

LEVEL I WATER CONSERVATION CERTIFICATION**WLS-051****PURPOSE**

This certification form documents compliance with the County's well ordinance relative to Level I water conservation measures that are required for water well permit applications submitted after October 4, 2022. This form ensures property owners are aware and understand that water conservation requirements are ongoing, and transferable to subsequent property owners upon change of property ownership.

PROCEDURE

The applicant or owner for the well permit must complete the Level I water conservation requirements per Sonoma County Code section 25B-13. Completion of these requirements can be documented with this form including the owner's signature and date and submitting the first two pages of the completed form to Permit Sonoma. The completed form can be uploaded to the well permit record through [Citizen Access](#). Additional information may be requested, and site inspection may be conducted in order to verify that water conservation measures have been complied with.

See the Supplemental Instructions portion of this form on how to perform a water conservation audit and verifying compliance with the below requirements.

Level I Water Conservation and Best Management Practices Checklist:

- ☐ A leak and water conservation audit of indoor and outdoor water systems has been completed. Either no leaks were detected, or all leaks have been fixed.
- ☐ Showerheads within all existing habitable spaces meet current water efficiency standards defined in the 2022 CA Green Code or have been retrofitted with showerheads that have flow rates of 1.8 gallons per minute or less.
- ☐ Faucets within all existing habitable spaces meet current water efficiency standards defined in the 2022 CA Green Code or have been retrofitted with aerators or other flow regulators and have flow rates of 1.8 gallons per minute or less for kitchen faucets and 1.2 gallons per minute or less for lavatory faucets.
- ☐ New landscapes comply with the water efficient landscape regulations contained in Sonoma County Code section 7D3 Water Efficient Landscape.
- ☐ For development after October 4, 2022, irrigated grass lawns are prohibited, unless compliant with Sonoma County Code section 7D3 Water Efficient Landscape.
- ☐ For existing development prior to October 4, 2022, irrigated grass lawns are no greater than 2500 square feet, unless compliant with Sonoma County Code section 7D3 Water Efficient Landscape.
- ☐ Downspouts are disconnected and roof rainwater is routed to disposal locations that maximize infiltration and minimize erosion or disconnection of downspouts and re-routing of rainwater poses a risk to onsite structures or geologic hazards or is infeasible due to other site constraints.

- ☐ Compliance with applicable water conservation requirements adopted by a Groundwater Sustainability Agency, as applicable to the project site, that are consistent with or more protective than the requirements of Sonoma County Code Chapter 25B.

FUTURE SITE DEVELOPMENT

- ☐ I understand that water conservation requirements are ongoing and attest that future development and operation of the site shall comply with all applicable water conservation requirements, including Level I water conservation requirements listed above.

PROJECT INFORMATION

Well Permit Record Number _____

Property Address _____

Assessor Parcel Number of proposed well _____

Assessor Parcel Number(s) of other parcels served by the proposed well _____

APPLICANT INFORMATION

Name _____

Mailing Address _____

Phone _____ Email Address _____

OWNER AGREEMENT

By signing this document, the property owner certifies to Permit Sonoma that the information in this form is true, and that all Level I Water Conservation Requirements specified in Chapter 25B-13(b) have been, or will be, complied with. The property owner further agrees to comply with all applicable County codes, and the rules and regulations set forth by Permit Sonoma including, but not limited to, maintaining water systems in good working order, replacing and installing new fixtures with fixtures that meet current water efficiency standards defined in the 2022 CA Green Code, complying with water efficient landscape regulations, complying with other applicable permit conditions, and notifying subsequent property owners of water conservation requirements.

Owner Name(s) _____

Owner Phone _____ Email Address _____

Mailing Address _____

Owner Signature _____ Date _____

LEVEL I WATER CONSERVATION CERTIFICATION FORM**SUPPLEMENTAL INSTRUCTIONS**

Instructions and further procedures on how to conduct a leak and water conservation audit, measure fixture flow rates, and verify compliance with other Level I conservation requirements are provided below. This supplemental assessment form will commonly be completed by the owner or a contractor prior to signing and submitting the certification form above.

If you have additional questions, please email PermitSonoma-Well-Septic@sonoma-county.org.

LEAK AND CONSERVATION AUDIT**A. Water System Leak Test**

Water system leak tests are commonly conducted through a pressure test. A water pressure gauge with female hose threads and the ability to measure up to 150 psi is recommended. A pressure test is simple and can be conducted by a homeowner. It is essential however to understand how the water system is plumbed for both the building(s) and any automated irrigation system control valves. In instances where multiple supply lines from the pressure tank exist to separately serve irrigation and buildings, a pressure test for each supply line must be conducted. If the building and irrigation control valves are served by the same line, minimally ensure any secondary shut-off valve installed to isolate irrigation control valves is open during the pressure test. Irrigation control valves are a common source of internal silent leaks, so you want to be sure the pressure test includes a test of these control valves. Water softening systems are also a source of silent leaks, so check that they are not actively recharging before beginning the test, but do not change the operational settings. Other leak test methods, including use of a flowmeter with a low flow indicator, may also be used but are often less practical for parcels served by private wells. If a flow meter is used, then it must be installed downstream of the pressure tank or gravity tank that pressurizes the water system.

For more information on leaks: <https://www.epa.gov/watersense/fix-leak-week>

Procedure for leak test using a pressure gauge:

1. Check the configuration of water lines downstream of the pressure tank or gravity tank to determine if one or multiple pressure tests are needed to ensure that both building(s) and irrigation control valves are tested.
2. Install a pressure gauge onto a spigot or faucet. The pressure gauge should be installed downstream of the pressure tank or storage tank that pressurizes the water system.
3. Turn off all fixtures and other appliances that use water and may outlet water from the system (e.g., faucets, dishwashers, clothes washers, ice makers, etc.).
4. If a water softening system is installed, do not conduct the pressure test during a system recharge. Wait until the recharge is complete. Do not put the system on bypass or change other operational settings.
5. The spigot or fixture where the pressure gauge is installed should be in the ON position. The gauge will show the pressure of the system. The typical range is 40 to 60 psi.

6. Isolate the pressure tank or storage tank from the water system through use of a shutoff valve. The shutoff valve between the pressure source and the water system should be turned to the OFF position.
7. At this stage the water system should be pressurized at a level of 40 psi or greater. Should water be released from the system by opening a faucet or a leak, pressure will drop. Any pressure drop will be observable in the pressure gauge.
8. Record the time and pressure reading on the pressure gauge.
9. Wait 30 minutes (do not turn on any fixtures or draw water from the system). Record the time and pressure reading on the pressure gauge.
10. If the pressure has dropped by more than 0.5 psi, wait another 30 minutes, and record the pressure again. A leak is indicated by any further drop in pressure.

Location (e.g. primary unit)	Test method? (Pressure Test, flow meter, Other)?	Leak Detected (YES/NO)	Solution / Comment

Finding Leaks

If you do observe a pressure drop indicating a leak there are many potential culprits and it may be difficult to find. Other than toilets, most leaks inside the home are easy to find and evident by a dripping fixture or wet area. Leaks outside the home can be more difficult to find. A broken water line can be a major water loss. Broken waterlines are often apparent as an unusual wet area with lush vegetation, like a spring. Irrigation control valves and water softening systems can also be sources of leaks that can be difficult to diagnose without the help of a suitable professional. A leaking irrigation control valve will allow water past the valve where it will exit a sprinkler or other irrigation emitter. Visual cues for irrigation control valve leaks include continuous weeping of water from a sprinkler or irrigation emitter creating a wet spot and lush vegetation.

B. Toilet Leak Test and Audit

Toilets account for about 20% of indoor water use of homes and are one of the most common sources of leaks. Upgrading old toilets to efficient models is also one of the simplest methods to reduce water use.

What are the flush rates of your toilets? Toilets sold after 1992 are at most 1.6 gallons per flush (gpf). Toilets sold after 2014 are 1.28 gpf or less (California standard). If no gpf rating is easily seen, remove the toilet tank lid. A gpf rating or date may be stamped on the lid's underside or inside the toilet tank.

Toilet leaks typically occur in two ways. The first is a faulty fill valve or float switch that causes the tank to constantly fill and overflow into the drain line. A faulty fill valve would cause a pressure drop in the system. The second is a faulty flapper, where water leaks around the flapper that controls flow from the tank to the bowl and exits via the drain line. A leaky flapper may not cause a pressure drop of the water

system unless the upper tank of the toilet refills during the pressure testing period. An intermittent leak from a faulty flapper is best diagnosed using a dye test.

Procedure for toilet leak test:

1. Flush the toilet and wait 15 minutes.
2. Valve leak. Remove the toilet tank lid. Lower your ear to hear if the valve is running and water is continually flowing into the tank.
3. If the valve is running, do not continue with the dye test, the valve needs to be repaired or replaced to ensure it shuts off completely. If the valve is not running, continue to the dye test.
4. Dye test. Use 10 drops of food coloring in the toilet tank and wait for 15 minutes without flushing. If the dye color appears in the bowl after 15 minutes, there is a flapper leak.

Toilet Location	Gallons per flush	Leak Detected (Y/N)	Problem (Valve / Flapper / Other)	Solution / Comment

C. Shower Head Flow Rates and Leak Test

Showers and baths account for about 20% of indoor water use of homes. Efficient showerheads can save large volumes of water and energy.

Level I Conservation Requirements specify that all showerheads must have a flow rate of 1.8 gallons per minute or less.

Procedures for Shower Flow Rate and Leak Test

1. Shower Diverter Leaks
 - a. Check if water coming out of a tub spout when the shower is running.
 - b. If this is the case, your diverter is no longer working properly, and you have a leak. This wastes both water and energy (used to heat water). Studies have shown that 34% of diverters leak more than 0.1 gallons per minute (gpm). The average diverter leak is 0.8 gpm and can waste 7,200 gallons annually per family of three (8 minute showers). If you add the cost to heat the

water, diverter leaks can cost up to \$100 per year. Check with your local hardware store or your plumber for a replacement diverter valve or replacement tub spout. This may require a plumber or handy person.

2. Measuring Shower Flow Rate

- Turn on the shower to full output.
- Capture the water from the showerhead with a 1 gallon plastic bag for five seconds.
- Carefully pour the water from the plastic bag into a large measuring cup.
- Place the measuring cup on a level surface. Read how many ounces the fixture output (in 5 seconds).

The equation below calculates the fixtures flow rate in gallons per minute from volume in ounces and time in seconds. Time should be 5 seconds if following the steps above perfectly; otherwise use the actual time that the bag was collecting flow from the fixture.

$$\text{Volume (ounces)} \div \text{Time (sec)} \times 0.469 = \text{Flow Rate (gpm)}$$

Location	Diverter Leak (Yes/No)	Volume (ounces)	Time (seconds)	Flow Rate (gpm)	Solution (Replaced diverter / Installed aerator / replaced fixture / other)

If a showerhead has a flow rate greater than 1.8 gallons per minute, the owner must replace the showerhead with a water efficient model.

D. Faucet Flow Rates

Kitchen and bathroom faucets account for about 20% of indoor water use of homes. Efficient faucets can save large volumes of water and energy.

All kitchens must have flow rates of 1.8 gallons per minute or less. All lavatory faucets must have a flow rate of 1.2 gallons per minute or less.

Procedures for Measuring Faucet Flow Rate

1. Turn on the faucet to full output.
2. Capture the water flow with a 1 gallon plastic bag for five seconds.
3. Carefully pour the water from the plastic bag into a measuring cup.
4. Place the measuring cup on a level surface. Read how many ounces the fixture output (in 5 seconds).

The equation below calculates the fixtures flow rate in gallons per minute from volume in ounces and time in seconds. Time should be 5 seconds if following the steps above perfectly; otherwise use the actual time that the bag was collecting flow from the fixture.

$$\text{Volume (ounces)} \div \text{Time (sec)} \times 0.469 = \text{Flow Rate (gpm)}$$

Location	Volume (cups)	Time (seconds)	Flow Rate (gpm)	Solution (Compliant / installed aerator / replaced fixture / other)

If a faucet flow rate is greater than allowed, the owner must replace the faucet with a water efficient model or retrofit the faucet with an aerator rated at 1.8 gpm or less for kitchens or 1.2 gpm or less for bathroom faucets. Installing a water efficient aerator is typically simple and cost effective.

For more information on faucets: <https://www.epa.gov/watersense/bathroom-faucets>

E. Landscape Irrigation System Audit

If you have an irrigation system, one broken component could waste as much as 1,000 gallons of water per week. It is very important to keep your irrigation system operating in tip-top shape. Regular monthly inspections and adjustments are recommended, not only to identify problems but also adjust the time that the irrigation system runs based on seasonal changes in weather. Plant water use is largely driven by hours of sunlight and temperature, so reducing the irrigation time as the days get shorter and turning off the system once rain begins and plants go dormant is highly recommended.

For more information: <https://www.epa.gov/watersense/outdoors>

Procedure for Irrigation System Audit:

1. Check for overly green or soggy spots, where broken spray heads or bubblers or underground pipe cracks may be present. Note, buried pipes, hoses or drip lines leaking into sandy, porous soil may not show up clearly.
2. Check hoses for leaks and dribbling spray nozzle connections. Repair by tightening, use Teflon tape, hose washers, or other methods.
3. Inspect irrigation timers. If you use a weather based controller, it should be set to weather-based mode. If it's a timer, you should have a seasonal schedule to follow. Systems should be turned off in the winter. If you are not sure how long to irrigate, consulting with an irrigation professional is highly recommended. Online scheduling recommendations can also be found at <https://www.savingwaterpartnership.org/watering-times/>.
4. Run a test of the irrigation system and look for missing or broken sprinklers, misdirected, clogged, or obstructed spray nozzles, sprinklers that do not pop up fully, drip lines that have been cut or moved out of place, or small geysers from missing drip emitters. Look for water pooling on the surface or water spraying where it shouldn't.
5. For help with irrigation auditing and repairs, look for a QWEL certified professional online at <https://www.qwel.net/>.

Location (e.g., main garden)	Leak Detected (Yes/No)	Comment / Solution

WATER EFFICIENT LANDSCAPE REQUIREMENTS

On average, landscape water use accounts for 50% or more of water use of rural parcels. Water efficient landscaping is a great way to reduce water use. Many beautiful native plants require very little water and provide added ecological benefit to wildlife.

1. New or rehabilitated landscapes installed after October 4, 2022, shall comply with water efficient landscape regulations contained in Sonoma County [Water Efficient Landscape Regulations](#). Requirements for a landscape plan and permit is only triggered if there also a building, grading, or design review permit.
 - a. Was any landscaping installed after October 4, 2022, that was associated with a building, grading, or design review permit, (Yes/No)? _____

- i) If No, proceed to Water Efficient Landscape Requirements Section 2, below.
 - ii) If YES, were landscape regulations applicable per [Sonoma County Code Section 7D3-3](#) (YES/NO)? _____
 - (1) If No, why were landscape regulations not applicable? _____
 - (2) If YES, provide the permit record number for the landscape plan. _____
If a landscape plan was required, but was not obtained, you must apply for a landscape plan.
2. Installation of new irrigated lawns is prohibited after October 4, 2022, unless compliant with [Water Efficient Landscape Regulations](#).
 - a. Was irrigated grass lawn installed after October 4, 2022 (YES/NO)? _____
 - i) If NO, proceed to Water Efficient Landscape Requirements Section 3, below.
 - ii) If YES, provide the permit record number for the landscape plan. _____
If no landscape plan was obtained, you must apply for a landscape plan.
3. New and existing irrigated lawns shall be no greater than 2500 square feet, unless compliant with [Water Efficient Landscape Regulations](#).
 - a. Provide the existing or proposed area of irrigated lawn on the parcel. If multiple parcels are served, list areas of irrigated grass lawns for each parcel. If area of lawn on any parcel is greater than 2500 square feet, provide the permit record number for the landscape plan.

Parcel (APN)	Area of Lawn (Square Feet)	Permit number of landscape plan (if applicable)

For rectangular lawns, area can be estimated by multiplying the average length by the average width.

For irregular shaped lawns (e.g., kidney shaped), area can be estimated by stretching a flexible tape measure across the lawn. Then using another tape measure, measure and record the width of the lawn perpendicular to the first tape measure, measure once every 4 feet. Calculate the area of each interval by multiplying the perpendicular width by 4. Add up the area of each 4 foot interval to get the total area. The table below can be used for this exercise.

Distance (feet)	Width (feet)	Interval Area (square feet)
0		
4		
8		
12		
16		
20		
24		
28		
32		
36		
40		
44		
48		
52		
56		
60		
64		
68		
72		
	Total Area =	

Alternatively, if the lawn area is not obscured by trees, an online map with an aerial image of the site and area measurement tool may be used. This [online map](#) has area measurement tools and recent aerial images covering Sonoma County.

If a parcel served by the well has existing irrigated lawn area greater than 2500 square feet and no permit with approved landscape plan was obtained, lawn area must be reduced, or a landscape plan must be obtained.

b. Area of lawn removed in order to comply with these requirements _____

(1) How was the lawn was removed: _____

Note, the irrigation system for the remaining lawn must be adjusted or retrofit to efficiently irrigate the reduced lawn area using irrigation design criteria as contained in Sonoma County [Water Efficient Landscape Regulations](#) for matched sprinkler precipitation rates, head to head coverage, distribution uniformity, pressure regulation, and prevention of runoff or overspray onto non-targeted areas.

DISCONNECTED DOWNSPOUTS

All downspouts shall be disconnected, and roof rainwater routed to disposal locations that maximize infiltration and minimize erosion, unless determined to:

- pose a risk to onsite structures or geologic hazards, or
- be infeasible due to other site constraints (e.g., insufficient space on parcel).

Roof rainwater runoff is disconnected if downspouts and rainwater leaders do not outflow directly into a creek or storm drain, but rather outflow water to a landscape area where water may seep into the soil and back into groundwater.

Are all downspouts disconnected (YES/NO)? _____

If no, please explain why disconnection of non-compliant downspouts would pose a risk to structures, present a hazard, or would be infeasible due to site constraints: _____

Summarize any changes made to downspouts in order to comply with this requirement:

GSA WATER CONSERVATION COMPLIANCE

Compliance with applicable water conservation requirements adopted by a Groundwater Sustainability Agency (GSA), as applicable to the project site.

Please reference the GSA's Groundwater User Information Data Exchange map to see if your or well parcel is within a GSAs jurisdiction: [GSA GUIDE Map](#)

Is the site within the jurisdiction of a groundwater sustainability agency (select one)?

- ☐ Santa Rosa Plain GSA
- ☐ Petaluma Valley GSA
- ☐ Sonoma Valley GSA
- ☐ Not within a GSA

For more information about local GSAs:

- [GSA GUIDE Map](#):
- [Santa Rosa Plain Groundwater Sustainability Agency](#)
- [Petaluma Valley Groundwater Sustainability Agency](#)
- [Sonoma Valley Groundwater Sustainability Agency](#)

ADDITIONAL RESOURCES

Basic toolkit for conducting a [leak and conservation audit](#), available through the Sonoma County Library

Sonoma Marin Water Saving Partnership [Water Saving Tips](#)

[EPA WaterSense](#)

EPA WaterSense [Dye Tests](#):