

News from the Water Resources Department's Well Construction and Compliance Section

BRENDA BATEMAN ELECTED PRESIDENT-ELECT OF AWRA

The Water Resources Department is proud to announce that Brenda Bateman, Technical Services Administrator, was recently voted American Water Resources Association (AWRA) President-Elect. Previously, Dr. Bateman chaired the AWRA Policy Committee, leading the development of a series of water resources policy statements as well as a set of case studies focused on drought and flood policy in the United States. She has been vice-chair of AWRA's Oregon Section (2009-2010) and General Co-Chair for AWRA's Annual Conferences in Portland (2013 and 2017).



When asked how it feels to be elected present-elect of AWRA, she responded, "I am so honored...My goal during 2018 is to strengthen the relationship between science and policy, improving the ability of decision-makers to manage the water resources that have been entrusted to their care." Brenda's vision for this multi-disciplinary association includes building on its strengths and ensuring that AWRA provides strategic leadership in the water resources arena.

For additional information about the American Water Resources Association, please visit their website: <http://www.awra.org/index.html>

OWRD NOW ACCEPTING CREDIT / DEBIT CARD PAYMENTS

The Water Resources Department is pleased to announce that credit/debit card payments are now being accepted for Geotechnical Hole fees, Groundwater Use Recording fees and Dam Safety fees. Customers can use their invoice number and Department-issued passcode located on the payment coupon to complete the payment process. The following URL's will take customers to the payment processing links:

Geotechnical Holes:

http://www.oregon.gov/owrd/Pages/GW/gw_geotech_well_form.aspx

Exempt Use Recording Fee:

http://www.oregon.gov/owrd/pages/exempt_use_788_info.aspx

Dam Safety Fee:

http://www.oregon.gov/owrd/Pages/sw/dams_in_oregon.aspx

**ONLINE
PAYMENTS**

Questions pertaining to geotechnical hole fees should be directed to Buffy Gillis at (503) 986-0850 or buffy.m.gillis@oregon.gov, questions regarding exempt use fees should be directed to Scott Kudlemyer at (503) 986-0861 or scott.b.kudlemyer@oregon.gov and questions regarding dam safety fees should be directed to Samantha Phillips at (503) 986-0829 or samantha.j.phillips@oregon.gov.

ARTICLES

Page 1 Brenda Bateman Elected President-Elect of AWRA;
OWRD Now Accepting Credit / Debit Card Payments

Page 2 Backflow Prevention Devices; Drillers Field Guide

Page 3 Dewatering Wells; Free Well Water Testing At Thurston High School

Page 4 2017 Safety Conference Coming To Portland;
Coming Soon: New 2017 Construction Rules

B BACKFLOW PREVENTION DEVICES

Chemigation involves applying agricultural chemicals and fertilizer through an irrigation system. The practice of applying these chemicals and 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 Water Resources 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.

In order 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 representatives of the Water Resources 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 Rodenticide Act (FIFRA) requirements, and are not intended to replace those regulations.

Questions regarding Oregon's backflow rules should be directed to Joel Jeffery at (503) 986-0852 or by e-mail at joel.w.jeffery@oregon.gov.

DRILLERS FIELD GUIDE

As a way of helping constructors accurately describe soil and rock formations encountered during the drilling process, the Well Construction and Compliance Section recently mailed each licensed well constructor, an *Oregon Driller's Field Guide for Soil & Rock Formation* (Guide).

The *Guide* provides a useful visual index to help correctly describe the kind and nature of materials penetrated on well logs and geotechnical hole reports. The details include color, grain size, soil or rock type, moisture content, marker beds, drilling action, percent fines, hardness or density, structures and definitions. The *Guide* also contains useful map and Department contact information.

For additional information about the *Guide*, or to request a copy, contact Joel Jeffery at (503) 986-0851 or by e-mail at joel.w.jeffery@oregon.gov.

OREGON DRILLER'S FIELD GUIDE FOR SOIL & ROCK FORMATIONS

CHECKLIST:

1. Color	3. Moisture Content	6. % Fines
2. Grain Size & Soil or Rock Type	4. Marker Beds	7. Hardness or Density
	5. Drilling Action	8. Structures and Definitions

1. Color

lavender	light brown	reddish brown	yellowish brown	blue-gray	green-gray	olive gray	light gray	dark gray
----------	-------------	---------------	-----------------	-----------	------------	------------	------------	-----------

2. Sand Grain Size

Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand
-------------	-------------	-----------	----------------

2. Grain Size & Soil Type

GRAVEL	Boilers >3/2 in Cobbles 3-12 in	Inches (USCS)	Coarse 3/4 - 3 in Fine >3/4 - <1/4 in
SAND	Coarse 1/8 - 1/4 Medium 1/252 - 1/8 Fine Visible - 1/32	Inches (USCS)	Screen Slot Size 100-400 + 20 - 100-dot <20-dot
SILT	Can't roll into 1/8" rod Doesn't stick to fingertips Easy to break when dry		Particles not visible to the naked eye
CLAY	Can roll into a 1/8" rod Sticky or sticks to fingertips Hard when dry		

Peat or Organic Soil

2. Rock Type

Sedimentary rock: composed of detrital grains, such as siltstone, shale or sandstone; usually rounded
Igneous rock: composed of crystalline groundmass; may have crystal inclusions; grains may be angular
Metamorphic rock: altered sedimentary or igneous rock; typically with warped banding or shiny, scaly texture, light and dark wavy banding

3. Moisture Content

Dry • Moist Wet or Saturated	4. Marker Beds	Ash or Pumice Peat • White or Tan layers Wood • Red or Black Sand
---------------------------------	-----------------------	---

5. Drilling Action

Hard • Heaving • Boulders • Refusal Chattery • Choppy • Void • Easy
--

7. Hardness or Density - Rated by ease of drilling (Easy, Moderate Effort needed, Hard or very Difficult)
Density (if silt, sand, gravel): Loose (Easy); Dense (Moderate); Very Dense (Hard)
Hardness (if clayey silt & clay): Soft (Easy); Stiff (Moderate); Hard (Hard)
Strength (if rock): Weak (Moderate); Moderate (Difficult); Strong (Very Difficult)

8. Structures and Definitions

Banded: Has layers • **Consolidated:** Grains held together by mineral deposits • **Fractured:** Breaks easily along planar surfaces • **Interbedded:** Alternating light and dark layers or alternating grain sizes
Silt or Clay Bound: Grains held together by silt or clay • **Slickensided:** Has polished fracture planes
Till: Tillman, gravels held in suspension by fines, non-sorted • **Weathered:** Grains decayed into smaller pieces • **Well Sorted:** Particles are similar in size

6. % Fines





DEWATERING WELLS

As the construction season approaches, the use of dewatering wells is expected to increase. In Oregon, only licensed and bonded Water Supply Well Constructors can install these dewatering wells.

The construction of the wells must meet minimum well construction standards, which includes, but is not limited to, proper seals, casing, protection, documentation, and decommissioning.

Individuals that are contracted to install, repair or decommission dewatering wells are encouraged to contact the OWRD

Well Construction Program Coordinator, Joel Jeffery, to discuss potential installation options. Joel can be reached at (503) 986-0852 or by email at joel.w.jeffery@oregon.gov.

FREE WATER TESTING AT THURSTON HIGH SCHOOL

For the past 15 years, Springfield Public School's Water and Energy Learning Lab program has facilitated a free well testing program at Thurston High School. Thurston High School's Community Water Testing Lab is now accepting appointments for the 2017 school year. Tests are performed by students and results are mailed or emailed to customers within one week. Although the lab is not certified, students are trained to produce accurate and reliable results.

- Appointments are required and spaces are limited, so please call (541) 744-4140.
- Accuracy of testing requires the use of a sampling kit provided by the program.

The sampling kit contains one sealed bacteria bottle, one 500 ml bottle, two labels, and detailed instructions, including a map to Thurston High School. Well water samples are generally collected the day of the appointment and returned between 7-9 am to Thurston High School's water testing Lab.

For more information contact Stephanie Lawless at (541) 744-4140 or by email at stephanie.lawless@springfield.k12.or.us.



WELL SAID NEWSLETTER

Available on the web at www.oregon.gov/owrd/pages/gw/forms.aspx. Please share with others at your organization.

Well Said is a production of the Oregon Water Resources Department's 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 kristopher.r.byrd@oregon.gov



For Well Construction & Compliance resources, log onto http://www.oregon.gov/owrd/Pages/gw/wcc_index.aspx

2017 SAFETY CONFERENCE COMING TO PORTLAND

The Oregon Governor's Occupational Safety and Health Conference will be held March 6 through 9, 2017, at the Oregon Convention Center in Portland. The event is the largest of its kind in the Northwest, with more than 150 workshops and sessions, and will feature speakers from across the United States.

Keynote speaker Todd Conklin will present "Thinking Differently about Safety". Conklin's presentation will focus on the human performance theory of safety where investigations are conducted before accidents happen. "Safety is not the absence of events," he said. "Safety is the presence of defenses."

The event will offer sessions on several specialties:

- Construction
- Workplace violence prevention
- Motor vehicle safety
- Emergency response and preparedness
- Communication and training
- Utilities



Registration for the event is scheduled to open in January. For more information about the conference, please refer to <http://oregongosh.com/>.



COMING SOON: NEW 2017 CONSTRUCTION

SAFETY RULES

In 2017, employers who conduct construction projects in Oregon will see two major changes to the rules they must follow to protect their workers from fall injuries.

The changes are as follows:

- Beginning January 1, the Oregon Occupational Safety and Health Division's (Oregon OSHA) 10-foot trigger height – the minimum height at which workers must be protected from falls – will lower to six feet.
- Starting October 1, slide guards will no longer be allowed as a method of protecting workers from falling off sloped roofs.

These new requirements mean that construction contractors will need to use some form of fall protection to prevent their employees from falling six feet or more to a lower level.

Falls to a lower level are the leading type of falls in Oregon's construction industry. From 2013 to 2015 a total of 774 construction workers were injured by falling to a lower level. In 2016, failure to comply with general fall protection requirements was the most cited construction industry rule, with 289 total violations (221 serious and 68 repeat) and initial penalties totaling \$603,010.

Oregon OSHA's technical staff can answer questions to help employers understand how to apply rules to their workplace. They can be reached at (503) 378-3272, or by e-mail at tech.web@oregon.gov.

PHOTOS FROM THE FIELD



Damaged well at a construction site in Northwest Oregon.



Drilling in snow in Eastern Oregon.



Well under construction in Central Oregon.



Damaged and buried water well in Southern Oregon.



WCC: "Protecting water resources through appropriate prevention and enforcement."





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

6 WELL SAID NEWSLETTER

Feb 2017
Issue 46

Well Construction & Compliance Staff Directory

Kristopher Byrd, Manager
kristopher.r.byrd@oregon.gov
(503) 986-0851

Joel Jeffery, Coordinator,
Well Construction Program
joel.w.jeffery@oregon.gov
(503) 986-0852

Laurie Norton, License and
Compliance Specialist
laurie.k.norton@oregon.gov
(503) 986-0856

Ladeena Bell, Well ID
Program Coordinator
ladeena.k.bell@oregon.gov
(503) 986-0854

Buffy Gillis, Well Log
Review Coordinator
buffy.m.gillis@oregon.gov
(503) 986-0850

Scott Kudlemyer, Exempt Use
Program Coordinator
scott.b.kudlemyer@oregon.gov
(503) 986-0861

Enforcement 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

South Central
Phone: (541) 306-6885
Fax: (541) 388-5101

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

Eastern
Phone: (541) 523-8224 x231
Fax: (866) 214-3493