

Fact Sheet

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Before You Buy: Wells, Septic Systems, and a Healthy Homesite

Tips for Small Acreages in Oregon

To Buy or Not to Buy

The ideal country home provides fresh air, productive soils, and clean water. Many people look for homes based on location, view, and house style. Rural home seekers must do more. In the absence of city utilities, buyers must choose a property that can provide the basic needs: drinking water, sewage treatment, and other considerations.

Soil Survey Savvy

A **soil survey** is a good place to start in choosing the right property. You can use a soil survey to find out whether land has the right soils for **house foundations, septic systems, crops, or wildlife ponds**. Soil surveys are only accurate to a 5-acre area, so it's important to get a professional to conduct an **on-site investigation** for building and septic system suitability.

You can do a **preliminary investigation**, just by looking at **soil color**. Dig a hole and look at each soil layer. Bright brown, red, and yellow colors indicate **well-drained soils** that may be suitable for septic systems or building sites. Gray soils or gray soils with mottled "rust spots" indicate **poorly drained soils** that may be good for ponds. Gray or mottled soils may be dry during the summer, but are often saturated during the winter. Vegetation may also indicate soil drainage.

Assessing Steep Slopes

A soil survey has information on **land slope** and its suitability for buildings and septic systems. Avoid building on steep slopes. Building and placing fill at the top of a slope, making road cuts, removing vegetation, and changing water drainage may cause **erosion** or **landslides** on steep slopes. If you see **"J-shaped" trunks** on trees on a site, beware. This indicates that trees are slowly adjusting to a slumping slope. Look elsewhere for a stable home site.

Floodplains and Wetlands

Floodplains provide "relief valves" that reduce flood damage. Wetlands filter pollutants, provide wildlife habitat, and recharge groundwater. So it's not surprising that these valuable areas are protected from most building activities. In many situations you will not be able to drain or fill a wetland or build in the floodplain. Look for the location of wetlands on a **National Wetlands Resource Inventory Map** published by the U.S. Fish and Wildlife Service. Floodplain locations may be found on a **Federal Emergency Management Agency (FEMA) Floodplain Map**. Cost-share funds and tax benefits are available to enhance wetlands and streamside areas for wildlife habitat. Maps and funding information are available at your local soil and water conservation district and USDA Natural Resources Conservation Service office.

The Right to Farm

It's peaceful and quiet in the country. That is, until your neighbor fires up the tractor and needs to harvest at night. You may live next to farmers whose livelihoods depend on growing crops and livestock. Don't be surprised if farm activities bring noise, chemical sprays, dust, and odors. Use this as an opportunity to understand what it takes to produce food and fiber. Many counties have "right to farm" laws that protect the farmer's right to use normal farming activities.

"Your best place (to live) is one that suits your clothes, encourages your lifestyle, and makes you smile a lot."

- Gene GeRue, *How to Find Your Ideal Country Home*

Construction limitations are based on soil properties and site features:

Slight:
Soil limitations are minor and easily overcome.

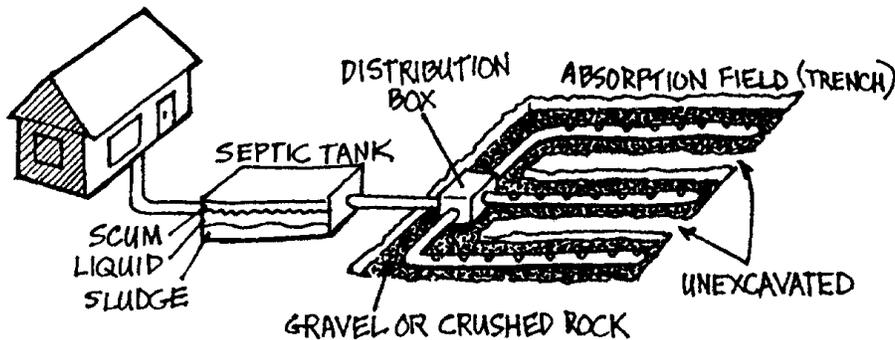
Moderate:
Special planning, design, or maintenance is needed to overcome or minimize limitations.

Severe:
Special design, significant increase in construction costs, and possibly increased maintenance are required.



USDA Natural Resources Conservation Service

Septic Systems: Installing a New One



Oregon Dept. of Agriculture

*Before buying undeveloped property, you should contact the local official for septic system permits. Don't overlook this essential step! The septic system site will determine the location of the house, well, and other installations. The septic system permitting official may be found at your local department of planning, building, community development, or public health, or at the regional Oregon Department of Environmental Quality. **Work with the septic system-permitting official to:***

- **Select a good location.**
Septic systems need gently sloping, moderately well-drained ground. Avoid areas with seasonally high water tables, floodplains, slopes steeper than 15 percent, and fractured bedrock. Locate the septic system downslope from existing or planned wells.
- **Find the right soils.**
A soil survey may indicate a promising site. However, you will need to have a percolation test done to determine how fast soils can absorb septic liquids.
- **Determine the proper setbacks.**
Decide whether a house, well, septic system, and the appropriate setbacks will fit on the property. Is there room for two septic systems - one for immediate use and the other for replacement in the future? A well must be located at least 50 feet from a septic system and 100 feet from a drainfield. Work with your permitting official to determine the setbacks needed from septic systems, buildings, property lines, cliffs, streams, and water lines.
- **Decide on the type of septic system needed.**
If the site investigation indicates poor soils for a conventional septic system, you may be able to use an alternative system. Alternative systems are usually more expensive and may require special maintenance and approval.
- **Include a contingency clause in the contract of sale.**
If possible, make the purchase dependent upon finding suitable soils for a septic system.

Septic Systems: Checking an Existing One

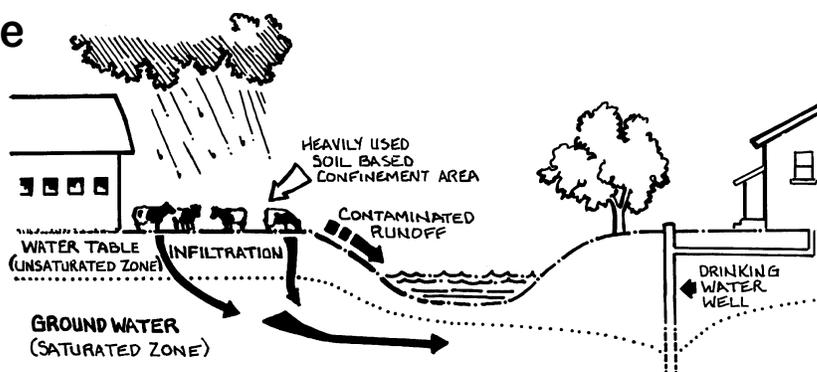
- **Ask when the septic tank was last pumped.**
Tanks should be pumped every 1 to 5 years depending on the household and soils. Check the age of the septic system. Up to 50 percent of all septic systems fail within 25 years. However, some systems that were installed in the 1930's have been well maintained and are still working.
- **Check how fast toilets and sinks drain.**
Toilets and sinks that drain slowly may indicate a waterlogged or clogged septic system. Such systems often need to be pumped or replaced.
- **Find the location of the septic tank and drainfield.**
The areas should not be unusually lush, smelly, green, or wet with seeping sewage. These are signs of a failing septic system that may need to be replaced.

Wells: Installing a New One

If you are looking at property without a well, get a drilling estimate from a licensed well driller. Also, consider the following to protect your future well:

- **Locate the well upslope and away from pollution sources.**

When a well is polluted, the cause is usually located at or very near the well. Avoid placing a well in a depression, drainage, or flood-prone area that may add polluted runoff to the well. The well should be located at least 50 feet from the septic tank and 100 feet from the drainfield. The well should also have minimum setbacks from fertilizer and pesticide storage, livestock yards and buildings, and manure piles.



Washington State University Extension Service

- **Install a proper well.**

A well is a direct pipeline from the soil surface to the groundwater. Pollutants most often enter wells through a poor seal at the top of the casing, inadequate casing grout, or a failure to disinfect the well after construction. Get a reputable driller and follow Oregon guidelines for well installation.

- **Prevent backflow into the well.**

During a power failure, most wells have a single check valve to stop the water column from falling back into the well. If the valve leaks (and many do), water flows back into the well and creates suction. Avoid sucking pollutants into your well by installing simple vacuum breakers on faucets and heavy-duty valves on lawn-sprinkling and irrigation systems.

Wells: Checking an Existing One

More than 500,000 Oregonians get their drinking water from private wells. If you are considering a home with an existing well, here are some things to ask about:

- **Recent well test.**

When a home is sold or transferred, Oregon regulations require homeowners to test domestic well water for nitrate and coliform bacteria. If the test results are satisfactory, taste the water. The water will likely taste different because wells are not chlorinated and have different mineral contents. If you notice an "off" taste, stained fixtures, or lead or copper pipes in the home, you may want to request additional tests.

- **Well report and pumping rate.**

Your local watermaster may have a record of the well depth and the conditions at installation. A domestic well should produce a minimum of 5 gallons per minute (gpm) for a three-bedroom home, but 10 gpm is better. Lower flow rates may be acceptable if water can be stored (e.g., in a pressure tank). Note any changes in water pressure when you run a faucet and flush the toilet at the same time.

- **Well house inspection.**

Check the well house and note cleanliness, the casing condition, and proximity to potential pollution sources. The well should be located at least 50 feet from the septic tank and 100 feet from the drainfield. Fertilizers, pesticides, fuel storage tanks, and animals should be located away from the well house.

- **Abandoned wells.**

Determine whether there are any abandoned or unused wells on the property. Abandoned wells that are susceptible to pollution need to be properly sealed.



Oregon State University
Extension Service



USDA Natural Resources Conservation Service



- The permitting department for septic systems is different in each county. Contact your local building, planning, or health department for the permitting official in your county.
- Oregon Water Resources Department (WRD) and Oregon Health Division (OHD) have well information and installation guidelines. Contact WRD at (503) 378-8455 and OHD at (503) 731-4317.
- The soil and water conservation district and USDA Natural Resources Conservation Service have soil surveys, the National Wetlands Inventory, and floodplain information. Look up your local office in the phone book's blue pages under federal government, Department of Agriculture.

What You Need to Know as a Rural Landowner	Who to Contact
Building Codes and Permits - Before building, contact your city or county planning department for zoning requirements and permits.	<ul style="list-style-type: none"> ■ County planning/building ■ Local building official
Buried Utilities - Oregon law requires that you notify utility companies no less than 2 days and no more than 10 days before you start to dig.	<ul style="list-style-type: none"> ■ Oregon Utility Notification Center (800) 332-2344
Fence Laws - Know open and closed range laws. Check for fence height or view ordinances.	<ul style="list-style-type: none"> ■ County building official ■ Oregon Dept. of Agriculture (503) 986-4681
Floodplain Protection - Permits may be required for work within a 100-year floodplain. Insurance and financing may be restricted.	<ul style="list-style-type: none"> ■ County planning/building
Forest Practices - Oregon regulations require that you notify ODF at least 15 days before you begin any forest activities. After harvest, trees must be replanted.	<ul style="list-style-type: none"> ■ Oregon Dept. of Forestry (503) 945-7470
Open Burning - Permits may be required in sensitive airsheds. Bans occur during fire hazard or air pollution periods.	<ul style="list-style-type: none"> ■ Local fire district ■ Oregon Dept. of Forestry (timber slash) (503) 945-7470 ■ Oregon Dept. of Environmental Quality (800) 452-4011
Septic Systems - Permitting official must approve soil suitability, design, and installation. Permits may be needed to repair or replace older systems.	<ul style="list-style-type: none"> ■ Local planning/building ■ Local health department ■ OSU Extension Service
Streambank and Wetland Protection - Permits are required to fill, drain, or dredge water areas (including wetlands) and to modify stream channels, streambanks, or wetlands. A water right is needed to construct a pond.	<ul style="list-style-type: none"> ■ Local soil and water conservation district ■ USDA Natural Resources Conservation Service (503) 414-3200 ■ Oregon Division of State Lands (503) 378-3805 ■ U.S. Army Corps of Engineers (503) 808-4373
Trash Recycling and Disposal - Locate licensed landfills, private trash disposal companies, and recycling centers. Burning or burying household trash on private land is not allowed.	<ul style="list-style-type: none"> ■ Recycling centers ■ Local garbage disposal companies ■ Licensed landfills ■ Oregon Dept. of Environmental Quality (800) 452-4011
Water Quality - You are responsible for managing manure, erosion, pesticides, fertilizers, irrigation, and near stream areas to protect surface water and groundwater quality. Rules for your watershed are either in effect or will be developed under Oregon Senate Bill 1010.	<ul style="list-style-type: none"> ■ Local soil and water conservation district ■ USDA Natural Resource Conservation Service (503) 414-3200 ■ OSU Extension Service ■ Local watershed council ■ ODA Natural Resources Division (503) 986-4700 ■ Oregon Dept. of Environmental Quality (503) 229-5279
Water Rights - A permit is needed for commercial or industrial uses of more than 5,000 gallons of water per day, more than 1 acre irrigated, and ponds.	<ul style="list-style-type: none"> ■ Local watermaster ■ Oregon Water Resources Dept. (503) 378-8455
Weed Control - You may need an applicator's license for some pesticides. Eradicate noxious weeds that crowd out forage and destroy wildlife habitat.	<ul style="list-style-type: none"> ■ Local weed control officer ■ OSU Extension Service ■ ODA Noxious Weed Control (503) 986-4621
Wells - Wells need to be registered with the local watermaster and constructed to Oregon Water Well Construction Standards.	<ul style="list-style-type: none"> ■ Local watermaster ■ Oregon Water Resources Dept. (503) 378-8455 ■ Oregon Health Division (503) 731-4317
Wildlife Protection and Endangered Species - The law protects threatened and endangered species. Your land management may be affected if these species are present.	<ul style="list-style-type: none"> ■ Local Audubon Society Chapter ■ Oregon Dept. of Fish and Wildlife (503) 872-5260 ■ U.S. Fish and Wildlife Service (503) 231-6179 ■ National Marine Fisheries Service (503) 231-2336

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