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Maintaining your well

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[Environmental Health | Thurston County \(thurstoncountywa.gov\)](http://thurstoncountywa.gov)

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This worksheet will help you learn how to maintain your well and the property around it by evaluating the risks associated with your actions at home. Maintaining your well will help protect your water supply, and one of your major investments, the value of your home.

For each group circle the answer, or answers, closest to your situation. Sometimes more than one answer may apply.

Well Construction and Maintenance:

Risk Level

Do you have a well on or near your property? Yes No Low Medium High

| Type of Water Source | Yes | No | Low | Medium | High |
|--|-----|----|-----|--------|------|
| <i>Dug Well</i> | Yes | No | Low | Medium | High |
| <i>Surface Water</i> | Yes | No | Low | Medium | High |
| <i>Spring</i> | Yes | No | Low | Medium | High |
| <i>Drilled or Driven Well</i> | Yes | No | Low | Medium | High |
| Condition of Cap | Yes | No | Low | Medium | High |
| <i>Well cap loose so small objects or animals can fall into well</i> | Yes | No | Low | Medium | High |
| <i>Well secured so objects cannot fall or crawl into well (e.g. cap tightly secured: gasket, if present, in good condition, well vented with screened vent).</i> | Yes | No | Low | Medium | High |

Casing Height*Casing under water during floods**Casing extends less than 6 inches above ground surface**Casing extends at least 6 inches above ground surface AND is never under water.***Location of Well***Water ponds around well during rain storms**Ground slopes toward well**Ground slopes away from well casing.****You can answer the next questions by referring to your well drilling report or well log.****Condition of Casing**Unable to determine.**No casing, or casing appears cracked or damaged.**No well drilling report, or casing ends above water level.**Well drilling report indicates casing extends below water level.***Condition of Seal***No well drilling report**Surface seal ends less than 18 feet below ground AND before first confining layer.**Well drilling report indicates surface seal extends at least 18 feet **OR** beyond first confining layer.***On-Site Sewage (Septic) System***Do you have an on-site sewage (septic) system on or near your property?***Location***Septic tank OR disposal system (drainfield, seepage pit, cesspool) within 100 feet of well.**Septic tank AND disposal system outside of 100-foot radius.***Lawn, Pasture and Garden Products***Do you use or store insecticides, herbicides or commercial fertilizers on your property?**Casing extends at least 6 inches above ground surface AND is never*

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|-----|----|-----|--------|------|
| Yes | No | Low | Medium | High |
| Yes | No | Low | Medium | High |

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| Yes | No | Low | Medium | High |
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Risk Level

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| Yes | No | Low | Medium | High |
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| Yes | No | Low | Medium | High |
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| Yes | No | Low | Medium | High |
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Risk Level

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| Yes | No | Low | Medium | High |
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| Yes | No | Low | Medium | High |
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| <i>Manure applied within 100 feet of well</i> | Yes | No | Low | Medium | High |
| Home Heating-Oil Tanks | Risk Level | | | | |
| <i>Do you have an operating, underground home heating-oil tank or farm fueling tank on your property?</i> | <i>Yes</i> | <i>No</i> | <i>Low</i> | <i>Medium</i> | <i>High</i> |
| Age | | | | | |
| <i>More than 15 years old or unknown</i> | Yes | No | Low | Medium | High |
| <i>Less than 15 years old.</i> | Yes | No | Low | Medium | High |
| Location | | | | | |
| <i>Within 100 feet of well.</i> | Yes | No | Low | Medium | High |
| <i>Outside 100-foot radius of well.</i> | Yes | No | Low | Medium | High |
| Maintenance | | | | | |
| <i>Tank or piping NOT checked for leaks within last year</i> | Yes | No | Low | Medium | High |
| <i>Tank and piping checked at least annually for leaks</i> | Yes | No | Low | Medium | High |
| <i>Are there abandoned home heating-oil tanks on your property or adjoining properties?</i> | Yes | No | Low | Medium | High |
| Status and Location | | | | | |
| <i>Don't know.</i> | Yes | No | Low | Medium | High |
| <i>Within 100-foot radius. Fuel in tank.</i> | Yes | No | Low | Medium | High |
| <i>Within 100-foot radius. Fuel removed.</i> | Yes | No | Low | Medium | High |
| <i>In neighborhood. Fuel in tank.</i> | | | | | |
| <i>In neighborhood. Fuel removed.</i> | Yes | No | Low | Medium | High |
| <i>Tank removed along with any contaminated soil.</i> | Yes | No | Low | Medium | High |
| Home, Auto and Equipment Maintenance | Risk Level | | | | |
| <i>Do you use paints, stains, paint thinners or other solvents, gasoline, oil or other household hazardous materials on your property?</i> | <i>Yes</i> | <i>No</i> | <i>Low</i> | <i>Medium</i> | <i>High</i> |
| <i>Do you repair equipment or machinery on your property?</i> | Yes | No | Low | Medium | High |
| Location of work area | | | | | |
| <i>Within 100 feet of well.</i> | Yes | No | Low | Medium | High |
| <i>Outside 100-foot radius.</i> | Yes | No | Low | Medium | High |
| Type of work area | | | | | |
| <i>Unpaved</i> | Yes | No | Low | Medium | High |
| <i>Paved</i> | Yes | No | Low | Medium | High |
| Storage | | | | | |
| <i>More than 5 gallons of petroleum products or other hazardous materials.</i> | Yes | No | Low | Medium | High |

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|--|-------------------|-----------|------------|---------------|-------------|
| <i>Less than 5 gallons</i> | Yes | No | Low | Medium | High |
| <i>No storage on site, used up or shared with someone else.</i> | Yes | No | Low | Medium | High |
| <i>Stored in well house.</i> | Yes | No | Low | Medium | High |
| <i>Stored within 100 feet of well</i> | Yes | No | Low | Medium | High |
| <i>Stored more than 100 feet from well</i> | Yes | No | Low | Medium | High |
| <i>Stored in open area without way to catch spills</i> | Yes | No | Low | Medium | High |
| <i>Stored in covered area without way to catch spills.</i> | Yes | No | Low | Medium | High |
| <i>Stored in open area with a second container to catch spills.</i> | Yes | No | Low | Medium | High |
| <i>Stored in covered area with a second container to catch spills.</i> | Yes | No | Low | Medium | High |
| <i>Disposal of materials (oil, oil filters, antifreeze, solvents, etc.)</i> | | | | | |
| <i>Stored indefinitely</i> | Yes | No | Low | Medium | High |
| <i>Don't know</i> | Yes | No | Low | Medium | High |
| <i>Poured down sink, drain or toilet into septic system.</i> | Yes | No | Low | Medium | High |
| <i>Dumped on ground.</i> | Yes | No | Low | Medium | High |
| <i>Dumped in garbage.</i> | Yes | No | Low | Medium | High |
| <i>Oil taken to used-oil collection site for recycling, and other waste taken to HazoHouse for disposal.</i> | Yes | No | Low | Medium | High |
| <i>Products completely used up</i> | Yes | No | Low | Medium | High |
| Stormwater | Risk Level | | | | |
| <i>Does water collect near your well?</i> | <i>Yes</i> | <i>No</i> | <i>Low</i> | <i>Medium</i> | <i>High</i> |
| <i>Water from roof-gutters, downspouts and driveway or other rainwater directed toward well.</i> | Yes | No | Low | Medium | High |
| <i>No standing water near well. Water from roof-gutters and downspouts drained away from 100-foot protective radius.</i> | Yes | No | Low | Medium | High |

Soils

Water may be “cleaned” naturally as it flows through the soil and back into ground water aquifers. However, the amount of contaminants removed by this process depends on the type of soil, the type of contaminant, and the distance the water travels before reaching the water table. Water moves quickly through coarse soils (such as sand and gravel). These soils remove few contaminants, even if the water table is quite deep. Water moves more slowly through fine-textured soils (such as clay and silt). These soils are much more effective at removing contaminants before they reach ground water. To find out the type of surface soil and depth to the water table in your area, you may use a variety of sources including:

- Your well drilling report or well log
- Soil Survey of Thurston County, Washington

- Critical Aquifer Area Map
- Your own assessment

Risk Level

If you aren't sure what type of soil you have, assume you fall into the high- or moderate-risk categories.

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|---|-----|----|-----|--------|------|
| <i>Coarse-textured soils (sands, gravely sands), regardless of water table depth.</i> | Yes | No | Low | Medium | High |
| <i>Water table less than 20 feet deep, regardless of soil type.</i> | Yes | No | Low | Medium | High |
| <i>Medium- to coarse-textured soil (silt loam, loam, sandy loam) AND water table between 20 and 50 feet deep.</i> | Yes | No | Low | Medium | High |
| <i>Medium-to-coarse textured soil (silt loam, loam, sandy loam) AND water table deeper than 50 feet deep.</i> | Yes | No | Low | Medium | High |
| <i>Heavy or fine-textured soils where water ponds for long periods AND water table shallower than 50 feet.</i> | Yes | No | Low | Medium | High |
| <i>Heavy or fine-textured soils where water ponds for long periods AND water table deeper than 50 feet.</i> | Yes | No | Low | Medium | High |

Taking action

Now that you have completed the checklist, review the activities that you ranked as high risk and write a description in the table below. You may wish to combine related issues, such as “home heating-oil tank more than 15 years old, not regularly checked for tightness.” If you have “low risk” soils, dealing with structural problems and activities in the immediate vicinity of the well is most important. If you have “high risk” soils, you may wish to expand your area of concern beyond a 100-foot radius. Next write immediate and long-range actions to correct each problem. Sometimes these actions are obvious. If not, refer to “Sources of Help” on the next page. If the list appears long or costly, begin by completing one or two immediate actions that are easy and affordable. Over time you can continue to make changes until all of your actions are “low risk.”

| DESCRIPTION OF HIGH-RISK ACTIVITIES | TAKING ACTION | |
|--|---|---------------------------------|
| | IMMEDIATE STEPS | LONG RANGE |
| Example: Abandoned home heating-oil tank—may still contain fuel. | 1. Check for fuel 2. Call oil supply co. to pump out tank. | 1. Investigate removal of tank. |
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Sources of Help

Many local agencies and groups provide help and information on keeping your well in good condition and your drinking water safe. Here are a few places to begin:

Well Construction and Maintenance

Proper well construction and maintenance reduce the risk of pollution by sealing the well from anything that might enter it from the surface. If wells are constructed without grout or a sanitary seal, surface water carrying bacteria, pesticides, fertilizer or petroleum products can leak into your drinking water supply.

Your well drilling report and your own visual inspection can give you information about the health of your well. Check your well drilling report to be sure that the casing extends below the

water level and that the surface seal extends at least 18 feet deep. Visually inspect your well to be sure that surface water does not pond around your well. Make sure that the well cap has a sanitary seal, so objects cannot fall, crawl or seep into the well.

Help: Thurston County Environmental Health, (360) 867-2673

[Public Health and Social Services | Thurston County \(thurstoncountywa.gov\)](http://thurstoncountywa.gov)

On-Site Sewage (Septic) Systems

Current health codes require new septic systems and drainfields to be installed outside the 100-foot well protective radius. These requirements lower the risk of sewage leaking into your water supply. If your septic system or drainfield is within 100 feet of your well, test your water more frequently for coliform bacteria.

More information: [Your On-Site Sewage System](#)

Help: Thurston County Environmental Health Septic Information Line, (360) 867-2669

Lawn, Pasture and Garden Products

Pesticides have been found in some Thurston County wells. Illnesses such as cancer and birth defects have been traced to pesticide exposure. The best way to keep pesticides out of your water supply is not to use them. If you use them occasionally, do not use them within 100 feet of your well. Carefully follow label directions and all federal, state and local pesticide application laws.

Pesticides should be stored in their original containers and clearly labeled. Check the containers to make sure they are not leaking. To be extra safe, store in a second container or plastic leak-proof tray.

Always store pesticides in an area with a leak-proof floor. Never store them in your well house.

More information: [Common Sense Gardening Guides](#)

Help: Thurston County Environmental Health, (360) 867-2674

Animal Keeping

Animals should be fenced away from your well. No dog runs or other animal pens should be within 100 feet of your well. Manure piles should be covered and kept away from your well.

Help: Thurston Conservation District, (360) 754-3588

[Public Health and Social Services | Thurston County \(thurstoncountywa.gov\)](http://thurstoncountywa.gov)

Home Heating-Oil Tanks

If you have a home heating-oil tank on your property, you should check the tank and piping regularly for tightness and leaks. Ideally, the tank should be located at least 200 feet downslope from your well. Consider replacing tanks over 30 years old with an aboveground tank.

If you have an abandoned home heating-oil tank, any remaining fuel should be completely removed, since abandoned tanks frequently leak. Better still, the tank should be removed, along with any contaminated soil around it. Even tanks on neighboring properties may pose a threat to the water supply. Ask your neighbors if they regularly check their home heating-oil tank for leaks or have an abandoned tank on their property.

Help: Thurston County Environmental Health, (360) 867-2664

Home, Auto and Equipment Maintenance

You should work on machinery at least 100 feet from your well. It is best to work on a paved surface with absorbent materials, such as kitty litter, nearby to soak up any spills. Oil, solvents or other fluids spilled on the ground can easily reach your water supply, especially if you live on coarse - to moderate - textured soils or the water table is shallow. Just one quart of motor oil can contaminate 250,000 gallons of water.

You should drain oil directly into a sealable, reusable container and take it to a used-oil collection site for recycling. Other materials—such as antifreeze, used oil filters and batteries—should be taken to HazoHouse for safe disposal. They should never be stored in your well house or within 100 feet of your well.

More information: [Recycle Your Used Motor Oil](#)

Help: Thurston County Environmental Health, (360) 867-2664

