

CELEBRATING 42 YEARS OF EDUCATION



Water Environment School 2018

Operations & Maintenance Laboratory Practices

Stormwater Collection Systems Safety

42nd Annual

Wastewater Basics Basics & Beyond

Wastewater Pretreatment Biosolids Management

Vendor Display

March 27-29



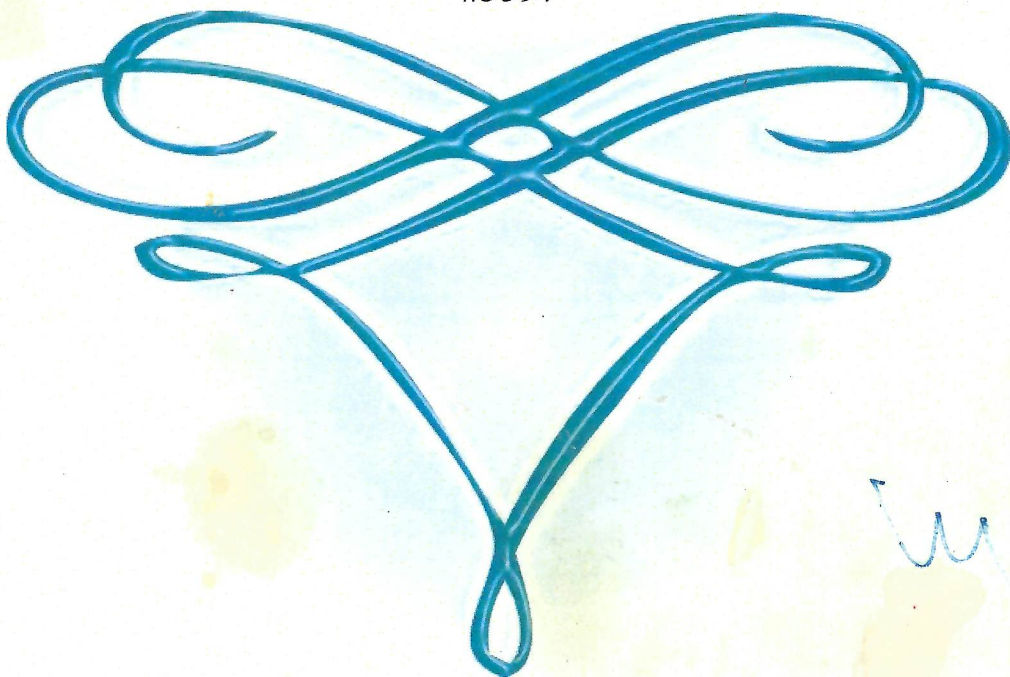
Oregon Water Education Foundation

SESSION SCHEDULE & DESCRIPTIONS

OESAC Approved

2.1 Wastewater & 1.2 Drinking Water CEUs

#3597





2018 Vendor's Display

This year's vendor's display will be on
Wednesday, March 28, 2018
in Randall Gymnasium.

Vendor's Day Raffle Rules and Procedures

- ❖ Check the number on your name badge. This number corresponds with a number that has been put into a raffle jar that is located with the vendor coordinator.
- ❖ Beginning around 10 AM on vendor's day, a few prizes to be awarded are selected per hour.
- ❖ A number is selected from the raffle jar. The number is taped number to the item, and written down on the wall behind the raffle items. People are invited to check throughout the day to see if they have won anything.
- ❖ Prizes may be claimed any time before 2:50 pm at the vendor's display.
- ❖ The items selected and awarded throughout the day are not the largest or most valuable items.
- ❖ All items will have been awarded by the end of the afternoon break – 2:50 to 3:10 PM
- ❖ From 2:50 to 3:00 PM all of the remaining items except for the few very most valuable ones will be selected.
- ❖ *ANY selected prize that has not been claimed by 3:00 PM will be recycled into the raffle pool.*
- ❖ **Prizes not claimed by 2:50 pm are forfeited and raffled off to a new number from the jar. Numbers already drawn are not recycled into the raffle.**
- ❖ From 2:50 to 3:05 pm all remaining items, including the most valuable, will be raffled off.
- ❖ The raffle will be completed by 3:05 to give enough time to get to the last class.
- ❖ Prize claimants must be present to win.
- ❖ If for some reason you have won a prize that is too big to carry with you, WES committee members will take it to the registration desk and hold it for you until after the last class.

Municipalities or other employers have varying standards for gifts that can be accepted at events like this; however the raffle items are purchased by ORWEF, and no particular prize could be attributed to any particular vendor. Anyone who claims a prize is responsible for determining if they are in compliance with their employer's policy, and anyone who claims a prize is responsible for any tax implications.

Please plan to visit & participate in the raffle!

Tuesday, March 27

Water Environment School 2018

Session	OPERATIONS & MAINTENANCE McLoughlin Auditorium	WASTEWATER PRETREATMENT Pauling 101	COLLECTION SYSTEMS Gregory Forum A	BASICS & BEYOND Pauling 131
7:00 – 8:00	REGISTRATION, COMMUNITY CENTER			
8:00-8:15	OPENING CEREMONY			
1 8:15-9:15	<p><i>Keynote Speaker</i> Utilities of the Future <i>Bob Baumgartner—Clean Water Services</i> <i>Randall Gymnasium</i></p>			
9:15	MORNING BREAK — COFFEE, TEA, ETC. DONUTS/BAGELS/FRUIT – Comm. Center			
2 9:30-10:30	Bio-Augmentation vs. Bio-Stimulation <i>Rick Allen</i> BIOLYNCEUS	Salem Public Works Waste Processing Facility <i>Nitin Joshi</i> <i>City of Salem</i>	What To Do With That Culvert? <i>Aaron Guffey</i> <i>E. Multnomah Soil & Water Conservation District</i> <i>Combined with Stormwater in GF B&C</i>	Ergonomics for Wastewater Operators <i>Dr. Ben Hokenson</i>
3 10:35-11:35	Solids Handling, A New and Cost Effective Strategy for Removing Sludge from Wastewater Lagoons and Treatment Plants <i>Rick Allen</i> BIOLYNCEUS	Toxics in Consumer Products <i>Lisa Cox</i> <i>Oregon Department of Environmental Quality</i>	Winning the Fight Against Wipes and Preventing Pump Clogs in Collections <i>Dave Barkey</i> <i>JWC Environmental</i>	How to Get a Job in the Wastewater Field <i>Greg Eyerly</i> WES
12:00-1:00	LUNCH for Attendees – CAFETERIA			
4 12:35-1:35	BNR with External Carbon <i>Rick Allen</i> BIOLYNCEUS	Fundamentals of Electronic Measurement: pH, Conductivity, Residual Chlorine, Etc. <i>Mark McElroy</i> <i>Thermo</i> <i>Joint Session with Lab In P101</i>	Collection System Asset Management <i>Barry Buchanan, P.E.</i> <i>Buchanan and Associates</i>	No Session
5 1:40-2:40	Process Control Nitrogen Removal <i>Adrienne Menitti</i> <i>Clean Water Services</i>	Fundamentals of Electronic Measurement: pH, Conductivity, Residual Chlorine, Etc. <i>Continued</i>	Collection System Strategies <i>Rick Allen</i> BIOLYNCEUS	Wastewater Membrane Basics (Section 1) <i>Blake Raines</i> WES
2:50 – 3:10	AFTERNOON BREAK – Cafeteria			
6 2:55-3:55	Process Control for Phosphorus Removal <i>Adrienne Menitti</i> <i>Clean Water Services</i>	It's Complicated: Controlling Odors in King County WTD ESI <i>David Kopchynski</i> <i>Parametrix</i>	Collection System Strategies <i>continued</i>	Tour of Tri-City's Membrane Bioreactor Plant (Section 2) <i>Blake Raines</i> WES
7 4:00-5:00	Totally Integrated Automation – Integrating a PLC HMI and Drive Together in 1 Project <i>Nathan Schiavo</i> Wesco	No Session	Collection System Strategies <i>continued</i>	Tour of Tri-City's Conventional Activated Sludge Plant (Section 3) <i>Blake Raines</i> WES

Session	BIOSOLIDS MANAGEMENT P102	STORMWATER Gregory Forum B&C	LABORATORY PRACTICES P103	SAFETY P132
7:00 – 8:00	REGISTRATION, COMMUNITY CENTER			
8:00-8:15	OPENING CEREMONY			
1 8:15-9:15	<i>Keynote Speaker</i> Utilities of the Future <i>Bob Baumgartner—Clean Water Services</i> <i>Randall Gymnasium</i>			
9:15	MORNING BREAK — COFFEE, TEA, ETC. DONUTS/BAGELS/FRUIT – Comm. Center			
2 9:30-10:30	Biosolids Primer, Part 1 <i>Brian Hemphill, PE</i> <i>Hemphill Water Engineering, LLC</i>	What To Do With That Culvert? <i>Aaron Guffey</i> <i>E. Multnomah Soil & Water Conservation District</i>	How To Solve It <i>Kristen Thomas</i> <i>City of Portland Water Pollution Control Laboratory & Ken Earle</i> <i>EZ Kem, Inc.</i>	Managing Your Confined Space Program <i>Craig Hamelund</i> <i>Oregon OSHA</i>
3 10:35-11:35	Biosolids Primer, Part 2 <i>Brian Hemphill, PE</i> <i>Hemphill Water Engineering, LLC</i>	Oregon Watershed Enhancement Board: 20 Years On <i>Meta Loftsgaarden</i> <i>OWEB</i>	Modern Instrumental Methods in Wastewater Analyses <i>Brady Miller</i> <i>Astoria-Pacific</i>	Managing Your Confined Space Program <i>Continued</i>
12:00-1:00	LUNCH for Attendees – CAFETERIA			
4 12:35-1:35	Biosolids Regulatory Issues <i>Paul Kennedy</i> <i>Oregon DEQ</i>	Climate Change Impacts on Stormwater & Wastewater Utilities <i>Matt Glazewski</i> <i>Water Environment Services</i>	Fundamentals of Electronic Measurement: pH, Conductivity, Residual Chlorine, Etc. <i>Mark McElroy</i> <i>Thermo Combined with Pretreatment in P101</i>	Managing Your Confined Space Program <i>Continued</i>
5 1:40-2:40	Site Authorization/soils NRCS <i>Paul Kennedy</i> <i>Oregon DEQ</i>	Continuous Monitoring & Adaptive Control (CMAC) of Stormwater Ponds <i>Leah Johanson, PE</i> <i>Water Environment Services</i>	Fundamentals of Electronic Measurement: pH, Conductivity, Residual Chlorine, Etc. <i>Continued</i>	Managing Your Confined Space Program <i>Continued</i>
2:50 – 3:10	AFTERNOON BREAK – Cafeteria			
6 2:55-3:55	Biosolids Management Plans <i>Paul Kennedy</i> <i>Oregon DEQ</i>	Stormwater 101 <i>Angela Wieland, PE</i> <i>Brown & Caldwell</i>	Problem Solving for the Future: Strategic Planning in the Public Sector <i>Kristen Thomas</i> <i>City of Portland Water Pollution Control Laboratory</i>	Managing Your Confined Space Program <i>Continued</i>
7 4:00-5:00	Biosolids Jeopardy <i>Dave Arguello</i> <i>Clean Water Services</i>	No Session	No Session	Slips Trips and Falls <i>Judy West</i> <i>Clean Water Services</i>

Wednesday, March 28

Water Environment School 2018

Session	OPERATIONS & MAINTENANCE McLoughlin Auditorium	WASTEWATER PRETREATMENT Pauling 101	COLLECTION SYSTEMS Gregory Forum A	BASICS & BEYOND Pauling 131
8 8:00-9:00	An Examination of Plastic Materials in Wastewater Applications <i>Leon Telesmanich</i>	How to Read a Lab Report <i>Matt Young City of McMinnville</i>	Work Zone Traffic Safety* <i>Tony Jobanek ODOT Technology Transfer Center</i>	Excel Management for Wastewater Operations <i>Chanin Bays WES</i>
9 9:05-10:05	VENDOR'S DISPLAY	Plumbing Plan Review - Pretreatment and FOG Devices <i>Jason Oster Clark Regional Wastewater District</i>	Work Zone Traffic Safety* <i>Continued</i>	Excel Management for Wastewater Operations <i>Continued</i>
10:05-10:15	MORNING BREAK — COFFEE, TEA, ETC. DONUTS/BAGELS/FRUIT – Comm. Center			
10 10:15-11:15	Reducing Operating Costs with Energy Efficient Improvements <i>Eric Braddock Energy Trust of Oregon</i>	VENDOR'S DISPLAY	Work Zone Traffic Safety* <i>Continued</i>	VENDOR'S DISPLAY
11 11:20-12:20	Electronic Operations Manuals utilizing a SharePoint Platform <i>Joel Borchers Clean Water Services</i>	Community Based Pretreatment <i>Clayton Brown Oregon Association of Clean Water Agencies</i>	Work Zone Traffic Safety* <i>Continued</i>	Introduction to Corrosion Control <i>Jeff Stallard WES</i>
12:20-1:20	LUNCH for Attendees – CAFETERIA~ Test of CCC Emergency System @ 12:30PM			
12 1:20-2:20	Low Temperature Drying of Biosolids <i>Jens Nelisen Treatment Equipment Company</i>	Industrial User Inspections <i>Dade Pettinger City of Vancouver, WA</i>	VENDOR'S DISPLAY	Occupational Exposure to Hydrogen Sulfide <i>Ben Marks G2 Consultants Inc.</i>
13 2:25-3:25	Secondary Clarifier Optimization Using State Point Analysis <i>Mark Walter Water Dude Solutions</i>	Gresham's Hauled Waste Plan <i>Julia Crown City of Gresham</i>	Surge Events in Pipelines and the Impact of Air Valves <i>D. Kim Sorensen, P.E. A.R.I. USA Inc.</i>	Pump Types and Applications <i>Bob Olijnyk Pump Tech</i>
3:25-3:40	AFTERNOON BREAK – Cafeteria			
14 3:40-4:40	Gas Detection & Confined Spaces, What You Need to Know <i>Greg McDonald Ritz Safety</i>	A Case for Coordinated FOG Management <i>Bob Patterson Clark County Public Works Joint Session with Stormwater in Gregory Forum B & C</i>	Infiltration and Inflow Study, City of Camas <i>Kenneth Charles Alexander Jay Swift Kyle Kirwan Gray & Osborne, Inc.</i>	Hands On' How to Use Excel In Wastewater Treatment <i>Amy Willman WES Meeting in McLoughlin Hall Room M132</i>

*You must complete all 4 hours and successfully pas written exam for certification card, valid for 3 years.

Session	BIOSOLIDS MANGEMENT P102	STORMWATER Gregory Forum B&C	LABORATORY PRACTICES P103	SAFETY Pauling 132
8 8:00-9:00	Transition to Cake Program at Clackamas WES <i>Chanin Bays Resource Recovery Program Supervisor WES of Clackamas County</i>	Natural Treatment Systems - Creating Benefits Beyond Wastewater Treatment <i>Carol Murdock Clean Water Services & Joe Liebezeit Portland Audubon</i>	Sometimes You Just Have to Say No <i>Chuck Lytle, Laboratory Manager City of Portland Water Pollution Control Laboratory</i>	First Aid, CPR & AED <i>Toby Holborn Holborn Safety **Preregistration Required****</i>
9 9:05-10:05	Am I Running Dirty? <i>Kelly Brown BDP Industries</i>	VENDOR'S DISPLAY	Ethics In Wastewater and Laboratory Operations <i>Gary Ward Ward Associates</i>	First Aid, CPR & AED <i>Continued</i>
10:05-10:15	MORNING BREAK — COFFEE, TEA, ETC. DONUTS/BAGELS/FRUIT – Comm. Center			
10 10:15-11:15	Land Application of Industrial Pretreatment Lagoon Solids: Vancouver, WA <i>Bill Fasth Brown & Caldwell</i>	Erosion Control Products for Sewer CIP and Development Projects <i>Kevin Jenison ACF West, Inc</i>	Sixty Years of Problem Solving Experience In Wastewater Analyses <i>Jennifer Shackelford Mackenzie Zirk Kris Dennis City of Portland Water Pollution Control Laboratory</i>	First Aid, CPR & AED <i>Continued</i>
11 11:20-12:20	Scientific Nutrient Management <i>Dennis O'Neill O'Neill Sustainable Ag Consulting, LLC</i>	Clackamas River Enhancement Projects <i>Peter Guillozet & Brian Vaughn METRO</i>	VENDOR DISPLAY	VENDOR'S DISPLAY
12:20-1:20	LUNCH for Attendees – CAFETERIA			
12 1:20-2:20	Agronomic Rate Calculations <i>Dan Sullivan, PhD Oregon State University</i>	DEQ's NPDES 1200-C Permit Program <i>Michael Kennedy Oregon Department of Environmental Quality</i>	Deciphering the Paperwork: How to Interpret your NPDES Permit & Read a Lab Report <i>Jennifer Shackelford & Amanda Haney City of Portland Bureau of Environmental Services</i>	No Session
13 2:25-3:25	VENDOR'S DISPLAY	DEQ's NPDES 1200-Z Permit Program <i>Michael Kennedy Oregon Department of Environmental Quality</i>	TKN Without Tears <i>Paul Winkler Shimadzu USA</i>	Safety At Heights -- Fall Protection Oregon OSHA OAR Division 2 1910.28 & 1910.140 Greg McDonald Ritz Safety
3:25-3:40	AFTERNOON BREAK – Cafeteria			
14 3:40-4:40	Nutrient Management Tools <i>Dan Sullivan, PhD Oregon State University</i>	A Case for Coordinated FOG Management <i>Bob Patterson Clark County Public Works Combined with Pretreatment in Gregory Forum B & C</i>	No Session	Safety At Heights Continued

Session	OPERATIONS & MAINTENANCE McLoughlin Auditorium	WASTEWATER PRETREATMENT Pauling 101	COLLECTION SYSTEMS Gregory Forum A	BASICS & BEYOND Pauling 131
15 8:00-9:00	No Session	FOG Program 101 Module 1 Clayton Brown Western States Alliance	Excavation Safety Competent Person Jim Johnson D2000 Safety ****Preregistration Required****	Hydraulics for Operators Lynne Chicoine WES
16 9:05-10:05	No Session	FOG Program 101 Module 1 Clayton Brown Western States Alliance	Excavation Safety Competent Person Training Continued	Operation and Maintenance Basics Matt Jenkins The City of La Center
10:05-10:15	MORNING BREAK — COFFEE, TEA, ETC. DONUTS/BAGELS/FRUIT – Community Center			
17 10:15-11:15	No Session	FOG Program 101 Module 2 Clayton Brown Western States Alliance	Excavation Safety Competent Person Training Continued	Polymer Seminar for Wastewater Treatment Jacob Cole & Rawlin Castro SNF Polydyne Inc.
18 11:20-12:20	SLG Technology - Drier Cake - Less Odor Drew Mearns Orege	FOG Program 101 Module 2 Clayton Brown Western States Alliance	Excavation Safety Competent Person Training Continued	Optimizing Polymer Mixing and Activation for Wastewater Treatment Lashley Loomis UGSI Solutions
12:20-1:20	LUNCH for Attendees – CAFETERIA			
19 1:20-2:20	Solids Reduction in Wastewater Jon Neuenschwander VogelsangUSA	FOG Program 101 Module 3 Clayton Brown Western States Alliance	Excavation Safety Competent Person Training Continued	NET DMR: How to, Excel Spreadsheet Use and Summary Statistics Tiffany Yelton Bram DEQ
20 2:25-3:25	No Session	FOG Program 101 Module 3 Clayton Brown Western States Alliance	Excavation Safety Competent Person Training Continued	NET DMR: How to, Excel Spreadsheet Use and Summary Statistics Tiffany Yelton Bram DEQ
3:25-3:40	AFTERNOON BREAK – Cafeteria			
21 3:40-4:40	Rotary Lobe Pumps in Wastewater Jon Neuenschwander VogelsangUSA	FOG Program 101 Module 4 Clayton Brown Western States Alliance	Excavation Safety Competent Person Training Continued	Hands On' How to Use Excel in Wastewater Treatment Amy Willman WES Meeting in McLoughlin Hall Room M132

Thursday, March 29

Water Environment School 2018

Session	BIOSOLIDS MGMT P102	STORMWATER Gregory Forum BC	SAFETY Pauling 132
15 8:00-9:00	Optimizing Dewatering Operations <i>Chris Maher</i> <i>Clean Water Services</i>	Stormwater Sampling Techniques <i>Randy Belston</i> <i>Portland Bureau of Environmental Services</i>	Excavation Safety Competent Person <i>Jim Johnson</i> <i>D2000 Safety</i> ****Preregistration Required**** <i>Meets In Gregory Forum A</i>
16 9:05-10:05	Optimizing Polymer Mixing and Activation <i>Lashley Loomis</i> <i>USGI Solutions, Inc/Polyblend</i>	Portland's Watershed Health Monitoring Overhaul <i>Colin Kambak</i> <i>Chris Prescott & Jason Law</i> <i>Portland Bureau of Environmental Services</i>	Excavation Safety Competent Person <i>Continued</i>
10:05-10:15	MORNING BREAK — COFFEE, TEA, ETC. DONUTS/BAGELS/FRUIT – Community Center		
17 10:15-11:15	Solids Processing Upgrades at the Tri-City Water Pollution Control Plant <i>Lynne Chicoine, PE</i> <i>Capital Program Manager WES of Clackamas County</i>	No Session	Excavation Safety Competent Person <i>Continued</i>
18 11:20-12:20	Class A Biosolids Program Based on Autothermal Aerobic Digestion <i>Tim Munro</i> <i>City of McMinnville</i>	Oregon Water Toxics Monitoring & Reduction Opportunities <i>Kevin Masterson</i> <i>Oregon Department of Environmental Quality</i>	Excavation Safety Competent Person <i>Continued</i>
12:20-1:20	LUNCH for Attendees – CAFETERIA		
19 1:20-2:20	Biosolids Dewatering Polymer Optimization <i>Stephanie Kerns</i> <i>Biosolids Coordinator, City of Salem</i>	Partnership for Surface Water Protection <i>Bob Patterson</i> <i>Clark County</i>	Excavation Safety Competent Person <i>Continued</i>
20 2:25-3:25	Transition of Salem's Biosolids Program <i>Stephanie Kerns</i> <i>Biosolids Coordinator, City of Salem</i>	Lost Rivers (Video)	Excavation Safety Competent Person <i>Continued</i>
3:25-3:40	AFTERNOON BREAK – Cafeteria		
21 3:40-4:40	Comparison of Options for Biosolids Dewatering <i>Matt Sprick, PE</i> <i>Carollo Engineers</i>	Lost Rivers (Video)	Excavation Safety Competent Person <i>Continued</i>