WELL SAID Newsletter

Apr 2025

Issue 79

News from the Water Resources Department's Well Construction Section

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APRIL 2025 WELL CONSTRUCTOR EXAM

The next Well Constructor exam is scheduled for April 14, 2025, at the Water Resources Department's (WRD) office in Salem. To sign up for the test, please complete an application to take the exam which can be found on the first two pages of the study guide. Mail the completed application and a check or money order in the amount of $20.00 to cover the exam fee to the Salem office. The study guide and other exam materials, including practice exams and video tutorials, can be found on the WRD website under Licensing Exam Information.

Here are the results of the January Well Constructor exam:

- One water supply well license examinee passed the exam and has been issued a trainee card.
- Three monitoring well license examinees passed the exam and were issued licenses after providing proof of their drilling experience.

Please contact Buffy Madrigal-Adams, Well Licensing Specialist, for questions regarding the exam or drilling experience requirements. She may be reached at Buffy.M.Madrigal-Adams@water.oregon.gov or (971) 287-8305.

WELL CONSTRUCTOR LICENSE RENEWALS 2025

For well constructors who have licenses expiring on June 30, 2025, this is a reminder that the fee for a two-year water supply or monitoring well license renewal is $150.00. An additional fee of $100.00 will be assessed for renewals submitted post June 30, 2025.

Well constructors must have a minimum of 14 continuing education credits (CECs) to renew their license. Of the 14 credits, a minimum of two credits must be in Oregon Rules and Regulations. An Online Well Constructor Rules Course is offered on the Department's website. Use the same login credentials that you use for electronic submittal of well reports and start cards. Please click the checkbox after reading the "Statement of Integrity" to enter the course. Unfortunately, online payment for the course is not yet available; please mail in the invoice and payment to WRD's Salem office via check or money order.

Well constructors who currently meet the minimum CEC requirement may renew their license online here: Online Well Constructor License Renewal.

License renewal paperwork will be mailed to the business address on file with the Department at the end of April. Please log into Update Contact Information to ensure that WRD has current address and contact information.

Questions related to license renewals or CECs may be directed to Buffy Madrigal-Adams at Buffy.M.Madrigal-Adams@water.oregon.gov or (971) 287-8305.

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.

MODERNIZING OREGON'S WELL CONSTRUCTION PROGRAM

The Department has submitted the final implementation report required by House Bill 2145, marking a significant milestone in modernizing the state's well construction program. Since July 1, 2022, all well reports have been reviewed on time, with over 30% of wells inspected on-site. Targeted training and process improvements have reduced deficiencies and strengthened groundwater protection.

This legislation was meant to accomplish several things: 1) prevent well deficiencies that can lead to contamination or waste of groundwater, 2) better protect groundwater resources for Oregonians, and 3) give the well construction industry timely assurance that their work is being performed in a manner consistent with state requirements.

A key factor in the successful implementation of the bill has been enhanced engagement with the well construction industry. Ongoing training and feedback have helped well constructors improve report accuracy and adherence to regulations. Digital modernization efforts have also streamlined the process, ensuring real-time updates and better tracking of well conditions across the state.

Looking ahead, the Department remains committed to strengthening collaboration with well constructors, providing training opportunities, and ensuring that well construction in Oregon meets the highest standards for protecting groundwater resources.

For more details, read the 2025 Legislative Report on HB-2145 Implementation or visit the Department's HB-2145 page.

For questions on HB 2145, please contact Travis Kelly, Well Construction Compliance Coordinator, at (971) 304-5079 or Travis.N.Kelly@water.oregon.gov.

BACKFLOW PREVENTION DEVICES

Chemigation involves applying agricultural chemicals or fertilizer through an irrigation system. The practice of applying these chemicals or fertilizers through irrigation systems provides individual irrigators with the opportunity to apply needed products to agricultural crops on a more regular basis and often at a significantly reduced rate. Because of the potential for contamination of the groundwater resource from chemicals flowing backwards into the well if pressure is lost, the Department has back-siphon prevention requirements detailed in the well construction standards. The standards require that back-siphon prevention devices be installed on any irrigation system connected to a groundwater source when fertilizers or other chemicals are applied through the system. The landowner or other responsible parties are accountable for ensuring that the back-siphon prevention equipment is installed and functions properly.

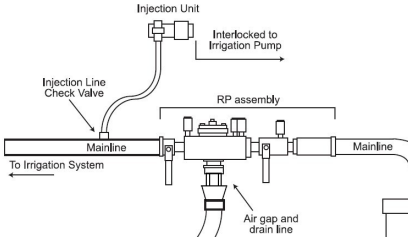
To meet minimum standards, the irrigation systems must include an automatic low-pressure drain, an inspection port, an irrigation line check valve, an air /vacuum relief valve, a chemical injection line check valve, and a system interlock. In addition, these systems are subject to inspection by the Department.

Information regarding the requirements for these systems is detailed in OAR 690-215-0017. These regulations are in addition to Federal Insecticide, Fungicide and Rodenti-cide Act (FIFRA) requirements, and are not intended to replace those regulations.

Questions regarding Oregon's backflow rules should be directed to Tommy Laird at Tommy.K.Laird@water.oregon.gov or (503) 302-8618.

You may also contact the regional well inspector where the chemigation or fertigation will take place. Their contact information is available on WRD's website: Resources for Well Constructors.

Backflow Prevention Device



DISINFECTION OF A WELL

Ensuring proper well cleanliness and disinfection is a critical step in the well construction and maintenance process. Oregon Administrative Rule (OAR) 690-210-0380 requires that before or after being placed in the well, **all** essential equipment, including pumping systems, sand, gravel, and well casings, must be **thoroughly cleansed**. This involves hosing or sluicing them with water, followed by disinfection using a solution that contains at least **50 parts per million** of chlorine. It is also essential that any water introduced into the well during construction is clean and potable, ensuring the highest standard of safety and hygiene.

Upon completion of the well, a careful **cleaning process** should follow. The well and its equipment, including the interior of the well casing, need to be swabbed thoroughly to remove **all** traces of oil, grease, and other foreign substances. The final step is disinfection. This involves agitating and mixing in the well a chlorine solution strong enough to maintain a residual of **25 parts per million after a 24-hour period**. Importantly, this process should also take place **after** the installation of pumping equipment to guarantee continued water quality and safety.

However, attention must also be paid to regulations governing the **discharge of chlorine**, which may vary by location. It is advisable for constructors to reach out to the Department of Environmental Quality or the relevant city public works department for information and guidance regarding compliance with local environmental standards.

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

ABANDONMENT OF FILTER OR GRAVEL PACK WELLS

Filter pack wells typically use gravel or silica sand to surround the well screen or perforated pipe to enhance water flow while preventing sediment from entering the well. In addition, a properly placed filter pack can also help to improve the efficiency and longevity of the well.

Once the well is ready to be decommissioned, a special standard is required to ensure that the abandonment method adequately protects the groundwater resource. Although each special standard is unique, there are specific requirements that apply to all gravel or filter pack well abandonments that should be noted:

- The abandonment method must ensure that all perforated sections of the casing will be pressure grouted throughout; **and**
- The remainder of the well must be filled with cement grout.

More information about the abandonment process for filter or gravel pack wells can be found in Oregon Administrative Rule (OAR) 690-220-0090.

Questions regarding special standards for filter or gravel pack well abandonments should be directed to Tommy Laird, Well Construction Program Coordinator, at (503) 302-8618 or Tommy.K.Laird@water.oregon.gov.

MONITORING WELLS: HOLLOW STEM AUGER

Because hollow stem augers are one of the most common drill tools used for monitoring well construction and abandonment, the Department would like to remind well constructors that if they are going to use these augers, that the **inside diameter of the auger** must meet the requirements described in Oregon Administrative Rule 690, Division 240. These rules state that "if the monitoring well is constructed using a hollow stem auger drilling machine, the inside diameter of the auger must be at least **four inches larger** than the nominal diameter of the casing to be installed." In addition, if a piezometer is being constructed or abandoned, the rules require the inside diameter of the auger to be at least **2.5 inches larger** than the nominal diameter of the casing.

When completing the construction section of the monitoring well report, please verify that the **inner diameter** of the auger is recorded as the borehole diameter. This is to ensure that the requirements of the rules are being met. Additionally, this helps with calculating the **correct amount of seal material required**. If a monitoring well is constructed without the required amount of seal material, then the well report reviewer will reach out to the driller to discuss.

Questions about monitoring well construction or abandonment should be directed to Tommy Laird, Well Construction Program Coordinator, at Tommy.K.Laird@water.oregon.gov or (503) 302-8618.

REQUIRED WELL CONSTRUCTION INFORMATION

Water bearing zones and static water levels are required to be reported on the well log for each water-bearing formation that is encountered. Along with this information, estimated flows are also required to be reported for the completed well. The water-bearing zone, static water level, and flow rate information is not only valuable information for the Department, but it is also useful for the landowner and pump installer when determining how much water the well produces and where to place the pump.

Since the Department has been conducting technical well report reviews, it has been noted that in many cases water bearing zone and static water level information is being left blank, with only the depth of the completed well water bearing zone and static water level provided. When this occurs, it is necessary for the well report reviewer to contact the well constructor to resolve the deficiency and request any missing information.

Well constructors that collect water bearing zone and static water level information that will not fit into the appropriate data field in the database are encouraged to enter the information in the Comments/Remarks section. If necessary, a document may also be attached to the submitted well report that describes water-bearing zone, static water level, and flow rate information in more detail.

For questions regarding the electronic submittal of well reports, contact Buffy Madrigal-Adams at (971) 287-8305 or Buffy.M.Madrigal-Adams@water.oregon.gov.

For questions about well construction rules and statutes, contact Tommy Laird at (503) 302-8618 or Tommy.K.Laird@water.oregon.gov.

MEET KIM FRITZ-OGREN

Kim Fritz-Ogren is the Field Services Division Administrator, starting this role in December 2024. Before that she managed the Planning, Collaboration, and Investments Section, which builds partnerships and incentivizes Oregonians to pursue integrated and innovative solutions for complex water challenges. This included supervising the staff who stood up and manage WRD's two well funds: the Water Well Abandonment and Repair Fund and the Harney Domestic Well Fund.

In addition to her work at WRD, Kim recently completed serving as an instructor for the Water Resources Graduate Program at Oregon State University teaching Sociotechnical Aspects of Water and Conducting Collaborative Projects.

Prior to WRD, Kim worked with the Environmental Protection Agency, Bureau of Reclamation, and Army Corps of Engineers on a variety of water management issues ranging from conflict management to water security for drinking water and wastewater utilities. She earned her doctorate in Geography at Oregon State University where her research focused on the Columbia River Treaty between the US and Canada.

Kim also holds a Master's of Science in Water Resources Policy and Management and a Certificate in Water Conflict Management and Transformation from Oregon State University as well as a Bachelors of Arts in Environmental Studies and Policy Management from Dickinson College.

In her free time, she enjoys gardening, baking, and adventuring with her husband, Justin, and children, Vera (4) and Silas (2).

TRENCHING AND EXCAVATION SAFETY

Trenching and excavation work is an essential component of many construction and maintenance projects. It is also one of the most hazardous activities on a job site. According to the Occupational Safety and Health Administration (OSHA), cave-ins, falling loads, hazardous atmospheres, and equipment accidents are some of the leading causes of serious injuries and fatalities in excavation work.

Key Safety Measures:

- **Protective Systems:** Trenches 5 feet or deeper require protective measures like sloping, benching, shoring, or trench boxes.
- **Competent Person Oversight:** A trained individual must inspect trenches daily for hazards and ensure compliance with safety protocols.
- **Safe Access and Egress:** Ladders, steps, or ramps must be placed every 25 feet in trenches 4 feet or deeper to provide workers with safe entry and exit.
- **Soil Testing:** Before digging, soil must be classified to determine stability and select appropriate protective systems.
- **Hazardous Atmosphere Testing:** Trenches over 4 feet deep require monitoring for toxic gases and oxygen deficiency.
- **Proper Spoil Placement:** Excavated materials and heavy equipment must be at least 2 feet from trench edges to prevent collapses.
- **Utility Location:** Identify and mark underground utilities. Accidental strikes on water, gas, electrical, or communication lines can lead to dangerous incidents.

Trenching and excavation work present serious hazards that require diligent planning, strict adherence to Occupational Safety and Health Administration regulations, and a proactive approach to safety. By understanding the risks, implementing appropriate protective systems, training personnel effectively, and preparing for emergencies, employers and workers can dramatically reduce the likelihood of accidents.

For more information on trenching and excavation safety, please visit this OSHA webpage: https://www.osha.gov/trenching-excavation

MORE PHOTOS FROM THE FIELD

New well in Eastern Oregon.

Friendly cat helps with well inspection.

New well in SW Oregon.

New well in NW Oregon.

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