



From the PRESIDENT

PNCWA President
Rick Shanley,
Carollo Engineers



Rick Shanley

In my tenure as PNCWA President, my biggest challenge has been finding the time to follow through on things for PNCWA in the midst of

trying to balance an already busy work and family life. Sound familiar? Yet the part of being President that I appreciate most is seeing things moving forward in PNCWA, because I know those things serve our mission, industry at large, and all of us who work within it.

Case in point: In May I was to attend the Idaho Regional Conference in Pocatello. As the scheduled time approached I was apprehensive of the time away from the office, while also looking forward to the interaction with Idaho members and others involved with PNCWA at the section level.

Once I got there and settled in I had a great time interacting with the people I had a chance to talk to. I am always impressed by the enthusiasm and level of dedication that I see from our members throughout the Pacific Northwest. The highlight of my trip was an hour meeting with section *(continued on page 29)*



Towards Sustainable Water Infrastructure *News from EPA Region 10*

Over the next twenty years, demands on water and wastewater systems will grow at unprecedented rates, while resources are likely to shrink. Water and wastewater utilities will face big challenges in their ability to keep pace with infrastructure needs.

In response, the U.S. Environmental Protection Agency, Region 10 is developing a Sustainable Water Infrastructure Initiative. The initiative will help water and wastewater systems with approaches to meet the gap in infrastructure funding. Given the state of our economy—and the current focus on energy, climate change, and green jobs—Region 10 believes water and wastewater systems will be looking for sustainable approaches that are cost effective and protect the environment.

Utilities and their local communities generally pay directly for most of their infrastructure needs (both for capital costs and for costs of operations and maintenance). More and more of these entities are having a tough time finding those funds. While federal and state monies can help, other strategies may be available to address the challenges in maintaining our nation's water and wastewater infrastructure.

In 2008, Region 10 conducted the “Innovative Energy Management” workshop for the water and wastewater utilities sector. The workshop showed how to reduce energy use and greenhouse gas emissions. The Region also held a “Climate Change and Water Infrastructure Forum,” which focused on strategies to adapt to climate change. *(continued on page 29)*

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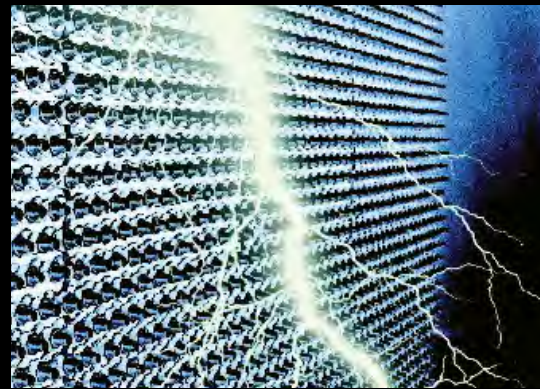
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Pacific Northwest Clean Water Association (PNCWA) is dedicated to preserving and enhancing the water quality in the states of Idaho, Oregon, and Washington. We promote the technical development of our members, the dissemination of information to the public and the advancement of science needed to protect the water environment.

Vision Statement

Pacific Northwest Clean Water Association will be the recognized leader throughout Idaho, Oregon, and Washington for ensuring clean water for future generations.

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The PNCWA newsletter is printed quarterly, and sent to over 1,500 members in Idaho, Oregon, and Washington. Professionals in wastewater treatment, most of whom are members of the Water Environment Federation organization, make up our mailing list.

Change of address for PNCWA members, officers, directors, or committee members should be directed to:

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To contribute an article, please contact Sheri Wantland at (503) 681-5111 or wantlands@cleanwaterservices.org

EDITOR'S NOTE: Newsletter articles reflect the author's opinions and not necessarily those of the PNCWA Board of Directors or Water Environment Federation.

Advertising Rates for PNCWA Newsletter

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2009 American Recovery and Reinvestment Act

By Marc Yarlott, Asset Management Committee Chair

American Recovery and Reinvestment Act (ARRA) of 2009, the \$787 billion stimulus bill that Congress passed in February 2009, has been a bit slow in taking effect according to some commentators. However, the reality is that the law itself has some difficult requirements.

The first difficulty is the requirement that the funded projects must be “under construction” no later than February 16, 2010 (Some sources indicate 2-17-10). The funding for all water-related projects, both clean and drinking, is being disbursed through the State Revolving Fund (SRF) program which typically has a list of “shovel ready” projects from the previous application period. Depending on the state, this list may already fully account for the funds allocated. To see the specific ARRA funding additions to the SRF for your state please refer to the website for EPA Region 10 at <http://www.epa.gov/region10/eparecovery/cleanwater.htm>

The second difficulty is that the qualifying projects must meet the “Buy America” clauses in the law which adds another level of documentation to prove the material sourcing meets stringent requirements. Although the rules may be waived, the review process is difficult and generally adds to the difficulty of the SRF process.

A third difficulty is that “20 percent of the funds shall support projects providing green infrastructure, water efficiency or energy efficiency improvements, or other environmentally innovative activities.” While this is loosely defined, it does set aside funds for efficiency improvements that might open up opportunities for projects that normally wouldn’t qualify for SRF funding. *(continued next page)*



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Can the ARRA help your community make infrastructure improvements and/or capital investments at your plant? It may be difficult to take advantage of the opportunity because the funding must be spent expeditiously, but here are a couple of suggestions:

1. If your project is “shovel ready” and is already on the SRF project list, consider reviewing the project in detail to look for elements that will qualify for the “Buy America” requirements and green infrastructure investments. If you can revise your project, there is less competition for these special funds. Even if your project was not scheduled to be funded beyond 2010, it might move up if it meets these requirements.
2. Review your capital improvement plan (CIP) for projects that might qualify as a “green infrastructure” project, such as replacement of motors with premium efficiency motors for energy savings and to update aging equipment. With this CIP list in hand, contact your SRF representative to see about adding these projects to the SRF list.

There is political pressure on the disbursement of ARRA funds to respond to the current economic situation, and policies are in a state of transition. If you would like to participate, please contact your state SRF representative for more detailed information on the status of the program. For more information on ARRA, please refer to the following web-sites, which are listed in order of priority:

- EPA Region 10: <http://www.epa.gov/region10/eparecovery/cleanwater.htm>
- EPA Recovery Act (ARRA) FAQ: <http://www.epa.gov/water/eparecovery/faq.html>
- For motor information checkout information at: <http://ydesign72705.blogspot.com/2009/01/motor-repair-or-replacement-decisions.html>
- Full document on ARRA: <http://edocket.access.gpo.gov/2009/pdf/E9-9073.pdf>



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Safety Spotlight: The LOTT Alliance, Olympia, Washington

By Shawn Redmond, LOTT Alliance

LOTT Alliance Safety Committee Vision: The LOTT Alliance believes in the self-respect and importance of individual employees and their need to derive personal satisfaction from their jobs. The prevention of occupational injuries and illnesses is of such a consequence to this belief that it will be given top priority at all times.

LOTT was born in 1976 by an interlocal agreement between the Cities of Lacey, Olympia and Tumwater; and Thurston County. LOTT is governed by a board of directors consisting of an elected official from each of our partner jurisdictions. Until a few years ago, the main treatment plant was owned and operated by the City of Olympia. In 2001, the LOTT Alliance was formed and obtained ownership of the Budd Inlet Treatment Plant, three lift stations and several miles of trunk sewer lines. Four years later, LOTT assimilated the treatment plant staff and became a stand-alone entity.

Currently, LOTT operates the main treatment plant in downtown Olympia; a satellite reclaimed water plant, lift station and recharge basins in Lacey; two lift stations in Olympia; and over 25 miles of sewer and reclaimed water pipelines. The LOTT Alliance employs around sixty people including operations, maintenance and process control staff; engineering; planning; and administrative staff.

LOTT has had an active safety committee composed of both employees and management since 1991. The Committee has developed policies and procedures for chemical handling, lock-out, confined spaces, and other activities as required by State safety regulations. Safety policies and procedures are not limited solely to compliance with the regulations. Where possible, LOTT informs staff members about safety off-the-job, too.

The Committee conducts quarterly safety inspections of all LOTT Alliance owned and operated facilities. Non-committee members can join in the inspection process, which utilizes inspection checklists for the various facilities. Criteria for the inspection process come from the Washington State Administrative Code for safety rules, fire and building codes, and LOTT policies. Although the checklists form the basis of inspections, members are not limited to items included on the checklist.

The LOTT Alliance hosts many tours of its facilities each year. Prior to tours by public groups, plant staff members conduct



Confined space training.

a safety inspection of the tour route. LOTT operates and maintains its own confined space rescue team. Routine trainings are conducted on a monthly basis and are a highlight for team members. The Safety Committee also plans and conducts a number of safety trainings for staff each year, most of which provide safety information that is useful for off-the-job situations as well as work-related applications.

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Another element of our safety program is the Safety Incentive Program, implemented in 2006. It was modeled after one used at the Rohm & Haas Chemical Plant in Elma. This program does not penalize for accidents or injuries. Instead, staff members receive points for qualifying safety-related activities. At the end of the year, those points are translated into gift certificate dollars, with a maximum benefit of \$200 per year per employee. The incentive program, through the combined efforts of the Safety and Wellness Programs, has significantly increased employee participation

in safety-related activities. Some criteria and point values include:

- Attend Offsite Safety or Wellness Training (10, max 20);
- Chair or Member of Safety Committee (10);
- Submit a Safety Suggestion (5, max 20);
- Conduct a pre-tour Safety Inspection (5).

There are currently 21 categories for earning safety incentive points. Points are not awarded for any required training, such as initial hearing tests.

In 2008, the Safety Committee initiated a third-party audit of the LOTT Safety Program by Argus Pacific, Inc. of Seattle. Argus Pacific found that, "The LOTT Alliance Safety and Health Program generally meets regulatory requirements and good management practice." The audit included several suggestions for improvement, such as updating the chemical hygiene plan for the lab, developing additional job hazard analysis plans, and reviewing safety program elements annually.

LOTT's Safety Committee will continue work to improve the Safety Program over time. They are busy responding to the suggestions from the 2008 audit and will address other areas for improvement that result from a QualServe evaluation scheduled for this summer. Overall, LOTT has a strong commitment to the safety of its workforce, which is exemplified through the work of the Committee and the success of the Safety Program.



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PNCWA Adopt a School Notes

Students at nine schools got up close and personal with wastewater and stream enhancement projects this year, thanks to PNCWA's Adopt a School program. Teacher comments prove the money is needed and put to good use. Patty Neavill of West Middle School in Nampa, Idaho arranged for 32 students to tour the treatment facility and reported, "The kids had a blast and really enjoyed their visit. It was a beneficial trip because the kids had so many misconceptions and questions to be answered about how the water is being processed."

Students from Aberdeen High School in Washington toured the wastewater facility and a biodiesel plant. Teacher Mike Machowek said, "We all sampled wastewater looking for bacteriophage that would kill E. coli and we found some!" Olympia High School students toured the LOTT facility and learned which pollutants were easy and difficult to remove from the water. Teacher Heidi Kirk said that months later her students are talking about the tour and relating what they learned to current topics of study. Students from Mount Rainier Lutheran High School used the money for trees for habitat restoration, and teacher Phil Schneider is excited to be working closely with the county surface water management staff on new projects.

Now it's time to grant more funding to more schools. Look for this year's Adopt a School winners in the next newsletter.



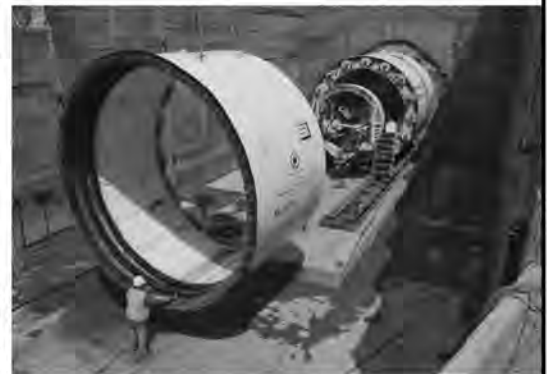
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PNCWA at WEFMAX Las Vegas

WEFMAX meetings are sponsored by Water Environment Federation (WEF) for WEF and Member Association leaders to discuss challenges and share successes. PNCWA was well-represented at WEFMAX this April 23 – 25 in Las Vegas where they met WEF Vice President Jeanette Brown and leaders of the Nevada Water Environment Association.

WEF Trustee and PNCWA Past President Ron Moeller expressed appreciation for PNCWA's strong showing at WEFMAX in Las Vegas. "I just wanted to thank you for your participation at WEFMAX. Andy did a fantastic job representing the Board and our organization with his presentation, and everyone made PNCWA look good...as usual! And it was so nice to have Haley there representing PNCWA. She has made quite an impression with the S&YP Committee and WEF staff!"

PNCWA representatives also attended other WEFMAX meetings, with John Shawcroft traveling to Omaha, Nebraska and J. Michael Read going to Halifax, Nova Scotia.



PNCWA is well represented at WEFMAX in Las Vegas. Pictured (back row) are Ron Moeller, Haley Falconer, Andy O'Neill (front row) Kristi Nelson, Michelle Burkhart and Doug Allie.



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PNCWA 2009

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3 Sunday Workshops
 132 Technical Program Presentations
 26 Sessions-Tracks
 3 Facility Tours

Monday Sept. 14 Technical Program

Monday Morning - September 14		Registration					
7:00 - 5:30		City of Kuna WWTWP	City of Boise WaterShed Public Educational Center				
7:30 - 9:45		Opening Session					
10:00 - Noon		PNCWA Business Luncheon					
Monday Afternoon - September 14							
1:20 - 2:00	Session 1 - Payette River Rm. Workforce Sustainability Organizational Strategies Support Sustainable Communities <i>Brad Jurkovic, Woolpert</i>	Session 2 - Snake River Rm. Wastewater Treatment Evaluating the West Boise Secondary Clarifiers: CFD Modeling and Field Verification <i>Richard Kelly, Brown and Caldwell</i>	Session 3 - Salmon River Rm. Anaerobic Digestion/Bio-energy Sustainable Energy Recovery Systems Provides Revenue While Reducing Carbon Footprint at Wastewater Treatment Facilities <i>Jyh-Wei (AJ) Sun, CDM</i>	Session 4 - Cottonwoods Rm. Collection Systems To Dese or not to Over: Dese That's the Million Dollar Question <i>Kevin Dour, Tetra Tech</i>	Session 5 - Summit Auditorium Phosphorus Removal Primary Sludge Fermentation for Reliable Biological Phosphorus Removal <i>Li Lei, CH2M HILL</i>	Session 6 - Douglas Fir Rm. Metals Removal Zinc Removal by Reactive Filtration with Hydrous Manganese Oxide <i>Remy Newcombe, Blue Water Technologies</i>	Session 7 - Ponderosa Pines Rm. Operators Track Mechanical Seals Part 1 <i>Dave Mathes, A.W. Chesterton</i>
2:00 - 2:40	You Say Goodbye, I Say Hello: Succession Planning in an Aging Workforce <i>Eva LaBonte, Clean Water Services</i>	Decentralized Wastewater Collection and Treatment: Bethel Heights Case Study <i>Tristian Bounds, Crenco Systems Inc.</i>	Practical Design and Operating Experience with Co-Digestion of Grease <i>Greg Moen, HDR Engineering</i>	Expanding the Use of a Hydraulic Software Package: The Development of an Interceptor Odor Predictive Model <i>Lisa Tamura, HDR Engineering</i>	Evaluation of Treatment Alternatives to meet Total Phosphorus Limits at the West Boise WWTF <i>William Leaf, CH2M HILL</i>	Heavy Metal Sorption to Biogenic Iron Oxides <i>Thomas Leake, Washington State University</i>	Mechanical Seals Part 2 <i>Dave Mathes, A.W. Chesterton</i>
2:40 - 3:20	Succession Planning: Building Personal Accountability for Career Planning <i>Nick Pealy & Joanne Peterson, Seattle Public Utilities</i>	Algae Removal from Wastewater Treatment Pond Effluent by Dissolved-Air Flotation <i>Yakup Nurdogan, CDM</i>	Bio-Energy Potential from Food Processing Solid Waste Materials <i>Robert Phammer, Phammer Engineering</i>	Vapor Phase Odor Control for Collection Systems <i>Rich Blackmun, Black & Veatch</i>	A Comparative Environmental Life Cycle Assessment: Biological VS Chemical Phosphorus Removal <i>David Watkins, Univ of Idaho and Dan Kratzenburg, DCI Engineers</i>	Wastewater Pretreatment The Nitty Gritty On Municipal Grit <i>Pat Herrick, Hydro International</i>	Composite Coatings <i>Ted Bruner, A.W. Chesterton</i>
3:20 - 3:40	Next Generation Mentoring: Helping Younger Workers Find Meaning <i>Nick Pozos, Carollo Engineers</i>	Performance of a Tire Chip Media Constructed Wetland <i>William Li, Stantec</i>	Fuel Interchangeability and supplementing bioacs with propane/air or Natural Gas/air <i>Sean Guichon, Algas-SD International</i>	Solving the Backup Dilemma in a Seattle Neighborhood <i>Martina Burke, Seattle Public Utilities</i>	Phosphorus removal using biogenic iron oxides as a filler media substrate <i>Hayley Falconer, Washington State University</i>	Wastewater Screening - A Fine Subject <i>Todd Giesbrecht, J.U.B Engineers</i>	Pump Basics <i>Ed Smith Pump Tech</i>
3:40 - 4:20	ROUND TABLE WITH ALL SESSION SPEAKERS plus more <i>Russell Mau, Gonzaga University</i>	Life Cycle Analysis for Selection of Treatment Processes and Materials of Construction for an On-Site Wastewater Treatment Facility <i>Jim Georger, Kruger, Inc.</i>	Renewable Energy Utilization of Wastewater Treatment Facilities <i>Mark Smith, HDR Engineering</i>	Pushing the Envelopes with Low Phosphorus Limits <i>Peter Schauer, Black & Veatch</i>	Green Screening in Bend, Oregon <i>Brian Casey, Carollo Engineers</i>	Pump Troubleshooting <i>Ed Smith Pump Tech</i>	
4:20 - 5:00			Manufacturers Reception, 2-Person Operations Challenge, Monday Night Fun Night—Exhibit Hall				

Sunday Sept. 13 Preconference workshops include:

1. Advanced Operator Training—Moving from Secondary to Tertiary Treatment
2. Unraveling the Mysteries of Collection System Odors: The How, Why and Where of One of the Most Misunderstood Aspects of Sanitary Sewer Maintenance and Engineering (Mark Smith, HDR; Dick Pope, Malcolm Pirnie; Dick Finger, King County, WA ret'd, Carrie Pak, CWS)
3. The Future of Wastewater Treatment: Sustainable Solutions (Dr. Cindy Paulson, BC; Dr. Amit Pramanik, WERF; Dr. JB Neethling, HDR; Dr. Glen Daigger, CH2M HILL; Mark Ankeny INL; Steve Krugel, BC; Dru Whitlock, CH2M HILL; Municipal Roundtable)

Wednesday Sept. 16 Special (extra) all day Session
 Wastewater Reuse Land Treatment System Modeling

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Technology and the Workforce ♦ Sept. 13-16 ♦ Boise ID

Schedule Improvements and Changes:

Sunday: Meet and Greet more fun, Students added to focus, WW Knowledge Bowl
Monday: Facility Tours and More CEUs: Tours have been moved to Monday morning
Monday: Opening Session starts at 10 AM Monday, after tours. More total CEUs as a result.
Monday Evening: Exhibit Hall opens Monday evening, 2-person Ops Challenge and WFP Latrine Building contest
Tuesday: Exhibit Hall open all day
Wednesday: Extra all-day Session added, Wastewater Reuse Land Treatment System Modeling

Tuesday AM Sept. 15 Technical Program

Tuesday Morning - September 15		Registration		Continental Breakfast		Operators Breakfast		Section Exchange	
		4-Person Operations Challenge		4-Person Operations Challenge		4-Person Operations Challenge		4-Person Operations Challenge	
7:00 - 5:30	Session 8 - Payette River Rm. Pump Stations/Hydraulics	Session 9 - Summit Auditorium BNR	Session 10 - Snake River Rm. Instrumentation/IC	Session 11 - Salmon River Rm. Water Reuse	Session 12 - Cottonwoods Rm. Utility Management	Session 13 - Douglas Fir Rm. Solids Processing/Reduction			
8:00 - 8:40	Trouble-shooting Vibration Issues at a Major Wastewater Pumping Station <i>Douglas Schneider, Brown and Caldwell</i>	Probabilistic Modeling and Uncertainty Analysis of a Two-Stage Biological Nitrogen Removal Process <i>Ayanangshu Day, Mississippi State University</i>	Migration Path from an Aging Network to Ethernet Controls <i>Gilbert Kwan and Gabe Stones, Harris Group</i>	Microconstituent and Pathogen Removal in Reclaimed Water: A Summary of Pilot Testing Results and Full Scale Costs <i>Keith Bourgeois, Carollo Engineers</i>	Business Intelligence for the Modern Utility <i>Glem Wolf, Weslin Engineering</i>	Innovative Biosolids Management at the Hills Canyon Treatment Plant <i>Priya Dhanraj & Monty Hazehurst, Kennedy/Jenks Consultants</i>			
8:40 - 9:20	Brightwater Marine Outfall Lessons Learned <i>Jeffrey Lunck, King County Wastewater Treatment Division</i>	Modernizing Trickling Filters for Nutrient (N & P) Removal <i>John Harrison, CDM</i>	Effluent Reuse in Water Reclamation Facilities, Instrumentation and Controls <i>Terry Stulc, Trindera Engineering</i>	Flexible MBR Design to Meet Unknown Permit Limits, Low Flow Start-up Conditions, and Future Reuse Requirements <i>Larry Rupp, Keller Associates</i>	Visualizing the Impact of Decision Making with the EFC Financial Dashboard <i>Bill Jarocki, Environmental Finance Center, Boise State University</i>	Camnitac™ Solids Reduction Process Implementation and Operation: Three Case Studies <i>Alan Chang, CH2M HILL</i>			
9:20 - 10:00	Wet Well Design Using VFD's and Submersible Pumps <i>Bruce Dudzik, HDR Engineering</i>	Advancing a Novel Process for Post-Anoxic Denitrification <i>Alexander Mookos, University of Idaho</i>	The Major Problem with Automation - A Consultant's View <i>Robert Salmond, Tetra Tech</i>	Pilot Testing and Evaluation of Three Filtration Technologies for the Eugene / Springfield Wastewater Treatment Plant <i>Steve Celeste, Kennedy/Jenks Consultants</i>	Using Business Risk Exposure Tools To Reduce a Utility's liabilities. <i>Thomas Kowrn, GHD</i>	Simultaneous Dewatering and Class "A" Processing of WWTP Biosolids and Septage Utilizing a Steam Heated Screw Press <i>James Capool, FKC Co.</i>			
10:00 - 10:30	Wastewater Treatment	Phosphorus Removal	Procurement/Contracting	Break - Exhibitors Hall		Regulatory			
10:30 - 11:10	Offset rising energy costs and reduce your carbon footprint with small hydropower: City of Gresham Case Study <i>D. Peter Oveson, Brown and Caldwell</i>	Reducing RPWRF Effluent TP for Discharge to the Spokane River <i>Larry Esvelt, Esvelt Environmental Engineering</i>	How can I get what I asked for when this is a public bid contract? A Discussion on Alternative Procurement Strategies for Control System Installations <i>Kevin Stively, Brown and Caldwell</i>	System-Wide Water Budgeting for Reuse Master Planning - South Truckee Meadows WRF <i>Jason Smesrud, CH2M HILL</i>	Do You Know Your Cost of Treatment? <i>Tom Stow, Clean Water Services</i>	Spokane River TMDL - An Idaho Perspective <i>Paul Klatt, J-U-B Engineers</i>			
11:10 - 11:50	Compact Wastewater Plants <i>John Harrison, CDM</i>	Treatment Process Selection for Very Low Effluent Phosphorus in Coeur d'Alene <i>David Clark, HDR Engineering</i>	An Alternative Contracting Procedure <i>Steve Kebbe, Clean Water Services</i>	Alter Planting the Seed: Growing a Water Reuse Program - Meridian, Idaho <i>Clint Dolsby, City of Meridian Idaho</i>	Master Planning Plus <i>Shem Liechty, Brown and Caldwell</i>	National WEF Update to Legislative and Regulatory Activities <i>Bob Matthews, CDM</i>			
11:50 - 1:20	Buffet Luncheon—Exhibitors Hall								

Area Attractions:

Boise is a delightful blend of traditional and non-traditional sights and attractions. The City of Trees boasts one-of-a-kind museums and urban parks, a river flowing through the heart of the city and a 25-mile riverfront greenbelt. Among the many unique sites to visit are the Basque Museum and Cultural Center, Morrison-Knudsen Nature Center, Idaho Anne Frank Human Rights Memorial, Idaho Black History Museum and the World Center for Birds of Prey.

Earn up to 2.5 CEUs (requested) for Sun-Wed.

PNCWA 2009
SHARING SOLUTIONS

Annual Conference Supplement

Technology and the Workforce ♦ Sept. 13-16 ♦ Boise ID

Join in PNCWA's 18th Annual Operations Challenge

Want to form a 2-person or 4-person team? See the Ops Challenge Committee page at www.pncwa.org

4-person Competition
Tuesday, Sept. 15
Exhibitors Hall

2-person Competition includes the new and fun Latrine Building Competition, a joint project of Ops Challenge and Water for People
Monday, Sept. 14
Exhibitors Hall
5:00 PM-7:00 PM

Tuesday PM Sept. 15 Technical Program

Tuesday Afternoon - September 15					
Buffet Luncheon—Exhibitors Hall					
11:50 - 1:20	Session 14 - Payette River Rm. Centrate to Fertilizer	Session 15 - Snake River Rm. Disinfection	Session 16 - Salmon River Rm. Stormwater	Session 17 - Cottonwoods Rm. CSOs/SSOs/I&I	Session 19 - Douglas Fir Rm. Asset Management
1:20 - 2:00	Can Nutrient Recovery be a Financially Sustainable Development Objective? <i>David Seymour, Kennedy/Jenks Consultants</i>	Paracetic Acid - A New Disinfection Approach <i>Kelley Dancy, CH2M HILL</i>	Source Tracing (IDDE) Using Innovative Technologies <i>Rick Fuller, City of Tacoma WA</i>	A Broad-Brush Approach, using GIS to Identify CSO Reduction Alternatives <i>Joan Montgomery & Grizelda Sarría, Tetra Tech</i>	Making the Best Use of Assets in a Poor Economy at the Meridian, Idaho WWTP <i>Daniel Ayers, CH2M HILL</i>
2:00 - 2:40	West Boise WWTF Use of Struvite Crystallization Technology as part of the Phosphorus Removal Plan <i>Dan Barbeau, Pharmed/Engineering</i>	Selection of UV Disinfection Systems for Achieving Class A Reuse Water at Small MBR plants <i>Li Lei, CH2M HILL</i>	Rewriting Seattle's Stormwater Ordinance <i>Robert Chandler, Seattle Public Utilities</i>	So Just How Effective Are Lamella Plates in Combined Sewer Overflow (CSO) Treatment? <i>Matt Crow, CDM</i>	Side Effects of WWTP Process Optimization <i>Levi Shoobry, J-U-B Engineers</i>
2:40 - 3:20	Impact of Phosphorus Recovery on Treatment and Operation at Durham AWWTP <i>Mario Benisch, HDR Engineering</i>	Installation, operation and maintenance of a non-contact UV disinfection system <i>Sean Goris, Black & Veatch</i>	A Tale of Three Cities: Retrofitting Surface Water Drainage Systems with Submersible Pump Stations <i>James Baird, Romtec Utilities</i>	Consequences of Managing CSO Flows Through a Wastewater Treatment Plant - Case History at Port Angeles <i>Patricia Tam, Brown and Caldwell</i>	Case Study: Use of a Scale Model to Optimize Treatment Efficiency of the Moscow, ID WWTF <i>Matthew Gregg & Nick Guho, University of Idaho</i>
3:20 - 3:40	Break - Exhibitors Hall				
3:40 - 4:20	Managing Your Discharge	Pharmaceuticals & EDCs	Measuring the Effectiveness of the City of Santa Monica's Award-winning Westside Urban Runoff Treatment Facility <i>Lawrence Magura, Black & Veatch</i>	Balancing Immediate SSO Needs with Ongoing Comprehensive Wastewater Planning: A Case Study of the Planning, Design and Construction of Flow Equalization for the City of Blaine, WA <i>Jeff Lykken, Tetra Tech</i>	Optimizing Existing Aeration Basins for BNR Upgrade and Plant Capacity at the Meridian ID WWTP <i>Ryan Anderson, Carollo Engineers</i>
4:20 - 5:00	Is Your Multi-Port Diffuser on Its Best Behavior? : Predicting and Validating Discharge Characteristics <i>Kwabena Adu-Sarkodie, West Yost Associates</i>	Fate of the endocrine disruptor compound, bisphenol A in municipal wastewater treatment plants - should we be concerned? <i>Henryk Welber, Brown and Caldwell</i>	City of Los Angeles Stormwater Infiltration Projects <i>Alice Gong, City of Los Angeles</i>	Challenges of Continuous Simulations to Validate Compliance for CSO Facility Design <i>Duane Studer, AECOM</i>	Incorporating Sustainable Features into the Tri City WPCP Phase I Expansion <i>Dale Richwine, MWH Americas</i>
6:00 - 7:00	Consultants Reception				
7:00 - 9:00	PNCWA Awards Banquet				
					Education/Safety LOTT's New Education Center: A Reviewed Educational Focus for our Wastewater Utility <i>Lisa Dennis-Perez, LOTT Alliance</i> Building a Safety Culture <i>Matthew Beltran, Veolia Water North America</i>

Area Highlights:

- Snake River Valley Appellation—26 wineries and 24 varieties of grapes
- Albertsons Boise Open, PGA Development Nationwide Tour, Hillcrest Country Club, Sept. 14-20
- Twenty additional beautiful public golf courses
- White Water rafting, Class I-IV within 1 hour drive
- Warhawk Air Museum: Curtiss P-40 Warhawk, NAA P-51 Mustang, DR-1 Fokker Tri-Plane, NAF N3N Naval Bi-Plane, NAA T-28 Trojan
- 25-mile riverfront greenbelt for walking, skating, biking, jogging
- Fifteen museums and centers
- World Center for Birds of Prey (Peregrine Fund HQ)

PNCWA 2009
SHARING SOLUTIONS

Boise Visitors Bureau
<http://www.boise.org>

Annual Conference Supplement

Technology and the Workforce ♦ Sept. 13-16 ♦ Boise ID

Conference Hotel:

Grove Hotel (same block as the conference site)
 Reservation cutoff date: 8/12/2009, Phone 888.961.5000
 245 S. Capitol Blvd. www.grovehotelboise.com
 Group name/number: Pacific Northwest Clean Water Association #65900

Wednesday AM Sept. 16 Technical Program

Wednesday Morning - September 16		Registration		Continental Breakfast		Special Session - Ponderosa Pines			
7:00 - 4:30	7:00 - 8:30	8:00 - 8:40	8:40 - 9:20	9:20 - 10:00	10:00 - 10:15	10:15 - 10:55	10:55 - 11:35	11:35 - 12:15	7:00 - 4:30
	Session 20 - Payette River Rm. Anaerobic Digestion/Bio-energy A Study of Co-digestion of Organic Wastes for Increased Biogas Production <i>Michael Salerno, CDM</i>	Session 21 - Snake River Rm. Collection Systems Design and Construction of a 200-foot-deep, 24-foot-diameter Conveyance System Access Shaft <i>Daniel Williams, MWH Americas</i>	Session 22 - Summit Auditorium MBRs There is another flat plate MBR technology - evaluation of Huber's VRM membrane bioreactor. <i>Henryk Melcer, Brown and Caldwell</i>	Session 23 - Salmon River Rm. Water Quality/Effluent Criteria & TMDLs Using the Biotic Ligand Model, Water Effect Ratio, and Copper Translator for Site Specific Copper Criteria to Update Effluent Limits for a WWTP <i>Scott Tobiason, Brown and Caldwell</i>	Session 24 - Cottonwoods Rm. Energy Efficiency Not Present Worth Calculations in Fine Bubble Aeration Purchase Evaluations <i>Richard Quinn, Stamford Scientific International</i>	Session 25 - Douglas Fir Room Wastewater Planning A Coalition Approach to Regional Wastewater Planning: Finding the Way Together <i>Heather Stephens, Kennedy/Jenks Consultants</i>	8 AM - 4 PM Special Session - Ponderosa Pines Wastewater Reuse Land Treatment System Modeling <i>Michael Cook, Idaho DEQ</i>		
	8:00 - 8:40 Climate Friendly: Food Waste Diversion to Digestion <i>Mike Joyce, Kennedy/Jenks Consultants</i>	8:40 - 9:20 Condition Assessment & Rehabilitation Technology Selection Perce County 72-inch Wastewater Tunnel to the Chambers Creek WWTP <i>Mike Hyland, CDM</i>	9:20 - 10:00 How to Implement a Membrane Bioreactor Facility under a Tight Schedule <i>Jude Grounds, MWH Americas</i>	10:00 - 10:15 Water Quality Standards Variances - What they are and when to use them <i>Steve James, J-U-B Engineers</i>	10:15 - 10:55 Turbo Blowers Direct Drive-Energy Efficient-High Speed-Turbo Blowers <i>AI Firmin, CDM</i>	10:55 - 11:35 Small WWTFs/Startup Wastewater Treatment Plant for Small Communities Designed for Lower Cost Operations-Construction & Startup <i>John Crippen, CDM</i>			
	10:15 - 10:55 Cogeneration at the Columbia Boulevard WWTP: Procurement, Design, Construction and Operation <i>Muriel Guisssaz-Teufel, CDM</i>	10:55 - 11:35 Laser Profiling and Its Use in Pipe Assessment and Rehabilitation <i>Jim Hansen, Brown and Caldwell</i>	11:35 - 12:15 MBR Design and Construction: The Devil is in the Details <i>Vai Frenkel, Kennedy/Jenks Consultants</i>	7:00 - 4:30 Creative Solutions to Nutrient Challenges in the Picky Pear Watershed <i>Amanda McInnis, HDR Engineering</i>	Small WWTFs/Startup Wastewater Treatment Plant for Small Communities Designed for Lower Cost Operations-Construction & Startup <i>John Crippen, CDM</i>	5-Day Lagoon Seepage Test - Case Study What You Don't Know May Cost You: Getting the Most Out of Your Existing Infrastructure <i>Tom Giese, Kennedy/Jenks Consultants</i>			
	11:35 - 12:15 Digester Mixing - What's the Right System for My Plant? <i>Michelle Burkhardt, CH2M HILL</i>	Something Old, Something New: Redirecting an Existing, Operating Influent System to Serve a New Treatment Plant <i>William Cranston, MWH Americas</i>	Lessons learned from MBR start-up <i>Doug Berschauer, CH2M HILL</i>	Using an innovative asset management framework to improve watershed health and program effectiveness <i>Jennifer Belknap, Williamson, Brown and Caldwell</i>	Turbo Blower Evaluation and Prepurchase Two Large Project Case Studies <i>Randal Zollinger, Bowen Collins & Associates</i>	Startup - Chaos or Order <i>John Koch, HDR Engineering</i>			
	7:00 - 4:30 Not Washing Food Wastes: The City of Tacoma Experience Developing Co-Digestion at the Central Treatment Plant <i>Christopher Muller, Brown and Caldwell</i>	Trenchless Crossing Evaluation on the Martha Lake Gateway Sewer <i>Eric Schoey, Jacobs</i>	Dynamic Control of Scouring Airflow Rate Based on TMP in Submerged Membrane Bioreactor <i>Hong Zhao, Kruger</i>	Water Quality Waivers for Small Communities <i>Mark Holtzen, J-U-B Engineers.</i>	Turbo Blower Experiences <i>Jason Broome, Forsgren Associates</i>				
CEU Turn In									

Additional Lodging:

Hotel 43 (across the street from conference site)
 Reservation cutoff date: 8/14/2009
 981 Grove Street www.hotel43.com
 208.342.4622
 Group name/number: Pacific Northwest Clean Water Association

Read all the abstracts online at www.pncwa.org

Further lodging information available in registration brochure or at www.pncwa.org



Changes and Improvements – the 2009 Annual Conference



If you haven't already received the 2009 Annual Conference registration brochure, you will shortly. Changes to the normal conference format are listed in the brochure, but we want to point out some of those changes here as well.

Register Early!

- **Before Fourth of July Special**—Registrations in by July 4 will get conference rates that are even better than early bird prices!

Schedule Changes:

- **Facility Tours and More CEUs**—Instead of having to choose between facility tours and technical presentations, this year's facility tours are first thing on Monday morning. This will allow for more CEUs for the overall conference.
- **Opening Session**—To facilitate tours on Monday morning, Opening Session is scheduled for 10AM-Noon on Monday.
- **Exhibit Hall and Ops Challenge now on Monday night and Tuesday**—Based on exhibitor surveys we're trying a new exhibitor schedule this year. The Exhibit Hall and Ops Challenge kick-off will be at the Monday Night Manufacturers Reception and then will continue through Tuesday until 5PM.
- **Technical Presentations**—Due to more tracks than before and slightly reduced time slots there will be more presentations than ever—a total of 132 plus a special all-day highly-technical session on water reuse. The time allotted to each standard technical presentation is 40 minutes instead of the previous 45. The suggested formats are either 40 minutes of presentation or 30-35 minutes for the presentation and 5-10 minutes dedicated to Q&A.


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PNCWA 2009 SHARING SOLUTIONS

Technology and the Workforce ♦ Sept. 13-16 ♦ Boise ID

Added Activities:

- **New! University Forum and Sunday evening reception**—There are great Sunday preconference workshops as usual that will be followed by a new event at the Sunday Meet & Greet. The University Forum will give a chance to interact with the students that will be the next generation of water professionals. In addition to free conference registration, these students will be able to attend the Sunday pre-conference workshop of their choice. Then at the Sunday evening Meet & Greet they will be participating in a fun knowledge bowl with other PNCWA members patterned after NPR's hit quiz show "Wait Wait Don't Tell Me".
- **Special Wednesday All-Day Technical Workshop on Water Reuse**—For those that want a very hands-on, very technical training regarding water reuse, we will be having an all-day Wednesday workshop on Wastewater Reuse Land Treatment System Modeling taught by Michael Cook from Idaho DEQ. The workshop is included in regular conference registration but signup is required as class size is limited. Attendees will need to bring a laptop for this hands-on workshop.



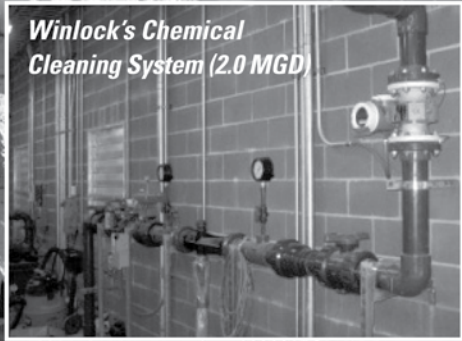
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Are you an S or YP, or do you know one? _____

By Kristi Nelson, PNCWA Treasurer and Students and Young Professionals Committee Chair

The 2009 WEF Young Professionals Summit was held on April 23rd in Las Vegas and I attended it with Haley Falconer and Andy O'Neill. Industry leaders coached us on ways to build more effective teams and become better leaders. We also heard what other Member Associations are doing in their Student and Young Professional (S&YP) Committees and came away with some great ideas to implement in PNCWA, including:

- Half-day Dale Carnegie workshop for students and young professionals
- Online networking communication page for the S&YP committee (using Google groups, LinkedIn, or Facebook)
- Student chapter leadership training
- Fundraiser ideas for scholarships, Water for People and S&YP Events



Sally Mills, Andy O'Neill, Haley Falconer, Kristel Fesler and Kristi Nelson attended the WEF Young Professionals Summit.

The PNCWA S&YP Committee is now meeting monthly (2nd Wednesdays) via conference call to plan local and association activities and begin implementing some of these ideas. If you are a student or young professional (or know one) and are interested in participating in the S&YP Committee, please e-mail me at Kristi.Nelson@hdrinc.com to obtain the information for our next conference call. S&YP events are targeted towards students and young professionals, but seasoned professionals (SPs) are welcome to attend any S&YP event if they bring a student or YP with them.

How sustainable are you? _____

PNCWA has a new award for projects that showcase sustainable design elements. We're looking for nominations of recent projects completed by PNCWA members that feature any of the following components:

- Renewable energy generation
- Greenhouse gas emission reductions
- Transformation of "waste" to products
- Energy efficiency improvements
- Reduction of toxic materials
- Green building techniques
- Habitat enhancement
- Water quality enhancement
- Public education and outreach about sustainability
- Integration and enhancement of social, economic, and environmental factors



If you have a project that provides one or more of these benefits, please submit a nomination online by June 25, 2009 at the PNCWA website on the "Awards Program" page. If you have questions about the award, please contact the Sustainability Committee Chair Jennifer Belknap Williamson at jbwilliamson@brwncald.com or 503-977-6617.



Nan Cluss



Michael Rainey

Your Membership Counts!

From the view here in the PNCWA office, WEF has stepped up to the plate—big time—on a number of issues that can't be relegated to the “we'll get to it when we have the time” pile. Always a great source of information and action, it looks to us that WEF is being even more active and proactive on issues that affect the entire industry, and therefore also the world at large.

Government Affairs

A recent WEFMAX presentation summarized WEF activities related to funding and the Economic Stimulus Package that included:

- WEF letter to Congressional leadership 10/08
- Recommendations to EPA regarding SRF streamlining 12/08
- Action Alert to Members and MAs 12/08
- Joint letters with other water associations 12/08 and 1/09
- Support for Green Infrastructure and Water Efficiency Projects
- Two FREE webcasts for WEF members on the Stimulus
- New Stimulus Funding Resources webpage: <http://www.wef.org/GovernmentAffairs/StimulusFunding/>

Other WEF Government Affairs Committee activities (e.g., developing a technical document to assist EPA with comments on NRDC Nutrient Petition and drafting WEF White Papers and tracking proposed/potential legislation on the issues of climate change and microconstituents) can be seen at www.wef.org/governmentaffairs.

Workforce Sustainability

We intended to use this issue of Streamlines to summarize some of the workforce sustainability articles that we have read recently...until we discovered that WEF now has a great resource center—the Workforce Sustainability Knowledge Center—with links to many of these articles and a variety of related resources. To access, from the top navigation bar on the WEF homepage go to Science & Technology Resources - Access Water Knowledge – Workforce Sustainability.

Technical Resources

The example above is the most recent avenue you can take on the Access Water Knowledge section of the WEF website. There are 14 other main categories with up-to-date resources on topics of interest to the water quality community.

WEF webcasts—WEF is offering more webcasts on relevant technical issues to augment the opportunities for keeping up with critical learning. In today's era of constrained schedules and budgets, this offers focused educational training right from your office.

Infrastructure Support

Water Is Life, and Infrastructure Makes It Happen™ (<http://www.waterislife.net/>) is the grassroots program designed to educate the general public, local leaders, and media about the value of water and wastewater infrastructure and the importance of investing in its long-term stability. The program provides communities with the *(continued on page 28)*



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Welcome to New Members of PNCWA!

The people listed below have become members of PNCWA between February and mid-May. The list represents both WEF/PNCWA new members and transfers from other Member Associations to PNCWA as well as new PNCWA-only members.

Welcome to all of you. Please let us know how we can best serve your needs and interests.

Colleen Bennett, Veolia Water NA
Alan Bower, City of Anacortes
James Brown, City of Portland
Peter Carter, King County - South Plant
Linda Chapman, Instrumentation Northwest
Bob Childers, City of Anacortes
Shawn Clark, APSCO
Pamela Cobby, Roth Hill Engineering
Ken Condit, Ace Consulting
Kelly Dancey, CH2M HILL
Paul Daniels, Castle Pines Metro Dist
Wayne Davis, City of Anacortes
Steve Doebler, City of Anacortes
Ron Doughten, Oregon DEQ
Kevin Dour, Tetra Tech
Dennis Eckhardt, Tetra Tech Inc
Haley Falconer, Student
Odilon Flores, Jr., City of Anacortes
Cory Fortez, Veolia Water NA
Becky Fox, City of Anacortes
Tim Furlong, Klickitat County PUD
Rob George, Veolia Water NA
Mark Goudie, City of Sunnyside
Darrell Gray, City of Leavenworth
Bill Hancock, Zeroday Enterprises
Perry Hanson, KUBOTA Membrane
Victoria Henderson, Roth Hill Engineering
Bob Hendrix, City of Anacortes
Josh Higgins, Student
Lesli Higginson, BP Cherry Point Refinery
Amanda Hohner, Student
Brandon Johnson, Student
Ven Dean Johnson, City of Anacortes
Sean Kehoe, King County
Joe Kernkamp, APSCO
Gwenn Kubeck, City of Corvallis
Thomas Leake, Student
Allen Lindbo, City of Anacortes
Jeff Maag, City of Gresham
Clay Mallett, Schweitzer Engineering Lab
Larry Martin, City of Idaho Falls
John Morgan, H2Morgan
Mike Neher, City of Post Falls
Brien Neill, ENECON Corporation
David Noel, Forsgren Associates
Pat Osborne, Sunland Water District
Michael Patten, WETRC
Ron Rampenthal, City of Corvallis
Janelle Rogers, CDM

Curry Rosato, City of Boulder
Katherine Schaffnit, Student
Kathryn Spencer, WES
Michael Spillane, Herrera Environmental Cons
Brian Stahl, City of Gresham
Ely Teragli, Clean Water Services
Michael Thompson, Student
Randy Turner, CH2M HILL
Jerry Walton, JR Process
James Watson, City of Myrtle Creek
Ho-Ping Wei, MWH
Harry Whyte, City of Anacortes
Ken Windram, HARSB
Lou Zurcher, City of Anacortes

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- Water Reuse
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Communications Camp Notes



Communications camp attendees enjoyed the workshop and proceeds support Adopt a School and Stockholm Junior Water Prize.

PNCWA's Public Education Committee sponsored the Communications Camp workshop on April 15 at King County's South Treatment Plant in Renton, WA. Two dozen public outreach and engagement professionals enjoyed sharpening their skills and sharing trends and lessons learned.

Public Ed committee chair Karen DeBaker said, "We are so fortunate to have high caliber presenters who are willing to volunteer their time and expertise with attendees." Bob Bandarra of HDR, Marcos Lopez of Tetra Tech, Jo Sullivan and Doug Rice of King County, and Leslie Gates and Laura Blaske of the Washington Department of Health gave inspiring, thought provoking and fun sessions on communication styles, stakeholder engagement, social marketing, media relations and risk communications.

Bob recommended the book *People Styles at Work* to round out his presentation on communication styles. Marcos said he calls public involvement "people involvement" and described his favorite form which is the charrette process. Jo examined the art and science of outreach and education, including how to talk about the "unmentionable" topics of our industry. Doug's social marketing, where behavior change is the product, is all about helping people discover what's in it for them, removing the barriers, and making it easy for them to adopt new behaviors that are better for water and the environment. Leslie invited attendees to evaluate real news releases and identify why they worked or fell flat, and encouraged the class to use the media to tell their story. Laura's risk communications session is packed with solid advice and hilarious examples, such as the product warning label that says Caution: food may be hot when heated.

Karen said, "Thanks to all the presenters and attendees for supporting PNCWA's Adopt A School program, Stockholm Junior Water Prize and other public education and outreach."

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WATER WASTE WATER STORM WATER

Oregon Region Operator's Conference

November 2 - 4 • Spirit Mountain Casino

Join us for the first ever Oregon Region Operator's Conference brought to you by the Eastern Oregon, Lower Columbia, South Central Oregon, Southwest, Umpqua Basin Operators, Water Quality Laboratory Analyst and West Central Oregon Sections.

Keynote speakers:

Woodie Muirhead, Brown and Caldwell

PNCWA President *John Shawcroft* and Oregon Region Director *Max Hildebrand*.

The focus is on what operators need to know to be successful at their facilities. The Monday workshop is on the Kubota Membrane Bio-Reactor, and the Tuesday workshop is on potable water and the Siemens Memcor system that provides water at Spirit Mountain Casino. Conference Champions, Sponsors and Vendors are needed, so please contact your Section leader for more information.

Hire Smarter— make an employment connection in 2009!

PNCWA Careers is the premier online employment resource for the water and wastewater industry in the Pacific Northwest.

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Increased exposure
Optional e-mail alerts

Water for People

Who knew we could raise over \$10K for Water for People by building a latrine? At last year's conference, eager teams did just that and now it's time to do it again. Let's raise the bar while we raise the latrine walls. The Second Latrine Building Competition will take place Monday, September 14th during the Ops Challenge and will have a few new twists, turns and some new rules to increase to the fun and challenge. Teams must be a least four people for safety.

Teams are forming, so if you're a PNCWA Board member, Past President, 5S, OYA, consultant or any other designation, get your team together, raise some cash and get ready to have a hoot for Water for People. Three coveted prizes will be awarded for latrine performance:

- Beat the Clock for fastest construction time
- The Golden Brick for most dollars raised
- Dressed for Success for the most creative team name and "uniform."

For details about the competition, joining a team or registering your team, contact Sheri Wantland at 503-681-5111 or wantlands@cleanwaterservices.org/ Can't compete? No problem. You can always buy-a-brick so we can finish the façade we started last year. All proceeds go to Water For People.



The Crystal Crucible Society

By Jan Wilson

The Crystal Crucible Society (C2) is coming to the Pacific Northwest Clean Water Association (PNCWA). The C2 Society recognizes and honors individuals for their outstanding contributions that promote increased professionalism in the wastewater laboratory field. The Society was conceived by the Water Environment Federation (WEF) Laboratory Practices Committee in early 2000.

There are now active C2 Societies throughout the midwest and east coast. The PNCWA branch of the C2 was begun in 2005 with four original members: Keith Chapman, City of Salem; Renee Chauvin, City of Portland BES; Alan Bingham, Clean Water Services, and Jan Wilson, retired. We can also include Ron Moeller as he was recently bestowed with an honorary C2 membership by the Ohio Crystal Crucible chapter.

With the support of the PNCWA Board the C2 Society has become active again and will be soliciting nominations for new inductees from PNCWA membership. All nominations will be reviewed by the current C2 members and those who meet the criteria will be accepted as new inductees. Inductees for 2009, and their employers, will be recognized at the PNCWA Annual Conference in Boise, ID. The inductees will receive a C2 pin and certificate of recognition. The inductees' employers will also receive a certificate of recognition.

Nomination forms and the full criteria for membership in the C2 Society are on the PNCWA website at www.pncwa.org. We encourage nominations to be submitted as soon as possible so the Society will have time to read and review documentation for the nominees. Below are some of the criteria that nominees should possess.

- Significant, active participation in one or more of the following areas: Wastewater-related analyses; education; training; safety; certification; management and planning.
- Involvement in promoting the professional recognition of the wastewater analysis profession.
- Active participation in Laboratory Practices Committees or regional Laboratory Sections.
- Papers or articles related to the wastewater analysis profession that have been accepted by state, regional, or national publications.
- Technical presentations at professional conferences.
- Active participation in the WEF Laboratory Practices Committee.

Nomination forms can be filled out electronically and e-mailed, or printed and mailed to the C2 Society Chairperson: Jan Wilson, 32616 NE John Storm Ave, La Center, WA 98629 wjl@aol.com



On the Move



Celeste Violet, PNCWA Source Control Committee Chair has joined Clean Water Services in Hillsboro, Oregon as a Source Control Inspector. Celeste was the Industrial Pretreatment Program Manager for Veolia

Water in Caldwell, Idaho for nearly five years. She and her son look forward to becoming Oregonians and enjoying the West Coast.

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WEFMAIL (WEF Member Association Information Letter)

By WEF Director *Michelle Burkhart*

There has been a great deal of discussion at national level about the services WEF provides for Operators. Operations staff is often not able to secure funding to attend national conferences, and benefit most from accessible training materials. While there is movement towards providing more of these services, I'd like to highlight some of the resources WEF has already developed specifically targeted to Operators and Plant Operations.

Each issue of Water Environment Technology includes an Operators Forum section that highlights maintenance and staffing, plant profiles and other operational issues. This section is tucked in the middle of the magazine, often with a highlighted bar along the edge for quick reference/identification.

I mentioned in the last newsletter the Access Water Knowledge page, accessed on the left hand side of WEF's website (www.wef.org). One of the Knowledge areas is Wastewater Treatment – Operations. This includes links to technical resources, training materials and state certification requirements. You can also download chapters of MOP 11 (for free!!) or the text in its entirety. Also available for free or purchase are Operators' Certification study aids. The Skills Builder quizzes provide training for new operators or can serve as a refresher for seasoned operators.

Take advantage of your WEF membership and check out these great resources!



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Brown and Caldwell has also made a commitment to change the way we do business in our offices; that's why we created BC Green, an internally-focused initiative that encourages sustainable practices in all that we do.

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Collections Committee—H2S Woes

by Vic Coles

Since retiring from Garden City, I've stayed very busy volunteering for a girls camp in the mountains outside Boise and helping people start careers as collection system operators. Recently, a former co-worker passed away and I was reminded of his brush with death years ago when he was exposed to a large amount of H₂S and the doctors barely had time to save him. New operators are unaware of the dangers of exposure to H₂S and how even low levels can build up in the fatty tissues of our bodies. When our body becomes saturated, we become very ill with headache, nausea, soreness in the neck, shoulders and back. We think we have the "flu" and feel better in a couple of days, go back to work and then soon are back to not feeling well.

Years ago I was asked to help a community where sewer lines were collapsing even though the system was not very old. As we televised the system we found much of it was gone from H₂S damage, not just damaged—gone! The bottom of the pipe was there but no top, just roots and dirt or void. The sad part is that with proper maintenance this system could have lasted 200 years for the same cost as replacing it. Although the operators had the equipment and were very good workers, they never received proper training on how to manage a collection system.

The collection system is any city's largest asset when the true value is considered, and true value is the cost of replacement. And, if not properly maintained, it will need to be replaced. A key element of collection system management and maintenance is understanding the H₂S generators in the system. Manage them or they will manage you.

For information on this, I recommend the excellent presentation by Pat Brown of Brown Environmental about H₂S causes and effects. Attend the PNCWA conference this September. With training money so tight, this is the one not to miss. See you in the fall.



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Washington's perfect wastewater treatment plants

OLYMPIA – Wastewater treatment plant operations just keep getting better in Washington to the benefit of citizens and clean water. The Washington Department of Ecology (Ecology) found 92 wastewater treatment plants in the state had perfect track records in 2008. This amounts to nearly one-third of the state's treatment plants, a sharp rise from 78 plants that earned the honor in 2007. The award-winning plants passed all environmental tests, analyzed all samples, turned in all state-required reports and avoided permit violations during 2008. The perfect-performing plants are located in 30 of Washington's 39 counties. Nineteen of the plants discharge their treated water into Puget Sound.

"This clean water success is a reflection of Washington's ongoing financial investments to help communities build and upgrade wastewater treatment plants, a strong certification program that keeps plant operators well trained, and the skills and dedication of the operators," said Kelly Susewind, manager of Ecology's water quality program. In the state's new budget, Ecology will award nearly \$108.7 million for wastewater treatment facility projects across the state in 2010. This funding helps pay for new construction and upgrades to plants. Nearly half of this funding comes from federal stimulus dollars.

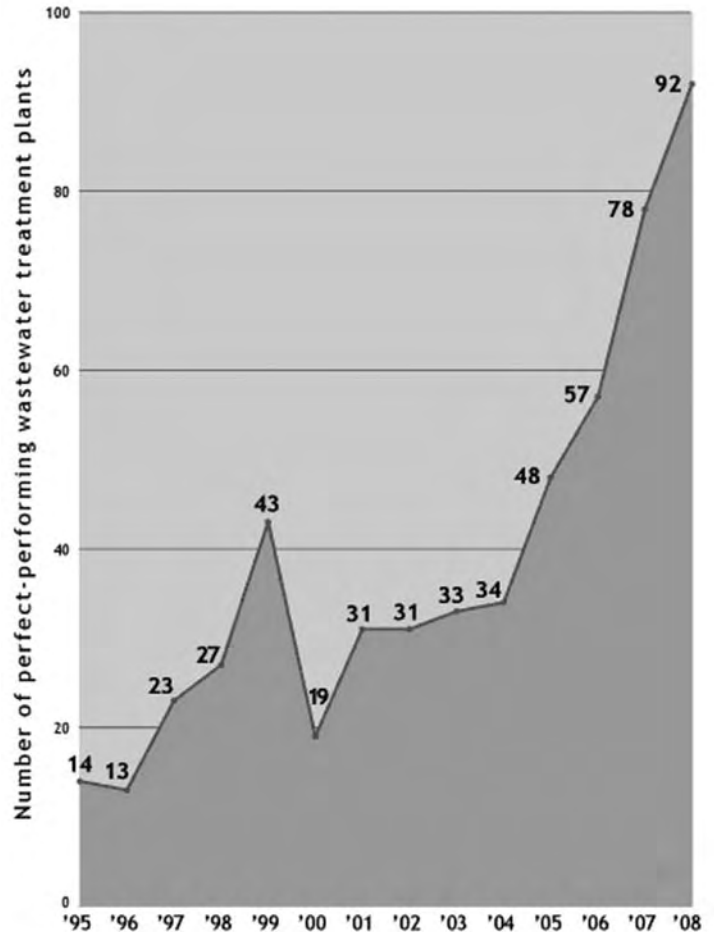
"These treatment plants do the heavy lifting for clean water in Puget Sound and across the state," Susewind said. "Our growing population puts more pressure on these facilities every day." Small facilities typically perform at least 60 laboratory tests per month on the treated wastewater. A larger facility may perform well over 120 analyses per month. "With the number of tests these plant operators must perform, there is a lot of opportunity for problems and these professionals passed the test all year long," Susewind added.

Before Ecology's recognition program began in 1995, it found just 14 treatment plants in perfect compliance. "We see a lot of pride among the operators out there who make it a personal goal to achieve the 100 percent compliance mark each year," Susewind added. "In many cases, these operators are backed by a very supportive local government that helps them be successful."

Wastewater treatment plant operators face around-the-clock challenges. Their plants collect household sewage and industrial wastewater from large networks of underground sewer pipes all day, every day. They treat the sewage and then discharge clean, treated water into waterways or spread the water onto land. Ecology monitors each plant's effectiveness by requiring they meet conditions of permits that limit the contaminants the plants may discharge into lakes, rivers or marine waters or onto the ground. Plant operators must be certified by the state and follow the requirements of their state permits.

Ecology reviewed every treatment plant's tests, reports and on-site inspections to determine which facilities

Outstanding trends of wastewater treatment plants



met all conditions of their permits. Highlights this year include super-achievers Manchester with 14 consecutive years of perfection, Newport with 13 years, and Port Townsend with 13 years. In addition, 20 plants are getting the honor for the first time. Chambers Creek, Marine Park in Vancouver, Sedro-Woolley, and Vancouver West have each received the award 10 times since 1995. On the flip side, Ecology's 14-year record also indicates that 124 of the state's plants have never achieved 100-percent compliance.

The award-winning plants are located in the following counties: Adams, Asotin, Benton, Chelan, Clallam, Clark, Cowlitz, Douglas, Grant, Grays Harbor, Island, Jefferson, King, Kitsap, Kittitas, Klickitat, Lewis, Okanogan, Pacific, Pend Oreille, Pierce, San Juan, Skagit, Skamania, Snohomish, Spokane, Thurston, Whatcom, Whitman, and Yakima.

For a complete list by county of the state's outstanding wastewater treatment plant award winners for 2008, go to: www.ecy.wa.gov/programs/wq/wastewater/op_cert/kudos.html

What are the Costs of an Accident?

By Wayne Adams, CSP; Veolia Water, Olympia

Accidents and work-related illnesses can have an adverse impact in the workplace. Within the water and wastewater industry employees are faced daily with a number of hazards ranging from electrical, atmospheric, chemical, slips, trip, and falls. Unsafe working conditions can affect performance by increasing the expenses, negatively affecting morale, and lowering the profitability. On the other hand a safe work environment can boost the productivity, improve employee morale, and decrease company/city expenses. The value of an effective occupational safety and health to the bottom line cannot be overstated.

In the United States it is estimated that approximately \$150 billion is spent annually on accidents. This estimate includes the direct and indirect costs of accidents that occur on and off the job. U.S. Bureau of Labor statistics indicate that in 1989, 35,000,000 work hours were lost as a result of accidents. There were 10,400 deaths per year in work related accidents with the leading causes being motor vehicles, falls, electric current, drowning, fire-related, air transport-related, poison, and water transport. The leading types of work injuries were overexertion, impact, falls, bodily reaction, compression, motor vehicles, exposure to radiation/caustics, rubbing/abrasions and exposure to extreme temperatures. Ranked by industry from highest to lowest deaths per 100,000: mining/quarrying, agriculture, construction, transportation/public utilities, government, manufacturing, services, and trade.


As a water or wastewater treatment plant manager or operator, preventing accidents is a primary concern. Many safety professionals illustrate the costs of direct to indirect costs of injury at a 1 to 4 ratio. For example, an employee cuts himself with a knife, gets stitches and the direct costs may be \$200. However the indirect costs which include the accident investigation, hazard correction, worker replacement, increased wages (over time), injury management, lost productivity, and costs of insurance would easily equal \$800. The total cost would be \$1,000. These costs must be covered somewhere. For publicly owned water or wastewater treatment plants, the costs may be absorbed by plant operations, and then reflected in higher insurance rates, and passed on to ratepayers. For a privately owned plant the costs are more direct to its owners, and again the costs will be reflected in higher insurance rates.

As a manager is it critical to convey the costs and effects of accidents within our industry, the economy, and society—not only the associated costs, but the equally significant effect on family, friends and co-workers. We owe it to our employees, customers and community to ensure we provide a safe place to work.



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In Memory of Mike Dennett

Michael Dennett lost his battle with leukemia on Saturday, May 2, 2009. Jay Meena said, "Mike was a valued friend and colleague to not only all of us at Whitney Equipment Company but to many of you, our customers, vendors and consulting engineers. He will be greatly missed not only for his superior knowledge of our product lines, but for his wonderful sense of humor, his unending knowledge of history and his ability to be everyone's friend."

Memorial services were held on May 8 at Normandy Christian Church in Des Moines, WA. Condolences and memories may be sent to Lois Dennett c/o Whitney Equipment, 21222 30th Dr SR #110, Bothell, WA 98021.

Streamlines *(continued from page 18)*

preparation and communication tools needed to succeed in raising awareness about water and wastewater infrastructure demands.

WEF/MA (Member Associations) Relations

The WEF website already has a great MA Resource Center. But in 2009 there is an integrated push underway to identify where communications between WEF and MAs can be enhanced and what the expectations are between the different facets of the Federation. The stronger the MAs are from a more cohesive relationship with WEF, the more the MAs can support individual members in their specific geographical area.

Your Membership Counts!

The examples above are just some of the initiatives of the Water Environment Federation. The people of WEF—staff and volunteers alike—are working hard on many fronts to make all of our jobs easier. We want to say a big thanks to all of those people and to the individual members of WEF that allow it all to happen.

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From the President *(continued from front page)*

leaders. We had the chance to just sit around the table having a drink and brainstorming ideas. These were people with a number of different job descriptions (and pressures) within the water environment, but with common areas for discussion. A few of the discussion topics included:

- 1) There is much concern about workforce sustainability. People want management and leadership type training. For some, the training available year-round is repetitive to training they've already done and they're not seeing anything focused on management and leadership (unless through their employer's in-house training). Leadership topics have been a focus at the PNCWA annual conference and many section-level attendees have taken advantage of them, but this discussion brought home the necessity to have these subjects offered on the section level. I will take this back to the PNCWA Leadership Development Committee to see how PNCWA can help with this.
- 2) It also became clear that many on the section level of PNCWA still do not understand the relationship between sections, regions, and PNCWA. I was asked that there be a written document that will help explain the relationships to new members of the sections. I'm happy to say that this document is already planned as part of a larger section resource guide being developed by PNCWA to answer common questions and provide common resources to all of the PNCWA sections. This guide will be rolled out at the Section Exchange at the annual conference in September.
- 3) I mentioned that PNCWA was in the midst of formalizing a rollout of training webinars. At first some were hesitant of the idea, thinking it may compete with the section trainings. When I clarified that it is envisioned these would be done in a group (not by individuals) at section events, all were very excited about the idea. Sections would of course choose whether or not to take advantage of the offer on a section by section basis.
- 4) We also discussed the advantages of PNCWA having a template presentation to take to high school career fairs and community colleges to bring new operators into our field. This will be complemented by our ongoing development of active student chapters to attract engineers. Given the number of planned retirements, this is a high priority issue and needs to be developed as soon as possible. I will communicate to the PNCWA board that we should make this an immediate action item.

I left thinking that was a great way to spend an hour, enthusiastic about how PNCWA as an organization can continue to serve the individuals serving the industry. Whenever I find the time to be involved in PNCWA, I find great satisfaction in the sense of community I get from interacting with people that share our common goals. And that's worth every minute I put in to it.

Towards Sustainable Water Infrastructure

(continued from front page)

Those efforts laid the groundwork for this new Sustainable Water Infrastructure Initiative. The initiative will address not only the pressing drinking water and wastewater infrastructure funding gap, but also link sustainable infrastructure to climate change adaptation strategies. EPA Region 10 is committed to working with its partners to support innovation in infrastructure management. Ultimately, the effort will help ensure the continued availability, affordability, and delivery of drinking water and wastewater services into the future.

For information, see www.epa.gov/waterinfrastructure/ or contact Cyndi Grafe (EPA Region 10 Sustainable Water Infrastructure Team Lead) at grafe.cyndi@epa.gov or 208-378-5771.



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