WELL SAID Newsletter

News from the Water Resources Department's Well Construction Section

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Issue 77

WHAT'S IN THIS ISSUE:

WELL SAID NEWSLETTER

Available on the web at OWRD home page, under *Agency Spotlight > Well Said Newsletter*. Please share with others at your organization. *Well Said* is a production of the OWRD Well Construction Section and is designed to inform the drilling industry and the public about program activities and other items of interest.

Questions or suggestions about this newsletter may be directed to Kristopher Byrd at (503) 991-2470 or email at Kristopher.R.Byrd@water.oregon.gov

OREGON WATER RESOURCES DEPARTMENT

Serving the public by practicing and promoting responsible water management.

WELL USERS ENCOURAGED TO RETEST FOR NITRATES

Landowners in the Lower Umatilla Basin Groundwater Management Area (LUBGWMA) who had their water wells tested for nitrates in 2023 are encouraged to take advantage of free re-testing to ensure that their water remains safe. The LUBGWMA is an area spanning northern Morrow County and northwestern Umatilla County designated by the state due to high nitrate levels in groundwater.

Oregon Health Authority (OHA), in partnership with Morrow and Umatilla counties and a coalition of community-based organizations, mailed a letter and brochure in English and Spanish on May 15 to roughly 1,600 households that completed initial well water tests in 2023 encouraging them to take advantage of free re-testing. On June 12, the same households received letters with individual results of their past tests and a brochure to help them understand the results, as well as instructions, time frame and frequency for re-testing their well based on their previous results.

OHA is coordinating the re-testing outreach effort in close partnership with Morrow County Public Health Department, Umatilla County Public Health Department, Oregon Department of Human Services, and many community organizations, including Doulas Latinas, Eastern Oregon Center for Independent Living, Euvalcree, National Center for Alternatives to Pesticides, Oregon Rural Action and Water for Eastern Oregon (H2OEO). These organizations can help connect domestic well users to the safe water services offered by the state through OHA.

Re-testing of households with well water close to the health action level of 10 milligrams nitrate per liter (mg/L) of water is especially important because nitrate levels can fluctuate during different seasons of the year. Nitrate in well water is a potential health hazard, and levels above 10 mg/L are considered dangerous for human consumption. Pregnant women and babies face the greatest risk.

For households whose well water tests higher than 10 mg/L but under 25 mg/L, the state will pay for installation and maintenance of one in-home reverse-osmosis system that is certified to reduce nitrate levels for safe drinking (treatment systems are not certified to remove nitrate at levels above 25 mg/L). Households with a laboratory nitrate test result higher than 25 can receive free water delivery.

Anyone who lives in the LUBGWMA can get a free laboratory analysis of their well water by visiting the website testmywell.oregon.gov or emailing Domestic.Wells@odhsoha.oregon.gov. They can also call the OHA Domestic Well Safety Program at (541) 952-9254.

33rd ANNUAL OREGON WATER LAW CONFERENCE

The Oregon Water Law Conference, to be held October 24-25, 2024, at the Royal Sonesta Portland Downtown in Portland, Oregon and via webcast, will provide an update on recent water-related legislation and administrative developments, including discussions of the key issues driving water policy.

Director of the Oregon Water Resources Department, Ivan K. Gall, will be presenting on the topic of "OWRD Changing of the Guard." Groundwater Section Manager, Justin T. Iverson, will be presenting on the topic of "Making Sense of Changes to Oregon's Division 8, 9, and 410 Groundwater Rules in 2024," and Water Policy Analyst, Kelly A. Meinz, will be presenting on the topic of "The Future of Groundwater in the Harney Basin."

Practitioners holding a wide array of perspectives will address complex water supply and management challenges in several of Oregon's watersheds, along with other recent decisions involving water distribution, water access, storage permits, and hydropower licensing.

For well constructors interested in attending the conference for continuing education credits, please contact Buffy Madrigal-Adams, Well Licensing Specialist, at (971) 287-8305 or by email at Buffy.M.Madrigal-Adams@water.oregon.gov.

If you are interested in attending the Oregon Water Law Conference, please contact Mehgan Klassen at mehgan@theseminargroup.net for further Information.

KLAMATH COMMUNITY COLLEGE WELL DRILLING PROGRAM

As domestic water wells in southern Oregon continue to run dry due to the ongoing drought and receding water tables, Klamath Community College (KCC) is answering the need for more well constructors by launching a new well drilling apprenticeship program. Caleb Puszkiewicz, assistant watermaster for the Klamath basin, tracks dry well reports for the state. He notes that since 2021, 1,280 dry wells have been reported in the basin; the majority of these are domestic use wells. So far this year, 44 dry wells have been reported.

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Klamath CC Well Drilling Program… Cont'd

KCC was awarded $975,000 from the state and recently acquired a new drill rig. Funds remaining after the purchase of the drill rig will be used to outfit the rig with necessary equipment.

Apprentices will take online courses from KCC and get hands-on experience in the field with drilling companies in their communities. The apprenticeship program will partner with the welding program, as water supply well drillers will need to be able to properly weld well casing to prevent aquifer and well contamination. Currently, there are students enrolled in welding courses at KCC in anticipation of joining the well drilling apprenticeship program.

Mark Griffith, KCC Apprenticeship Program Director, is in the process of hiring a geologist to instruct students on basic geology, including understanding the characteristics of aquifers. Once the students pass the water well constructor exam and provide the necessary proof of experience, they will be licensed by the Water Resources Department.

For more information on the KCC drilling program, please contact Mark Griffith at griffithm@klamathcc.edu or (541) 880-2261.

For more information about drilling experience requirements, including welding proficiency, please contact Buffy Madrigal-Adams, Well Licensing Specialist, at (971) 287-8305 or by email at Buffy.M.Madrigal-Adams@water.oregon.gov.

Photo Credit: Klamath Falls Herald and News

FLOWING ARTESIAN WELLS

Flowing artesian wells occur when pressure in the aquifer is great enough to force the water to flow at land surface without a pump. When flowing artesian conditions are encountered during well construction, it is required that the well be continuously cased and sealed to a minimum of five feet into the confining unit immediately overlying the artesian water-bearing zone. In the absence of a confining unit, minimum case and seal depths will be determined by the Water Resources Department through Special Standards, or the well constructor may seal five feet into the interval immediately overlying the artesian water bearing zone.

To ensure the artesian well operates safely and efficiently, several additional requirements must be met:

- Watertight Cap: Prevents contamination and maintains pressure.
- Pressure Gauge: Allows for monitoring of the well's pressure.
- Control Valve: Ensures that the flow of water can be completely stopped.

These measures are crucial for monitoring and controlling the well's pressure and flow.

Any well where the static water level is above the land surface must adhere to these requirements, regardless of whether the water flows over the top of the well casing. Once the artesian well is completed, the shut-in pressure and free flow discharge must be recorded on the Well Report.

The requirements for artesian wells are detailed in Oregon Administrative Rule 690-210-0155. For any Special Standard Requests or questions regarding well construction, you can contact Tommy Laird, Well Construction Program Coordinator, at (503) 302-8618 or via email at Tommy.K.Laird@water.oregon.gov.

OREGON GROUNDWATER ASSOCIATION FALL CONFERENCE

The Oregon Groundwater Association (OGWA) Fall Conference is scheduled for October 11 and 12, 2024 at the Eagle Crest Resort in Redmond, Oregon. The Oregon Water Resources Department will present on two topics for continuing education credits (CECs). Travis Kelly, Well Construction Compliance Coordinator, will be presenting on Modernizing the Well Construction Program, while Bill Nashem, District 24 Watermaster, and Joe Kemper, Hydrogeologist, will be presenting on Water Rights and Wells.

Well constructors licensed in Oregon are required to obtain a minimum of 14 CECs during each licensing period, regardless of the number of licenses or endorsements held.

The following requirements apply to the CECs:

- A minimum of **two (2) CECs** shall pertain to groundwater and well construction statutes under ORS 537.505 to 537.795 and 537.992, and administrative rules under OAR 690-200 through 690-240, during each licensing period.
- A maximum of **eight (8) CECs** may be obtained through approved safety/first aid/CPR/ Hazardous Materials courses during each licensing period. Of the **eight (8) CECs**, a maximum of **four (4) CECs** may be obtained through Hazardous Materials training courses and a maximum of **four (4) CECs** may be obtained through safety/first aid/CPR courses.
- Exhibitions shall count as **one (1) CEC** per approved exhibition attended and shall not exceed **two (2) CECs** per licensing period.

For more information regarding the OGWA Fall Conference, please visit Oregon Ground Water Association - Fall Conference (ogwa.org). For questions regarding continuing education credits, please contact Buffy Madrigal-Adams at (971) 287-8305 or Buffy.M.Madrigal-Adams@water.oregon.gov.

PFAS AND DRINKING WATER

On April 10, 2024, the Environmental Protection Agency (EPA) issued the first-ever national, legally enforceable, drinking water standard to protect communities from exposure to toxic Per-and poly-fluoroalkyl substances (PFAS). PFAS are composed of a chain of linked carbon and fluorine atoms, forming an extraordinarily strong bond, making them difficult to break down naturally.

The EPA has designated six types of PFAS as having enforceable levels, called Maximum Contaminant levels (MCLS), in addition to health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs). See the table below for the final MCLG and MCL levels for the six different PFAS.

Compound	Final MCLG	Final MCL (enforceable levels)
PFOA	Zero	4.0 parts per trillion (ppt) (also expressed as ng/L)
PFOS	Zero	4.0 ppt
PFHxS	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
HFPO-DA (commonly known as GenX Chemicals)	10 ppt	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index

It is expected that this regulation will prevent PFAS exposure in drinking water for approximately 100 million people; preventing thousands of deaths, and reducing tens of thousands of serious PFAS-attributable illnesses over many years. Additionally, the Bipartisan Infrastructure Law allocated $1 billion in funding to help states and territories implement PFAS testing and treatment in public water systems (PWS) and to help owners of private wells address PFAS contamination. PWS will be required to monitor for PFAS and implement solutions to reduce PFAS above MCLs by 2027 and 2029, respectfully. For additional information, please visit the EPA's website: Per- and Polyfluoroalkyl Substances (PFAS) | US EPA.

SPECIAL STANDARDS FOR SEPTIC SETBACKS

When constructing a new well, small lot size or other specific site conditions can sometimes make it challenging to maintain the required 100-foot setback from the nearest septic drain line. If no other location on the property meets this setback, a Special Standard may be approved to encroach on the nearest septic drain line, but a deeper annular seal will be required. The well constructor must drill the well as far from the drain line as possible, but no closer than 50 feet. Once the Department is notified, the regional well inspector will meet the driller onsite to verify distances and confirm the location is the furthest viable spot for drilling.

Before the well inspector's site visit, well constructors should obtain a copy of the septic map from the county onsite septic program or Oregon Department of Environmental Quality (DEQ) records and mark the drain line locations on site. If a septic map is unavailable, the drain lines should be located by excavation or sewer scope and flagged for visibility. Drain lines on neighboring properties may also need to be located if they are within setbacks. During summer, green patches in otherwise dead grass can indicate drain lines. Aerial images are another way to locate them. Well constructors should not rely on the landowner's knowledge to locate the septic system, as it may not be reliable.

For questions about special standards, please contact Tommy Laird, Well Construction Program Coordinator, at (503) 302-8618 or by email at Tommy.K.Laird@water.oregon.gov.

MEET TOM SKILES

Tom Skiles joined the Oregon Water Resources Department (OWRD) in March 2023 as the District 17 Watermaster, and since January 2024, he has been the manager of the South Central Region in Klamath Falls. In this role, Tom has been known to remind his colleagues how lucky they are to work in the Klamath Basin at such a transformative and historic time. In the Basin, water law and water rights; fisheries and ecosystem restoration; dam removal; social and environmental justice; and agriculture have been thrown into the same crucible. No one truly knows what the future will look like in the Basin, but Tom is grateful for the opportunity to play a public service role.

Tom was born and raised in California's Central Valley. The grandson of a farmer, he worked on the farm as a teenager before moving on to UC Davis as an agriculture major. While at UC Davis, he took a couple fisheries courses and worked on purse seiners in Alaska during the summer salmon harvest to pay his college tuition. Those experiences were pivotal, and he changed the focus of his studies from agriculture to fisheries science (BS) and hydrologic science (MS). Before coming to OWRD, Tom worked at the Columbia River Inter-Tribal Fish Commission as a fish passage scientist for more than a decade.

In his younger adulthood, Tom enjoyed competing in road and mountain cycling, marathons, and ultra marathons. Today, he's happy to coach and ride trails with his 11-year-old son and 8-year-old daughter, ski and hike with his family, and struggle to keep up with his spirited Malinois-mix dog.

For questions about the Klamath basin, contact the Klamath watermasters office at (541) 883-4182.

WELL LOCATION REPORTING - NO SITUS ADDRESS

When constructing a well on a property without an assigned address, it is important to avoid using "No Situs Address" as the street address of well on the well report. According to Oregon Administrative Rule (OAR) 690-205-0210 and OAR 690-240-0395, well constructors must provide the nearest address to the property if one is not assigned. To comply with these requirements, constructors should list the closest property address or the nearest intersection on the well report. For instance, if the well is located next to a property with an address, you might report it as:

- "Lot next door to 725 Summer St NE, Salem, OR."

If the well is situated at an intersection with no nearby address, you should note the intersection and specify the corner where the well is located, such as:

- "SW corner of intersection of Summer St NE and Union St NE, Salem, OR."

By adhering to these requirements, well constructors ensure accurate and reliable location reporting, which is essential for effective water resource management in Oregon.

For questions regarding well report requirements, please contact Tommy Laird, Well Construction Program Coordinator, at (503) 302-8618 or Tommy.K.Laird@water.oregon.gov.

HARD HAT SAFETY

Hard hats are designed to protect workers from head injuries caused by falling objects, impacts, and electrical hazards. The head is one of the most vulnerable parts of the body, and injuries to this area can be severe or even fatal. According to the Occupational Safety and Health Administration (OSHA), thousands of workers suffer head injuries each year, many of which could be prevented with the proper use of hard hats. To maximize the protective benefits of hard hats, it is essential to follow best practices for their selection, use, and maintenance:

1. **Proper Fit:** Hard hats should fit snugly on the head without being too tight. Adjustable suspension systems can help achieve a comfortable and secure fit.
2. **Regular Inspection:** Hard hats should be inspected regularly for signs of damage, such as cracks, dents, or wear. Any hard hat showing signs of damage should be replaced immediately.
3. **Proper Storage:** Store hard hats in a cool, dry place away from direct sunlight and extreme temperatures, which can degrade the materials and reduce their effectiveness.
4. **Cleaning:** Clean hard hats with mild soap and water. Avoid using harsh chemicals or solvents that can weaken the shell.
5. **Replacement:** Replace hard hats according to the manufacturer's recommendations or if they sustain a significant impact. Even if no visible damage is present, the integrity of the hard hat may be compromised.

For more information on hard hat safety, please visit: https://www.osha.gov/

PHOTOS FROM THE FIELD

Well inspection in the North Central region

Wild rabbit helping inspect a well

MORE PHOTOS FROM THE FIELD

Improperly capped flowing artesian well

Collapsed liner with a stuck pump

Inspecting a well in Eastern Oregon

Drill rig on top of a hill in Northwest Oregon

WELL CONSTRUCTION SECTION
OREGON WATER RESOURCES DEPARTMENT
725 SUMMER ST NE, SUITE A
SALEM, OR 97301

Well Construction Section Staff Directory

Kristopher Byrd, Manager
Kristopher.R.Byrd@water.oregon.gov
(503) 991-2470

Travis Kelly, Well Construction Compliance Coordinator
Travis.N.Kelly@water.oregon.gov
(971) 304-5079

Tommy Laird, Well Construction Program Coordinator
Tommy.K.Laird@water.oregon.gov
(503) 302-8618

Buffy Madrigal-Adams, License and Compliance Specialist
Buffy.M.Madrigal-Adams@water.oregon.gov
(971) 287-8305

Ladeena Ashley, Well ID Program Coordinator
Ladeena.K.Ashley@water.oregon.gov
(971) 287-8218

Linda Walker, Well Report Review Coordinator
Linda.K.Walker@water.oregon.gov
(971) 287-8201

Scott Kudlemyer, Well Program Specialist
Scott.B.Kudlemyer@water.oregon.gov
(971) 287-8360

WCC Section Fax: (503) 986-0902

Region Office Directory

Western
Phone: (503) 986-0900
Fax: (503) 986-0903

Southwest
Phone: (541) 774-6880
Fax: (541) 774-6187

Central
Phone: (541) 591-2115

South Central
Phone: (971) 375-5424

North Central
Phone: (541) 278-5456
Fax: (541) 278-0287

Eastern
Phone: (541) 523-8224 x231
Fax: (541) 550-3898

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