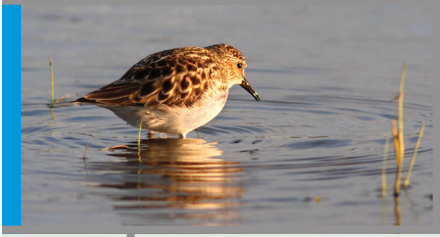
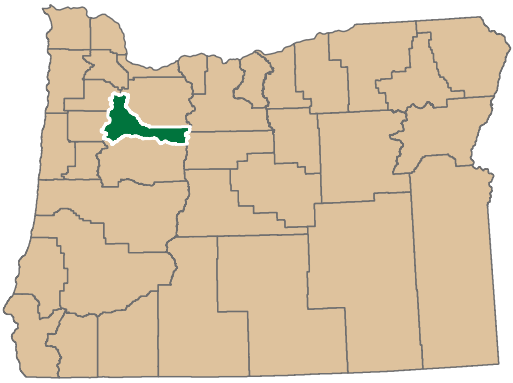
Marion County
Rural Living Handbook



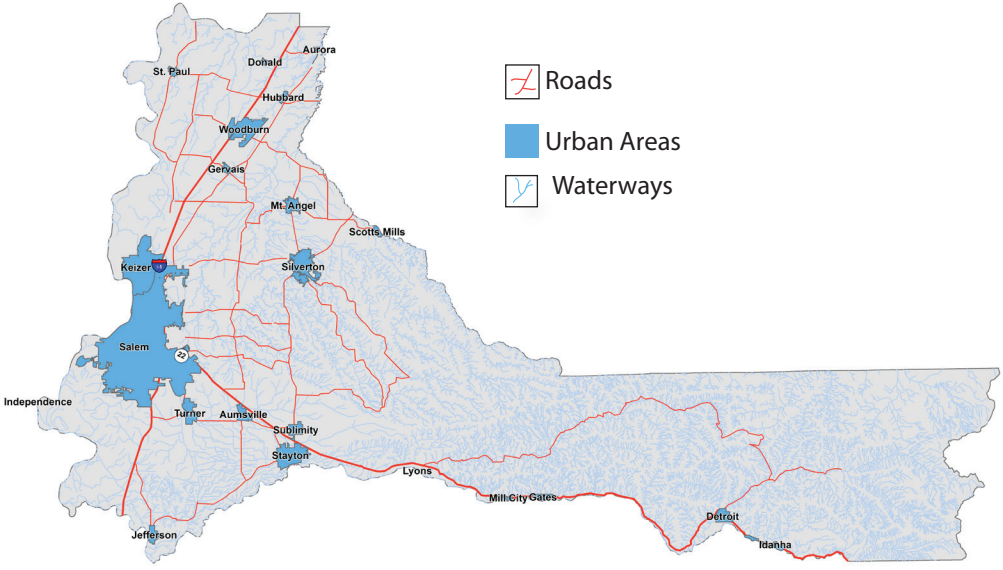
A Resource for Country Living and Land Stewardship

Marion County, Oregon

Marion County is located in the heart of the WIllamette Valley. The county encompasses nealry 1,200 square miles, with a population of 306,665. It has 20 cities, including the State Capital, Salem.



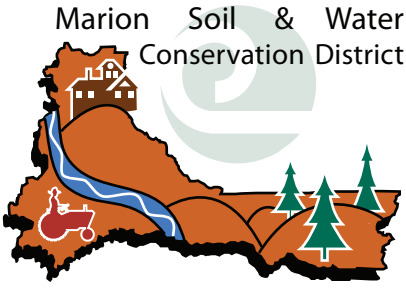
County Map



Marion County Rural Living Handbook

created by

Marion Soil and Water Conservation District



April 2011

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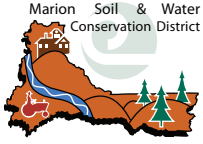


Purpose of the Handbook

With the population of Marion County and the Willamette Valley expected to double by 2050, the District recognizes a need to provide both new and current residents with up-to-date information related to living, engaging, and understanding rural Marion County. This need becomes even more pertinent because of the value that the county's natural resources provide to the region.

As more people move to the county the rural/urban buffers are shrinking, with some urban residents now living next door to rural agricultural producers. Due to this and the lack of understanding each other's perspective there is an increased need for both residents and agricultural producers to educate themselves on the other.

Information related to the diversity of issues that may arise for property owners of rural Marion County is scattered among many different government agencies, non-profits, academic institutions and text books. This can make it difficult for property owners to find answers or identify the proper agency to contact.

The Rural Living Handbook aggregates important basic information into one document that is easy to understand and identifies resources for property owners who would like additional information.

This document is primarily for small or new landowners, but does have value for the more experienced or large-scale agricultural producers. This document hopes to make life in Marion County for new and long term residents a more rewarding experience.

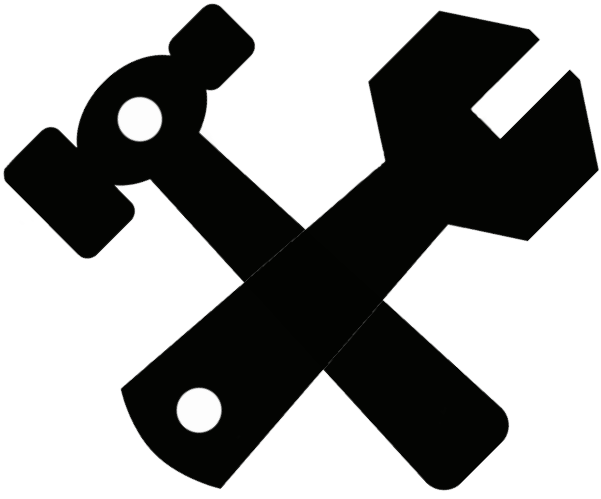
How to Use Handbook

Use this handbook as a jumping off point for beginning your transition to the county and to determine if living in rural Marion County is for you. This handbook will help clarify information about county regulations, policy, rights, and the administering agencies. It also provides general information about gardening, managing the land, wildlife habitat, and many other topics about which a rural resident may have questions.

The Rural Living Handbook has eight sections that address a broad range of topics related to rural living. Each section is then broken into chapters with detailed information on a specific topic related to the section heading. At the end of most chapters there is a list of resources that can provide additional information on the topics discussed in that chapter.

Phone numbers of local and state agencies are located on the last page of the document for quick access. Many of these agencies' websites are listed within the document in the Additional Resources box of the section related to that entity's mandates.

The District has made considerable efforts to validating the information in this document, especially regarding laws, codes and regulations. If any discrepancy exist between this document and the official wording, the official wording takes precedence. This document is not intended to provide legal advice. Always check with regulatory agencies before engaging in any significant projects.



Acronyms

This document uses acronyms frequently to denote government agencies or terms that are normally expressed as an acronym. These acronyms are also commonly used in local, state and federal publications.

AFO	Animal Feeding Operation
BLM	Bureau of Land Management
CAFO	Confined Animal Feeding Operation
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency
FSA	Farm Service Agency
GMO	Genetically Modified Organism
NOP	National Organic Program
NRCS	Natural Resource Conservation Service
ODA	Oregon Department of Agriculture
ODF	Oregon Department of Forestry
ORS	Oregon Revised Statutes
OSU	Oregon State University
OWEB	Oregon Watershed Enhancement Board
OWRD	Oregon Water Resource Department
ROW	Right-of-Way
SWCD	Soil and Water Conservation District
USDA	United States Department of Agriculture

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GETTING STARTED

WELCOME

to rural Marion County,

a majestic place that is the largest agricultural producing county in the state and houses the state's capital along with the first university in the west. The county's history and environmental characteristics give it a unique character and culture.

Before jumping into the nuts and bolts of natural resource concerns, learn about the history and reasons why this document is vital to the future of the region. The history of the county establishes the baseline for what Oregon's ancestors gave us. The history of Marion County also sheds light on the origins of the county's great soils and the responsibilities that we have inherited.

SECTIONS

INTRODUCTION

Why, who and what

The Marion Soil and Water Conservation District has created this document to assist rural property owners in understanding and implementing conservation practices on their property. It also explains the laws and regulations related to natural resources at the local, state and federal level. By educating property owners on conservation practices and the consequences of doing nothing, the Marion SWCD hopes to encourage greater participation in proactive land stewardship. Property owners' proactive engagement provides the greatest benefit to the county, cities and the natural environment.

Urban vs. Rural

Life in urban and rural environments differs greatly, with each having their own pros and cons that need to be taken into consideration when deciding on where to live. The separation between these areas is becoming harder to define due to the ever-increasing spread of development. It is not uncommon to see a subdivision located down the road from commercial agricultural production, or large areas of open space located in a downtown urban center. Within these two environments there are distinct characteristics that differ greatly based on the common types of activities and surroundings that are present.

Rural environments provide people with a greater connection to nature, a common reason for people to move into the country. Along with increased privacy and a slower pace, the connection gives rural property owners an experience of tranquillity. Rural living however, comes with increased separation from urban amenities such as grocery stores, schools, medical facilities, activities, and social opportunities normally present in an urban setting.

Rural environments often lack the domestic infrastructure common in urban areas. Household water is derived from a well; waste water is sent into an on-site septic system rather than to a treatment plant; and the property owner is responsible for managing and maintaining these systems.

Rural living is immensely rewarding. However, rural living requires a considerable amount of work to maintain the property: weeds, wildlife, water quality and the land. Continue reading to find out more about common concerns and issues related to living in rural Marion County.

Document Creator

Marion Soil and Water Conservation District

The Marion SWCD was established in 1971 when the Santiam, Silver Creek and Mount Angel Soil Conservation Districts were combined under the Oregon Soil Conservation Law. The District currently covers all of Marion County except for a small strip of land in the northeast part of the county in Woodburn. The District is classified by the state as a special district and is primarily funded by a county-wide permanent tax base of 5 cents per $1,000 on assessed property value.

The Marion SWCD works to preserve and develop natural resources, control and prevent soil erosion, conserve and develop water resources and water quality and preserve wildlife and the natural beauty of the region while protecting and promoting the health and safety of its residents. Accomplishing these goals requires cooperative efforts among citizens, natural resources users, local, state and federal agencies, and the District.

Some of the strategies that the Marion SWCD has developed to accomplish these tasks are: cost-share grants to property owners, educational workshops, research, and data collection and fostering relationships and cooperation among its partners and constituents.

The Marion SWCD is housed in the USDA Service Center in Salem, Oregon with the Farm Service Agency (FSA) and the Natural Resources Conservation Service (NRCS). Marion SWCD's close proximity with these partners allows it to provide its clients with a comprehensive list of resources and options for conservation efforts.

The District offers this document as a tool to educate local citizens on topics related to natural resource conservation. The topics discussed in this document directly relate to the goals and priorities that have been set by the district in its long range business plan.

"Conservation Through Education"

History of Conservation Districts

In 1935, President F.D. Roosevelt addressed the problem of the Dust Bowl and soil erosion by establishing the Soil Conservation Service within the USDA. In 1937, this legislation was implemented at the state level to allow the formation of local soil conservation districts. In 1963 the state of Oregon added "water" to the names of the districts.

The districts in Oregon are political subdivisions of state government, but are also municipal corporations.

USDA Service Center

650 Hawthorne Ave SE Suite 130
Salem Oregon 97301-5894
Ph. 503.391.9927

MARION COUNTY HISTORY

A short history lesson

The history or Marion County flows like most western cities; native Americans first inhabited this land, then slowly European settlers began to arrive. First came fur traders from the north and then Europeans from the east. As populations began to expand, so did the stress imposed on the natural environment. Many of the issues and circumstances that we are left with today are directly related to the actions of the first settlers. It is important to understand the past, so that we can move forward into the future.

Missoula Floods

The Missoula floods of 13,000 to 15,000 years ago during the last ice age shaped and altered the Willamette Valley into what it is today. The process started when an ice dam built up on the Clark Fork River and created Glacial Lake Missoula. As the water level in Glacial Lake Missoula increased so did the pressure on the glacier dam until it ruptured, sending massive amounts of water down the Clark Fork and the Columbia at a rate of 10 times the combined flow of all rivers in the world. The flood covered Eastern Washington and the Willamette Valley with water and sediment. As the water receded it left behind alluvial deposits that over time built up as more flood events occurred. Some believe that these events occurred 40 to 50 times over a period of 2,000 years. Signs of these events are still present in the Willamette Valley as glacial erratics or non-native boulders. Glacial erratics can be found throughout the valley, the largest being its own State Natural Site off Highway 18 north of Bellevue.

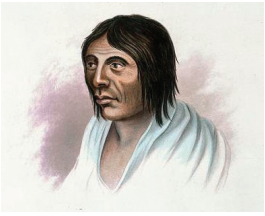
Political

Marion County was first established July 5, 1843 by the Provisional Legislature and was originally named Champooick District. In 1845, Champooick District was broken into many different counties, one of them Marion, although it wasn't until 1856 that the current geography of Marion County was established. Marion County was named after General Francis Marion, who was a revolutionary war hero and is considered one of the fathers of modern guerilla warfare. Marion County is located in the heart of the Willamette Valley with Yamhill and Clackamas counties to the north, Polk County to the west, Wasco and Jefferson counties to the east and Linn to the south. Marion County stretches from the Willamette River to the foothills of the Cascades, providing a variety of topographical features and soil types. Salem, the county seat and the state capital, is one of the valley's oldest cities. The capitol of Oregon was originally in Oregon City, but was moved to Salem due to concerns about Oregon City.

Settlement

Kalapuya Indians

The Kalapuya Indians were the first people to settle in Marion County, six to 10 thousand years prior to the arrival of early white settlers. They were a semi-nomadic group, establishing permanent housing for the winter months and travelling throughout the WIllamette Valley during the warmer months searching for game and other food sources. They were familiar with certain land management strategies like regular field burning, turning densely vegetated fields into open pasture. They found that burning brought elk, deer and other animals to the area while providing ideal habitats for their staple crops.



Sketch of a Kalapuya Man
photo courtesy of the Library of Congress

Disease in the 1830's ravaged the Kalapuya population, killing 90 percent of the tribe. Eventually they lost most of their land and their tribe's government designation. The Kalapuyas are now part of the Confederated Tribes of Grand Rhonde. Unfortunately, much of their culture has been lost or destroyed, leaving us with minimal information about their past.

First Settlers

The first settlers in Marion County were the Metis, retired French Canadian trappers who worked out of Fort Vancouver. They settled on small farms in the area with Native American wives and their many children. The earliest recorded contact between a Kalapuya and a white individual was in 1814 by the fur trader Alexander Henry. The first Metis trapper arrived for good in 1829 and shortly thereafter, 75 of his colleages moved to the valley.

Jason Lee was a missionary from Quebec. Lee built a Methodist Mission, setting in motion the permanent settlement of Salem. Lee was also instrumental in organizing the Oregon Institute, now Willamette University in 1842, the first university in the West.

Jason Lee
courtesy of Wikipedia

Russian Orthodox

The 10,000 Old Believers in Oregon is one of the largest concentration of people from that faith in the United States. They came to Oregon in an effort to escape the persecution from the official Russian Orthodox Church. The Old Believers who fled during the mid 1800's either worked on farms or operated small-scale industries, cloth manufacturing and flour mills. They were also famous hunters. Some of the Old Believers who fled from China were able to hunt and capture live tigers to supply Chinese zoos.

Agriculture

Agriculture played an important role in the history of Marion County and the Willamette Valley. Many of the first immigrants settled here because of the ideal soil conditions for growing a variety of crops. Many crops produced in this region have won awards; the Marionberry was named after the county.

Wheat has been an important crop to this region since the 1840's when it was used as currency. It became the dominant crop in 1870. Wheat production increased by 252 percent from 1870-1880, but fell drastically due to the wheat market crash in 1893.

Flax Seed was produced in the Valley from the 1840's to the 1950's. Many native species of flax existed, but it wasn't until 1876, when a farmer from Turner entered his flax in the Centennial Exposition in Philadelphia, where he won a bronze metal and a certificate of merit that showed the rest of the country how great this region's soil was for producing flax. The industry boomed until competition arose from synthetic fibers and cheaper production costs elsewhere.

Many of the natural resource and environmental concerns that we face in the 21st century have roots in the 19th century. The early settlers arrived with texts from the east that prescribed how the natural landscape should be ordered. These texts were more concerned with making money off the land than trying to understand natural processes.

The new settlers introduced this region to fields of wheat, barley, rye, and oats and gardens of peas, squash, pumpkins, tomatoes, potatoes, turnips, cabbage, cucumbers, carrots, beets and onions. They used intense agricultural production methods that did not address issues related to environmental degradation. These practices lead to environmental stress, soil erosion and compaction that damaged natural drainage systems.

Livestock populations were heavy in Marion County due to the bountiful amount of pasture land. The settlers allowed their animals to over-graze the natural forage grasses, which then were destroyed and lost. The settlers thought that the problem was inferior grasses and not the number of animals, so they planted non-natives that overpowered the native grasses. By the early 20th century over half of the grasses around Salem were not native.

As the production of crops and livestock increased, so did the conflicts between the settlers and the natural wildlife. These conflicts led to what is known as the "war" against predators. Settlers were encouraged to kill wildlife to protect their property from damage. Bounties were offered throughout the 19th century and for most of the 20th century. The predator population shrank drastically.

These combined actions led to the natural environment being altered forever. Today we strive to reinstate these processes and the wildlife lost during Marion County's early settlement period.

MARION COUNTY STATS

A snapshot of today

The following statistical information about Marion County was derived from the OSU Oregon Communities Explorer and the 2007 USDA Census of Agriculture. This information can help give residents a statistical picture of the county today, along with the changes that have occurred since the last census. This data can help test predictions or assumptions and aid in the development of new ones. This information can help interested individuals assess area affordability and social demographics.

Total Area
762,128 acres

# of Cities
20

Total Population 2010
315,335

10.7% ↑ Since 2000

Median Age
34.6

% White Only
71.47%

% Latino Only
21.89%

Median Household Income
$46,453

Poverty Rate
15.41%

Total # of Farms
2,670

Land in Farms
307,647 acres

Average size of farm
115 acres

Average Temperature

62.4 April - September

43.7 October - March

Total # of Housing Units
120,948

Vacant Housing Units
6.6% (7,991)

Median Housing Value
$132,600

For more data visit:
oe.oregonexplorer.info/rural/ or
www.agcensus.usda.gov/

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BUYING RURAL PROPERTY

Many people romanticize the idea of living in the country on 10 acres with a horse, scenic views and picturesque local wildlife. But this fantasy can quickly turn into a nightmare if a property has unexpected problems, or the new property owner has to fulfill obligations or liabilities that were passed on by the previous property owner, or if soils are diseased and unable to produce a marketable crop. There are many aspects of the site that should be taken into consideration prior to buying rural property in order to protect yourself from possible issues.

Due diligence before purchase can help you have a successful experience living in rural Marion County. Understanding your goals for living in the country and being realistic about your abilities are also important for finding property that will be best suited for what you want to accomplish.

SECTIONS

BUYING PROPERTY

Do your due diligence

Buying rural land is similar to buying in the city, but with additional considerations to keep in mind. Septic, wells, soil, water, and zoning are just a few characteristics of a property that should be considered prior to purchasing. Having a comprehensive awareness of what is happening on the land can help buyers minimize their risk of future problems or unexpected surprises.

New to Rural Living

If you have never lived in a rural environment, consider renting a place prior to buying so that you can get a feel for what it means to live in the country: longer commutes, isolation, the surroundings, and nearby seasonal activities related to farming. A real estate agent who has a history with rural property should be knowledgeable about the many pros and cons of living in the country. In addition, have in mind what you want to do with your property so you can be more specific in what you are looking for. Be sure to have the property inspected prior to making an offer; the house, well, septic system, irrigation system, if present, to make sure you are getting what you expect and not a liability.

Summer

Winter

In rural areas the look of a properties physical chracteristics can vary greatly between the summer and winter months. In the summer a property could look perfect with dry soils and good dense vegetation, but in the winter it could have large pools of standing water with vegetation looking sparse due to the lack of leaves and blooms. Altering the natural characteristics of the land can cause problems in the long or short term to the functionality of your land's or surrounding properties' natural ecology.

Key Considerations

Domestic Water Supply

Where will your domestic water be coming from: a well, surface water, or municipal water? Depending on where your water is derived from you may need to research the long-term availability of the water supply. (*see Water section.*)

Water Rights

Water rights are required if you want to use water for a purpose outside of domestic use. Water rights can be difficult to acquire depending on your location within the county. (*see Water section.*)

High Water Table

Properties with a high water table make installing a septic system difficult and costly. The water table could also cause problems for a below-grade basement. Driveways may also need to be re-paved or re-graveled more frequently because of the softer soils. Having a *perk test* done to determine water's percolation rate will provide an answer to the question, "does my property have a high water table?"

Soil

The type of soil you have on your property can directly affect what you can and can not grow. Soil nutrient levels will dictate how much you may need to alter the soil in order for it to support certain crops. Soil disease and the presence of pest may need to be looked at depending on your intended use of the land. (*see Soil section.*)

Pre-existing Regulatory Obligations

The previous property owner may have committed to certain practices or programs which the new owner may be obligated to complete: forestry re-planting, government administered conservation program, or land use violations. Being unaware of these obligations may be costly.

Future Changes

The possibility of neighboring land use or activity changes should be considered before buying property. These types of changes can drastically alter the experience of a place: block views, cause noise, or odors, or change how your land functions. Like seasonal changes, rural land activities can also vary greatly over time due to ever-changing agricultural markets and land values.

Additional Resources

Field Guide to Agricultural/Farm Land
www.realtor.org/library/library/fg814

Redfin
www.redfin.com/home

BEING NEIGHBORLY

It starts with "Hello"

In the country, neighbors are few and far between, which makes developing a relationship with yours important to help prevent possible conflicts. Unfortunately, some property owners may have preconceived ideas about people who move from the city, establishing a relationship early may help to alleviate any misconceptions. Understanding what is happening on your neighbor's property and knowing where your property ends and your neighbor's begins are some of the first steps one should take when moving into a home in rural Marion County.

Advice on Being a Good Neighbor

- Recognize that being a good neighbor is a two-way street.
- Respect your neighbor's "Right to Farm."
- Be aware of the types of activities that will be occurring on your neighbor's property throughout the year. (*see Living Next to..*)
- Understand that livestock and farm machinery may need to use and/or share local roads or driveways.
- Pay attention to the wind when conducting certain land management activities to minimize drift or smell from burning.
- Know that actions on your property can have a negative effect on your neighbors.
- Work together to maintain fences and property boundaries so that pets, noxious weeds, runoff, or livestock are contained.
- Educate young children about property boundaries and the importance of not trespassing.
- Respect one another's privacy and space, for it is highly prized by rural residents.

Dogs

Dogs are wonderful pets and would love to run free on a large piece of property, but allowing them to run at large could result in a civil infraction. If a dog attacks, chases, injures or kills a neighbor's animal, th owner could be charged with a civil infraction, so try to keep your pets confined to their property. Property owners do have the right to kill a dog or animal that is harassing or attacking their animals. Dogs also should be licensed and vaccinated for rabies, in addition to having a collar with their license attached. (*For more information on the county's dog laws see Marion County Statute 6.05.*)

Fence Lines

Fences and property lines have the potential of causing conflict between neighbors while also providing an opportunity to develop a relationship by working together. It should be the responsibility of each property owner sharing a fence to maintain part of the existing fence and/or share in the cost for constructing a new fence, if necessary. If you plan on constructing a fence that fronts a public right-of-way contact Marion County Public Works prior to doing so. *(see Property Management section*)

Property Lines

The Marion County Planning Office can provide maps and descriptions of property boundaries to interested parties. Comparing these documents with what is happening on the ground and talking with neighbors prior to purchasing a home can help with property boundary discrepancies. The only way to definitively establish property lines is to have the property professionally surveyed by a private consultant.

Tips for Conflict Resolution

Be Respectful: Refrain from any negative comments or put downs.

Control your Emotions: Yelling or intimidating actions will benefit no one. Create a safe environment for dialogue.

Use a structured process for contentious topics: Limit spontaneously discussing these topics because they most likely will lead to conflict.

Understand willingly: Listen and acknowledge other perspectives.

Communicate openly and honestly: Be open and honest about your concerns while being respectful, otherwise the process will be compromised.

Put your focus on the future: Rather than focusing on the past talk about the possible future changes that can be made to solve the problem.

LAND USE

It regulates your property

Land use is synonymous with "zoning" which regulates many aspects of a piece of property. What you can build on it, if you can subdivide, permissable activities, set-backs, and building height restrictions can all be found in a property's zoning description. County zoning laws are regulated by the Marion County Planning Department which also manages the requirements set forth by the Growth Management Act.

Zoning Types

The goal of zoning is to limit conflicts between adjacent property owners based on land use activities, conserve farm and forest lands and develop efficient public services and facilities. Here is a list of common zoning types in Marion County along with some of their regulatory aspects:

Exclusive Farm Use (EFU) / Special Agriculture (SA) - Large plots of land with high value soils for agriculture. Only one primary farm dwelling is allowed to house farm staff or the property owner. A land use permit can be acquired for temporarily housing farm employees or medical hardship help. New dwellings on undeveloped parcels are strictly regulated.

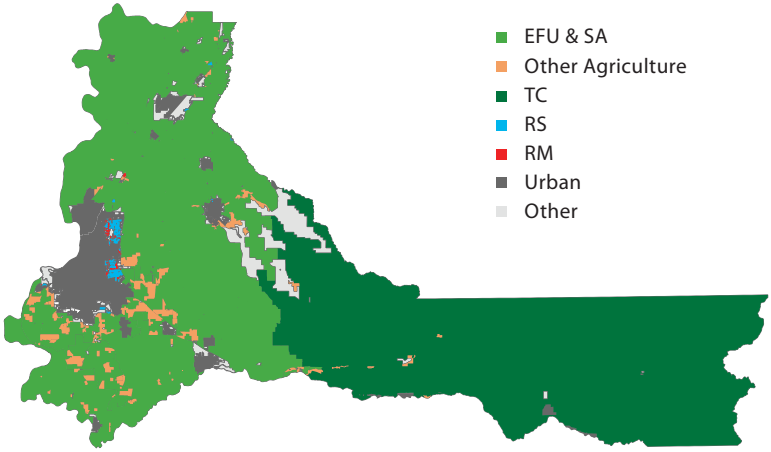
Timber Conservation (TC) - Large plots of land with soils generally suited for timber production. Residential and other more urban activities are limited to protect commercial forest uses and timber management. Management of fish and wildlife resources, and agricultural use of lower elevation areas are considered compatible activities.

Single-Family Residential (RS) - No building or structure can exceed a height of 35 feet. Minimum lot size is two acres. A dwelling or building can only occupy 30 percent of the lot area.

Multi-Family (RM) - Limited to properties inside Urban Growth Boundaries and a few rural properties where public services are available. Duplex and multiple unit residential and compatible commercial activities are allowed, subject to standards.

Commercial (C) - This zoning allows the development of office buildings, retail establishments, and other revenue generating enterprises. It is possible to have both a home and business on the same lot, though a conditional use permit is required.

Zoning Map



Growth Management Act (GMA)

Oregon's Growth Management Act was adopted in 1972 and is one of the nation's strongest growth management laws. The Growth Management Act is a statewide planning policy that dictates how cities and counties plan and sets what is called an urban growth boundary around urban areas. In addition, cities and counties are required to create their own comprehensive plans. The urban growth boundary is meant to cluster future development in already established urban areas while preserving natural resource lands and open space outside of the boundary. It also required county governments to designate exclusive agricultural protection zones that are zoned Exclusive Farm Use (EFU). This act also established Oregon's nineteen planning goals. (*For more information on Oregon's nineteen statewide planning goals visit: www.oregon.gov/LCD/goals.shtml.*)

Building Permits

The construction of any building larger than 200 square feet requires a building permit. Property owners should ask themselves these questions prior to applying for a building permit; how is the property zoned? Is the proposed building allowed in that zone? Is it a conditional use? Will it require any special review?

A building permit requires a site plan showing the tentative location of the proposed structure and the building's structural plan. Keep both the site plan and structural plans for the building on file during construction in case questions arise about properly following the approved plans.

Land Use Permits

The allowable uses on a site are listed in the zoning description. Some uses are allowed, but need to meet certain criteria. Land use permits are issued based on the appropriateness of the use for the site and neighborhood along with criteria specified in the zoning code. Land use permits are required for activities or uses including certain dwellings in farm and forest zones, home occupations and temporary dwellings for medical hardship. The county or city can place additional restrictions on the use to reduce or offset any possible impacts to adjoining or neighboring properties. A site plan is normally required for any structure involved in a land use permit. Land use criteria varies from city to city and county to county so check your local zoning code for your area's criteria.

Easements

An easement is a right to use, for a specific purpose, a particular piece of land owned by another. Most property easements are noted in the deed. It is a good idea to assess the land for any possible implied easements that may not be on the deed. Also talk with neighbors and the previous owner about possible implied easements. Easements are primarily used by the public sector for siting utility lines, pipes, or access. There are a variety of easement types with different legal implications, that if present on a property, should be understood. Check with a title company for the presence of any easements on a specific property. If you are establishing an access easement on your property, contact Marion County Planning Division if you are uncertain about the minimum standards for private roads. (*For information on road standards visit: www.co.marion.or.us/PW/Engineering/engineeringstandards/*)

Conservation Easements

Conservation Easements are voluntary easements that place additional restrictions on a property's development capabilities. These are used to protect property with important natural resources from being developed in the future. The property owner who implements the easement sets the restrictions. These easements are managed by either a land trust or a government agency to make sure the easement is upheld in perpetuity. If interested in implementing a conservation easement on your property contact a local land trust.

Additional Resources

Marion County Rural Zoning Code
www.codepublishing.com/OR/marioncounty/

Introductory Guide to Land Use Planning for Small Cities and Counties in Oregon
www.oregon.gov/LCD/docs/publications/introductory_guide_to_land_use_planning_in_oregon.pdf

Marion County Comprehensive Plan
www.co.marion.or.us/PW/Planning/zoning/comprehensiveplan/

LIVING NEXT TO...

Know what thy neighbor is doing

When buying land in the country individuals should research what types of activities will be occurring on neighboring properties because you may be affected in some way. Farmers rely upon their land for income and hindering them in any way could affect their way of life. Smells, noise, drift, and dust are some examples of the realities of agricultural production that you may have to tolerate. Talk with local residents to find out about the common agricultural activities that occur in the area.

Neighboring Impacts

Be aware that actions or the lack their of on your property can have a negative affect on your neighbors property and agricultural commidity. This can occur when you do not treat a crop for pest, or disease which then spreads to a neighbor's commercial crop. If you are interested in growing the same crop as your neighbor, you should talk with them about their pest management strategy so that you can manage yours in a similar way.

Right-to-Farm Law

ORS 30.930

This law protects farmers from legal action brought by individuals, local governments, and special districts, that may be intended to limit the ability to farm or conduct forest practices. The 1993 Oregon Legislature passed this law on the basis that forestry and agriculture are critical to the economic welfare of the state and need to be protected. This protection covers all lands zoned Exclusive Farm Use (EFU) or forest use outside of the urban growth boundary. This law does not protect farmers and foresters from non-farm-generated occurrences such as: increased traffic, vandalism, litter, and even spray drift.

The following topics are protected by the right-to-farm law and should be considered prior to purchasing rural property.

Noise

Agricultural production can be fairly noisy at times. Farmers often work from the early hours of the morning to the late hours of the night, especially during the planting season - Spring and harvesting season - late Summer. The timing of this work varies depending on the type of crop. The schedule and operation of agricultural practices are based on external factors like weather, so they cannot be constrained to normal "work hours." Noise levels can vary greatly depending on the type of work that is being conducted.

Dust is common occurrence in rural Marion County, caused by farming activities and high winds.

"The more you know, the better you are prepared."

Spray Drift

There is a chance that rural property owners may be affected by spray drift coming from other properties. Farmers use chemical sprays to protect their plants from disease and pests, and can be vital to the success of their crop. Applicators are required to be licensed prior to spraying. Pesticides are normally applied from the spring to the fall, with the heaviest application occurring during the spring. Spray has the ability to travel by wind - drift or by volatilization that occurs when the spray turns into a gas and becomes airborne, where it can travel for very long distances. This is important to be aware of if you have concerns with inhaling pesticides or are growing crops that are highly sensitive to chemicals. Spray drift can be minimized by following the label and using best management practices.

Dust and Pollen

Depending on the types of crop that are being grown and the land management practices of neighbors, there can be times when air quality is low and pollen levels are extremely high, especially compared to urban areas. Farmers tilling their fields can create large clouds of dust that can travel long distances, depending on weather conditions. Dust can also occur when fields are left bare and a wind storm occurs. High wind events are more frequent in rural areas because of the lack of natural windbreaks.

Pollen levels can also become extremely high in rural areas because of the concentration of pollen-producing crops grown in the county. Crops like grass seed, nursery plants and trees that are grown on a large scale will produce large volumes of pollen that can cause irritation or allergic reactions to individuals who are sensitive.

Smoke and Odors

Smoke is caused by the burning of yard debris, cardboard and residual crop vegetation and is a common occurrence in rural Marion County. It is a legal and common practice for rural property owners to burn piles of vegetation that create large clouds of smoke, along with an odor that can travel for long distances.

Animal operations, more specifically AFO's and CAFO's can produce unacceptable odors and with the right wind can be smelt from long distances away. Odors can also be derived from fields that have been recently amended with manure. (*see Agriculture section.*)

3

WATER

Water is considered to be one of the most abundant resources on Earth, yet only one percent of it is actually drinkable. It is therefore vitally important to protect and conserve this resource. Marion County currently has four designated areas where groundwater is limited, along with many streams that are in need of some remediation.

The local, state, and federal governments have, with some success, put in place regulations, policies, and strategic plans that work to protect these waters. The success of these efforts rely heavily on property owners being proactive in protecting the waters that pass through their property. Luckily these governments also provide grants and educational resources to their citizens to assist in the enhancement and protection of our waterways. A good first step for property owners is to become familiar with the features within the landscape that directly relate to the health and quality of our waters.

SECTIONS

WATERSHEDS

Everyone lives in a Watershed

Watersheds and their hydrological features provide key functions to natural ecosystems. Destroying or altering these features in any way can have a huge impact upon the natural environment. A watershed is defined as an area of land where all of the water that falls upon it, is under it, or drains off of it, converges into specific lakes, rivers, streams, wetlands, or oceans. Watersheds are bounded by topographical high points known as divides, such as ridges, hills, or mountaintops. Watersheds come in different shapes and sizes, with the larger ones such as the Willamette River Basin being divided into smaller subbasins. Our actions on the land directly affect the water quality and quantity for all communities living downstream.

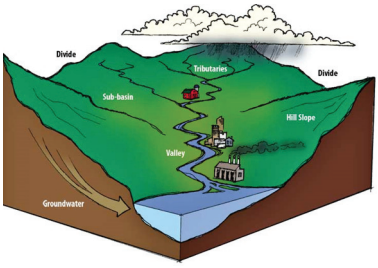


Figure 1 - Watershed Diagram
Courtesy of Ducks Unlimited Canada

Willamette River Watershed

Marion County lies within the Willamette River Watershed (Basin) which is Oregon's largest watershed at 11,500 square miles. Roughly 70 percent of the state's population currently lives within this watershed. The valley's population is expected to nearly double by 2050 making it the fastest-growing region in Oregon. This makes protecting the watershed an important goal for Oregon and the future of the region.

Courtesy of Riversphere/Tulane University

The Willamette Valley is characterized by mild wet winters and warm dry summers, with fertile soils that make the valley the most important agricultural producing region in Oregon. As the pressures of development increase, conflict between the natural environment and urbanization will also increase. With approximately 96 percent of the valley floor (Willamette Ecoregion) in private ownership, conservation efforts and watershed protection must rely primarily on voluntary actions by property owners.

Development has already greatly altered the valley from its historic environment of grasslands, oak savannas, wet prairies and other open habitats. The Willamette River has been disconnected from its natural floodplain and much of the historic wildlife habitat is fragmented.

Wetlands

Wetlands and their adjacent ecological transition zones are important features of a watershed. The flow of water, the cycling of nutrients, and the energy of the sun meet to produce a unique ecosystem characterized by its hydrology, soils, and vegetation. Wetlands can be classified into four general categories: marshes, swamps, bogs, and fens.

Wetlands have two primary characteristics: (1) hydric (water logged) soils and (2) water-tolerant plants. Even when water isn't visible these indicators will still be present.

Wetlands are home to thousands of species and provide important breeding areas. Wetlands' natural systems are critical to maintaining the ecological balance of a region. They help reduce flooding by storing water, and help reduce water pollution through their filtering and cleansing abilities.

Riparian Areas

Riparian areas are defined by the Natural Resources Conservation Service as ecosystems that occur along waterways and water bodies. They act as the transition between the wet (aquatic) lands and the dry (terrestrial) land. A healthy riparian area will be highly vegetated with ideal riparian vegetation, good shade, and an abundance of woody and organic debris. Plant roots provide the bank with increased stability while minimizing sediment runoff. Riparian buffers should be between 25-100 feet wide depending on surrounding land uses. Properly managed riparian areas provide property owners and the environment with numerous benefits. Riparian areas are vital to the natural ecosystem, thus ***property owners are highly discouraged from altering or removing riparian vegetation.***

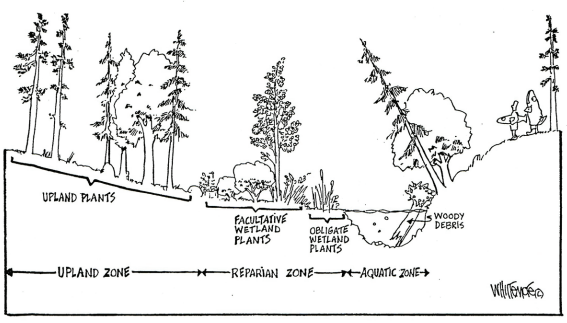


Figure 2 - Healthy Riparian Area
Courtesy of Adopt a Stream Foundation

Ecological Benefits

- Reduces water pollution
- Reduces flooding
- Reduces erosion
- Protects fish habitat
- Provides nutrients
- Provides wildlife habitat

Additional Resources

Willamette River Basin Atlas
www.fsl.orst.edu/pnwerc/wrb/Atlas_web_compressed/PDFtoc.html

EPA: Wetlands
water.epa.gov/type/wetlands/index.cfm

WATER RIGHTS

First in Time, First in Right

Water Rights are required if property owners are interested in using water for uses other than domestic. They come in two types, surface and ground. Property owners are encouraged to find out from the Oregon Water Resource Department (OWRD) if their property has water rights or not and if so, to acquire the documentation for that right. If you currently have a permit, it is in your interest to work on acquiring a certificate.

Key Terms

Priority Date: Oregon water rights are based on seniority. The first person to obtain a water right is the last to be shut off.

Beneficial Use: The specific intended use of the water.

Diversion Point: The point where water is removed from a stream.

Appropriation Point: the point where groundwater is removed, i.e. a well.

Appurtenance: The area where water is allowed to be used.

Losing Water Rights: If you have a permit, water rights can be cancelled for not continuing to "prove up". A water right once established must be used beneficially at least once every five years (ORS 540.610), if not it is considered forfeited and is subject to cancellation.

Exempt Uses

Some water uses do not require a water right. For a full list visit the Oregon Water Resource Department's website. *www.wrd.state.or.us*

Ground Water Exemptions

- Single or group domestic purposes, not to exceed 15,000 gallons per day.
- Industrial or commercial purposes not to exceed 5,000 gallons per day.
- Stock watering.
- Watering lawns or non-commercial gardens under 1/2 acre in area.

Surface Water Exemptions

- Qualified reclaimed water uses.
- Qualifying stock water uses.
- Emergency fire-fighting.
- Certain forest management activities.
- Certain diversions promoting soil conservation.

Vested Rights

If you have a water right on your property with a priority date that pre-dates these dates, you should apply to the OWRD for a certificate. Proof of your priority date is required.

Water Right Acquisition

Water Right Types: Ground and Surface

1st Apply for a permit from the OWRD. Once a permit is issued, it allows the property owner to begin constructing a water system.

2nd Construct the water system and use water based on permit conditions.

3rd Hire a certified water right examiner (CWRE) to validate the water system.

4th If all conditions of the permit have been met, a certificate is issued.

Water Right Transfer

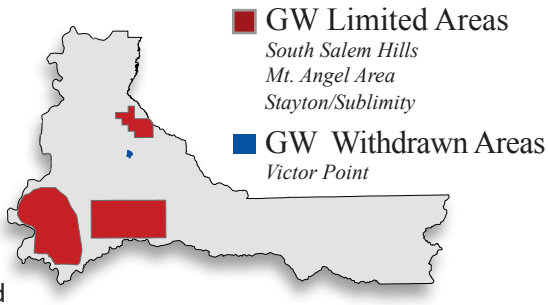
Water rights have very specific designations on where water can be used on your property, for what, the amount, when, and from where you can extract the water. Before changing any of these components, the water right holder needs to receive approval for a water right transfer from the Oregon Water Resources Department or else that part of the water right could be lost.

When water rights are transferred, they must be "proved up" in order to receive a certificate for the new right. The initial priority date on the water right will be maintained after the transfer.

There are multiple types of transfers available for water users: permanent, temporary, and instream. For more information visit the OWRD website.

Groundwater (GW) Management Areas

These areas are defined by the OWRD to prevent excessive declines in groundwater. There are currently three GW Limited Areas and one GW Withdrawn area in Marion County.



GW Limited Areas do allow new water rights, but are restricted to a few designated uses. Check with OWRD for a complete list of possible uses.

After September 2001 the OWRD put a moratorium on drilling new wells within the GW Withdrawn Area. Residents can, however, conduct maintenance on existing legal wells that are impaired.

Stay Informed

Every Tuesday the Oregon Water Resource Department releases information on current water right applications. Check regularly for any new water right acitivities in your area. *apps.wrd.state.or.us/apps/misc/wrd_notice_view/?notice_id=21*

Water Storage

Constructing a pond or reservoir of any size to store water requires a permit from the OWRD. A secondary water use permit is required to use or divert the water that is being stored. Water storage is generally allowed from November through June.

Reservoirs with a dam height of 10 feet or greater and that store 9.2 acre-feet or more of water require engineering plans and specifications that must be approved by the OWRD prior to the construction of the reservoir. There is an expedited permitting process for individuals building reservoirs with a height of less than 10 feet and that store less than 9.2 acre-feet of water.

"Watering a lawn using surface or ground water larger than a ½ acre requires a water right."

Rainwater Harvesting

Marion County property owners may collect and use rain water from impervious surfaces on their property without a permit. But, if you install an above grade tank of 5,000 gallons or more, a building permit is required. When developing a rainwater harvesting system, you should first establish the amount of water available and your water needs. The size of the cistern needed will depend on the amount of water you want to collect and what you want to do with that water during a specific time frame. Different activities require different amounts of water. Crop irrigation requires roughly 2 - 2½ acre feet of water per acre during the June to September growing season. The rainwater catchment formula will help define how much water is available for collection from a roof. Contact the Marion SWCD and local government agencies for assistance and possible grants.

Rainwater Catchment Formula

Roof Area	x	Annual Rainfall	x	0.46	=	Gallons of Water per Year

1 acre foot = 325,851 gallons

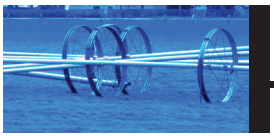
1 person = 50 - 70 gallons per day

Additional Resources

Oregon Water Resource Department
www.wrd.state.or.us/

An Introduction to Oregon's Water Laws
www.oregon.gov/OWRD/PUBS/aquabook.shtml

Oregon Water Resource Department Publications
www.wrd.state.or.us/OWRD/PUBS/index.shtml



IRRIGATION

Over-irrigating costs you money

Irrigation in Marion County is vital to maintaining its active and vibrant agricultural community. Irrigation is needed in the county during the summer months when rainfall is limited and crops are growing. Depending on the system and management used, there are maximum efficiencies that can be reached. An efficient irrigation water application system coupled with good water management can save property owners money by reducing energy costs and increasing the amount of land irrigated.

Irrigation Systems and Management

The type of irrigation system and the quality of management defines the limits on application efficiency one can acheive. Irrigation management plays the largest role in achieving high levels of irrigation efficiency. It is possible to install a high efficiency system and still have low application efficiencies due to improper management. Choose accordingly and be aware of the required labor and operational maintenance associated with that particular system. The three commonly used irrigation methods in Marion County are: surface, sprinkler and micro.

Key Factors of an Irrigation System

- Crop water requirement.
- Application uniformity.
- Water supply reliability.
- Operational precision.
- Water use efficiency.
- Economic returns.

Attainable Irrigation Efficiencies

System Type	Efficiencies (%)
Surface Systems	
Level Border	60-80
Furrow	60-80
Graded Border	55-75
Wild Flood	25-40
Sprinkler Systems	
Linear Move	75-90
Center Pivot low pressure	75-90
Fixed Solid Set	70-85
Center Pivot high pressure	65-80
Hand Move	60-75
Traveling Gun	60-70
Stationary Gun	50-60
Micro - Irrigation Systems	
Sub/Surface Drip	85-95
Micro Spray	85-90

Courtesy of ATTRA www.attra.ncat.org

Water Districts

Marion County currently has four user-owned water districts that deliver water and maintain drainage in specific areas of the county.

- Santiam Water Control District,
- Sidney Irrigation Cooperative,
- East Valley Water Control District,
- Lake Labish Water Control District.

There are two types of water districts: Irrigation and Water Control. A Water Control District has the ability to manage more than one resource, while an Irrigation District only delivers irrigation water.

Water districts provide property owners within the district with the required infrastructure for obtaining water from the point of diversion to their property. Property owners are required to pay an annual fee for the use of the infrastructure. The Districts are required to maintain the ditches and other aspects of the system. Property owners are asked not to alter or change district irrigation ditches in any way. A water right is required to use the water from a canal or ditch that is adjacent to your property.

"Be aware that what appears to be a stream on your property might be an irrigation or drainage ditch."

Water Conservation via Irrigation Scheduling

Weather Based Monitoring – Monitor weather (temperature, rainfall, humidity, and crop evapo-transpiration) patterns to schedule irrigation application. Computer-based programs and local weather stations should be used for scheduling.

Soil Based Monitoring – The available water-holding capacity of a soil depends on soil texture and organic matter content. Monitoring the soil moisture during the growing season will help reduce water loss through over-irrigating. Soil moisture monitoring can be done by the "feel and appearance" method or via more sophisticated methods.

Evaporation Based Monitoring – With a close growing crop, water evaporation from an open water source can approximate the evapo-transpiration (ET) rate of the crop. ET gauges, which operate on the same principle, are available to more precisely monitor evaporation for irrigation scheduling.

Additional Resources

Irrigation in the Pacific Northwest
irrigation.wsu.edu/

NOAA National Weather Service
www.weather.gov

Web Soil Survey
websoilsurvey.nrcs.usda.gov/app/HomePage.htm

AgriMET
www.usbr.gov/pn/agrimet/

WELLS

A domestic water source

Many residents in Marion County are not connected to a municipal water source and must rely upon a well for their domestic water uses. Roughly 500,000 citizens in Oregon use a household well and are required to protect, test and purify the water to keep their family safe. Having a basic knowledge of the mechanics and issues related to a well will assist property owners with identifying and solving problems when they arise.

Locate an Existing Well

If you know or suspect a well is the source of your water, locate the well. It most likely will be a three- to six-inch pipe sticking out of the ground near the home. You should also locate the pipe that connects the well to your house so you do not disturb it. The direct path from where the pipe enters the house to the well is mostly likely where the pipe is located. Private locating companies can assist in locating the pipe and the well.

Well Log

Well logs are kept by the Oregon Water Resources Department to track the current state of wells, even dry wells. Well logs can be used to get information about ground water in an area prior to drilling a well or buying property. The well logs contain information on: how often wells were deepened, how much water is being produced, and water depth. Doing research and having a plan prior to buying property should help minimize unanticipated surprises.

Well Test

It is smart to have well water tested prior to purchasing a home.

Chemical Tests are recommended to be done every 2 – 3 years.

Biological Tests should be done yearly.

Owners of a permitted or certified well are responsible for having a ***Pump Test*** every 10 years. This test can be administered by a well driller or a pump vendor. The information gained should be submitted to the OWRD for planning purposes.

Well Tag

Wells that are deepened, drilled or altered are required to have a well tag. Well tags are provided by the OWRD. Wells should be tagged prior to selling a property.

Well Performance

In order to evaluate the performance of a well, baseline information is necessary. This information can assist in determining well maintenance and rehabilitation scheduling.

- What is the static water level in the well prior to use?
- What is the pumping rate after a specified period of pumping?
- What is the water level in the well after a specified period of pumping?
- Is the water clear and free of sand and silt?
- How rapidly does the water level recover after pumping?

Common Well Issues

Yearly maintenance and upkeep of a well is good practice for prolonging its life and keeping drinking water safe. Yearly water tests will provide the needed information for identifying possible health concerns related to water quality.

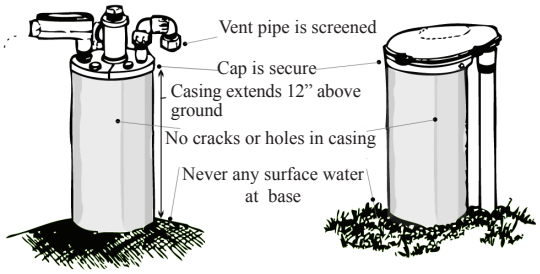


Fig.1 - Areas to check on a well
Courtesy of ODA

Water Quality: All ground water contains some gases and minerals; acceptability and desirability of these materials is a matter of personal preference. Be aware that some problems invisible to the naked eye, such as hardness or high bacterial counts, do require treatment, while other issues that are more obvious may not be detrimental to one's health and do not need to be treated.

Well Stops Working: First, check the power source; has a fuse blown or the pump died? The worst case scenario is that the well is dry. Contact a professional well driller if this occurs.

Additional Resources

Water Well Owner's Handbook
www1.wrd.state.or.us/pdfs/Water_Well_Booklet_2010.pdf

Department of Human Services: Drinking Water Program
www.oregon.gov/DHS/ph/dwp/index.shtml

How to Disinfect a Well
www.co.marion.or.us/HLT/PH/EHS/water/well.htm

SEPTIC SYSTEM

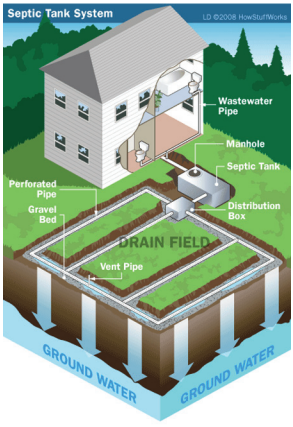
Your on-site sewer system

If your property has a septic system, it is important to understand how it works and what is required to maintain the system in order to maximize its life expectancy. Maintenance is the key to a properly functioning and long-lasting septic system. A failed septic system can contaminate local water sources and cause serious public health risks and environmental harm.

How it Works

Septic systems consist of two main parts; the septic tank and the drain field.

Waste water enters the septic tank where it needs to sit for at least a day to separate out heavy (sludge) and light solids (scum) from the water. As more water enters the septic tank, it pushes out waste water into the drain field. The drain field provides additional bacteria treatment as the material passes through perforated pipes, into a gravel bed and then into the soil. Overuse of the system, even for a short period of time, can cause water to be released into the drain field without being properly separated in the septic tank. This can contaminate ground water and damage the system by clogging the pipes.



Courtesy of How it Works Discovery

Importance of Maintenance

- ***Cost*** – Septic systems are expensive to repair or replace. Lack of maintenance is a primary reason for early failure.
- ***Health and Safety*** – A failed septic system can release inadequately treated solid waste into natural water sources creating a risk to public health.
- ***Property Value*** – A failed system can lower property value. In addition, occupational permits might not be approved because of a failed system.

"Household soap, grease and garbage disposals are highly detrimental to a septic system"

Required Maintenance

Monitoring the functionality of the septic system and conducting maintenance accordingly is your best bet for maintaining a healthy septic system. Following these rules will help prolong the life of your septic system.

- Schedule annual inspection.
- Develop a septic tank pumping schedule for your tank. Pumping frequency depends on the size of the tank, household water use and the volume of solids. Most tanks are designed for a three- or more-year pumping cycle.
- It is a good idea to supervise cleaning to make sure it is done properly.
- Divert rainwater from the drain field.
- Check faucets and toilets for leaks. Make repairs if necessary.

Causing Harm to the System

Some actions can cause serious damage to the septic system and can reduce the life expectancy of the system. Properly managing the site of the septic system will also help prolong the system's life. Following these simple guidelines will help keep your system safe.

- Flush only easily digested organics and water down the drain. Refrain from flushing items that could be placed in the trash; napkins, cigarette butts, dental floss, feminine products, pharmaceuticals or condoms.
- Minimize your use of household soaps and chemicals. They can destroy helpful bacteria that assist in the breaking down of solid waste in the system. Small amounts of drain cleaner can kill the needed bacteria and disrupt the system.
- Experts believe that septic tank additives are unnecessary and provide little to no benefit for a properly managed system.
- Avoid driving or parking on top of the system.
- Plant only grasses near or above the drain field and tank.
- Avoid allowing animals to graze on the drain field.

Additional Resources

National Environmental Service Center: Septic Systems
www.nesc.wvu.edu/subpages/septic.cfm

EPA: Septic Systems
cfpub.epa.gov/owm/septic/index.cfm

4

PROPERTY MANAGEMENT

Successful country living may require property owners to establish some type of land management strategy. You may already have a vision of what you want to do on your land. Setting goals to achieve that vision is the first step towards developing a property management plan. Marion County offers many resources to rural property owners, including assistance in developing a plan. Federal, state and local grant programs often require property owners to have a current property management plan.

Good property management will help maintain and possibly increase the value of your property, as well as conserve essential natural resources. Even if your property is already well planned and well-established, you may still need to manage weeds and other unwanted vegetation from taking over. Proactive efforts will also help avoid regulatory conflicts or infractions. All in all, property management is a smart idea.

SECTIONS

MANAGEMENT PLAN

Plan today, to prepare for tomorrow

Developing a management/conservation plan is a proactive effort to protect the vitality and sustainability of the natural resources on the land. It is also the first step in finding and qualifying for government conservation programs. Management plans can be developed for a number of different resources: forestry, agriculture, soil, water and wildlife habitat. The plan is a blueprint for the future of your land's natural resources.

Benefits of a Plan

- *Helps property owners comply with environmental regulations.*
- *Potentially improves land management efficiency and production.*
- *Identifies current and potential natural resource problems.*
- *Provides property owners with a better understanding of what is happening on the land.*
- *May increases property value.*

Contact for Assistance

Natural Resources Conservation Service
503.399.5741

Marion SWCD
503.391.9927

Developing a Plan

Identifying what you want to do with the land and where, will help you develop a comprehensive plan. Include your family from the beginning of the process to help you create a plan that will meet future expectations. Even if you currently like the way your land looks, you will need to do something to keep weeds out and the water clean. Property owners are encouraged to consult with a conservation planner from the Natural Resources Conservation Service (NRCS) or the Marion SWCD for assistance in developing a management plan.

Components of a Plan

Here is a list of common elements found in a conservation/management plan:

- Property owner's objectives and goals.
- Aerial photographs or diagrams of the property.
- Resource information: soil type, potential crop production types, possible stocking rate and water resources.
- Description of land treatment decisions.
- A work plan with the location of future and completed conservation practices.
- Plan of operation and maintenance of conservation practices and systems.

Marion SWCD provides a blank management plan template on their website. *www.marionswcd.net*

WEED MANAGEMENT

Weeds can damage your property

Weeds are defined as plants growing in places where they are not wanted. The most common terms for classifying weeds are noxious and invasive. Noxious weeds can cause harm to the natural environment, humans and animals; invasive weeds proliferate, crowding out desired vegetation and creating mono-cultures leading to declines in habitat diversity. Weed management never stops. Weeds that appear to be suppressed may re-emerge. Reducing soil disturbance is key to controlling weeds, along with regular monitoring and weed removal.

Importance of Weed Management

Weeds and invasives spread fast, choking out native species. Weeds once established can become very difficult to eradicate. Early detection is essential. Regularly walking your property and learning to identify local problem weeds and the safest means of removal will help prevent a large infestation. Invasives can be found both on land and in water. Noxious weeds can be harmful to animals and humans. Some weeds if eaten, can make people and animals sick, and if touched can cause rashes or cuts. Weeds stress the natural ecosystem and negatively impact watersheds by displacing native and desirable plants and wildlife habitat. They also have the ability of negatively affecting timber and agriculture industries. Partnership between local residents, the state, county, and cities, help bring us closer to eradicating noxious and invasive weeds in Marion County.

Weed Control District

Marion County has an active weed control district that spans the entire county outside of the urban areas and is managed by Marion County Public Works. Its goals are to educate citizens on weed issues, establish effective weed prevention and control measures, while increasing their ability to implement weed management through out the county.

Property owners are encouraged to control any noxious weeds on their property that have been identified by the weed inspector. A weed inspector for the county can issue property owners a notice that requires them to remove and prevent weeds that are specified on the notice. If the problem is not resolved, the county will do the work and then charge the property owner.

Weed-free Hay & Straw

Oregon Department of Agriculture has developed a pilot weed-free forage certification program. This is a voluntary pilot program that certifies weed-free forage and adds value to the product. For more information visit:

www.oregon.gov/ODA/PLANT/WEEDS/weedfreeforageprogram.shtml

Management Strategies

It is encouraged for property owners to work with neighbors on weed management because of the transient nature of weeds. Be aware that certain weeds require different management strategies to control. Identifying weed threats on your property is the first step to early detection and rapid response. Here are some other strategies for managing weeds:

Prevention: Keep your property covered with desirable vegetation and make sure not to transport weeds. Use native or naturalized vegetation to out-compete noxious weeds. Quickly respond to any new weed infestation.

Mechanical: Pulling and mowing weeds before they seed can help stop them from spreading.

Grazing: Allow livestock to graze weeds before they seed. Since animals can transport seed, don't move them from a weedy area to a weed free area.

Chemicals: Herbicides are commonly used to kill weeds. Be sure to read the labels prior to application. Utilize weather tools, buffers or other practices to minimize any transport to water by runoff or drift.

Transportation

Weeds travel by many means: people, animals, wind, water, machinery. Here are some practices that will help limit the spread of invasive and noxious weeds on your property and throughout the county:

- After working with or walking through weeds or invasives, wash your clothing, boots or machinery to remove any remaining residue or plant seeds before moving to another area.
- Use only native or naturalized species when planting new vegetation. Invasives are commonly used unknowingly as ornamentals.
- Dump fish tanks/aquariums down the drain or into the trash. Many aquarium plants and animals are aquatic invasives.
- Buy fire wood locally. Weeds and pests can be transported in wood.
- Clean boats of all vegetation and aquatic life after each use. CLEAN, DRAIN, and DRY.

Additional Resources

Marion County Weed List
www.co.marion.or.us/PW/Operations/weeds/weedlist.htm

Oregon: Aquatic Invasive Species Prevention Program
www.boatoregon.com/OSMB/Clean/AISPPmain.shtml

Report Invaders: Oregon Invasive Species Hotline
oregoninvasiveshotline.org/

Noxious Weeds: Short List

*"See, **ERADICATE**"*

1. *Yellow Flag Iris*
Grows with roots in water. Prefers partial shade. Resin can irritate the skin. Must remove all parts of the plant.

2. *Butterfly Bush*
Commonly escapes yards and takes over riparian habitats.

3. *Meadow Knapweed*
Found in disturbed areas, roadsides, waste areas, and pastures. Remove roots and place flowers in a bag. for disposal

4. *Purple Loosestrife*
Square stem and can get up to 10' tall. Mature plant can produce 2.7 million seeds. Found mostly in moist or marshy areas.

5. *Tansy Ragwort*
Produces yellow flowers. Found in pastures, roadsides and other disturbed areas. Mowing is ineffective.

6. *Knotweeds*
Multiple strains: Giant, Japanese, Himalayan & Bohemian. Red bamboo like stem. Grows along roadsides, trails and rivers

7. *Lesser Celandine*
Ground cover with bulbous roots. Mechanical control ineffective, spreads it. Bag all parts.

8. *Diffuse Knapweed*
Found in gravel pits, roadside, vacant lots, and heavily grazed pastures. Mowing or cutting can increase infestation.

9. *False Brome*
Bunch grass that has broad flat leaves with hairs along the edge. Mow or pull before it seeds.

10. *Thistles*
Found along roadsides, ditches, fences and disturbed areas. Mowing may increase population.

BACKYARD WILDLIFE

Water + Cover + Food = Habitat

One of the privileges of living in the country is being closer and more connected with the natural environment. But over time we have been losing natural areas to more profitable land uses. You can manage the land in a way that encourages and promotes wildlife habitat. Working with neighbors and understanding what is happening on other properties will help make your wildlife habitat a success.

Habitat Elements

Wildlife needs three basic elements for a supportive habitat.

Food: Animals will venture to your property if there are available food sources. Nuts, seeds, fruits, and commercially purchased bird seed are food types that will help attract wildlife to your property. Commercial bird seed should be microwaved prior to distribution to greatly reduce the chances of it producing weeds.

Water: Drinking water sources are essential for wildlife. Clean flowing water, bird baths, and garden ponds are features that will help draw wildlife to your property.

Shelter: Wildlife need cover and protection both on your property and when traveling between properties. Bird/bat/bee boxes, hedgerows, shrubs and trees can provide wildlife with a place to rest, hide from predators and a covered path for travel.

Planting a diversity of native vegetation at varing heights will help attract wildlife to your property. Developing and maintaining appropriate vegetation at the three different vertical areas (canopy, understory, and floor) of the natural environment will help provide a variety of habitats on your land.

Tips for Successful Backyard Wildlife Habitats

- *Planning and research are important beginning steps to creating productive backyard wildlife habitat.*
- *Collaborate with neighbors. Their actions will directly affect the outcomes on your property. More cooperation should lead to greater success.*
- *Reduce the use of chemical sprays and refrain from unnecessary spraying on natural areas.*
- *Use water efficiently and maintain natural water features, along with the vegetation that surrounds those features.*

Pets

Pets should be monitored when they are outside for both their own safety and the safety of the wildlife that may be living on your property. At night pets should be brought inside or put within a shelter for their safety. Many birds will nest in low-lying trees and brush which makes them easy prey for cats, so it is important to watch your cats when they are roaming outside. Leaving pet food or animal feed out may attract unwanted animals and pests.

"Cats prey on birds, so watch your cat when it's outside."

Snags and Dead Trees

Snags and dead trees are important elements to have and leave on your property for wildlife. They provide habitats to roughly 80 different species; reptiles, birds, mammals and amphibians call these features home for at least part of their lives.

If you do not have any snags or dead trees on your property, you can girdle unneeded trees to create snags.

Piling woody debris near the forest edge can provide wildlife with places to hide. In dry areas, fire risk must be taken into consideration.

Pollinators

Pollinators are important to our environment and facilitate the reproduction of at least 80 percent of the world's flowering plants. In addition, they help produce a healthy affordable food supply; yet many of us eradicate their habitats by using pesticides and herbicides and by removing vegetation.

Hummingbirds, bats, small mammals, beetles, bees, ants, wasps, butterflies, and moths are all pollinators. Providing nectar-bearing flowers and blossoming bushes as sources of nectar and pollen year-around will help increase your pollinator population. Farmers are able to increase pollinators on their farm by diversifying crops and planting pollinator plots, field borders, or hedgerows.

Additional Resources

Plants for Pollinators Guides
pollinator.org/guides.htm

NRCS: Wildlife Habitat
www.nrcs.usda.gov/feature/backyard/WildHab.html

OSU Wildlife Extension
fw.oregonstate.edu/Extension%20&%20Outreach/Wildlife%20Extension/index.htm

RURAL ROADS

If it's not posted, it's 55 mph

Roads are the means to accessing the many places where we want to travel. Here in Marion County roads have multiple classifications with each having their own regulations and maintenance requirements. Marion County Public Works can inform property owners of the type of road that accesses their property.

Public Right-Of-Way (ROW)

A public right-of-way is an area of land which is dedicated to the passage of vehicles and pedestrians. States, cities and counties regulate and manage the public right-of-way depending on road type. A rule of thumb for defining the edge of the public ROW are by utility poles or a fence line because they normally lie on or follow the edge of the ROW. Some of the activities that are not allowed in the ROW are:

Signage – Personal Signage is not allowed in the ROW.

Mailboxes – If in the ROW they need to meet specific standards outlined by Marion County Public Works.

Plantings – That encroach the ROW, are not in compliance and need to be trimmed back. Create a buffer between plants and the ROW to reduce the chance of encroaching the ROW or plant low growing species that can be mowed.

Fences – Marion County Public Works should be contacted prior to installing a fence that fronts a ROW to make sure it will meet county regulations.

Road Types

When buying property in rural Marion County, it's important to identify what type of road you live on and if there is required maintenance. Contact Marion County Public Works to acquire this information. The different road types are:

County Road – Is part of the public ROW. The county is responsible for maintaining these roads.

Local Access Road/NCR - These roads are a part of the public ROW. Maintenance of the ROW is the responsibility of the property owners who use that road for access.

Private Road - Any road constructed on private property or within a private easement. Maintenance is the responsibility of the property owner and is not required to meet county standards. These roads can be built without a permit, as long as they do not cross a stream, encroach a public ROW, or intersect with a county or local access road.

Road Maintenance Agreement

A road maintenance agreement is used to define road maintenance requirements for property owners who share a local access road. Each property owner who shares a local access road should share in the road maintenance duties. The ORS's state that the county may not use county funds to maintain local access roads. Conflicts between property owners about road maintenance responsibilities are civil issues that are outside of Marion County Public Work's jurisdiction.

Permits

A permit is required when conducting certain activities in the ROW. There are two primary permits granted by Marion County Public Works:

Access Permit - This permit is required if you are creating a new driveway access/sidewalk, rebuilding, paving or repaving, widening or improving an existing driveway/sidewalk, or changing the use of an existing driveway access. The permit is valid for up to three months, but if construction is not completed in that time, a onetime extension can be requested.

Right-Of-Way Permit - This permit is required for all work done in the right-of-way except for routine maintenance of vegetation and light driveway maintenance. Examples of work that requires a permit include; removal of trees over 6" in diameter or installing above or below ground structures or utilities. This permit normally takes less than two weeks for approval.

Private Maintenance Agreement

If you are conducting practices on your land that could be negatively affected by the standard road maintenance practices conducted by Marion County Public Works, you may enter into a private maintenance agreement with them. This agreement requires the property owner to maintain the vegetation in the ROW to county standards. There is no private maintenance agreement available for maintaining your own ditch, only the vegetation. If proper maintenance is not occurring, the county has the right to conduct their standard maintenance activities without the consent of the property owner.

Additional Resources

Marion County Public Works Shoulder Standards
www.co.marion.or.us/PW/Operations/

Marion County Public Works Permits
www.co.marion.or.us/PW/Engineering/permit/default.htm

WASTE MANAGEMENT

Reduce, Reuse, Recycle

Personal waste management is one simple way to reduce our individual carbon footprint and minimize our impact on the natural environment. All Marion County residents can acquire curbside garbage pickup through a private hauler and will soon have the ability to recieve curbside recycling. Marion County leads Oregon in recycling with a recovery rate of 58.2 percent (2009) and plans on improving its recycling rate through education, outreach and increasing the types of materials that can be recycled.

Recycling & Transfer Stations

Marion County residents can dispose of their waste at a transfer station for a small fee. The types of materials accepted at each station varies, so check with each facility prior to visiting.

Salem/Keizer Transfer Station
3250 Deer Park Dr. SE
Salem OR 97317
503.588.5169
7 days/week

Browns Island Demolition Landfill
2895 Faragate Street
Salem OR 97302
503.588.5169 "press" 0
Mon - Fri
Sat (Apr-Oct)

North Marion Recycling and Transfer Station
17827 Whitney Lane NE
Woodburn OR 97071
503.588.5169
Mon - Sat

Hazardous Waste

Waste that contains toxic and hazardous chemicals such as weed killer, pesticides, or rust removers are not allowed in the curbside bin and need to be disposed of at a hazardous waste facility. The service is free and available to all residents; however, farms and businesses must make an appointment by calling 800.444.4244, and they will be charged a fee. Note: antifreeze can now be recycled curbside.

Hazardous Waste Facility
@Salem/Keizer Transfer Center
3250 Deer Park Dr. SE
Salem OR 97317
503.588.5169
Thurs & 1st, 3rd Sat

Find your Hauler

Marion County provides multiple ways to find the name and contact information for your local curbside garbage and recycling hauler.

Recycling Hotline 503.390.4000

Find your Garbage Hauler
gis.co.marion.or.us/Haulers/Haulers.aspx

Electronic Recycling

It is now illegal to dispose of T.V.'s, monitors, laptops, and CPU's in the garbage. Many electronic devices contain toxic and valuable materials which require them to be recycled. Marion County residents can recycle electronics FREE at the Salem-Keizer and North Marion Recycling Transfer Center and at the non-profit vocational agency, Garten Services. Some accepted materials are:

- Televisions
- Computers & Peripherals
- Microwaves
- Cell Phones
- Photocopy Machines
- Cameras

For a complete list visit: *www.co.marion.or.us/PW/ES/wastereduction/recycling/elec.htm*

Composting

Composting yard debris, food scraps, manure and other organic materials can help reduce the amount of waste that you send to the landfill. Compost also provides a valuable soil amendment to property owners. (*For more detailed information on the composting process see Additional Resources.*)

Master Recycler Program

Marion County provides an opportunity for its residents to become educated in recycling and solid waste management by participating in the Master Recyclers Program. This program is free, but once completed, participants are required to volunteer 30 hours of community "payback" through independent projects and outreach events.

The training consists of 40 hours of instruction: 8 evening classes, a composting workshop and 2 field trips. Contact Marion County Environmental Services if interested.

Dead Animals

Disposal of dead animals must be done at a local transfer station or regional landfill.

Animals up to 60 lbs

These animals can be disposed of at local transfer stations, but need to be wrapped in a tarp or plastic bags.

Animals over 60 lbs

These animals need to be disposed of at a regional landfill: Coffin Butte Landfill or Riverbend Landfill.

For additional options, consult ODA's "Disposing of Large Animal Carcasses" brochure. *www.oregon.gov/ODA/NRD/docs/pdf/water/carcass_disposal_rev.pdf*

Additional Resources

Marion County Composting Information
www.co.marion.or.us/PW/ES/wastereduction/compost/index.htm

Marion County Recycling and Disposal Guide
apps.co.marion.or.us/Recycle/

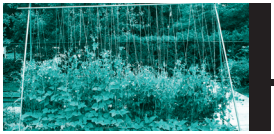
Marion County Environmetal Services
www.co.marion.or.us/PW/ES/

5 AGRICULTURE

Marion County is currently the leading agricultural county in Oregon with an annual sales value of $493,022,080 (2009). Agricultural production helps create jobs throughout the region from the planting of the seed, to the processing, and selling of the commodity.

Agriculture in Marion County is more than just a means of making a living; it is a way of life and culture. Many farms in Marion County have been owned and run by local families for generations. These farmers' commitment to the land creates value to them and to our community. Their farms give the county its special character, in addition to the environmental and economic contributions that provide an essential cultural resource for current and future generations. New farmers can be proud of joining this valuable sector of Marion County.

SECTIONS



SMALL FARMS

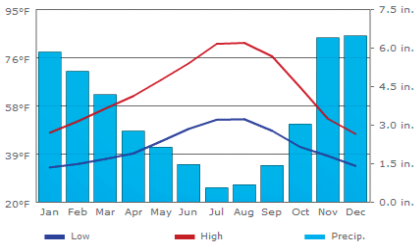
It can be gratifying

Developing a small farm on your property is like starting any small business. It requires long hours, determination and a long-term commitment. When evaluating the available options for a piece of property, property owners should consider these factors; goals of the farm, physical resources on the farm, family resources and skills, and the type(s) of agricultural commodity that will be grown. These initial factors will help shape your decisions.

Climate

Marion County has a maritime climate that is characterized by cool, wet winters and warm, dry summers. The county's growing season is long, with an abundance of moisture for most of the year. Fifty percent of the annual rainfall in the county occurs from December to February. During the summer months the county is fairly dry and requires irrigation for most agricultural production. Frost is a common agricultural issue in the county and may require additional management techniques for the success of certain crops.

Be aware that a single property can have multiple micro-climates caused by the terrain and natural features. Micro-climates have the ability to affect the lands' capacity to grow certain crops. With the right micro-climate, uncommon crops can be grown where commonly grown crops will not thrive. Property owners should assess these factors before selecting their crops.



Salem Climate Graph
courtesy u.s. climate data

Farm Goals

Before establishing an agricultural business, property owners should identify their intentions in becoming a farmer; hobby, tax deferral, or the creation of supplemental or regular income. This decision should be realistic and based on site conditions, available labor, your financial situation, your family's abilities, and your knowledge of agricultural practices. Start small and expand slowly as knowledge about your crops and site increase. Some aspects of farming can be learned from books, but with each year of practical experience you will greatly improve the productivity of your land.

Site Resources

The characteristics of a site such as soil type, orientation to the sun, topography, elevation, water availability and micro-climates may restrict the types of crops that can be grown, or might provide unlimited options. Matching crops with the capabilities of the land is a farmer's best bet for success.

Family Abilities

A family's knowledge and agricultural abilities should be directly related to the scale and intensity of an agricultural operation. Financial security should also be taken into consideration. Property owners who overextend themselves can destroy the possibility of long-term success. Caring for the crop can require a fair amount of time depending on the scale of the operation. It is good practice to choose agricultural commidities based on their management requirements and your family's work schedule. During the summer, most crops need to be cared for on a daily basis. This can hinder summer vacation trips or traveling for certain holidays.

Tax Deferral

An agricultural tax deferral lowers the property tax burden on lands that are producing income from farming. In order to receive and maintain an agricultural tax deferral, farms must meet specific annual income requirements based on the size of their land. These requirements will need to be met for three out of five years; otherwise the deferred taxes will need to be paid back in full. Before buying a piece of property check with the local tax assessor on the current state of a property's tax deferral because the back property tax liability created by the previous property owner can be passed on to the new owner.

Agricultural production is not the only activity for which a property owner can acquire a tax deferral; forestry, wildlife habitat or entering into certain state and federally funded conservation programs can provide property owners with a tax deferral. Check with your local tax assessor on options for acquiring a property tax deferral.

Additional Resources

Marion County Assessor's Office
www.co.marion.or.us/AO/

OSU: Small Farms
smallfarms.oregonstate.edu

WSU: Small Farms
smallfarms.wsu.edu

NOAA National Weather Service
www.nws.noaa.gov/

AGRICULTURAL WATER QUALITY

Keep it out of the water

Oregon and the federal government have implemented policies and plans that address water quality related to agricultural production and that work to protect the public and natural environment from unnecessary pollution. These policies guide the regulatory process of the Oregon Department of Environmental Quality (DEQ) and Oregon Department of Agriculture (ODA). Knowing these laws and what they regulate will help property owners to minimize their risk of committing infractions which could result in penalties.

Pollution Sources

When thinking about agricultural water quality and the regulations that shape the laws, property owners need to first understand the difference between point and non-point source pollution.

> Point Source: Defined by the EPA as any recognizable transporting agent in which pollutants are or may be discharged; pipe, ditch, channel, tunnel, conduit, well, etc. (section 502(14) of the Clean Water Act)
>
> Non-point Source: Generally refers to runoff, precipitation, drainage or any source that does not meet the legal definition of "point source." Excessive fertilizer or chemicals from agricultural land, sediment from erosion, and bacteria from livestock and pet waste are all examples of non-point source pollution.

Non-point source pollution, the leading cause of water quality problems in the county, is of high interest to local, state and federal agencies. Through regulations and proactive conservation programs DEQ and ODA work to minimize the amount of pollution from all sources that leave a property.

Agriculture Water Quality Management Act

This act is also known as "Senate Bill 1010" and was passed in 1993 by the Oregon Legislature to help reduce water pollution from agricultural and rural sources throughout the state. It applies to all lands outside of urban growth boundaries with the exception of land that is covered under the Forest Practices Act. This act takes a proactive approach to conservation and is voluntary, but also law. Water quality complaints in violation of the local plan are investigated and regulated by ODA.

Marion County farmers and stakeholders have developed an Agricultural Water Quality Plan titled the "Molalla-Pudding-French Prairie-North Santiam Sub-basins Plan". This plan identifies strategies to reduce water pollution through education, suggested land treatments, management activities, and monitoring. The complete document can be found on ODA's website.

Clean Water Act

The federal Clean Water Act makes it unlawful to discharge any pollutant from a point source into navigable waters without a permit. It also sets water quality standards for all contaminants in surface water. Any surface water that does not meet these standards is placed on the 303d list and must be given high priority by the state and assigned Total Maximum Daily Loads (TMDL's) that set thresholds for pollutants in those waters. A number of streams in Marion County are on the 303d list, including the Pudding River and Zollner Creek, for multiple reasons: temperature, bacteria, and toxin levels.

The Oregon Plan for Salmon and Watersheds

The Oregon Plan is a state effort to restore salmon runs, improve water quality and achieve healthier watersheds. It is funded through lottery dollars and salmon license plates. Implementation of the plan relies upon volunteerism and local stewardship. The state works with all stakeholders: citizens, the timber industry, conservation groups, government agencies, tribes, fishermen, and businesses to sustain salmon for the long term. The Oregon Watershed Enhancement Board (OWEB) has taken the leadership role in coordinating actions and administering a restoration grant program. In addition to helping support priority actions and volunteer-based projects, the agency has also established extensive monitoring measures to evaluate a watershed's health and the effectiveness of the plan. If you are interested in getting involved or implementing a project contact OWEB or the Marion SWCD.

Working in Waters and Wetlands

The Food Security Act of 1985 protects all wetlands from being harmed or removed without a permit. When working in or adjacent to a stream or wetland, there is a good chance that you may first need to acquire a permit. Placement of fill, excavation, alteration of stream banks or stream course, ditching, stump removal, and plowing or discing wetlands not previously farmed, are all activities that require a permit and are regulated by the Department of State Lands and the Army Corps of Engineers. All work done at or below the high water mark is subject to these regulations. A rule of thumb for identifying a high water mark is by a change in the type of vegetation present on the bank. You should always contact your local authorities before doing work in or near a waterway.

Additional Resources

EPA: Clean Water Act
www.epa.gov/regulations/laws/cwa.html

Molalla-Pudding-French Prairie-North Santiam Sub-basins Plan
www.oregon.gov/ODA/NRD/docs/pdf/plans/molalla_pudding_2010_plan.pdf

The Oregon Plan for Salmon and Watersheds
www.oregon-plan.org/

LIVESTOCK

Diversify your operation

Raising animals can provide environmental benefits and economic vitality to a piece of property. Goats, for example, can assist with brush management, provide manure that can be used as a soil amendment while also producing marketable milk and cheese. Raising livestock is also a means of diversifying an operation because it complements many other practices. But raising animals comes with varing characteristics that should be considered prior to getting started.

Stocking Rate

The stocking rate determines how many animals your land can support. It is this management practice that can have the greatest affect on the long-term condition of a site and the profitability of a livestock operation. Establishing the stocking rate, the amount of forage a particular animal needs, and how much forage is available, is key to maximizing profits while sustaining current land conditions. The stocking rate equation has been standardized for all animals based on weight. (*For the formula and examples of how to calculate your stocking rate see Additional Resources, Determining Your Stocking Rate.)*

Animal Feeding Operations (AFO's)

In 2011 there were 54 Confined-AFO and AFO's being operated in Marion County. These operations are a top priority for the NRCS's Environmental Quality Incentives Prgram to assist with nutrient and waste management planning and implementation. Oregon's House Bill 2156 regulates pollution and water quality for AFO's.

Feeding Operation: AFO's and CAFO's

CAFO's/AFO's are defined by the EPA as "a place where animals are kept in a confined space for at least 45 days in a 12 month period, without any grass or vegetation being present during the normal growing season." The difference between confined and other feeding operations is based in part by the number of animals that are involved. These operations congregate animals, feed, manure, urine, dead animals and a production facility on a small area of land. Feed is brought to the animals rather than allowing them to graze or feed in pastures or fields.

Due to large concentrations of manure and the lack of ground vegetation these operations can cause great harm to the natural environment because of the risk of pollution during rain events. Implementing vegetation buffers along with a manure management strategy can help reduce the risk of polluted runoff or leachates.

Buying Animals

Conducting research prior to buying animals is always a good practice. There are many different breeds of each animal to choose from; be sure to choose the right breed for your land and what you are trying to accomplish.

Buy animals from a trusted seller and try to avoid barn sales of culled animals. When buying animals ask the seller about problems with the herd and vaccination information to make sure there are no red flags. Be aware of the diseases and issues related to your particular animal and consult with the local veterinarian when problems occur.

Fencing

In Marion County there are currently no open range areas that allow animals to graze and roam freely; therefore fencing is required for containing animals on your property. There are numerous fencing types to choose from, each having pros and cons. Maintenance, up-front costs, the type of animals contained, durability, soil type, terrain, and effects on wildlife are some factors to think about when choosing the right fence. If you are constructing a new fence along a property line or roadway, contact Marion County Public Works to check for siting issues. Work with neighbors to develop the fence, to help establish a working relationship and to reduce the chance of future conflicts about the fence.

Selling Meat

In Oregon, selling meat from raised animals can be done in two ways. If you want to sell cuts of meat individually at farmers' markets, to restaurants or grocery stores, the animal must be processed by a USDA certified plant. You can also sell the live animal to a customer; the purchaser is then responsibility for having it processed. This is known as an "on the hoof sell" and the meat from that sale cannot be sold, bartered or given to food banks. (*For a complete breakdown of the rules and regulation related to the selling of meat, consult the Beef Cattle Library article in Additional Resources.*)

Buying Meat Whole

If interested in purchasing a whole animal to be processed for meat you should read the Beef and Pork Whole Animal Buying Guide for information related to what you're purchasing.

Additional Resources

Determining Your Stocking Rate
extension.usu.edu/files/publications/publication/NR_RM_04.pdf

OSU Extensions: Livestock Production
smallfarms.oregonstate.edu/livestock

OSU Beef Cattle Library: Frequently asked questions about processing
beefcattle.ans.oregonstate.edu/html/publications/documents/BEEF006-FAQ_001.pdf

Beef and Pork Whole Animal Buying Guide
www.extension.iastate.edu/Publications/PM2076.pdf

PASTURE MGMT.

Take Half, Leave Half

Maintaining a pasture to its maximum potential requires management that does not allow animals to over-graze, trample or compact the soil. Putting too many animals on the land will put increased stress on the pasture and can quickly turn the pasture into a muddy, weedy field. Improving or protecting the health of your pasture can help increase the property's value, while reducing the amount of polluted runoff that leaves the land. A healthy pasture will also support animal health by providing nutritious forage that will better their chances of staying disease-free.

Pasture Crops

Decisions crucial to grazing management should be made based on plant growth. Pasture crops vary in the time of season when they are most productive, so choose accordingly. Proper irrigation, soil management and lime application can help improve a pasture's productivity.

When choosing a pasture crop it is recommended to choose a mixture of ONE GRASS and ONE LEGUME. Many of the commercial seed mixtures will consist of a large variety of grasses and legumes, which can be hard to manage because of their different growing season and livestock appeal. Ultimately, you want to choose a mixture that is best suited for the animals that will be foraging.

Depending on the condition of your pasture, you may need to reseed with new forage crops. Understand that the state of a pasture is a sign of the current management practices; reseeding without changing management practices can be an expensive and ineffective decision. But if a pasture does not improve with better management then reseeding is the next step.

Signs of GOOD Management

- Sacrifice area used when pasture is wet.
- Large pasture subdivided into smaller pastures.
- Animals fenced out of streams.
- Water provided in each pasture.
- Presence of a vegetation buffer between streams and pastures.
- Forage is never less than 3" in height.

Signs of BAD Management

- Bare ground filled with weeds.
- High browse lines on trees and shrubs.
- Trampled stream bank.
- Animals grazing through the fence.
- Grazing happening on wet soil.
- Animals sunk in the mud/manure ankle deep.

Grazing Strategies

There are two primary styles of grazing available to property owners: continuous and rotational. Providing quality forage throughout the year helps save farmers a considerable amount of money on feed costs. In Marion County, year-around grazing is not advisable because of the wet and cold weather that occurs during late fall, winter and early spring.

Ideally, animals should graze before pasture crops mature and produce a seed head. After a plant seeds, it will stop growing and is less palatable and nutritious to animals. Pasture crops should reach a height of 6-8" before allowing animals to graze. Only 50 percent (3-4") of the crop height should be grazed; otherwise it will effect the plants ability to rejuvenate.

Rotational: Pastures are sub-divided into paddocks. Animals are frequently rotated between paddocks to allow forage to rejuvenate. This strategy requires property owners to have a base knowledge of their forage crops and an understanding of the animal-pasture interaction to be successful. Rotation frequency depends on the amount of forage available, crop type and the number and type of animals foraging.

Continuous: Animals are allowed to roam the entire property freely choosing the type of forage that they want to eat. Animals will forage the most nutritious and palatable plant species first until eventually they have exhausted the good forage species. This method of grazing can result in a patchwork of grass, weeds and mud because of the animals' selectivity.

Common pasture crops in western Oregon

- Orchardgrass
- Perennial Ryegrass
- Tall Fescue
- Subclover
- Dutch White Clover
- New Zealand White Clover

Poor Pasture Management

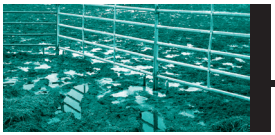
Good Pasture Management

Additional Resources

ATTRA: Pasture - Sustinable Management
attra.ncat.org/attra-pub/sustpast.html

NRCS: Animal Manure Management
www.nrcs.usda.gov/technical/ECS/nutrient/animalmanure.html

The ABCs of Pasture Grazing
www.animalag.wsu.edu/water quality/Tab2_Pasture Grazing.pdf



MUD & MANURE MGMT.

Manure is "black gold"

Mud and manure management is important for animal health, keeping water quality high, and making a property look attractive. Good management plays the biggest role in keeping mud and manure under control. Depending on the scale of the issue, manure can reduce a property's value while putting the health of the property owner, farm, and animals at risk.

Mud Production

Mud can be caused by a number of activities and conditions, including increased surface water, high traffic areas, highly organic soil, and the lack of ground cover. If not managed properly, mud can be hazardous to animal health, causing sickness and parasites. In addition, runoff from a muddy property will have high levels of sediment that contribute to water pollution.

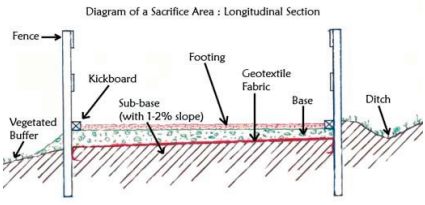
6 Techniques for Reducing Mud

Reducing the amount of rain and water that runs through a pasture and animal yard will greatly reduce mud production. Ideally you want to divert water to a wetland, stream, ditch, bioswale or other safe outlet before it passes through animal areas. Here is a list of additional techniques for reducing mud production on a property.

- Establish a sacrifice area for animals.
- Pick up manure regularly.
- Use appropriate footing for paddocks, sacrifice areas and high traffic areas.
- Install gutters and downspouts to roofs.
- Use vegetation as a mud manager.
- Rotate water trough placement areas to avoid mud and manure buildup.

Sacrifice Area

A sacrifice area is an alternative animal housing area used to keep animals off the pasture during the wet months. This area can also be used to care for sick or injured animals. Locate the sacrifice area away from water sources and plant a vegetation buffer around the area to reduce the chance of contaminating the water. The appropriate size depends on the type and quantity of animals that will be held. For longevity, the Marion SWCD recommends using crushed gravel for a base material.



There are multiple types of bases and footing materials available for a sacrifice area; sand, hog fuels and gravel. Talk with a professional on the best choice for your property.

Courtesy of Fairfax County Virginia

Manure Management

Manure, if not properly managed, can leach into ground and surface water causing pollution. Animals produce a lot of manure and without regular management it can become overwhelming quickly. Ideally manure should be collected every one to three days to reduce polluted run-off, fly breeding sites, and muddy areas. Using certain types of footing material can make cleaning sacrifice areas easier with minimal material loss.

"Federal and State laws forbid discharging any animal waste into water"

Manure Storage

Whatever the method of manure storage being used, the pile should be covered during wet periods and set on an impervious surface to limit leaching and runoff. If you plan on using a front loader to turn or move the pile make sure the roof of the structure is tall enough. The Marion SWCD can assist property owners in developing a manure composting/storage facility.

Good

Courtesy of Alayne Blickle

Better (needs cover)

Courtesy of the Sequim Gazette

Best

Manure Application

Applying manure to fields and pastures may help with the soil's tilth, water holding capabilities, resistance to erosion and production of beneficial organisms. Crop nutrient needs should be the regulator for how much manure is applied. The goal is to maximize nutrient use with minimal environmental hazard. Nutrients in manure vary between animals, so conduct soil tests and then choose the proper animal manure accordingly.

Manure Exchange Program

The Marion SWCD manages this program, which allows property owners to post their contact information online to then have people contact them for free manure pickup. If you are interested in participating in this program contact the Marion SWCD. The list of participants can be found at *www.marionswcd.net.*

Additional Resources

OSU Small Farms: Mud and Manure Management
smallfarms.oregonstate.edu/mud%2526Manuremanagement

Manure Management Handbook
www.nerc.org/documents/manure_management/manure_management_handbook.pdf

ORGANIC

A more natural way

Organic agriculture is a complex process that requires extensive accountability through diligent recordkeeping and documentation. Organic agriculture provides benefits to the environment by requiring practices that are more in tune with nature and promote biodiversity, water conservation and soil enhancement. Property owners are required to stop all non-organic practices on their land for three years prior to the certification process. Farmers who are interested in organic agriculture should fully understand the process, requirements and additional work associated with adding the label of "ORGANIC" to their product.

Certification Agencies

Organic certification verifies that a farmer is managing his agricultural operation: growing crops, raising livestock, or processing fiber according to the USDA National Organic Program. Here is a list of agencies that certify organic products in Oregon.

Oregon Tilth
tilth.org

USDA National Organic Program
www.ams.usda.gov/AMSv1.0/nop

Oregon Certified Sustainable Wine
ocsw.org

Different agencies vary in the fees that they charge, the types of products that they certify and the amount of recordkeeping that they require. The certification process can last eight to twelve weeks.

"Non-organic practices on the land must be stopped for 3 years prior to organic certification."

Different Labels

Depending on the concentration of organic material in a product, there are multiple certifications that can be acquired.

100% Organic: 100% organically produced ingredients

Organic: 95%+ organically produced raw or processed agricultural products.

Made with Organic: 70%+ organically produced ingredients.

Record Keeping

The amount of recordkeeping and documentation required for an organic operation is much more detailed than for conventional production. Records must "fully disclose all activities and transactions in sufficient detail to be readily understood and audited" (NOP Section 205.103 (b)(2)) In addition, the Organic System Plan which is an additional component of the documentation, must be up to date and on file at all times. *(For a complete breakdown of the recordkeeping requirements for organic certification see, "Preparing for an Organic Inspection" in Additional Resources.)*

Certification Requirements

Organic Seeds

One criteria for being certified organic is to use organic seeds. If an organic seed type is unavailable, the farmer must provide documentation of efforts to acquire the seed from three different sources prior to being able to use a non-organic seed. The non-organic seed must be non-treated and not a GMO.

Materials

Organic producers, processors, and handlers must use materials that meet the requirements set under the National Organic Standard. A list of these materials can be found at the Washington State Department of Agriculture website and at the Organic Materials Review Institute (OMRI). (*see Additional Resources.*)

Land Management

Utilizing natural methods to address issues on the farm is encouraged and must be used prior to utilizing any organic sprays. Sprays and unnatural methods that meet organic requirements are considered a last resort to natural methods. The property owner must prove that natural methods of pest control have been ineffective before being allowed to utilize alternative methods.

Livestock

Depending on the animal and what you are producing from the animal, different requirements apply regarding what it means to be "organic". (*see NOP Section 205.236 – 205.239.*)

Any changes to an agricultural operation from when it was certified requires farmers to contact the certifier; i.e. undocumented drift coming from adjacent fields, planting a new crop, new management practice.

Additional Resources

Preparing for an Organic Inspection: Steps and Checklists
www.attra.ncat.org/attra-pub/organic_inspection.html#inspection

ATTRA: National Sustainable Agricultural Information Services
attra.ncat.org

OMRI: Organic Materials Review Institute
www.omri.org

SUSTAINABLE PRACTICES

Farming with nature

Sustainable agriculture is a means of producing food without depleting the earth's resources or polluting the environment. It works to mimic nature's self-sustaining processes by promoting biodiversity, recycling plant nutrients, protecting soil from erosion, conserving and protecting water, and integrating livestock with crop production. Farms that rely on sustainable practices tend to be of smaller scale and can be labeled by many different names; natural, organic, low input, perma-culture, holistic, and biological farms. The difference between them is in the practices and farming models that they follow, yet they all share the same goal of protecting and improving ecological health.

Conservation Buffers

Conservation buffers are vegetation strips that, when properly done, can provide a variety of natural services; they reduce erosion and polluted runoff, provide areas for habitat, increase soil productivity, protect areas from winds and flooding, and enhance the visual aesthetic of a property. These practices can be ineffective without an understanding of the natural process that is being addressed. The size, shape and structure of the buffer will determine how effectively it will perform. If interested in implementing a conservation buffer, contact the Marion SWCD or the NRCS for assistance in implementing conservation buffers.

No-Till

No-till is an emergent agricultural technique that does not disturb the soil to the extent of conventional tillage practices. No-till helps keep the soil intact, reducing soil erosion while helping the soil hold more water. No-till leaves residue cover on the field that would normally be tilled into the soil prior to seeding. The residue helps with reducing soil erosion, but requires regular monitoring for the presence of slugs and other pests. No-till does require more management throughout the year because of the increased monitoring and treatments needed to keep land pest free. No-till can be done with any seeded crop.

Preparation: First you should understand the soil's current condition. Does the soil need any amendments, or are there pest problems, like slugs or cutworms? Pest problems should be treated prior to beginning no-till. In most cases, if pests are present you should wait at least a year after exterminating pests to start no-till. Expect to have a slight loss in crop yield for the first couple of years while the soil is rebuilding itself. No-till farming should be done for multiple consecutive years to experience the full benefits of the practice.

Cover Crops

Cover crops are essential to preserving and maintaining healthy soils in the county. Cover crops help protect the soil from erosion, reduce soil nutrient leaching and provide additional nutrients to the soil by green manuring. Cover crops can be placed between crop rows, under fruit and other trees, and on un-vegetated land. Choose a cover crop that won't shade out cash crops, won't wrap around trees, grows well in the shade, and will crowd out weeds. Contact OSU Extension for information regarding cover crops that can help meet your farm goals.

Crop Rotation

Establishing a crop rotation may help with erosion, plant disease, and other problems that a mono-culture might intensify. Rotating crops can leave built-up bug populations without food or habitat; rotation disrupts their life cycle and reduces the need for chemical control. For vegetable production, it is recommended to wait three years before repeating a crop in the same plot. Crop rotation can be done for all scales of agriculture production. Take into consideration soil types, climate, and available water when deciding on a rotation crop. Implementing a crop rotation along with cover crops takes good planning and management.

Integrated Pest Management (IPM)

Integrated Pest Management is a strategy for pest management that utilizes both natural and chemical-based practices, though pesticides should be used only when natural management is ineffective. IPM utilizes the most effective and environmentally conscious practices for controlling pests on a farm. IPM uses information about the life cycle of pests and their interaction with the environment to develop a management strategy that is economical and least hazardous to the health of people, the land, animals, and the environment. These techniques can be used for non-agricultural uses as well.

There are currently a variety of online tools available to property owners for using local pest infestation forecasting. One of the best tools is the "IPM Pest and Plant Disease Models and Forecasting" website. (*see Additional Resources.*) Property owners can monitor possible pest infestations related to specific crops for scheduling pest management. Most farmers already implement a form of IPM; they can move farther along the continuum to more ecologically friendly pest management practices regionally through the use of advanced warning and scouting tools.

Additional Resources

NRCS: Conservation Buffers
www.bufferguidelines.net

IPM Pest and Plant Disease Models and Forecasting
uspest.org/wea/

OSU: Integrated Plant Protection Center
www.ipmnet.org/

6

SOIL

A handful of soil is filled with thousands if not millions of life forms working together to create nutrients, aerate the soil, and turn nitrogen from the air into a form that roots can absorb. Soil is a natural resource that is commonly overlooked because we see it everywhere, yet the kind of soil needed for food production is being lost rapidly across the country and the world. Urban development and land use changes are removing productive agricultural land from our soil base. Today, roughly 40% of the soils in Marion County are ideal for agriculture. The state has zoned these resources specifically for agricultural uses. Efforts to increase production, however are causing erosion.

Soil conservation starts with the property owner. If property owners understand how the soil works they can begin to improve it and more easily identify and correct problems. All rural property owners and agricultural producers should be aware of their role in protecting this vital resource.

SECTIONS

SOIL BASICS

Soil, the skin of Earth

Soil is a vital resource in the production of food, fiber, and many other necessities of life. Soil delivers water and nutrients to crops, physically supports plants, helps control pests, and protects the quality of drinking water, air, and wildlife habitat. Property owners who understand the basic facts about soil should be better prepared to identify and address issues on their property.

Importance of Soil

Soil is a medium for plant life and its quality is directly related to the success of that plant. The types of soil on your property have a huge influence on:

- Type and quantity of grass/crops/trees your land can support.
- Ability to absorb water, determing when and how much you will need to irrigate.
- Ability to construct buildings with foundations.
- Soil erosion and runoff.

The attributes that determine soil productivity are: *soil type, compaction, pH level, and nutrient levels*. Property owners who identify these characteristics for their soil will have a good understanding of what can be grown on their property and can determine if the soil needs any amendments. Many resources are available to help property owners identify their soil profile.

Soil Types

Soils consist of organic material, minerals and air space, and are classified into three basic types, or textures:

Clay Soils, fine-grained, nutrient rich, heavy, under-draining.

Sandy Soils, coarse-grained, light, easy to work, over-draining.

Silty Soils, fine but coarser grains than clay, high in nutrients.

Individually these three types may present some challenges for irrigation and workability. Loam, a combination of the three, is the ideal soil type. Clay is a common soil type in the county that doesn't drain or provide water to plants well. Adding compost or organic material to your soil is a good idea and will help improve drainage, prevent erosion, and balance the ph levels of most soils.

Soil Type Example: ***Abiqua <silty clay loam>, 3 to 5 % slope***

Soil Name ↑ *Soil Type* ↑ *Slope* ↑

Soil Tests

Soil testing can help property owners understand their soils' nutrient deficiencies, and identify soil characteristics that can be improved for a better growing environment. There are several ways you can test your soil to determine the physical properties and nutrient levels. These include: "Do it yourself" home tests, home commercial soil testing kits, and professional soil testing laboratories. The home commercial test can be purchased at a local gardening store for a relatively low cost (~$20) given the money one can save from fully understanding the irrigation and amendment needs of their soil.

The "do-it-yourself" methods can provide fairly good results if done correctly; soil type, compaction, ph, and biological health are the four characteristics of a soil that can be tested with these methods. *(see Additional Resources.)*

The NRCS or the OSU Extension office can assist property owners with collecting a soil sample and locating a testing lab.

Nutrient Management

Nutrient Management is used to manage the amount, source, placement, form and timing of the application of plant nutrients and soil amendments. The goal is to optimize crop yields and minimize non-point source pollution while maintaining or improving soil conditions. The most common soil nutrient amendments are: nitrogen (N), phosphorous (P), and potassium (K).

Nutrient Application should be done in response to a plant's uptake characteristics, while considering weather and climate conditions to minimize runoff.

- Apply nutrients uniformly
- No direct nutrient application in established buffer areas
- Don't apply to frozen, snow-covered or saturated soils
- Don't apply dry manure when there is potential for wind-driven loss
- Delay application if precipitation is forecasted within 24 hours of the time of application.
- Avoid applying upwind of occupied structures.

For more information contact OSU Extension or the local NRCS office.

Additional Resources

Soil Testing: OSU Extensions Small Farms
smallfarms.oregonstate.edu/soil-testing

"Do it Yourself" Soil Tests
organicgardening.about.com/od/soil/a/easysoiltests.htm

Web Soil Survey
websoilsurvey.nrcs.usda.gov/app/

SOIL MANAGEMENT

Keep it on the land

Practicing good soil management can help limit the amount of soil that leaves a piece of property and increase the soil's biology. Property owners can reduce the amount of sediment that leaves their property through consistent land monitoring and implementing conservation practices. Soil nutrient depletion, loss of healthy soil characteristics, reduced soil productivity, and water pollution are just some of the consequences of improper soil management.

Soil Erosion

Soil erosion and its impacts are some of the most important but poorly understood environmental concerns we face. Soil erosion can be caused by:

- Water
- Wind
- Tillage Practices
- Development
- Agricultural practices

Soil erosion is a consequence of over-grazing or leaving land bare, combined with damaging rains and winds. Stream banks are highly susceptible to soil erosion when left bare because of the constant force of the waterway. Removal of riparian plants can cause large amounts of land to be washed away. Maintaining vegetation or residue on the land year-round is the best strategy against excessive soil erosion. "No-till" is another land management strategy that can greatly reduce the amount of soil that leaves your land.

Soil Compaction

Soil compaction is a change in the soil structure and not just an increase in soil density. This causes the soil to have smaller pores, limiting its ability to absorb water, and decreasing crop yields.

Compaction is primarily caused by wheel and animal traffic. The size, weight, and frequency of traffic directly relates to the speed and level of compaction that is occurring.

There are different types of compaction, each with different causes and treatments.

The types are:

- Surface Crusting
- Surface Compaction
- Deep Compaction
- Plow Pan

Wet soil is the most susceptible to soil compaction, so limiting heavy machinery operations during these times is ideal but can also be a tough decision. If soil compaction is causing you problems, contact the NRCS or an agronomist.

Practices to improve Soil Performance

Add organic material

Regularly adding organic material helps enhance soil quality, soil structure, water and nutrient holding capacity, and helps protect the soil from erosion and compaction.

Avoid excessive tillage practices

Tillage is a necessary practice for preparing fields, but unfortunately it makes soil more susceptible to erosion, causes compaction, and can alter the productivity of the soil. By reducing tillage practices you can minimize these problems, diminish the loss of organic material and increase the amount of residue on the land.

Cover the soil

Bare soil is much more susceptible to erosion than land that has crop or residue cover. Many farmers leave the residue on their land between growing seasons for the purpose of reducing erosion. In addition, cover crops, once decomposed, can add important nutrients and organic material to the soil. Ground cover needs to be managed for diseases, pests, and phosphorus build-up.

Reduce Chemical Use

The use of fertilizers and chemicals for pest management can greatly impair a soil's healthy biology. Chemicals can harm naturally-occurring organisms crucial to its fertility and structure. Utilizing primarily non-chemical approaches to land management and only appling chemicals as a last resort can help increase the natural biology of the soil.

Increase Crop Diversity

Different crops provide unique beneficial factors to the soil. These factors help control pests and weeds naturally due to the diversity of organisms in the soil. By rotating vegetation or crops and increasing the diversity, you can increase the types of insects, microorganisms, and wildlife that are present on your land.

Soil Monitoring

Day-to-day observation and the development of a soil management plan will assist property owners in identifying changes to their soil and its productivity. Periodic soil tests can assist with identifying necessary soil amendments.

Soil Biology

Soil biology is one aspect of soil that is commonly overlooked but is important to the soil's fertility. Diverse and balanced soil biology creates a high-quality soil. Soil is an ecosystem where thousands of different creatures interact and contribute to the overall health of the soil. One simple indicator of healthy soil biology is the presence of earthworms and nematodes, the more the merrier. Soils that have a healthy biology are much more resilient to extreme environmental conditions and severe disturbances. Those soils can also produce healthier plants that are more resistant to disease. Many land management choices, like spraying and tilling, if done improperly, will disturb and damage the soil's biology.

Soil Management Plan

Conducting a visual site analysis and documenting problem areas and changes to the land over time could greatly benefit any grower.

The Plan

- Base Map of the property with a soil inventory. Provide a means for recordkeeping on the map.
- Inventory of soil issues on the property.
- Land management practices that can resolve the soil issues.
- Goals that the property owner wants to accomplish.
- A list of resources.

Composting

Composting is the process of turning plant remains and other once-living material into fertilizer and organic matter that is ideal as a natural soil amendment. There are multiple containers and methods for composting, all of which share primarily the same process. The main difference is in the amount of time it takes for the material to fully compost. Composting helps reduce household trash production while providing a valuable resource that can help increase crop yields. If you want to start composting at home, there is no better time to start. There are many online and local resources available to residents. *(see Additional Resources.)*

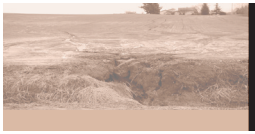
Additional Resources

The Soil Management Series
www.extension.umn.edu/distribution/cropsystems/DC7398.html

USDA: Oregon Natural Resources Conservation Service
www.or.nrcs.usda.gov/

Soil Data Mart
soildatamart.nrcs.usda.gov

OSU Extensions: Soil and Compost
www.extension.org/pages/Soils_and_Composting



WEB SOIL SURVEY

Data you could use

The web soil survey provides property owners with up-to-date soil information used for making land-use and management decisions on their property. Forestland in eastern Marion County is excluded from the Web Soil Survey. The tools' interface can be a bit overwhelming at first, so here are the steps to obtain soil information for your property.

STEP 1

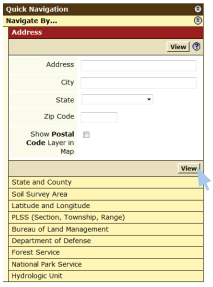
Go to their website: *websoilsurvey.nrcs.usda.gov*

STEP 2

Click the "Start WSS" button located at the top of the page.

STEP 3

Define your "Area Of Interest" (AOI)

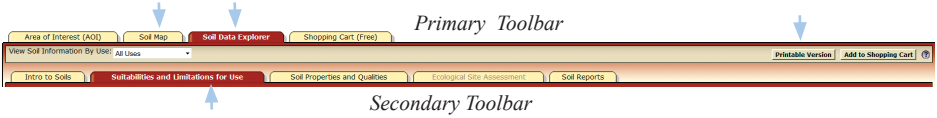


- Using the toolbar to the left, you can specify an area of interest with an address, state, county or other geographic characteristics. Once entered hit the "View" button and the map should automatically zoom to the area entered.
- You will then need to define the area where you want to acquire soil data. Use the zoom and "AOI" tools to define this area. "AOI" tools allow users to draw a rectangle or irregular shape to define the area.

STEP 4

View Soil Data and Explore Soil Information

- Once you have defined an area of interest you will then use the primary toolbar (pictured below) to access and print information related to your area of interest.



- Clicking on the "Soil Data Explorer" button will bring up a secondary toolbar that can generate thematic maps on the chemical and physical properties of a soil. Once you have chosen an attribute from the sidebar (not shown), click "View Rating" to generate a thematic map and an information table.

Play around and see what else the WSS can offer.

7

FORESTRY

Forests provide significant environmental, social, and economic benefits, in addition to the direct benefits of jobs and wood products. They enhance air and water quality, provide habitat for fish and wildlife, and offer varied recreational opportunities. In Oregon 35 percent of all forest land is privately owned and contributes about 80 percent of the state's timber harvest.

The majority of the county's forestlands are located in eastern Marion County in the Willamette National Forest. The most common commercial tree species in the county are mixed-conifer, primarily Douglas fir. With proper management our forest resources can produce harvestable timber far into the future. It is this goal that drives sustainable forest management practices and reflects one of the many amazing and vital characteristics of our forests.

SECTIONS

SMALL WOODLAND MGMT.

It starts from the roots up

Forest management is a challenge because it involves more than just trees. Good management requires the consideration of every aspect of the forest habitat – including shrubs, herbs, grasses, fungi, insects and wildlife. Active woodland management can help protect your home from wildfires and the forest from unwanted pests and diseases.

Oregon's Forest Practices Act

The Forest Practices Act was implemented in 1971, the first act of its kind in the nation. It outlines management practices that foresters must consider when planning timber harvests on state or private lands. The act regulates written plans, reforestation, clear-cutting, road construction and maintenance, and the protection of water resources and wildlife habitat. Forest regulations and practices are updated regularly based on scientific research, so stay informed.

Notification of Operation/Application for Permit

A Notification of Operation/Application for Permit is required when conducting any activity related to growing or harvesting forested tree species including spraying, road construction, and use of machinery. You must file an application if you intend to sell or barter trees that you cut or if your activities are related to forestry production for profit. The application must be filed with the Oregon Department of Forestry (ODF) 15 days prior to starting work. The application is then electronically sent to the Department of Revenue by ODF for tax purposes.

Application to Operate Power-Driven Machinery: This permit is encouraged if you are working within 1/8 mile of, or in a forest protection district, even if the forestry practices being conducted are not related to for-profit forestry. This permit reduces an individual's liability when doing any type of work with power-driven machinery in these areas. If this application is not filed and you cause a forest fire, you are 100 percent liable for all damages.

"It takes roughly 4 years after planting, for a tree to be able to grow on its own."

Forest Management Plan

If you plan on engaging in forestry, you should first develop a management plan. A current forest management plan can help you qualify for grants and conservation programs through ODF and other agencies. ODF can provide assistance in developing a plan. Private consultants are another option to landowners for developing a plan. They can also assist you in marketing logs, or overseeing a logging operation. Professional assistance can help save you money and minimize mistakes.

Hiring a Forester

When having work done on your property it is very important to know who you are hiring before they come onto your property with a chain saw. Landowners should ask for credentials and references from the logger, and ask to see some past work prior to having any work done. The Association of Oregon Loggers (AOL) provides a list of certified loggers. There are many forestry operations that can cause damage and expose you to liability.

Cooper's Hawk

OSU Oregon State University Extension Service

OSU: Ties to the Land
www.tiestotheland.org/

Succession Plan

Developing a property succession plan will aid in the process of passing woodland property to the next generation. Without a plan, the new landowner will be obligated to pay the federal inheritance tax that is roughly 50 percent of the appraised property value. This can put great pressure on the family to sell the land to a developer or harvest the wood resource to pay the tax. "Ties to the Land" is an organization that works to educate families on planning for property succession.

Re - Planting

After trees have been harvested from a site the landowner is required to replant within two years. Once the trees are planted it is up to the landowner to maintain those trees for the next four years. After four years a tree is considered "free to grow" on its own. When buying property that appears to have been harvested without any new planting, check with ODF for the current status of the site.

Additional Resources

Oregon Department of Forestry
egov.oregon.gov/ODF/

Oregon Forest Resources Institute
www.oregonforests.org

Oregon Forest Practices Act
www.oregon.gov/ODF/privateforests/fpaKeys.shtml

Oregon Association of Loggers
www.oregonloggers.org

A HEALTHY FOREST

A priceless commodity

A healthy forest has trees that are resistant to disease, insect infestation and animal damage. There should be a diverse mix of plant species in the forest, with healthy vegetation at all levels of the vertical area, with trees being spaced far enough apart to minimize nutrient competition between them.

Tree Diversity

By maintaining a diversity of trees appropriate to the site, you will encourage the overall health of the forest. Tree species should be selected based on soil and climatic conditions. Soil information can be found on the Web Soil Survey. (*see Soil section.*)

New trees require protection from competing vegetation to help improve their survival rate. In addition to species diversity, forests should also have trees of various ages.

Thinning

Thinning is the process of removing trees to improve your forest's growth, health and vigor. Thinning creates more light, water and nutrients for the remaining trees. It reduces the loss of trees due to pathogens, increases resistance to wildfire, drought, and insect infestation. Thinning also offers an opportunity to encourage species diversity.

Stewardship Foresters : ODF

They provide services encouraging and supporting landowners in improving forest health, fish and wildlife habitat, soil and water quality, recreation opportunities and aesthetics of private forests through information, technical assistance, financial incentives and regulation.

Diseases and Pests

Depending on the health of your forest, it could be susceptible to disease and pests. Being able to identify problems in the forest is important for treatment because most problems require different treatments. Root disease, beetles, and sudden oak death are some of the most common issues in this region that can spread to neighboring trees and destroy a stand. If you think that your forest is diseased, contact a local forester or ODF for assistance in identifying the problem and taking the proper actions for eradication.

Douglas-fir Beetle

FIRE PREVENTION

Even an ember can start a fire

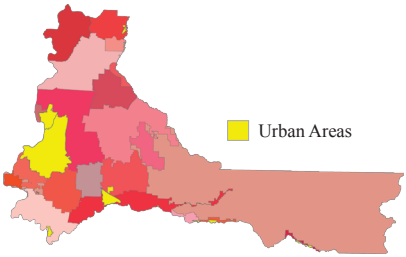
Research has shown that reducing fuel sources around a structure can greatly increase the chance of it surviving a wildfire. Fire needs three elements to occur; fuel, oxygen and heat. Remove anyone of them and the fire will die out. Fuel is defined as anything that can burn. Landowners should systematically arrange trees and shrubs in a way that makes it difficult for fire to spread on your property. Many fires start from a single ember that lands on a fire fuel source. Fires should be covered and never left unattended.

Importance of Fire

Fire is mostly seen as a destructive undesirable occurrence, but it is actually a necessary part of a healthy forest's ecosystem. Fire helps remove unwanted invasive species, parasites, diseases and insects, while the remaining ash provides needed nutrients to the soil. Fire also helps reduce the amount of fuel in the forest resulting in smaller, less severe wildfires. Some trees require the high temperature of fire to open their cones for seed dispersal and reproduction.

Fire Districts

If you live outside of the Salem/Keizer urban growth boundary, there is a good chance that you rely upon a volunteer-based fire district for your fire needs. The fire districts and ODF work cooperatively to enforce fire laws and respond to fires in Marion County. Marion County also has ambulance districts that function in the same manner as fire districts.



Map 1: Shows all of the different fire districts in Marion county, each denoted by a red hue.

"All outdoor burning is prohibited during the fire season."

Fire Season

Fire Season is normally June - October, depending on the weather. During this time ALL outdoor burning is prohibited.

Call for up-to-date burning conditions

Santiam Canyon | 503.769.3400 ***Silverton Area*** | 503.873.3138

Home and Property Fire Prevention

A fire break is a gap in vegetation or other combustible material that works to stop or slow the progress of a brush or wildfire. Rivers, lakes, canyons, roads or gravel trails are examples of both natural and man-made fire breaks.

Developing a yearly schedule can help speed up implementing and maintainin fire prevention measures on your property.

- To create a firebreak, remove combustible vegetation from 30 feet around the house, a 100-foot buffer is ideal.Short green lawn is OK.
- Prune tree branches to at least 10 feet above the ground.
- Keep limbs at least 15 feet away from the roof and chimney.
- Clear roofs and gutters of debris.
- Have a shovel, rake, axe, saw, bucket, roof ladder and hose ready for use during the fire season.
- Replace flammable building materials and vegetation with more fire-resistant ones.
- When burning, have a good water source near by.

Evacuation

Prepare an evacuation strategy with two different paths from your property. Create a portable supply kit filled with the essentials: food, water, tools, and appropriate clothing. If you have a gas or propane tank on site, shut them off prior to evacuation. It is also a good idea to shut off the electricity at the circuit breaker box starting with individual breakers before pulling the main breaker. Gas lines should also be shut off at the meter as well as tanks. Most importantly, follow the instructions of your local fire or police officials during a fire event.

Additional Resources

Marion County: Community Wildfire Protection Plan
www.co.marion.or.us/NR/rdonlyres/E3E3CF51-7A28-4B9A-B62D-0869E5E07F66/10785/FinalforMarionCountyCWPP010209.pdf

ODF: FireWIse Communties
www.firewise.org

BACKYARD BURNING

Don't burn garbage

Backyard burning is allowed in rural Marion County, with certain limitation. Garbage burning is prohibited. Garbage must be properly disposed of curbside or at a local transfer station. If not done properly, backyard burning can cause public and environmental harm and could result in a fine. Residents are encouraged to use proper containment and control measures when conducting backyard burning. The Oregon Department of Forestry and local fire districts are the entities which enforce these laws.

What you can Burn

Rural Marion County residents outside of the restricted burn area are allowed to burn with permision from the local fire district:

- Yard Debris
- Clean and Untreated Wood
- Paper and Cardboard
- Woody Debris

Residents who live outside of the restricted burn area must get permission from their local fire department before burning. Burning during the fire season is prohibited.

Restricted Burn Area

Marion County has designated areas directly outside of urban areas as special control areas for burning. Within these areas residents are only allowed to burn ***YARD DEBRIS*** on designated "Burn Days". Burn Days historically occur in the Spring (March - June) and during the Fall (October - December). Burning on days not classified as a Burn Day, is subject to a fine. Contact your local fire distrcit to find out when these days occur.

Restricted Areas

- Within 3 miles of the city limits of an urban area with a population between 1,000 - 45,000.
- Within 6 miles of the city limits of an urban area with a population of 45,000 +.

Additional Resources

Marion County: Backyard Burning Information
www.co.marion.or.us/PW/ES/disposal/backyard.htm

Marion County: Environmental Services
www.co.marion.or.us/PW/ES/

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GETTING INVOLVED

Marion County offers many opportunities for its citizens to get involved. But these opportunities can be difficult to find if you do not know where to look. Both Marion County and its residents benefit when citizens participate and have their voices heard. Grant programs, policy meetings, social groups and sustainable partnerships are some of the forums and resources that benefit from increased citizen participation.

These opportunities also allow residents to meet new people and discover new aspect of Marion County. Residents can pass this new-found knowledge on, spreading awareness through personal stewardship. Make sure your voice is being heard and that you are not missing out on any of the resources available to you.

SECTIONS

LOCAL GROUPS

Have your voice heard

Mahatma Gandhi said, "Be the change you want to see in the world." This mantra requires citizens to be proactive in creating a world which they envision to be ideal. Marion County provides one of the best opportunities because it houses the state capital. Many of the government and non-profit organizations in the state have their offices in Salem and hold regular public meetings and work groups. These opportunities provide the citizens of Marion County with the power to influence change in their community and to meet like-minded people. The following list of groups and organizations focuses on the agricultural and natural resource communities, but there are many groups not listed here that are equally important to both the county and its residents.

Oregon Farm Bureau (OFB)

The Oregon Farm Bureau is a voluntary, grassroots, non-profit organization representing the interests of the state's farmers and ranchers in the public and policy-making arenas. It is the state's largest general farm organization with about 54,000 members; 8,900 are professionally engaged in agriculture. Becoming a member of the OFB requires annual dues of varing cost depending on the county where you live.

Contact Information	3415 Commercial St. SE Salem, OR 97302	503.399.1701 800.334.6323 (toll free) *www.oregonfb.org*

Oregon Women of Agriculture (OWA)

The Oregon Women of Agriculture is an all-volunteer group that focuses on nearly all facets of agriculture. Membership requires an annual fee and provides members with pertinent information related to agricultural production and an open forum to discuss, use, and develop ideas and skills.

Contact Information	630 NW Hickory Street Suite 120 Albany, OR 97321 info@owaonline.com	503.243.3276 *www.owaonline.org*

Local Work Groups

SWCD - The Marion SWCD has monthly board and committee meetings open to the public. Citizens may become active board members if they meet certain requirements and win in a public election. The dates and times of the Marion SWCD meetings can be found on the Marion SWCD's website.

NRCS - The NRCS holds its work group meetings twice a year with local stakeholders to discuss natural resource concerns in the county. This information is used by the NRCS to develop priorities for their long term strategic plan. Contact Les Bachelor (503.399.5741), if interested in participating in the work group.

FSA - FSA holds its meetings once a month to discuss with its constituents their programs and the policies that dictate their process. For more information about the meetings contact Martin Nguyen (503.399.5741), Executive Director.

All of these meetings are held at the USDA Service Center; 650 Hawthorne Ave, SE, Suite 130, Salem, Oregon, 503.399.5741. Be aware that there are other opportunities throughout the county for the public to work with government and policy-making agencies. If interested in a certain issue or aspect of government contact the regulatory or administering agency to see if they have any work groups available.

Watershed Councils

Watershed councils allow the public to get involved in protecting and restoring a watershed. These groups are independent and volunteer based. Here is a list of watershed councils in Marion County:

Claggett Creek Watershed Council

Mill Creek Watershed Council

North Santiam Watershed Council

Pringle Creek Watershed Council

Pudding River Waterhsed Council

Mid-Willamette Watershed Alliance

More information about the watershed councils can be found at the Network of Oregon Watershed Councils website: **oregonwatersheds.org/oregoncouncils/willamette-map**

Local Grange

The Local Grange helps promote sustainable local economies and communities; they believe local farmers, food producers and their support networks are critical to that goal. The Grange both creates and partners programs to enhance their capacity. The Grange provides opportunities to its members for local engagement, addressing local issues through solution development, and learning leadership skills. Membership does require a fee, with fees varying between granges; so check with your local grange. To find your local Grange visit: .

4-H

4 -H is a non-formal, community focused, experiential education program for today's youth. The program combines the cooperative efforts of youth and adult volunteers with community and Extension resources. The mission of the 4-H program is to help young people build competence, confidence, connection, compassion and character as they learn and grow. If interested in getting involved in 4 - H as a participant or volunteer visit their website:

extension.oregonstate.edu/marion/4h

Oregon FFA

The Oregon FFA is a program for students that develops their potential for premier leadership, personal growth, and career success. FFA encourages the practical and applied study of math, science, english, social science, and leadership using agriculture education. To join the FFA you must be enrolled in an Ag Science Education Course in your local school. Contact your school's counselor or Ag Science instructor to enroll in Ag Ed and join the FFA.

Local Industry or Commodity Groups

A number of groups focus on a specific agricultural commodity or industry. These groups come together to discuss market issues, local pest problems and possible new practices that can assist growers in being more successful. In addition, they work to establish policies that better support a thriving business model, while protecting the environment. Here is a short list of currently active groups:

Oregon Wheat Growers League.

Oregon Cattlemen's Association.

Oregon Sheep Growers Association.

Oregon Association of Nurseries.

For a robust list of associations visit: *www.aglink.org/industrynews/agresources.php*

Local Extension Agent

Your local extension agent offers objective, research-based information to help Marion County youth and adults solve problems, develop life skills, and manage resources wisely. Their agents can assist in answering questions by telephone, in person and by e-mail relating to natural resource concerns, crop/land appropriateness, and current agricultural marketing trends. They also coordinate information tours, conferences, short courses, workshops, and demonstrations.

Oregon State University Extension Service, Marion County
3180 Center Street NE, Room 1361
Salem Oregon 97301
Ph. 503.588.5301
Web. *extension.oregonstate.edu/marion*

LOCAL EVENTS

Support local events

Throughout the year Marion County celebrates and brings attention to the culture and agricultural values of the region and the state. These events help bring the community together to showcase the resources produced here and the people who make this region special. Come and help support the local economy by buying local products from local producers; help keep our dollars here while increasing the capacity of local businesses.

Farmers Markets

Salem Saturday Market
Green Parking Lot
Corner of Summer and Marion Street
May - October

Salem Public Market
1240 Rural Avenue, SE
Year-Round, every Saturday

Salem Wednesday Market
Chemeketa Street NE
(between High and Liberty St.)
May - October

Stayton Farmers Market
400 West Virginia Street
Year-Around, every Monday

Silverton Farmers Market
S. Water St. & Division St. NE
Year-Around, every Tuesday

Native Plant Sale

The Marion SWCD holds a Native Plant sale each year, with all of the proceeds going to fund two scholarships. At the sale you can purchase a large variety of native plants at a relatively low price. The sale is ussually held in March so check with the Marion SWCD for the exact time and place of the sale and for a list of plants that will be available. Volunteers are needed.

Ag Fest

Ag Fest occurs annually on the last weekend of April. This is where you can touch, taste and experience life on the farm. In addition you can learn where our food and fiber come from, how livestock is raised, the importance of forests for our ecology and survival, plus much more.

Ag Fest
Oregon State Fairgrounds
Salem, Oregon
Last weekend of April
Saturday - Sunday

Earth Day

Each year the Oregon Garden holds a free Earth Day event to celebrate our wonderful planet. Come and learn about reducing your ecological footprint. Talk with local groups and people who are trying to make the county and the world a better place for current and future generations. Check with the Oregon Garden on the specific day and time of the event.

Earth Day
Oregon Garden
879 W Main ST
Silverton, Oregon
503.874.8100

CONSERVATION PROGRAMS

It pays to be aware

Many of the grant programs available to property owners can assist them in implementing conservation practices on their property. Programs have specific requirements on the practices that they will support in addition to caps on the amount of dollars that are available. Some programs require property owners to provide an in-kind or cash match. The following is a partial list of programs available to property owners so check with other federal and state agencies to see what types of programs they provide. If you have questions or would like to apply for one of the following programs contact the program's administrator.

MARION SWCD

Property owner Assistance Program (LAP)

Helps fund projects that work to solve specific natural resource issues (such as erosion, weed control, overgrazing). Property owners who have gone through the conservation planning process with Marion SWCD are encouraged to apply.

Eligibility: Preference will be given to small acreage property owners who have difficulty finding financial assistance through other state and federal programs. Property owner projects must also be compatible with the goals of the local Agricultural Water Quality Management Area Plan.

Max. Amount Awarded	**$5,000**
Property owner's Contribution	**50% in-kind & cash match**
Length of Contract	**1 year (June project deadline)**
Application Deadline	**May**

Special Project Grant Program (SPG)

The SPG program seeks those cutting-edge conservation practices currently under represented in Marion County. These projects will serve as models for others to follow. Funded projects will offer the potential to work towards solving local area resource concerns.

Max. Amount Awarded	**$5,000**
Property owner's Contribution	**50% in-kind match**
Length of Contract	**1 year (June project deadline)**
Application Deadline	**July - February**

Oregon Watershed Enhancement Board Small Grants (OWEB)

OWEB funds projects designed to improve water quality, water quantity, and fish and wildlife habitat. This program funds on-the-ground watershed restoration and enhancement projects on forest, agricultural, range, urban, and rural residential lands.

Eligibility: Any person, tribe, watershed council, soil and water conservation district, community college, state institution of higher education, independent not-for-profit institution of higher education, or political subdivision of the state that is not a state agency, applying through a recognized local Watershed Council or Soil and Water Conservation District.

USDA Conservation Programs

The following programs are all administered by the USDA. In order to be eligible for these programs property owners and producers must meet both the program requirements and producer requirements. Producers must meet the USDA's average adjusted gross income requirement, and depending on the ground conditions, such as having highly erodible soils, they may need to meet additional requirements for eligibility.

Natural Resources Conservation Service

Environmental Quality Incentives Program (EQIP)

Property owners develop a farm plan to install erosion control, water conservation, and wildlife habitat improvement measures such as manure compost storage, fencing, hose pumps, cover crops, no-till practices, tree planting, wildlife habitat, and other practices.

Eligibility: Property owners with conservation plans that rank high in water quality improvement, water conservation, and erosion control.

Conservation Stewardship Program (CStP)

CStP is a voluntary conservation program that provides property owners with financial and technical assistance to conserve and enhance soil, water, air, and related natural resources on their land. CStP provides opportunities to recognize excellent stewards and deliver valuable new conservation practices.

Eligibility: CStP is available on tribal and private agricultural lands, as well as nonindustrial private forests. The program provides equitable access to all producers, regardless of operation size, crops produced, or geographic location. Eligible lands include cropland, grassland, prairie land, improved pasture land, rangeland, nonindustrial private forest land, and agricultural land under the jurisdiction of an Indian tribe.

Wetland Reserve Program (WRP)

WRP funds projects that restore wetlands, flooded areas, and adjacent upland areas for fish and wildlife.

Eligibility: Property owners must prove ownership and land must be suitable for restoring wetlands that are valuable for wildlife.

Wildlife Habitat Incentives Program (WHIP)

Property owners develop a farm plan that installs wildlife habitat measures such as planting native trees, shrubs, and grasses, creating snags, fencing off natural areas, and installing bat boxes, snake hibernating mounds, and raptor perches. Property owners must pay the up-front costs of the conservation project and once completed, the property owner will be reimbursed 50 to 75 percent of the projects cost.

Eligibility: Property owners, tribes, and local and state agencies that own or have control over land. Property owners are encouraged to partner with other agencies or groups to help offset costs.

Farm Service Agency (FSA)

Conservation Reserve Enhancement Program (CREP)

CREP provides funding to eligible property owners through cost-share assistance for the installation of conservation covers such as filter strips and forested buffers. These conservation practices help protect streams, lakes, and rivers from sedimentation and agricultural runoff. CREP also helps property owners develop and restore wetlands through the planting of appropriate ground cover.

Eligibility: Generally, property owners with cropland or pasture land that borders streams under a water quality management program or a historic wetland.

Conservation Loans

The FSA provides loans to eligible property owners who want to implement conservation practices on their property.

Eligibility: Activities must be listed on a NRCS-approved conservation plan.

Other Agencies with Conservation Programs

Oregon Department of Fish and Wildlife

Programs: Habitat Resources Program
Wildlife Habitat Program

Oregon Department of Forestry

Programs: Forest Stewardship Program
Reforestation Tax Credit
National Fire Plan

Definitions

Culling: The process of removing animals from a group based on specific criteria. This is done to reinforce certain criteria and to remove certain undesirable charaterstics from a group.

Evapo-transpiration: Is used to describe the sum of evaporation and plant trapnspiration from the Earth's land surface into the atmosphere.

Field Border: A border of vegetation around a field or property area.

Forage: Plant material eaten by livestock.

Grade: Used to denote the surface of earth. It also refers to the amount of incline of a surface.

Green Manure: A cover crop that is grown primarily to add nutirents and organic matter to the soil. Is typically grown for a specific period of time then plowed into the soil.

Ground Water: Water located beneath the ground surface. Is normally extratced through the use of wells.

Hedgerow: A line of closely spaced shrubs or trees that form a barrier or mark the boundary of an area.

High Water Mark: The highest level reached by a body of water that has been maintained for a sufficient period of time to leave evidence on the landscape.

Invasive: "Non-native" or "native" plants or animals that adversely affect the habitats and bioregions they invade economically, environmentally, and/or ecologically.

Leachate: Any liquid material that drains from land or stockpiled material and contains significantly elevated concentrations of undesirable material derived from the material that it has passed through.

Easement: A right to use, for a specified purpose, a particular piece of land owned by another.

Definitions

No-Till: A way of growing crops from year to year without disturbing the soil through tillage.

Noxious: An invasive species of a plant that has been designated by county, state or provincial, or national agricultural authorities as one that is injurious to agricultural and/or horticultural crops, natural habitats and/or ecosystems, and/or humans or livestock.

Paddocks: A fenced pasture subdivision.

Prove-Up: This is the process of developing a water system and then using water based on the specifications of your water right.

Public Right-of-Way A strip of land that is granted, through an easement or other mechanism, for transportation purposes, such as for a trail, driveway, rail line or highway.

Riparian Areas: A type of habitat occurring along the bank of a water course or other water body typically consisting of water tolerant trees and shrubs. Many riparian areas occur as bands of vegetation along a water course, often called riparian corridors.

Sacrifice Area: It is a relatively flat outdoor area on which no grass is expected to grow and provides an alternative holding area for animals to the pasture.

Wetland: Lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface.

Contact List

Marion SWCD

Salem, 650 Hawthorne SE Suite 130 503.391.9927

Fire Districts

In case of emergency dial 911

Aumsville Fire District	503.749.2894
Aurora Fire District	503.678.5966
Idahna-Detroit Fire District	503.854.3494
Gates Fire District	503.897.2929
Hubbard Fire District	503.981.9454
Jefferson Fire District	541.327.8222
Keizer Fire District	503.390.9111
Mt. Angel Fire District	503.845.2438
Marion County Fire District No. 1	503.588.6526
Crakes Crossing Fire District	503.873.6868
Silverton Fire District	503.873.5328
Stayton Fire District	503.769.2601
Sublimity Fire District	503.769.3282
Turner Fire District	503.743.2190
Woodburn Fire District	503.982.2360

Marion County Government

Assessor	503.588.5144
Business Services	503.589.3295
Building Inspection	503.588.5147
Dog Control- Licensing	503.588.5233
Dog Control - Complaint	503.588.5366
Environmental Services/Solid Waste	503.588.5169
Health Department	503.588.5357
Planning & Zoning	503.566.4116
Public Works/Roads	503.588.5304
Sheriff	503.588.5094
Weed District	503.365.3149

Contact List

Federal Agencies

Bureau of Land Management	503.375.5646
Farm Service Agency	503.399.5741
Natural Resources Conservation Service	593.399.5741
U.S. Fish and Wildlife	1.800.344.9453
Wildlife Services	503.326.2346
U.S. Forestry Department	503.854.3366

Oregon State University Extension Office

Marion County - Salem	503.588.5301
North Willamette Resource and Extension Center	503.678.1264
Polk County - Dallas	503.623.8395

Oregon State Agencies

Department of Agriculture	503.986.4550
Department of Environmental Quality	1.800.452.4011
Department of Fish and Wildlife	503.947.6002
Department of Forestry	503.945.7200
Department of Land Conservation and Development	503.378.5518
ODA: Natural Resource Division	503.986.4700
Water Resources Department	503.986.0900
Oregon Watershed Enhancement Boards	503.986.0178

Other

Marion County Historic Society	503.986.4550
Marion-Polk Food Share	503.581.3855
Mid-Willamette Valley Council of Governments	503.588.6177

Resources used in the development of this document:

Other Rural Living Handbooks: Jackson County, Hood River County, Polk County, Deschutes County, and Clackamas County

Complete Idiot's Guide to Country Living by Kimberly Willis

Soil and Water Conservation by Frederick R. Troeh, J. Hobbs

On Land and Water Management for Small Acreages in Oregon by USDA

Farming Sourcebook: 2007 by OSU Extensions and Washington State Univeristy Extensions

OSU Extensions Publications

OSU Small Farms Publications

Natural Resources Conservation Service Publications

Iowa State University Extensions Publications

Oregon Department of Forestry Publications

Marion County Government Publications

Oregon Water Resources Department Publications

Water District Publications

Pacific Historical Review vol. 64 no. 3; The Environment and Settler Society in Wetern Oregon

The History of Oregon's Old Believer Community by Paul J. Wigowsky

In addition, the author attended many workshops related to natural resource conservation and held multiple interviews with government staff directly related to a specific topic. The links within the document also provided information that was used to create this document.

Photographs coutesy of:

Marion SWCD Staff
Dave Budeau
Library of Congress
Wikipedia
Ducks Unlimited Canada
Tulane University
Adopt a Stream Foundation
Oregon Departmnet of Agriculture
Discovery: How it works
US Climate Data
Fairfax County Virgina
Alayne Blickle
Sequim Gazette

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This handbook is an attempt to offer accurate and complete information as of the date of publication. Licenses and/or permits may be required for surveying, engineering, real estate, pesticide application and other land-use practices; always check with your local city/county/state authorities to determine license and permitting requirements. Due to constantly changing law and regulations this handbook does not relieve any responsibility of the users to know and comply with the most current laws and regulations.

This document can also be found online at:
www.marionswcd.net

"Conservation through Education"

Support your local Conservation District

Marion Soil and Water Conservation District
650 Hawthorne Ave SE Suite 130
Salem Oregon 97301

1971-2017
40 Years of Conservation
Marion Soil and Water Conservation District