

News from the Water Resources Department's Enforcement Section

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Road Trip!

The Department's yearly continuing education road trip is winding down with one more stop to go. A two hour class is scheduled for June 9th at the Salem office of the Water Resources Department. The class has been approved for 2 CECs in the rules category. To sign up or if you have questions about this class, contact Tracy or Kristopher.

E- Filing

Many drillers are e-filing well logs. This is an efficient and cost saving method to file well reports. E-filing is beneficial to both the drilling industry and the Department. For more information about the new e-filing well log form, contact Ken Smith at (503) 986-0867.

License Renewals

The deadline to renew your driller's license is coming up fast. Renewal forms were mailed out in March 2006. There are approximately 400 licenses renewing this year, so if you have not received your new license yet, please be patient.

Renewal forms are available on our website at www.wrd.state.or.us/OWRD/GW/well_constructors.shtml#Well_Licensing. Please

contact Tracy if you have questions.

One License, One Bond

The Oregon Water Resources Commission has amended the State's Well Construction Standards relating to the licensing and bonding requirements of drilled wells in the State of Oregon. The licensing and bonding requirements are described in Oregon Administrative Rules Chapter 690, Divisions 200, 205, 220, 225 and 240.

Prior to adoption of the new rules, the Water Resources Department issued two types of well constructor licenses: one for water supply wells and one for monitoring wells. The new rules combine the two well constructor's licenses into a single license with endorsements and require one bond which covers both endorsements (monitoring well and water supply well). These changes are consistent with Governor Kulongoski's regulatory streamlining efforts and will result in cost savings for all Oregon licensed well constructors.

The amended rules should be effective by July 1, 2006.

Who You Gonna Call?

Call Codi Holmes and she will gladly send you start cards, well logs and well tags if needed. Her direct phone number is (503)986-0854.

Obtaining a Water Right

Under Oregon law, all ground water is considered a public resource. With the exceptions listed below, anyone intending to use ground water must first obtain a water right permit from the Department. In general, a water right permit must be obtained before using water from any well. The following uses of ground water do not require a water right permit:

- Group and single-family domestic use up to 15,000 gallons per day
- Stock watering
- Watering any lawn and/or noncommercial garden totaling ½ acre or less in area
- Down-hole heat exchangers
- Any single industrial or commercial development up to 5,000 gallons per day.

These exempt uses are on a per-property or per-development basis and cannot be increased. For example, you cannot double the amount exempted by adding a second well. If you have questions regarding a ground water use and the requirement to obtain a water right permit, contact your local watermaster or the Department's water right information group at (503)986-0900.

Online Courses

Check out the Department's website for approved Continuing Education Courses. Some courses are available online so if time is a factor, these online courses may be an option.

Maintaining Your Well

Landowners have the ultimate responsibility for maintenance of their well(s). If well construction problems are discovered that may contribute to contamination or waste of the ground water resource, the Department may require repairs or abandonment to eliminate the problem.

One simple well maintenance tip is:

Once a year, have a water sample analyzed for bacteriological quality. Every five years have a

sample checked for chemical quality such as hardness or specific conductance.

Changes in the quality provide an early warning of defective surface casing, seals, or contaminated aquifers. Many local water treatment or conditioning businesses and some local Health Department offices or independent laboratories will perform these tests for free.

Two Drillers, One Well?

Quiz: *Bonded Driller A* starts, but does not complete a well, and removes his drill rig from the well site. *Bonded Driller B* comes along and completes the well. Do both drillers need to file a well report?

Answer: Yes. Each driller must file a separate well report. The well report must describe the portion of the project that each driller completed.

How Bentonite Got Its Name

From Wikipedia, the free encyclopedia

Bentonite is an absorbent aluminium phyllosilicate generally impure clay consisting mostly of

montmorillonite. Two types exist: swelling bentonite which is also called sodium bentonite and non-swelling bentonite or calcium bentonite. It forms from weathering of volcanic ash, most often in the presence of water. Bentonite expands when wet - sodium bentonite can absorb several hundred percent of its dry weight in water. It is commonly used in drilling fluids, used to make slurry walls, waterproofing of below grade walls and used to form impermeable barriers (i.e. plug old wells, as a liner in the base of landfills to prevent migration of leachate into the soil).

Much of bentonite's usefulness in the drilling and geotechnical engineering industry comes from its unique rheological properties. Relatively small quantities of bentonite suspended in water form a viscous, shear thinning material. At high enough concentrations (~60 grams of bentonite per liter of suspension), bentonite suspensions begin to take on the characteristics of a gel (material with finite yield strength).

Bentonite can be used in cement, adhesives, ceramic fillers, cosmetics, and cat litter. Bentonite, in small percentages, is used as an ingredient in commercially designed clay bodies and ceramic glazes. Bentonite clay is also used in pyrotechnics to make end plugs and rocket nozzles. Sodium bentonite is

Well Said Newsletter

Available on the web at www.wrd.state.or.us/OWRD/GW/forms.shtml.

Please share with others at your organization.

Well Said is a production of the Oregon Water Resources Department's Enforcement 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 can be directed to Kristopher Byrd at (503)986-0851 or Kristopher.R.BYRD@wr.d.state.or.us.

“Serving the public by practicing and promoting wise long-term water management.”

used mostly as drilling mud in the oil and gas well drilling industries. The non-swelling calcium bentonite is sold within the alternative health market for its claimed therapeutic properties. Pascalite is a commercial name for bentonite clay.

Bentonite also has the interesting property of adsorbing relatively large amounts of protein molecules from aqueous solutions. It is therefore uniquely useful in the process of wine making, where it is used to remove excessive amounts of protein from white wines. Were it not for this use of bentonite, many or most white wines would precipitate undesirable flocculent clouds or hazes upon exposure to warmer temperatures, as these proteins denature. It also has the incidental use of inducing more rapid clarification of both red and white wines.

Bentonite is named after Benton Formation (a geological stratum, at one time Fort Benton Formation) in eastern Wyoming's Rock Creek area. Most high grade commercial sodium bentonite mined in the US comes from the area between the Black Hills of South Dakota and the Big Horn Basin of Montana. Sodium bentonite is also mined in the southwestern US, in Greece, and in other regions of the world. Calcium bentonite is mined in the Great Plains, Central Mountains and south eastern regions of the US.

Supposedly the world's largest current source of bentonite is Chongzuo in China's Guangxi province.

In Oregon, dry western sodium bentonite may be used in sealing water supply wells, however, powdered bentonite, bentonite grout or slurry cannot be used as a sealing material in water supply wells. If you have questions contact Kristopher Byrd at (503)986-0851.

GPS

Converting GPS coordinates to Township, Range and Section is available online.

Check out this site.
<http://www.esg.montana.edu/gl/xy-data.html>.

Monitoring Well Reminders

- Leaving a monitor well without a vault or monument requires a Special Standard.
- Any individual may install protective metal posts provided the surface seal is not disturbed.
- Monitoring well development may be performed by individuals other than a bonded monitoring well constructor as long as the well is not altered.
- Well development should

not affect the integrity of the casing or seal and should not occur prior to 24 hours after the annual seal is placed if cement grout or bentonite grout slurry is used.

- If dry bentonite is used, well development should not occur prior to 12 hours after the annular seal is placed.

Questions regarding monitoring wells should be directed to Kristopher Byrd at (503) 986-0851.

New Watermasters

Just when you think you've got the watermasters and their districts figured out, they switch...AGAIN. Yes, it has happened again.

Kathy Smith is the Department's Watermaster in District 14. She covers Josephine County.

Mike McCord is now the Watermaster in District 16 located in Salem. District 16 includes 5 counties (Polk, Yamhill, Benton, Lower Clackamas and Marion counties).

Sabrina White is the Watermaster for District 20 located in Oregon City. District 20 covers two counties (Multnomah and Northern Clackamas counties).

Joel Clark is the Watermaster for District 21 located in Condon. District 21 covers Wheeler, Sherman, Morrow and Gilliam Counties.

Frequently Asked Questions

Look for answers to these questions in the next *Well Said*.

- Who is allowed to construct geotechnical holes?
- Can I take a water sample out of a temporary geotechnical hole or does taking a water sample automatically make it a well?
- I have a dry well on my property. Can you tell me what I need to do to abandon it?
- What are the setbacks for a well from a property line?
- Can I abandon a water supply well with bentonite?
- I drilled a well for a couple and they ran out of money. Can I wait till they pay me before I go back out and top off the seal?
- Who is required to repair a well involved in a real estate transaction. The buyer or the seller?
- I want to install a new septic drain field on my property. Can you tell me where my neighbor's well is?
- I have some monitoring wells that I want to excavate out. Does a driller need to be on site during the abandonment?
- I am a consultant on an old gas station site and one of our monitoring wells is missing. Can I just leave it or do I need to find it?



We're on the Web!
See us at:
www.wrd.state.or.us

Oregon Rural Development Loans

Home improvement loans are available from the United States Department of Agriculture (USDA). Grants may be available to pay the cost of repairs and improvements to remove identified health and safety hazards. Home improvement loans can be used for the installation and repair of sanitary water and waste disposal systems, including plumbing and fixtures. For more information about Oregon Rural Development Home Improvement Loans and Grants contact your local USDA office or visit USDA website at: <http://www.rurdev.usda.gov/or/>.

Clean Water Festival

In April WRD participated in this Portland festival where approximately 1500 fourth and fifth graders from northwest Oregon learned about water and what they can do to protect their own watersheds.

Fun, interactive classroom activities and exhibits taught kids about water science and ecology.



Claudia Chinook created by Rickreall Watershed Council.



Be Water Wise program Regional Water Providers Consortium.

native fish, the effects of pollution, the importance of protecting and conserving our natural resources, and much more.

The festival provides a needed forum for children and teachers to learn about the importance of water from educators, managers and scientists. Learning about our most important resource is the first step toward carefully managing and protecting it so that clean and abundant water will be available to future generations and us.

The students circulate among 36 classrooms that feature presentations ranging from how aquifers work to how salmon migrate, 30 tables in an exhibit hall with interactive displays to motivate kids to think about water's importance to human health and the ability of wildlife to thrive, and 3 stage performances where kids laugh, sing and perform as they learn about water. For more information contact Nicole Charlson at (503)986-0829.

AWSE Spring Workshop

The Association of Western State Engineers Spring Workshop was held in Portland in May. The

purpose of this workshop is to bring people with technical expertise in water resources practices in the nineteen western states together to share information, ideas and problem solutions.

Discussion topics included future water supply planning, water banks, transfers, conjunctive use, water availability, and well construction licensing, enforcement and continuing education. Many of the state representatives described current issues in their state and contributed to state roundtable discussions.



Figure 1. This is a cased well on a construction site. The well head has been cut several feet below grade. Note the water flowing toward the well head. Figure 1B shows debris that was in the well.



Figure 1B. Some of the debris from inside the well (Figure 1).



Figure 2. Casing completely rusted through.



Figure 3. Uncapped cased well in an underground vault.



We're on the Web!
See us at:
www.wrd.state.or.us

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

East
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Fax: (866)214-3493



Figure 4. Too close to animal holding area.



Figure 5. Uncapped cased well in an underground vault.

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