

2009 OREGON OPERATORS CONFERENCE

Nov. 2–4
Spirit
Mountain
Casino



FOR OPERATORS, BY OPERATORS

Presented by the Oregon Region,
Pacific Northwest Clean Water Association



A MESSAGE FROM THE REGIONAL DIRECTOR



Dear Colleagues:

On behalf of the Oregon Region Board of Directors, it is my pleasure to welcome you to our first ever Oregon Operators Conference. The conference theme, "For Operators, By Operators," addresses the many and varied challenges before us as water professionals. The issues we face today, and indeed, the issues of tomorrow, are unlike any we have seen since many of us entered the profession.

All of the Sections that comprise the Oregon Region have worked together and organized an outstanding conference with an exceptional technical program. Some conference highlights include:

- A one day Kubota MBR workshop
- A one day Siemens / Memcor filtration water treatment workshop
- The Operator's Toolbox by Brad Musick
- A Laboratory Track
- A Maintenance Track
- A manufacturers' exhibit hall full of products and new ideas

I encourage you to arrive early and stay late to enjoy the many recreational opportunities available at Spirit Mountain Casino and Lodge and the surrounding Central Oregon Coast area.

As you can see, the conference is more than an opportunity to reunite with old friends and make new ones. It is more than a means to get CEUs or PDHs. It is more than a chance for a get away to a beautiful and relaxed atmosphere. It is all of these and more. Primarily, and perhaps most importantly, it an opportunity to receive quality training and education that is needed to embrace the challenges of tomorrow.

Please enjoy the conference!

Sincerely,

Max Hildebrand
Oregon Regional Director, PNCWA

IN THE BEGINNING ...

The Oregon Region was founded in early 1980's with ten sections. To date, there are eight viable sections including: six operator, one maintenance, and one laboratory analyst section. They are all very active with training opportunities, plant profiles, and section meetings.

This is the first time that all sections have come together as a united group to organize and facilitate a training activity. The goal is to make this training as interactive and enjoyable as possible, with many of the classes being termed hands-on. We hope you enjoy the conference and please do not hesitate to bring up any questions or concerns you may have to any of the attending section leaders.

Oregon Region Executive Board

Region Director

Max Hildebrand
Brown and Caldwell

Secretary/Treasurer

Dan Laffitte
Brown and Caldwell

Lower Columbia Section Representative

Monica Anderson
City of Wilsonville

West Central Oregon Section Representative

Robert Jones
Spirit Mountain Casino

Southwest Oregon Section Representative

Bob Dillard
City of North Bend

Eastern Oregon Section Representative

Jessica Lindley
City of LaGrande

South Central Oregon Section Representative

Dan O'Malley
City of Bend

Umpqua Basin Operator's Representative

Steve Miles
Orenco Systems

Water Quality Laboratory Analyst Representative

Cory Fortez
Veolia Environmental Services

Maintenance Section Representative

Kevin Bruton
CH2M Hill OMI

KEYNOTE SPEAKERS



Max Hildebrand

Max is an Operations Specialist in Brown and Caldwell's Portland office. He has 19 years of practical experience as a certified operator and environmental consultant. He is an Oregon Grade IV Operator and he has worked previously for the Cities of Albany, Salem, Eugene, and Corvallis. He has a BS degree in Management from Lindfield College. In 2002, Max was the Oregon Operator of the Year and, in 2006, received the Hatfield Award. He has participated in many training activities throughout the State of Oregon and he currently sits on the PNCWA Board of Directors as the Oregon Region Director.



John Shawcroft

John Shawcroft is an Assistant Project Manager for Veolia Water North America and he works at the Caldwell Idaho Wastewater Treatment Plant. He has 31 years of practical experience as a certified operator, superintendent, and project manager. John is certified as a Level IV in Wastewater Treatment and Collection, and Level II in Water Distribution for the State of Idaho and has previously worked for the Cities of Meridian, Boise, and Idaho Falls. He has a BS in Environmental Health from Boise State University. John was the Idaho Operator of the Year in 1987, a 2003 Hatfield Award recipient for the PNCWA, and inducted into the Select Society of Sanitary Sludge Shovelers in 2003. He will be the PNCWA president as of September 16, 2009.



Woodie Mark Muirhead

Woodie Muirhead is an Operations Specialist and Vice President in Brown and Caldwell's Honolulu office. He has 32 years of practical experience as a certified operator, plant manager, and environmental consultant. He is an Oregon Grade IV Operator, and worked previously for the Cities of Medford and Corvallis, Oregon, as well as the Unified Sewerage Agency (now Clean Water Services), Washington County, Oregon. Woodie has conducted training workshops nationwide that focus on improving the understanding of biological and chemical principles of wastewater treatment. He is the developer and author of the Lab Lessons and Fate of Pollutants series for WEF's Operations Forum.

Accommodations:

Spirit Mountain Casino lies on the Grand Ronde Tribal reservation, amid the ruggedly beautiful Oregon Coast. Surrounded by the breathtaking Coastal Range and the Pacific Ocean, Grand Ronde is a land rich in culture and recreational possibilities. The rooms and suites at Spirit Mountain Lodge are well-appointed and ready to make your stay comfortable and enjoyable.

150 rooms have been blocked for the conference. Call the lodge and reserve your room, under the PNCWA name. Also, to get a better room rate, you may want to register as a Coyote Club member. This will save 36% on the cost of your room.

Directions:

From Portland, OR

Approximately 60+ miles

- I-5 South
- Highway OR-99W exit in Tigard
- Continue on OR-99W (~ 22 miles)
- Highway OR-18W (Ocean Beaches) exit
- Continue on Highway OR-18W (~31 miles)
- Casino on left 1/4 mile past Valley Junction on Highway 18W

From I-5, Eugene, OR

Approximately 100 miles

- I-5 North towards Salem (55+ miles)
- Exit 249 to Commercial Street
- In Salem, OR-22 W & continue on OR-22 (25+ miles)
- Merge at Valley Junction onto OR-18 & continue (5+ miles)
- Casino on left

From Lincoln City, OR

Approximately 25 miles

- From OR-101, east onto OR-18 E
- Casino on right

SPIRIT MOUNTAIN CASINO AND LODGE

27100 S.W. Salmon River Highway
Grand Ronde, Oregon 97347
Phone: (800) 760-7977
Fax: (503) 879-2486

[http://spiritmountain.com/
directions-to-spirit-mountain-casino/](http://spiritmountain.com/directions-to-spirit-mountain-casino/)



EXCURSIONS

Lincoln City SBR WWTP

Wednesday, Nov. 4th
1 - 5 p.m.

The City of Lincoln City has recently finished its Phase 1A upgrade. It was the first major upgrade since 1981.

Phase 1A improvements included:

- an influent screening area with two FSM ¼" perforated screens
- a Smith-Loveless Pista grit removal system
- four Aqua-Aerobics 1.1 MG Sequencing Batch Reactor tanks with fine bubble diffusers, floating mixers, and decanters.

The City proposes to proceed with Phase 1B in the very near future.

This will include:

- Filtration
- UV disinfection
- Digester/solids handling upgrades



The plant now operates on a time mode system to try to maintain a constant effluent flow without pre or post equalization.

Using screw pumps, the effluent from the SBR's is conveyed to secondary clarifiers and chlorination/de-chlorination system prior to the discharge to Schooner Creek.

Wastewater Treatment Superintendent

Joe Whisler

Lead Operator

John Creighton

Operators

Edward Hildebrand

Datle Rutledge

CONFERENCE HIGHLIGHTS

Monday, Nov. 2nd
9 a.m. - 5:20 p.m.

Victor Santa Cruz of Santa Cruz Production, a renowned laboratory and microbiological professional, will have an all day presentation covering a gamut of topics including:

- Protozoans/Metazoans in wastewater
- Nicordia, micorthrix
- Filamentous bacteria I and II
- Floc structure
- Alkalinity/volatile acids
- Immunological/generic arrays

Tuesday, Nov. 3rd
8 a.m. - 5:20 p.m.

"Operations Toolbox" by **Brad Musick**, National Service Leader for Kennedy Jenks' Operations Services, presents an in-depth discussion of:

- Process Control Tools
- Information Management Tools
- Instrumentation and Testing Tools
- Maintenance Tools

Monday, Nov. 2nd
9 a.m. - 5:20 p.m.

Professional staff from **Enviroquip** will hold an all day workshop on Membrane Bio-Reactor Operation which includes:

- An extensive classroom session on theory, operation and maintenance, and process control
- A tour of the Spirit Mountain wastewater MBR treatment plant process control testing and process adjustment.



Tuesday, Nov. 3rd
8 a.m. - 5:20 p.m.

Siemens / Memcor representatives will hold an all day workshop which includes:

- A classroom session on theory, equipment components, operation and maintenance, and process control
- Hands-on operation and training at the Spirit Mountain water plant with water sampling and process adjustment.



CONFERENCE TRAINING SCHEDULE & EVENTS

DAY 1 – Monday, Nov. 2

Wastewater **WORKSHOP TRACK** Technical Collections /Basics Lab **WORKSHOP TRACK**

8:00 -8:30	Welcome – Opening Session			
8:30 -9:00	Keynote Speaker			
9:00 -9:50	Kubota MBR Workshop Enviroquip	Sludge Thickening Jar Testing Joe Randolph	Environmental Cleanup Frank Spieler	Protozoans/Metazoans in Wastewater Victor Santa Cruz
9:50 -10:10	Break			
10:10 -11:00	Kubota MBR Workshop Enviroquip	BOD Analysis Keith Chapman	Pump Rebuilds TBA	Nocardia Victor Santa Cruz
11:00 -11:50	Kubota MBR Workshop Enviroquip	Pump Controls Ty Collins	Pipe Line Inspection, No-dig Rehabilitation Services Darren Barnes	Microthrix Victor Santa Cruz
11:50 -12:50	Lunch			
12:50 -1:40	Kubota MBR Workshop Enviroquip	Newberg's Class A Biosolids Dan Eichel	Linko Data Systems – FOG Skip Feeney	Filamentious Bacteria I Victor Santa Cruz
1:40 -2:30	Kubota MBR workshop Enviroquip	Biosolids Spill Response Harry Bludworth	Wireless Remote Data Aquisition Systems Ken Navidi	Filamentious Bacteria II Victor Santa Cruz
2:30 -2:50	Break			
2:50 -3:40	Kubota MBR Workshop Enviroquip	History of Co-generation Mike Myer	CMOM: Past, Present, and Future Tim Keegan	Floc Structure Victor Santa Cruz
3:40 -4:30	Kubota MBR Workshop Enviroquip	The Regulatory Environment for Co-gen Mike Myer	Intro to AC Power and AC Motors Joe Evans	Alkalinity/Volatile Acids Victor Santa Cruz
4:30 -5:20	Kubota MBR Workshop Enviroquip	Wastewater 101 Eric Wahlberg	Intro to AC Power and AC Motors Joe Evans	Immunological/Genetic Arrays Victor Santa Cruz
7:00	Tailgate party (BBQ Dinner) with Monday Night Football			

CONFERENCE TRAINING SCHEDULE & EVENTS

DAY 2 – Tuesday, Nov. 3

WORKSHOP TRACK

WORKSHOP TRACK

Wastewater

Technical

Collections /Basics

Water

8:00 -8:30	Operator's Toolbox Brad Musick	Instrumentation Maint. & Care Garrett Lawson	Pump Curves 101 Jon Simmons	Microfiltration Systems Seimens Memcor
8:30 -9:00	Operator's Toolbox Brad Musick	Instrumentation Maint. & Care Garrett Lawson	Pump Curves 101 Jon Simmons	Microfiltration Systems Seimens Memcor
9:00 -9:50	Operator's Toolbox Brad Musick	Lab Process Optimization – Using Online Instrumentation Garrett Lawson	Submersible Pumps Dave Olsen	Microfiltration Systems Seimens Memcor
9:50 -10:10	<i>Break</i>			
10:10 -11:00	Operator's Toolbox Brad Musick	Safety at Heights Greg McDonald	Sample Collection Rory White	Microfiltration Systems Seimens Memcor
11:00 -11:50	Operator's Toolbox Brad Musick	Controls Branom Instruments	Interpreting Lab Results John Neilson	Microfiltration Systems Seimens Memcor
11:50 -12:50	<i>Lunch</i>			
12:50 -1:40	Struvite Presentation Rob Baur	Wind Power Generation Greg Price	Basic Math Review Scott Nebecker	Microfiltration Systems Seimens Memcor
1:40 -2:30	Optimizing Biological Dentrification Woodie Muirhead	Chemical Feed Control Greg Brown	Basic Math Review Scott Nebecker	Microfiltration Systems Seimens Memcor
2:30 -2:50	<i>Break</i>			
2:50 -3:40	SRT & OUR: Simplicity with Meaning Lance Mason	Chemical Feed Control Troubleshoot Greg Brown	Laser Profiing of Pipes Kevin Clinger	Microfiltration Systems Seimens Memcor
3:40 -4:30	Recycled Water Update Dan Hawthorn	UV Doctor - UV Disinfection Todd Schweitzer	Basic Equipment Repair & Troubleshooting Kevin Clinger	Microfiltration Systems Seimens Memcor
4:30 -5:20	Electronic O&M Manuals Ed Griffenberg	UV Doctor - UV Disinfection Todd Schweitzer	Digester & Lagoon Cleaning JR Hindman	Microfiltration Systems Seimens Memcor
6:00	Oregon Regional Conference Banquet			

CONFERENCE TRAINING SCHEDULE & EVENTS

DAY 3 – Wednesday, Nov. 4

WORKSHOP TRACK

WORKSHOP TRACK

Wastewater

Collections /Basics

Maintenance

8:00 -8:30	BC-State Point Analysis for Secondary Clarifiers Henryk Melcer	Wastewater Screening Dale Richwine	Centrifuge Maintenance Clean Water Services
8:30 -9:00	BC-State Point Analysis for Secondary Clarifiers Henryk Melcer	Wastewater Screening Dale Richwine	Centrifuge Maintenance Clean Water Services
9:00 -9:50	The Cannibal Process Steve Riley	SolarBee / Solar Mixing Joe Ellers	Developing a Managed Maintenance Program Roy Brandon
9:50 -10:10	<i>Break</i>		
10:10 -11:00	Optimization of Belt Press Performance Kelly Brown	Lift Station SOP Jonathan Gasik	Predictive Maintenance Approach Mark Libby
11:00 -11:50	Optimization of Belt Press Performance Kelly Brown	Wasterwater Disinfection Dale Richwine	Correct Equipment: Control Panels Howard Taub
11:50 -12:50	<i>Lunch</i>		
12:50 -1:40	SBR: Good Fit for a Coastal Community Ken Conduit	WWTP Energy Efficiency Walt Mintkeski	Facility Condition Assessment Roy Brandon
1:40 -2:30	Shuttle to Lincoln City Plant Tour Lincoln City	Equipment Selection From an Operator's Perspective Sue Lawrence	Vibration Analysis Roy Loop
2:30 -2:50	<i>Break</i>		
2:50 -3:40	Plant Tour Lincoln City	QA / QC Lab Results Jonathan Gasik	Electric Motors and Drives Ben Ewing
3:40 -4:30	Plant Tour Lincoln City	TSS Analysis Cindy Covey	Wireless Condition Monitoring Technology Scott Denning
4:30 -5:20	Plant Tour Lincoln City	How to Deal with Your City Council Scott Nebaker	Wireless Condition Monitoring Technology Scott Denning