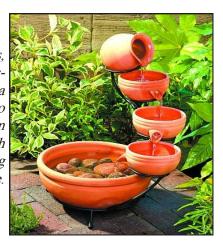
In addition to a water rights permit, any fill/removal activity in stream channels (perennial or intermittent), or in wetland areas will likely require a permit from the DSL prior to any construction. Check out the chapter on "Riparian Areas, Wetlands and Water Quality Management" for more details.

While ponds provide important habitat for turtles, frogs and other animals, they can impair water quality and aquatic life downstream. Unless the pond is disconnected from a waterway (and few are in nature), the water in the pond will warm and grow algae before flowing downstream. This is of concern to natural resource managers since water temperatures in the Hood River basin exceed state standards in many stream reaches during the summer and fall.

A poorly-designed or constructed pond can be breached during a storm event. Ponds can also be attractive nuisances to children, pets and other animals. As such, ponds are a liability to the landowner. Check your insurance coverage to assess if the benefits outweigh the risks.

If you want to enjoy the aesthetics of a pond without

Water features, like the one pictured here, are a nice alternative to ponds which can require much more planning and maintenance.



the hassles of permits and liability, you might want to build a water feature. A water feature differs from a pond in size and source of water. It might be a fountain, a man-made babbling brook or a birdbath, but a water feature would be filled with domestic water, not irrigation water or water from a stream.

> Article written in cooperation with: Bob Wood, Water Resources Department

Pasture Management

ith proper pasture management, you can have clean water, healthy animals and a vigorous pasture – all at a reasonable cost. But, healthy pastures don't just happen. Without some attention your pastures can quickly become a source of weeds, mud, manure and headaches for you, your animals and neighbors. Here are some tips to help you manage your pastures for healthy animals and environment.

Animal Density

For someone who is new to rural living, five acres may seem like unlimited space. Consequently many small acreage landowners put too many animals on too little pasture. Before acquiring animals, ask yourself, "Do I have enough space for these livestock?"



Pop Quiz: During a 6 month grazing season, how many acres of irrigated pasture does it take to provide the forage needs of one

a) horse b) cow c) sheep d) llama e) goat?

e) 1/5 acre.

ANSWERS: a) 1 acre b) 1 acre c) 1/3 acre d) 1/3 acre

Grazing

Grazing is your primary pasture management tool. Think of your pasture grasses as your crop and the animals as your method of harvesting. Matching the amount of grass with the amount eaten will reduce waste and prevent the need to grow or buy hay, which can increase your expenses. Understand that you may only have enough pasture to exercise your animals and will need to provide hay year-round.

Keep grasses in a vegetative state. Consider the bottom 2 to 3 inches of the plant as an "energy bank" which should be left for plant use, not animal feed. Overgrazing causes bare spots and encourages weeds, erosion and runoff of nutrients into nearby streams and wetlands

Cross Fencing and Rotational Grazing: You can control how long animals are allowed to graze an area by dividing your large pasture into several smaller pastures. Left on their own to continuously graze, animals will eat their favorite grasses and leave less desirable species to thrive and go to seed. Rotational grazing is the practice of allowing livestock to start grazing in a pasture when the forage is 6-8 inches tall. After the forage is eaten to about 4 inches, livestock are removed and the plants are allowed to re-grow. These grazing heights optimize nutritional value for the animals as well as pasture plant health.

Good grazing management should increase the amount of forage per acre. It will reduce overgrazing and the need to buy feed from other sources. Livestock are healthier and will maintain weight on well-managed pastures.

Other Management Tools

Mow and Drag: Mowing the pasture simply cuts all of the plants to the same height. This prevents plants from getting too tough and from overshadowing each other. Dragging can be done with several devices such as chain link fence or an old bed spring. You drag this around the pasture to break up manure clods and spread them evenly throughout an area, making nutrients evenly available.

Reseeding. If you do reseed pastures, consider soil types and how you will be using the pastures. Choose an early maturing variety for a pasture that you can move animals onto in early spring. For a pasture that is too wet in spring, select a later maturing variety. This will help balance plant growth, animal needs and soil conditions.

Compaction: Soil that is compacted restricts root growth and prevents water from moving through the soil to roots. Keep animals off pastures in wet winter months. If soil is already compacted, aerate the area in the



Continuous grazing leads to patchy pastures, while pasture rotation can minimize overgrazing.

spring or early summer when grasses are actively growing and fill in rapidly.

Article written in cooperation with: Carly Heron, Natural Resources Conservation Service

Weed Management

f not managed, your property could be a source of weeds causing problems for you and your neighbors

What is a Weed?

A weed is defined as a plant growing in a place in which it is not wanted. Almost any plant could be classified as a weed if found growing in an unwanted place. The most problematic weeds are those that are considered invasive and non-native. Not all non-native plants become invasive. However, invasive non-native weeds are plants that were introduced to our area and aggressively reproduce. These plants are able to out-compete native plants because they have

Some of Hood River
County's "least wanted" weeds are:
Knapweed
Knotweed
Scotch Broom
Purple Loosestrife
English Ivy
Himalayan Blackberry

no natural predators to keep their populations in check. Consequently they reproduce rapidly and aggressively invade areas traditionally inhabited by native vegetation.

Why should we care about invasive weeds?

Our ecosystems rely on the native vegetation that makes up the foundation of the food chain. When non-native weeds displace native plants, they can permanently alter our natural environment and diminish the available food source for native wildlife. They can also reduce the economic viability of our community's farms and ranches.

Prevention

Prevention is the most effective and least costly form of weed control. Good management practices can help you maintain desirable vegetation. Sound practices include purchasing weed-free hay and bird seed, avoiding over-grazing, planting certified grass seed and washing your vehicle, waders, boots and clothing after being in a weed-infested area. Respond quickly to weed infestations when they do occur.

Weed Control

The best way to combat weeds is to provide strong competition from desirable plants. Healthy, vigorous, non-invasive plants compete for the space, moisture and nutrients that weeds need to live.

The use of herbicides is just one way to control weeds. To be successful chemical controls should be coupled with cultural and mechanical management techniques. Mulches, cultivation and other cultural



Japanese Knotweed (also known as false bamboo) is one of Hood River County's least wanted weeds.

methods of management can be lower in cost and more effective than the use of chemicals. When there is soil disturbance on your land, seed desirable plants quickly before weeds take over. Never leave bare soil.

Identification

Landowners are encouraged to learn to identify plants common to our area. Information on weeds and plant identification is available from the Hood River County Weed and Pest Division, OSU Extension Service and the Hood River SWCD offices.

Article written in cooperation with: Nate Lain, Hood River County Weed and Pest Division and Vern Holm, Northwest Weed Management Partnership

Resources

Oregon Department of Agriculture: www.oregon.gov/ODA/PLANT/WEEDS/

Plant Conservation Alliance:

www.nps.gov/plants/alien/factmain.htm#pllists

Center for Invasive Plant Management: www.weedcenter.org

Pacific Northwest Weed Management Handbook: http://ag.ippc.orst.edu/pnw/weeds

Washington State Noxious Weed Control Board: www.nwcb.wa.gov

Backyard Wildlife

ne of the benefits of living in the country is having an abundance of wildlife. While most wildlife do not pose a threat, some can become a nuisance. This section discusses attracting wildlife and how to avoid nuisance wildlife problems.

Wildlife Habitat = Food + Water + Cover

If your land offers these three components, most likely you will attract some wildlife. Food requirements will vary by species, from seeds and berries for birds to grasses and shrubs preferred by deer and elk. Water on or near your property will increase the variety of wildlife you will attract. Cover is also needed for hiding from predators, nesting and shelter.

By growing a diversity of native vegetation and maintaining a water source you will provide the necessary elements of good habitat. The type of plants you use to provide food and cover will determine the type of wildlife species that are attracted to your property.

What you may see as an untidy brush pile or fallen tree can be wonderful habitat for backyard wildlife. Dead trees provide homes to many species of birds, mammals, reptiles and amphibians. Brush piles and border vegetation (hedges, windbreaks, etc.) can also provide needed shelter in managed landscapes. Consider leaving snags, brush piles, peripheral vegetation and other woody material on your property unless they pose a safety hazard.

Nuisance Wildlife

Wildlife of all sizes are common in Hood River County including black bear, cougar, bobcat, coyote, elk, deer, beavers, raccoons, weasels, gophers, squirrels and skunks - to name just a few. It is important to keep in mind that your property may be part of their territory. While most predators avoid humans, their natural instinct is to kill easy prey, which can include livestock and pets. Other wildlife may simply enjoy grazing in your garden or snatching your chicken eggs. Precautions can be taken to avoid conflict.

Just as you can attract wildlife by providing food, water and shelter, you can deter wildlife by <u>not</u> providing these essentials. The most common nui-

Resources

OSU Extension Service:

Check out their many publications on wildlife at: http://extension.oregonstate.edu/catalog/

Oregon Department of Fish & Wildlife: www.dfw.state.or.us/springfield/wildlifeandpeople.html

Wild Neighbors: the Humane Approach to Living with Wildlife, by John Hadidian

sance animals reported in the county are raccoons and skunks. Both are attracted to residences by the lure of an easy meal such as pet foods and compost piles. A simple solution is to not leave pet food outdoors and locate your compost pile away from your home. To ensure your home remains pest free, seal all openings that could allow wildlife to move in.

Livestock

While larger livestock are rarely attacked, smaller animals are more vulnerable. All animals need shelter from the elements with smaller animals needing pro-

Valley quail are a common sight in the Hood River Valley.



tection at night when most predators are active. A sturdy enclosure is a good investment to protect your animals. Keep in mind that if you have fowl to protect, skunks, weasels and other small predators can enter through very small openings.

Dealing with Pests

While deer and elk are beautiful to watch, they are also attracted to gardens. You may wake up to find your prize roses were browsed by hungry deer, or that everything you planted in your garden has disappeared. Netting can be draped over plants as a deterrent, but you can also select landscaping varieties that deer do not prefer. A tall fence around a vegetable garden is recommended.

For more tips on how to deal with nuisance animals and avoid wildlife conflicts call your local Oregon Department of Fish and Wildlife office.

This article was written in cooperation with: Jeremy Thompson, Oregon Department of Fish & Wildlife and Elizabeth Daniel, OSU Extension Service

Gardens and Landscaping

The Hood River Valley is a great place to grow a garden. Not only can gardens produce fresh food and improve the beauty of our homes, but they can provide a chance to relax and to reconnect with nature. Knowing a few facts about your new surroundings can further enhance your gardening experience.

Climate

Like most of Oregon, Hood River has a winter rainfall climate. The months of November through March generally receive the most precipitation. Annual precipitation totals differ greatly from the west to east side of the valley and are also dependent on elevation. Average annual rainfall in the county is 35 inches.

The valley sometimes gets late hard freezes wreaking havor on gardens and fruit trees alike. The average last frost in the lower valley is the first week of May. Towards Mt. Hood, the frost date will be later in May or early June. A rule of thumb is not to plant your garden until all of the snow melts off Mt. Defiance.

Winds are another common weather feature. Seedlings and even established plants can snap in gusts. Additionally, wind coupled with extreme temperatures can take a toll on plants. Plants transpire (lose water by evaporation) more under these conditions.

Choosing a Garden Spot

Researching the needs of the plants you want to grow can save a lot of energy. Things to consider include hardiness zone (Hood River is generally considered Zone 6-7), frost, rainfall, soil tilth and sun exposure. Plants vary in their requirements for sunlight and choosing a location with enough sun may be one of the most important considerations you can make for the success of your garden.

Soil

Soil is the foundation of a healthy garden. Soil tests can give you a baseline understanding of your soil chemistry, but it's the life in the soil that helps aeration and makes nutrients available to plants. You can improve your soil by reducing tillage and increasing organic matter. Compost and aged manure can be mixed into the soil to help feed your soil microbes. See the chapter entitled "Soils" for more information.

Pests

What may seem like pests are often beneficial. By working with wildlife rather than against it, unintend-

Resources

Hood River Climate Data: (Select Area 6) www.ocs.oregonstate.edu

OSU Extension Service

http://extension.oregonstate.edu/gardening/

Water Conservation Tips

Water conservation saves time, money and energy, and can improve the health of your plants. Some water-wise gardening tips include:

- Group plants with similar water, soil and sun exposure needs.
- Select plants that are adapted to your site.
- Water in the early morning and avoid watering when the wind is blowing.
- Eliminate leaks inside and out.
- Keep irrigation water on target (off cement).
- Apply water to the plant root zone (top 12").
- Mulch to reduce evaporation.
- Consider planting drought-resistant varieties.
- Install an irrigation system that fits your needs.

See the chapter entitled "Irrigation Water Management" for some more water conservation tips.

ed consequences can be avoided. For insect pests, try attracting predatory insects to your garden to keep the unwanted bugs in check. You can attract beneficial insects and pollinators by growing plants as nectar and pollen sources, creating alternative habitats, providing water sources and using selective insecticides rather than broadspectrum ones. If you decide that treatment is necessary, choose the least toxic alternative for controlling the specific pest. Always follow the label when applying pesticides to avoid unintended consequences.

The OSU Extension Service Master Gardener Program in Hood River County ((541) 386-3343) conducts weekly plant clinics to help answer gardenrelated questions. They also offer yearly training on gardening this area.

Article written in cooperation with: Elizabeth Daniel and Steve Castagnoli, OSU Extension Service and Shilah Olson, Wasco SWCD

Small Woodland Management

If you have recently purchased forest land, you may be challenged by the task of managing these resources. Forests represent a significant and complex component of our natural environment. They are composed not only of trees, but of shrubs, herbs, grasses, fungi, micro-organisms, insects, other invertebrates and vertebrates that all interconnect in countless ways. Trees dominate the forest, define the land-scape and create habitat for wildlife.

Forests are dynamic systems and over time forest



composition changes. Fires, floods, windstorms, insect infestations, diseases and landslides wipe out pieces or whole tracts of forest. These natural disturbances alter resources needed by plants and animals, benefiting some and depriving others.

Managing the Resource

As a new forest manager, the first step is to develop a management plan defining what your objectives are for your forest. The best way to start is to walk your land. The legal boundaries and access to the property should be well established. Begin to inventory, map and familiarize yourself with the various resources on the property. Then formulate and outline a set of objectives. Often landowners decide to have a management plan written by a professional forester.

One common goal for all forest managers is to maintain healthy forests. A healthy, vital forest landscape is defined as one that maintains its functions, diversity and resiliency within the context of natural disturbances. It is capable of providing people with the array of values, uses and products desired now and in the future. The bottom line is the trees should be growing. You can help maintain a healthy forest by conducting forest management activities in such a way as to protect soil, water, wildlife and fish habitat. Such values are woven into the Oregon Forest Practices Act. The Act governs nearly every aspect of forest management including harvesting, regeneration,

vegetation control, road building and protection of environmentally sensitive areas.

Forest management activities commonly undertaken by landowners include planting, vegetation control, pre-commercial thinning, fuel reduction, firewood cutting, road construction and timber harvesting. Prioritizing specific activities involves consideration of natural circumstances, species characteristics, owner objectives, environmental considerations and regulatory rules. Please consult with the Oregon Department of Forestry (ODF) on tools and techniques that will make your forest management successful.

Information Sources

ODF is a regulatory agency of forest management and fire protection. It administers the Oregon Forest Practices Act which guides all non-federal forest activities in the state. A Notification of Operations from ODF is legally required for all landowners initiating a forest operation.

ODF also offers technical advice through their Forestry Assistance program, which administers most costshare subsidies for completing various noncommercial forest and resource management activities. The local ODF office is located in The Dalles.

Article written in cooperation with:
Doug Thiesies, Oregon Department of Forestry
Henry Buckalew, Hood River County Forestry Department
Pete Peterson, Westside Fire Department
Kim Smolt, USDA Forest Service

Resources

Contact any of these agencies for more information on managing your small woodland:

Oregon Department of Forestry
Hood River County Forestry Department
USDA Forest Service
American Tree Farm System
Oregon Small Woodland Association
Oregon Forest Resources Institute

Fire Prevention

s more of us move into rural areas, we need to increase our fire awareness. Longer response times, limited water hydrants, difficult terrain and unpaved roads all increase the risk of fire damage to your home. Building your home in a wooded area is appealing, but you need to be aware of the potential dangers of wildfire and learn how to protect your family and home.

Prevention

Keep a defensible space of 30 to 200 feet around your home. If your home and landscape are properly maintained, they may survive a fire even without fire department intervention. The size of your defensible space depends on the slope of the land and the type of vegetation around your home.

Burning on Your Property

Under state laws, a person must have a valid burning permit obtained from ODF or the local fire district to burn any material in Hood River County. On the day you plan to burn, call your local fire department or ODF before lighting the fire.

Simple Fire Prevention Measures

- Maintain 30' of green lawn or fireresistant plants around your home.
- Prune the branches of trees below 12' to remove "ladder fuels" that help ground fires become crown fires.
- Trim branches away from your roof and house. Keep gutters and vents clean.
- Replace wood shake roofs. Screen vents and areas under decks with metal mesh.
- Store firewood away from your house.
- Trim branches along driveway at least 14' tall and wide.
- 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.

During fire season we are all required to follow Oregon fire prevention laws. Fire season typically begins in May or June and ends with the coming of the fall rains. During fire season, burning restrictions apply and open burning may be prohibited. Also, public use restrictions may limit times that the public can perform various activities on forest land. These activities include off-road vehicle use, campfires, smoking,



mowing, welding, using chain saws and fireworks.

Fire Ecology

Fire is a fundamental component of a healthy forest ecosystem. It is an integral part of forest regeneration, cleansing and renewal and maintaining plant and animal diversity. Fire removes undergrowth that chokes trees and facilitates disease. Burned trees return nutrients to the soil. Burned snags and downed trees in streams create habitat for fish and wildlife. Many plants require fire as part of their life cycle.

Fire Prevention Agencies

The Hood River County Rural Fire Protection Districts provide fire protection within rural fire district boundaries. These highly-trained volunteer firefighters respond to wildland and structural fires. Their primary responsibility is the protection of lives and property. ODF is responsible for wildland fire protection and suppression on all non-federal and private forest lands both inside and outside of the Rural Fire Protection Districts. These responsibilities include regulating outdoor burning and industrial operations on forest lands and providing landowner assistance by inspecting and offering advice on fire-prone rural properties. It is a good idea to know which fire department or district is responsible for your protection.

Article written in cooperation with: Pete Peterson, Westside Fire District, Henry Buckalew, Hood River County Forestry Department, Leo Segovia, USDA Forest Service and David Jacobs, Oregon Department of Forestry

Waste Management

ot waste? Lucky for you, Hood River County is one of the few counties in the state that has a sanitation company (Hood River Garbage, Inc.) that will provide service to your home regardless of your location. There are many other community services also available to manage your waste disposal needs. In this chapter we will provide a brief overview of some of these waste management options.

Household Hazardous Waste

Leftover household products that contain corrosive, toxic, ignitable or reactive ingredients are considered to be household hazardous waste (HHW). These products include items like paints, cleaners, oils, batteries and pesticides that contain potentially hazardous ingredients and require special care when you dispose of them.

Improper disposal of HHW includes pouring them down the drain, on the ground, into storm sewers, or putting them out with the trash. The dangers of such disposal methods might not be immediately obvious, but improper disposal of these wastes can pollute the environment and pose a threat to human health

Instead, safely store your HHW until you are able to

take it to one of the regular collection events in Hood River County. Watch the Hood River News, your SWCD website or call Hood River Garbage, Inc., for information about upcoming collection events.



On Wednesdays, you can bring yard debris to the Hood River transfer station (at 3440 Guignard Drive) for free. Before 2003, the waste went to landfills, but now the company grinds the material and takes it to the Portland/Vancouver market for compost.

Burn Barrels

Many rural residents choose to burn their trash in a 55 gallon drum or in a pile. However, in Hood River County, there is really no reason to engage in this practice since full garbage service is provided to all county residents at a reasonable rate.

Resources

EPA: Household Hazardous Waste Guide: www.epa.gov/msw/hhw.htm

Gorge Re-Build It Center: www.rebuildit.org

Columbia Gorge FreeCycle Network: http://groups.yahoo.com/group/gorgefreecycle/

High levels
of toxic
chemicals
and particulates are
emitted in the
smoke of
burn barrels.



High levels of toxic chemicals and particulates are emitted in the smoke of burn barrels. These may cause acute respiratory and other health problems in those breathing the smoke.

Recycling

In addition to garbage collection, Hood River Garbage Inc., provides curbside recycling service for all plastic containers, mixed paper, aluminum, tin cans, phone books, cardboard, glass, milk cartons and even used motor oil. These recyclables are shipped to a Materials Recovery Facility in Portland.

Gorge Rebuild It Center

One of the best ways to handle waste is to reuse it. If you need to dispose of old building materials, bookshelves, fixtures or other leftovers from your latest remodel, consider making a charitable donation to the Gorge Rebuild-it Center. This non-profit retail store's product line consists of reusable building materials. Contributors receive a tax deduction for their donation. Kitchen and bathroom cabinets and fixtures, windows and doors, dimensional lumber, lighting, reusable flooring, surplus electrical and plumbing supplies, bricks, block, tile and any other reusable building materials are accepted.

Article written in cooperation with Jacque Betts, Hood River Garbage, Inc.

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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.

lease let us know what you think!
ver County?
How many acres do you manage?
nd 10 being extremely helpful) please rate this
ost useful?
handbook that you would like to know more about?
nis postcard and mail it to us
vw.hoodriverswcd.org/HRRLH.htm
1



Oregon Watershed Enhancement Board

OWEB's mission is to help create and maintain healthy watersheds and natural habitats that support thriving communities and strong economies.

The Oregon Watershed Enhancement Board (OWEB) is a state agency led by a policy oversight board. They promote and fund voluntary actions that strive to enhance Oregon's watersheds. OWEB gets its funding from Oregon Lottery revenues and

other sources including Salmon License Plate revenues and federal Pacific Coastal Salmon Recovery Funds. In 1998, Oregon voters approved a ballot measure that set aside 15 percent of all lottery revenues for restoring Oregon's salmon, watersheds and state parks. Under the program, half of the funds are used to enhance watersheds and salmon habitat.

www.oregon.gov/OWEB/

Hood River Soil & Water Conservation District

Our mission is to provide educational, technical and financial assistance to our community for the protection, conservation and restoration of natural resources.

The Hood River SWCD is governed by a locally elected, volunteer Board of Directors. It is a legal subdivision of state government and receives funds to administer its programs from the Oregon Department of Agriculture, Oregon Watershed Enhancement Board, Natural Resource Conservation Service, Confederated Tribes of Warm Springs and others.

www.hoodriverswcd.org

