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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 & Compliance 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) 986-0851 or e-mail at Kristopher.R.Byrd@oregon.gov



Serving the public by practicing and promoting responsible water management.



MEET DOROTHY MORTENSON

The Oregon Water Resources Department is pleased to introduce Dorothy "Morty" Mortenson to the drilling community. Dorothy has been with OWRD for just over 10 years as a GIS and application developer in the Information Services section. Her most recent large project includes the Groundwater Information System (GWIS), where groundwater records are now publicly accessible, viewed on a map, and measured water levels are able to be viewed as hydrographs.

Additionally, Ms. Mortenson, working alongside subject experts within OWRD, has worked on the Groundwater Use Recording Mapping tool, the Water Rights Mapping Tool and the Klamath Tribal Instream Claim Dashboard.

Before joining OWRD, Dorothy worked for 18 years in Alaska with the Dept of Natural Resources as a GIS analyst and manager (primarily on the Exxon Valdez Oil Spill project), and 7 years for the National Park Service as a data manager for a program related to long-term ecological monitoring. Prior to Alaska, she served as a GIS specialist for an Environmental Protection Agency deposition project.

Getting "elbow deep in the data" to build better information systems is a daily mission for her at OWRD. She states that "with data there is information. With information, there is knowledge. If we're lucky, knowledge will lead to wisdom."

During her free time, Dorothy has recently started growing trees from seeds or cuttings. She also enjoys bird dog training, floating down the clean, clear waters of Oregon, archery, and anything else outdoors. Living in a rural area with a domestic well most of her life, Dorothy can appreciate the challenges facing well constructors and is thankful for all that the drillers do to ensure that our drinking water is viable and safe.

Please continue reading this edition of the *Well Said* to learn about some new exciting projects that Ms. Mortenson has been working on directly related to well constructor needs.

WELL REPORT QUERY: NEW MAPPING TOOL

The Well Construction & Compliance section is pleased to announce an exciting new improvement to the Well Report Query application on the OWRD website. The application now allows for searches using the Well Report Mapping Tool.

The screenshot shows the 'Well Report Information' search interface. On the left, there is a 'Search by Township/Range/Section (TRS)' section with dropdowns for Township (South) and Range (West), and a grid of sections numbered 1 through 36. Below the grid is a 'Find TRS by Address' button. On the right, the 'Well Report Information' section contains various search criteria: Well Log (dropdown), Start Card (to), Well Label: L (to), Completed Date (to), Received Date (to), County (dropdown), Bonded License Nbr. (with a 'Find a Driller' link), Owner Last Name, Company Name, Completed Depth (to), Yield (to), Tax Lot, and Type of Report (dropdown). At the bottom, there is a 'Records per Page: 10' setting and buttons for 'Search', 'Search by Map', and 'Reset'.

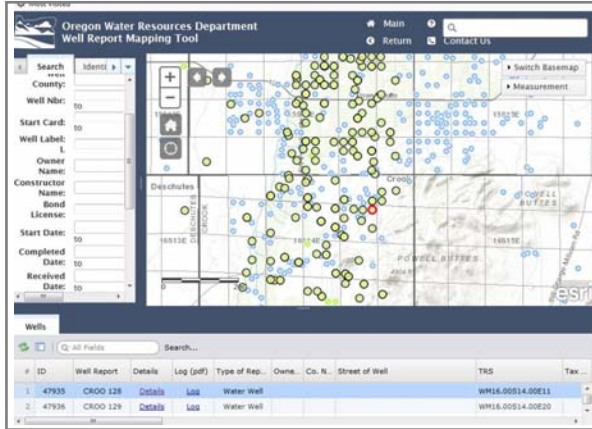
After clicking "Search by Map", click on the "Help" button and choose "User Guide" to find information regarding how to best navigate the application.

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WELL REPORT QUERY: NEW MAPPING TOOL, cont'd

The map will display locations of wells in Oregon in the areas of your choosing. To display the best placement for the wells on the mapping tool a variety of data sources were used; for example, data from the Groundwater Section and other field staff, well reports with latitude/longitude, and exempt use maps with coordinates provided by the landowner. Wells without coordinates are displayed in the center of the Township/Range/Section (and quarter-quarter if one is provided). To access a PDF of the well report, please look below the mapping tool (as seen below).



For assistance with navigation or questions about the mapping tool, please contact Dorothy Mortenson at (503) 986-0857 or Dorothy.C.Mortenson@oregon.gov

KLAMATH GW RULEMAKING

During a special meeting on April 12, the Oregon Water Resources Commission voted to adopt new interim rules that specify how OWRD will manage groundwater uses to meet calls for water to fulfill senior surface water rights in the Upper Klamath Basin. The rules will be in effect through March 2021.

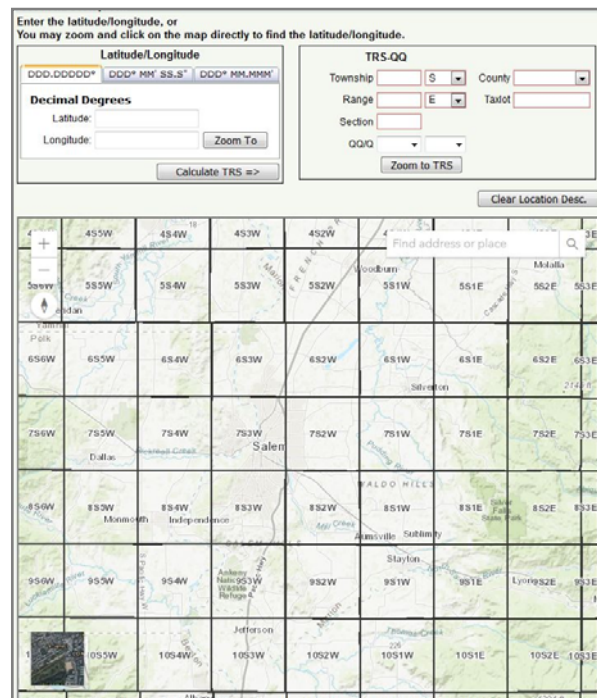
The newly adopted Oregon Administrative Rules (OAR), Chapter 690, Division 025 (OAR 690-025-0020, -0025, -0040) provide that regulation of wells located within 500 feet of surface water will result in relief to senior surface water right holders. Currently, there are seven wells located within 500 feet of surface water that may be subject to regulation to meet the call of a senior surface water right under these new interim rules.

The rules are an interim approach to regulation, while the Department works with the basin to develop longer-term water management rules. OWRD intends to conduct significant engagement and outreach with the local water user community and stakeholders to develop permanent rules by March 2021.

Please visit www.oregon.gov/OWRD and click on Rulemaking, for more information.

NEW MAPPING FEATURE FOR START CARD E-FILING

OWRD is eager to announce that as of July 15, 2019 we have a new mapping tool integrated directly into the start card e-filing application. This feature allows well constructors to: locate a property on a map, mark the proposed location of the well, and then convert that location to GPS coordinates and/or the TRS location. The previous start card application offered a tool to find TRS, but because that program was outdated, the information was not always accurate—especially in rural parts of Oregon. The goal of the newly updated start card application is to boost the integrity of the location information in the well report query database.



The Well Construction & Compliance section would like to give a very special thank you to Dorothy Mortenson for taking on this project after discovering that the previous version's mapping tool was imprecise. Dorothy's dedication to finding ways of acquiring solid data makes her invaluable to our team. Thank you Dorothy!

If you have any questions regarding the update to the start card application or need assistance with navigation, please contact Buffy M Gillis at (503) 986-0856 or Buffy.M.Gillis@oregon.gov.

We also encourage contacting Dorothy if you have suggestions or ideas on how to improve our applications. She may be reached at (503) 986-0857 or Dorothy.C.Mortenson@oregon.gov.

DRILLER LICENSING

License Renewal Statistics

As a way of keeping the Oregon drilling community informed of the latest numbers related to statewide well constructor licensing, the Department would like to share information regarding the 2017-2019 well constructor licensing cycle, which ended on 6/30/2019:

A total of 103 well constructor licenses were renewed in 2019. Of those...

- 61 are water supply well licenses
- 32 are monitoring well licenses
- 10 have both license endorsements

A total of 28 well constructors who were up for renewal in 2019 have yet to renew their licenses. As a reminder, there is a **\$100 late fee** for those who did not renew their license prior to June 30, 2019. Additionally, if a license lapses for more than one year, a well constructor will need to re-take the exam, and requalify, in order to become licensed again and continue drilling in Oregon.

Please direct all licensing questions to Buffy Gillis at (503) 986-0856 or Buffy.M.Gillis@oregon.gov.

License Exam Study Packets

The well constructor licensing examination is offered at the Salem office of the Water Resources Department once every quarter during the months of January, April, July, and October. In order to help prepare applicants, the Department has been working on updating the study packets for both the Water Supply Well and Monitoring Well licensing exams. A few of the items scheduled to be updated include: the *Map Reading Fact Sheet*, the *Classification of Rocks Fact Sheet*, and the *High Voltage Lines Fact Sheet*. In an effort to provide the most useful information possible, OWRD would also like to get feedback from the drilling community regarding what information they feel would be most helpful.

If you have a suggestion or would like more information, please contact Buffy Gillis at (503) 986-0856 or Buffy.M.Gillis@oregon.gov.

HARNEY GW STUDY

Advisory Committee will meet Thursday, August 8 and Friday, August 9.

The Greater Harney Valley Groundwater Study Advisory Committee is scheduled to meet Thursday, August 8 from 9:00 a.m. to 4:00 p.m., and Friday, August 9 from 9:00 a.m. to noon at the Harney County Community Center located at 484 North Broadway Ave, Burns, OR. Members of the public are welcome to attend.

During the meeting, scientists from the Oregon Water Resources Department (OWRD) and the United States Geological Survey (USGS) will share initial study findings about groundwater resources in the area based on data that have been collected as part of the Greater Harney Valley Groundwater Study. In addition, they will review figures and graphics that will be included in the groundwater study reports and seek feedback from members of the Committee.

Since 2016, OWRD and the USGS have been cooperatively conducting a groundwater study in the Greater Harney Valley that is providing information about groundwater resources in the area. The Greater Harney Valley Groundwater Study Advisory Committee, which includes local land-owners and other interested organizations, is co-convened by OWRD and the Harney County Court to track and provide input on the study as it progresses to its 2020 report publication deadline.

To receive future announcements about the Groundwater Study, send an email to Harmony.S.Burright@oregon.gov.



EXCAVATION SAFETY



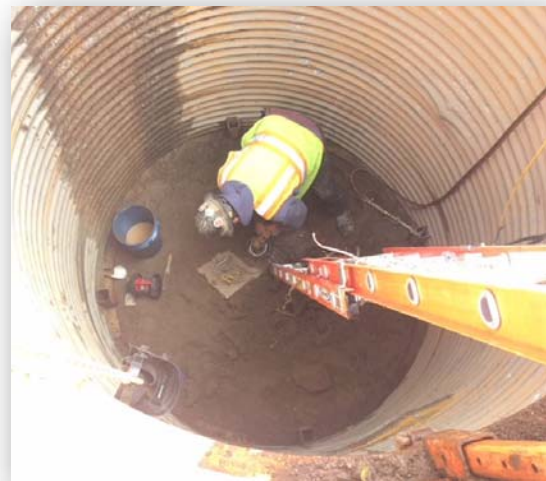
When people think of trenches, they often think of long excavations dug for the benefit of installing a sewer line or electrical conduit. This is not always the case, however, as there are many other uses for trenches and excavations. One example of an excavation constructed for the benefit of well construction, is a hole that is needed to locate and repair a well's casing that may have been bent, or buried, during site development activity. Another excavation used in the well construction industry is a hole that is dug during the construction or decommissioning of a dug well. Stories have been told about how in the past, a driller has entered a deep excavation to weld on a new piece of pipe to repair casing that has been bent. Is this type of activity safe? The answer would have to be "no," as there are deaths that occur every year from excavation cave-ins.

In Oregon, fatalities caused by excavation cave-ins are a relatively rare occurrence; however, in 2016, a 29-year-old pipe layer died when he was buried under 6 feet of soil in an improperly shored trench, and in 2018, three Oregon workers were injured – one critically – in two separate incidents involving trenches that lacked protective systems. The key factors in all three Oregon instances included the failure of a competent person to inspect the trenches and ensure that they were safe to enter, as well as the employee's failure to recognize the danger of entering an unprotected excavation, even for a brief period of time.

Excavation cave-ins typically result from the disturbance of native soil that provides horizontal support for trenches. The removal of this soil allows the side walls of the excavation to eventually move downward. This slope failure takes the form of sliding, sloughing or toppling, and can occur quickly. The longer the face of the excavation remains unsupported, the more likely it is to cave in. What is alarming, is that a trench cave-in can trap victims within seconds, or kill them in minutes. Just consider that a cave-in that contains three to 5 cubic yards of soil weighs 8,000 to 14,000 pounds, and with that kind of weight, a victim can suffocate in less than three minutes, or suffer serious internal injuries.

The basic methods for addressing trench safety are sloping, benching, shoring, and shielding. The correct method for a specific case will depend on factors such as soil type and water content. In addition, the trench depth and width plays an important role for the type of required safety measures. If an examination of the soil type, or other examinations, show problems such as budging, tension cracks, water accumulation, sluffing, heaving, squeezing, or subsidence, then additional protection, including shoring, may be required. (Source: *Oregon OSHA*, June – July 2019, Volume 65)

The photos below illustrate excavations made to repair or properly abandon a well.



PHOTOS FROM THE FIELD

Constructing a dug well.



Preparing to video a flowing artesian well.

PVC cased well during repair activity.



Water well with a bad annular seal.



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WELL SAID NEWSLETTER - Oregon Water Resources Dept

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