

Pacific Northwest Clean Water Association

# PNCWA

Newsletter  
Summer 2010



## MEMBER NEWS

Corvallis, Meduri Farms  
and Lakehaven Operators

## FEATURE FOCUS: BIOSOLIDS

Starts on page 19

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CH2M HILL OMI PHOTO



**Operations at the City of Walla Walla, WA** (CH2M HILL OMI) Left to Right: Paul Olson, Dean Moran, Mark Babbitt, Randy Lindquist, Walter Bird, Bud Ruther, Philip Johns, Cheryl Rickertsen, Kirk Brown, Willy Breshears and Rob Muskthel

PNCWA IS MADE UP OF PEOPLE DOING A GREAT JOB. WANT TO SEE YOUR ORGANIZATION'S GREAT PEOPLE ON THIS PAGE? IF YOU ARE A PNCWA MEMBER, PLEASE EMAIL YOUR HIGH RESOLUTION PHOTO TO MIKERAINEY@PNCWA.ORG, WITH THE NAMES AND LOCATION OF THE PHOTO. CONTACT THE PNCWA OFFICE FOR ASSISTANCE.

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COVER PHOTO: BIOCYCLE FARM, MU#1, CITY OF EUGENE PHOTO BY KEN VANDERFORD

**MISSION STATEMENT**

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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### Upcoming newsletter editorial themes:

Q3 (Fall) Watershed Management  
Q4 (Winter) Wet Weather Issues

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PNCWA

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I believe the three most critical issues facing PNCWA and our professions today are the aging workforce, increasingly strict and variable environmental regulations, and decreasing funding to meet the challenges of the first two. We can do little about the changing regulatory situation; regulators are under pressure to make improvements to the environment and protect the world from all sources of pollution. As water professionals, we need to find the best way to work with regulatory agencies to prioritize proposed legislation to immediately address the most urgent requirements while allowing municipalities time to collect sufficient funding and resources for less urgent requirements in order to achieve the new goals without compromising existing programs. PNCWA encourages regulators in membership and to engage in the training and conferences offered to better enable all of us working together as colleagues toward a common ground which builds a bridge between

required regulations and the practical experience and knowledge of day to day water or wastewater treatment facility operations.

Funding will not get better any time soon. Budgets are stretched, hard decisions are being made concerning what project gets done, and needed projects are postponed or cancelled for lack of funding. If regulators are not allowed to factor how much it costs to meet requirements in an ailing economy, our decisions will be about which regulation is the most important and how long a perceived lesser need can be postponed. The adage "you can't make guns *and* butter" simply means that if you have a dollar you have to choose rather than do both. The federal government hasn't learned this lesson. Deficit spending is not a solution to economic woes, and regulating without regard to cost is doomed to darken the economic skies—not improve the environmental condition.



PNCWA PRESIDENT  
JOHN SHAWCROFT  
VEOLIA WATER NA

As for the aging workforce, PNCWA makes a considerable effort to involve students and young professionals but the average PNCWA member is 54 years old and our workforce is in the early stages of turnover. We all know this and work to engage the younger incoming personnel, but the existing jobs are still filled by

*Continued on page 27*

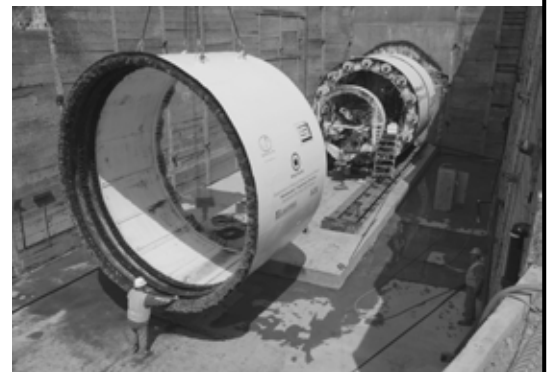
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## Award Nominations extended until August 10

All Award Nominations (except Operator of the Year) are online at [www.pncwa.org/page/awards](http://www.pncwa.org/page/awards). You must be a member to nominate a fellow professional or an outstanding project:

- Arthur Sidney Bedell Award (WEF–PNCWA Award)
- George W. Burke, Jr. Award (WEF–PNCWA Award)
- Laboratory Analyst Excellence Award (WEF–PNCWA Award)
- William D. Hatfield Award (WEF–PNCWA Award)
- Excellence in Water Reuse Award (PNCWA Award)
- Individual Distinguished Achievement Award (PNCWA Award)
- Young Professional Award (PNCWA Award)
- Lyman Ketcham Award (PNCWA Award)
- Municipal Water Protection Award (PNCWA Award)
- Sustainability Award (PNCWA Award)
- Operator of the Year (includes Collections, coordinated by Regional Directors)
- Safety Awards – Divisional Safety Awards and Zero Lost Time Accident Awards (PNCWA Award)
- Excellence in Biosolids Management  
Aug. 6 deadline [www.nwbiosolids.org](http://www.nwbiosolids.org)

## Board of Directors Nominations due August 10

Be one of twelve who lead and govern PNCWA as a member of the Board of Directors comprised of the President, President-Elect, Vice President, Treasurer, Secretary, Past President, two WEF Delegates, and four Regional Directors. The PNCWA Nominating Committee is accepting nominations for the positions of Vice President and WEF Director. The Presidential rotation is a four year commitment beginning with Vice President, and all officers must be WEF members. PNCWA strives for representation of Idaho, Oregon and Washington by rotating the Vice President nominations by state and will select from Oregon in 2010 if at all possible. To qualify, you or your nominee must have documented evidence of professional experience and capabilities including:

- Significant career accomplishments (PNCWA, Section, etc.)
- Professional experience and credibility
- Leadership knowledge and experience
- Visionary planner, motivator, consensus builder, and communicator
- Knowledge of the PNCWA organization and governance

Nomination forms are at [www.pncwa.org](http://www.pncwa.org).

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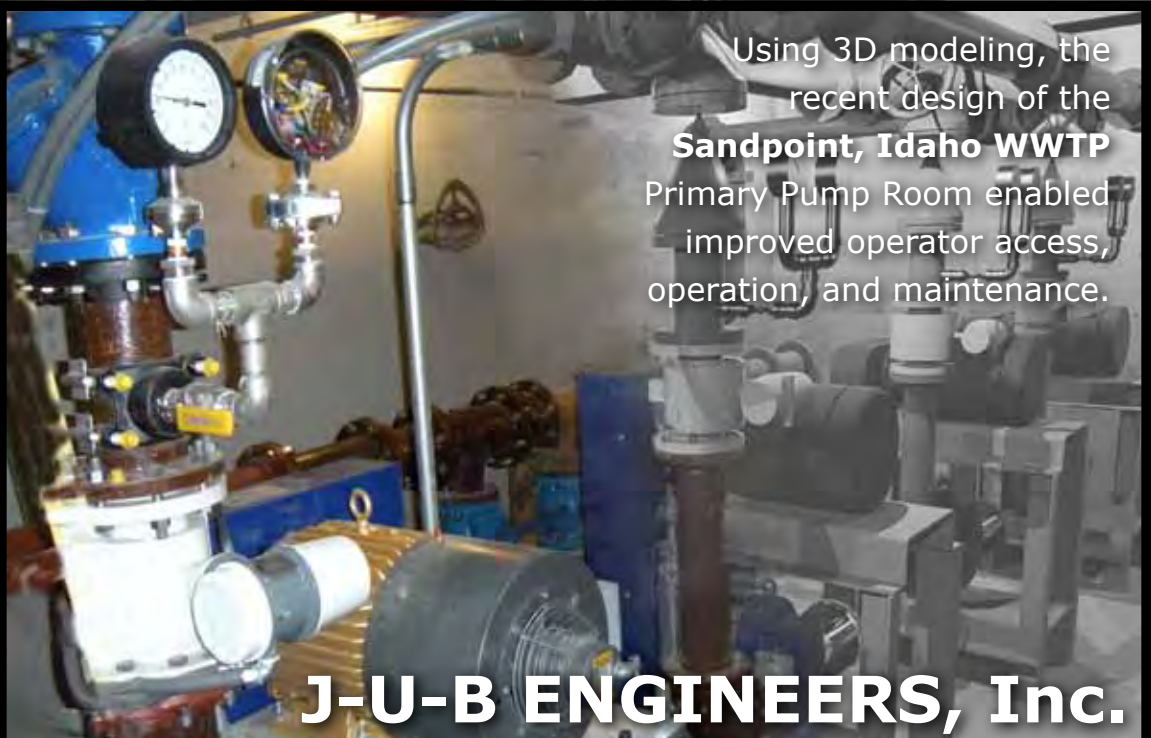
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# Walla Walla Team's Commitment to Safety Shines

After a two-year process, the City of Walla Walla, Washington's Wastewater Treatment Plant, operated by CH2M HILL's Operations & Maintenance Business Group, has earned Voluntary Protection Program STAR status. The VPP STAR certification is the nation's highest award for a safety program.

"Safety is not just a word in Walla Walla. It is a practice that each member of our team takes seriously," said Project Manager Willy Breshears. "Without the commitment of every person, every day, we wouldn't have earned VPP STAR status, the George W. Burke, Jr. Facility Safety Award or celebrated more than 3,000 days without a safety incident. I'm extremely proud of our team, and it's great to see their efforts recognized."

The Walla Walla team of 13 began the long, difficult process of earning VPP status in 2007. The final step occurred when four evaluators from the Washington State Department of Safety and Health conducted a three-day, on-site evaluation. During this process, evaluators reviewed safety and health programs and documentation, conducted walk-throughs to observe work practices and conditions, and interviewed each employee.

The DOSH team noted several best practices that included the team's morning meetings and the weekly staff meeting where safety is discussed first and foremost. The evaluators also thought the team's use of color-coding throughout the facility to mark railings, cranks, guards and other hazards was noteworthy. Evaluators noted a total of seven hazards during their check, and the Walla Walla team fixed the items before the inspection was finished.

"I am very proud of all the Walla Walla employees. VPP is not an easy accomplishment. It took a lot of teamwork and effort from the staff to achieve this goal," said Regional Health & Safety Manager David Ells. "Project Safety Team Leader Cheryl Rickertsen did an exceptional job in keeping the team focused and on track throughout this process. VPP STAR is not the final result. The staff is continuing to make improvements to better their safety program and to maintain VPP STAR status."

"While each of us had thoughts of turning back and quitting at one point or another during this journey, we are all very proud that we made it," added Cheryl. "Achieving the VPP STAR is a great accomplishment. I think having each of us doing our jobs every day – not just to get the job done but getting it done in a way that VPP would approve of – is a greater accomplishment. Without even realizing it, we are all working more safely and are stronger as a team."

The team also recently celebrated two other safety milestones: reaching 3,000 days (288,000 hours worked) without a lost-time incident in August and winning the George W. Burke, Jr. Facility Safety Award from the Water Environment Federation (WEF). The award was presented at the Pacific Northwest Clean Water Association's annual conference. The George W. Burke, Jr. Facility Safety Award is the premier safety award presented by WEF, and



CHERYL RICKERTSEN PRACTICES WITH THE FIRE EXTINGUISHER IN SAFETY TRAINING.

its purpose is to encourage an active and effective safety program in municipal or industrial wastewater facilities and to stimulate the collection and reporting of injury data. The judges complimented Walla Walla for excellent documentation of its safety program and record. The project also was given a Five Year Plaque for "Zero Lost Time."

"Walla Walla clearly hit it out of the park when it comes to safety," said Corporate Health & Safety Director Mark Zachary. "The long hours and commitment they put into earning VPP status shows their true commitment to safe work behaviors. It's something we all should be proud of."

The team commemorated its VPP STAR achievement with its client at a celebratory dinner in January. Officials from the state's Department of Safety and Health presented a plaque and flag to the team. The O&MBG provides operations and maintenance services at Walla Walla's 9.6-mgd wastewater treatment plant, designed to serve a population of 37,000, and also manages the land application of biosolids and industrial pretreatment program. The city hired CH2M HILL's O&MBG full-time in April 2000.

*For more information about PNCWA's Safety Awards including Zero Lost Time Awards and the prestigious George W. Burke Award, visit PNCWA's website at [www.pncwa.org/page/awards](http://www.pncwa.org/page/awards). The deadline for awards nominations has been extended to August 10.*

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By Thomas "Bud" Ruther  
CH2M HILL OMI (Walla Walla)

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# Voluntary Protection Program



THE BANNER AT WALLA WALLA WWTP (CH2M HILL OMI) DURING THE FACILITY'S QUEST TO ACHIEVE VPP STATUS

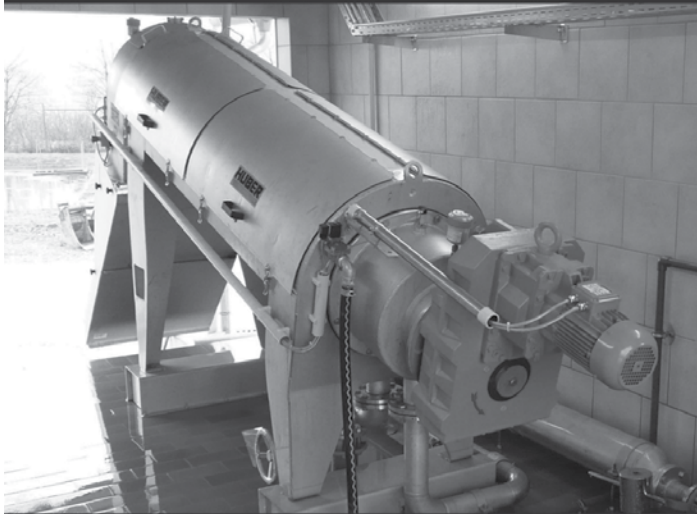
If you are a part of the safety world, you are bound to have heard the name "VPP". It's almost becoming as common as OSHA. That's because VPP (Voluntary Protection Program) is a cooperative occupational safety and health and environmental management system. VPP participants are a select group of facilities that have designed and implemented outstanding health and safety programs. Management, labor and government work together to establish a cooperative relationship at a workplace that has implemented a strong program in VPP.

VPP is a program that OSHA uses to recognize worksites that have achieved and maintained excellence in worker safety and health protection through cooperation among government, industry and labor. There are three different VPP programs: STAR, MERIT and STAR DEMONSTRATION. STAR recognizes sites that have the highest level of safety and health excellence. MERIT recognizes sites that have good safety and health programs but must take additional steps to reach STAR quality. STAR DEMONSTRATION recognizes worksites that have STAR quality safety and health programs but still require demonstration and/or testing of experimental approaches that differ from current STAR requirements. A site that applies for participation in the VPP must submit a written application that addresses the major elements of the program: management leadership and employee involvement, worksite analysis, hazard prevention and control and safety and health training. An onsite review by OSHA officials to evaluate the workplace and interview employees is the final stage of the application process.

When your site decides to go for VPP you need to understand that you need "buy in" from all the associates you work with. Striving toward VPP is a concentrated effort but you need everyone's participation to succeed. There are 107 sites striving toward or have achieved VPP status in Region 10 which encompasses Idaho, Alaska, Washington and Oregon. To find out more about VPP go to the website at [www.vpppa.org](http://www.vpppa.org). If you go to Chapters and Chapter Corner you can also go to your region's website.

"Bud" Ruther can be reached at [thomas.ruther@ch2m.com](mailto:thomas.ruther@ch2m.com)

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## PNCWA Scholarship Committee Requests Items for Silent Auction

By Steve James, PNCWA Scholarship Committee Chair

PNCWA is an educational organization so opening doors for our members is a critical part of our mission. Scholarships are a great way to open new doors for our members and industry. The newly created PNCWA scholarship program is off to a strong start with our first \$1500 scholarship awarded this year. The winner will be announced at the opening session of the annual conference.

We need your help to continue to build this scholarship program. PNCWA will be inaugurating our first annual silent auction during the conference this year so we need individuals and groups to donate items for the auction. Potential items include wine, weekend getaways, restaurant gift certificates, tickets to sporting events, theme baskets, etc. Donors will get recognition during the conference. *If you have any questions about donating items or about scholarship in general, please contact Steve James at 208.762.8787.*

The overall scholarship program objective is to encourage and support educational studies in the area of water quality, providing incentive for highly capable individuals to prepare for careers in the field of Water Quality Control and Environmental Protection.

Contributions are tax deductible! —PNCWA is a 501 (c) 3 non-profit organization. Contributions may also be made online by card at [www.pncwa.org](http://www.pncwa.org).

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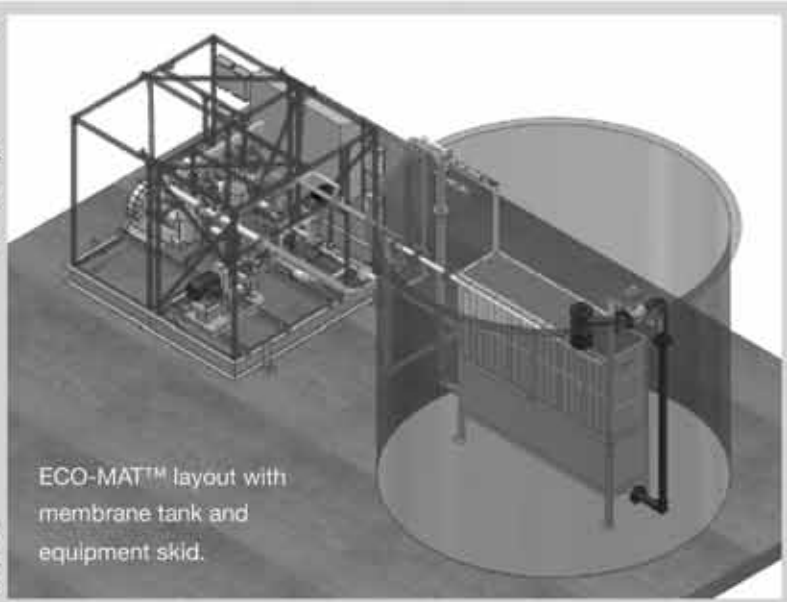
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## Washington Department of Ecology honors WWTP perfection

OLYMPIA - Every hour of every day and every night, unseen people are working to protect the health of our waters and the water we drink. They are our state's wastewater (sewer) treatment plant operators. Most people don't think about what goes on behind the scenes to protect our water, but the state Department of Ecology does because it regulates wastewater plant operations. When the agency sees perfect compliance at the plants, it recognizes the achievement with annual Outstanding Wastewater Treatment Plant Awards. Last year, 87 of the state's wastewater treatment plants had perfect track records. The award-winning plants passed

all environmental tests, analyzed all samples, turned in all state-required reports and avoided permit violations during 2009. Highlights about the 2009 award recipients:

- 14 plants achieved the honor for the first time.
- Four were state correctional facilities (Clallam Bay, Larch, Olympic and Cedar Creek).
- Two were state parks (Fort Columbia and Millersylvania).
- Manchester Wastewater Treatment Plant in Kitsap County again had a perfect record giving it a perfect 15-year string.

Just a few of the additional outstanding plants were:

- City of Kennewick Wastewater Treatment Plant – previous awards in 2002-2003 & 2007-2008
- City of Vancouver Marine Park Treatment Facility – previous awards in 1996-1997, 1999-2001, 2003, & 2005-2008
- City of Vancouver Westside Treatment Facility – previous awards in 1997, 1999-2001, & 2003-2008
- City of Port Townsend Wastewater Treatment Plant – previous awards in 1995-1996 & 1998-2008

For a complete list by county of the state's outstanding wastewater treatment plant award winners for 2009, go to: [www.ecy.wa.gov/programs/wq/wastewater/op\\_cert/kudos.html](http://www.ecy.wa.gov/programs/wq/wastewater/op_cert/kudos.html)

## Washington Department of Ecology's Water Quality Program 2009 Annual Awards

**Creative Thinker Award:** Ted Hamlin of Ecology's Spokane office invented a low cost, low maintenance device for sampling stormwater sediments.

**Good Neighbor Award:** David Dunn of Ecology's Lacey headquarters is skilled in giving technical assistance about engineering and environmental requirements for wastewater treatment systems to local governments, consulting engineers, the general public, and other state and federal agencies.

**Jim Krull Award for Outstanding Achievement:** Financial Management Services team of Cindy Price, Brian Brada, Tammie McClure, David Dunn, Bill Hashim, Pat Brommer, Jeff Nejedly and Steve Carley who made sure the federal stimulus American Reinvestment and Recovery Act funds got out of the door and on the ground for clean water projects across the state.

**Open Category:** Bob Raforth in the Yakima office contributed greatly to the Water Quality Program and was a critical



FINANCIAL MANAGEMENT SERVICES TEAM STEVE CARLEY, BILL HASHIM, BRIAN BRADA, DAVID DUNN, JEFF NEJEDLY, TAMMIE MCCLURE, PAT BROMMER (NOT PICTURED: CINDY PRICE)

to the permitting of Buckhorn Mountain gold mine.

**Ron Devitt Award for Excellence in the Field:** Kevin Hancock, Southwest Regional Office in Lacey, is a truly dedicated industrial stormwater inspector who spends days and nights on the road away from home inspecting permitted facilities from the Strait of Juan de Fuca to the Columbia River.

**Rookie of the Year:** Doug Howie who since August 2009 has provided timely, high quality technical assistance on stormwater regulation and control.

**Team Builder:** Sandy Howard routinely navigates the Water Quality Program through precarious seas of news reporters and captains the Washington Waters —Ours to Protect educational campaign.

**Unsung Hero:** Brian Brada who works in information systems providing important, sometimes invisible infrastructure that keeps our waters clean.

**Program Manager's Award:** Karen Burgess who was nominated by Water Quality Program Manager Kelly Susewind who said, "Karen has always met my 'always' criteria, and I am impressed every time I have the opportunity to work with her."



# Enabling Energy Efficiency:

In response to unprecedented support for energy efficiency across both private and public sectors, the Consortium for Energy Efficiency (CEE), in cooperation with the Water Environment Federation (WEF), has released the Energy Efficiency RFP Guidance for Water and Wastewater Treatment Facilities. The new guidance provides water utilities, cities, and towns with ready-to-use language to help them include energy efficiency requirements in solicitations for design services. Municipal officials may use this guidance to simplify and streamline the RFP process, to help cities and towns tap in to federal funding streams and local efficiency program resources, and to make energy efficiency a standard feature of treatment facilities.



## Integrated Asset Management

By Marc Yarlott, PNCWA Asset Management Committee Chair

On May 11, I attended a keynote address by EPA's Steve Allbee at the FullCircle2010 Asset Management Conference in Vancouver, WA on asset management and the future of water and wastewater infrastructure. I have heard several of his lectures over the past five years and attended his two day seminar on Asset Management, which I recommend. A new discussion point was Steve's call for Asset Management to become an "integrated" way of thinking.

The term "integrated" was puzzling until Steve explained how broadly asset management concepts affect current interests in our industry including sustainability, energy efficiency, and maintenance, as well as formal Asset Management. All of these are impacted or about assets; assets are purchased and maintained to provide a service to the owners, and incur costs throughout their lifecycle whether the focus is on triple bottom-line (economic, ecological and social) cost, or strictly looking at energy efficiency, or maintenance. Steve is calling for us from sustainability, maintenance, and operations to integrate and incorporate Asset Management concepts into all design, equipment specification and purchase, construction, operational and maintenance services because our communities need to maximize the return on investment from the assets.

This perspective requires a new way of thinking about our work and objectives. Minimizing lifecycle costs while maximizing the service function is a bit foreign to everyone from designers, regulators, contractors, operators and maintenance staff and

will require new approaches to everything. For example, the purchase price of a pump is only a fraction of the entire cost to run the pump to deliver the service of moving water, yet our traditional approach has been to seek out the lowest purchase price without consideration of electrical or maintenance costs of the pump design. The new approach is to select a pump based on much broader lifecycle costs and to design, operate and maintain the plant to minimize energy demand and maximize pump life.

How can this new thinking become part of our industry? Steve suggested certification of Asset Management professionals, definitions and specifications for training and certification, and training for a wider cross section of those working in our industry including regulators, engineers, operators, maintenance techs, and contractors would help put the concepts into practice and make it part of the way our industry works.

If you are interested in integrating the best approaches that each of us employ to get more life and return from our communities assets, please consider how you can contribute and then find a way to participate. A video of Steve Allbee's keynote address is posted at <http://tinyurl.com/Allbee-FullCircle> with a discussion of certification 50 minutes into the presentation. You can also find more about the EPA's training schedule and resources at [http://epa.gov/owm/assetmanage/assets\\_training.htm](http://epa.gov/owm/assetmanage/assets_training.htm) and contact information at <http://ydesign72705.blogspot.com/>.

# RFP Guidance for Water and Wastewater Facilities

Although water and wastewater treatment facilities provide an invaluable service to their communities, they are also the largest energy consumers in many cities and towns. A typical wastewater treatment facility spends as much as \$100,000 per year on energy for every 1 MGD of treatment capacity. By making energy efficiency a standard part of their management practices, facilities could potentially save between \$20,000 and \$40,000 per 1 MGD per year—money that could be used for capital improvements, education, or other essential services.

The Energy Efficiency RFP Guidance provides information and tools to help cities and towns gain access to the energy savings potential in their water and wastewater treatment facilities. It includes ready-to-use language to request consideration of measures including high speed blowers, sensors and process controls, variable frequency drives, nutrient removal processes, and more.

View the guide online at [www.cee1.org/ind/mot-sys/ww/rfp/index.php3](http://www.cee1.org/ind/mot-sys/ww/rfp/index.php3)

“Energy efficiency and energy independence are essential to sustainable water and wastewater treatment,” said WEF President Paul Freedman. “WEF commends CEE for taking the lead in developing this new guidance and encourages utilities to incorporate energy efficiency as part of their standard operating practices.”

*Walt Mintkeski, WEF-PNCWA member, Energy Trust of Oregon, contributed to the development of the RFP as did WEF committee members from the following WEF Committees: Environmental Management Systems, Municipal Wastewater Treatment Design, Plant Operations and Maintenance, Sustainability, Utility Management.*

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# WEF Member Association Information Letter

By WEF Directors Douglas Allie and Michelle Burkhart



One of the Water Environment Federation (WEF) goals is to provide water quality professionals (scientists, engineers, regulators, academics, plant managers and operators) with valuable resources and provide the latest in water quality news. A great tool is Access Water Knowledge™ at [www.wef.org/awk/](http://www.wef.org/awk/), a fully searchable library of WEF's research journals and papers presented since 2000. The



database also includes discussion forums and Knowledge Centers for key information on seventeen different water quality issues such as collection systems, infrastructure, stormwater, sustainability, and utility management.

As part of a two-phase project to improve access to water quality science, engineering, and technical practices

information, WEF launched a redesigned WEFTEC Web site [www.weftec.org](http://www.weftec.org) that complements the look and brand of WEF's primary site [www.wef.org](http://www.wef.org). As an added service to attendees, WEF has also improved the WEFTEC Personal Planner. A popular feature over the past few years, the "My WEFTEC Planner" allows users to create their own complimentary conference schedule that can be printed, downloaded and saved as a Word/CSV file, or saved online in a personalized account that can be accessed and updated both before and during the event.

Other notable updates include an interactive calendar with upcoming deadlines; an improved WEFTEC Exhibitor Directory and search function; an increased focus on WEFTEC's Global Business Opportunities and official publications; a photo gallery from past WEFTECs; and a homepage slideshow that highlights the five main reasons



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PNCWA's WEF Directors provide updates on WEF activities and issues to the PNCWA membership throughout the year.

WEF Directors serve as a communication link between PNCWA and WEF, keeping both Boards informed of issues, policies, decisions, etc. relevant to the other.

thousands of water quality professionals from around the world attend WEFTEC each year—Education, Exhibition, Events, Exploration, and Networking.

A clearinghouse of communications resources is now available on WEF's Access Water Knowledge Biosolids channel to assist WEF members and utilities in responding effectively with the public, media outlets, and local officials about biosolids recycling.

WEF and AWWA have joined forces on a new public outreach campaign that will enhance the image of water careers and encourage students and job seekers to "Work for Water". The campaign will promote water careers as both professionally fulfilling and aligned to the greatest public health and environmental cause of our day. The outreach will also address one of the water community's top concerns

in the coming decade—the expected retirement of 30% of the water workforce and the need to recruit new talent to the field. The campaign's Web site —[www.WorkforWater.org](http://www.WorkforWater.org)—launched May 2010. To submit resources and materials, please contact Linda Kelly, WEF's Managing Director of Communications at [LKelly@wef.org](mailto:LKelly@wef.org) or 703.684.2448.

WEF offers an alternative way to achieve educational credits through comprehensive online training materials for water professionals and students. Choose from a variety of training course options from fundamentals to advanced levels through the Distance Learning: Water Quality Training Program <http://training.wef.org>. With restrictions in travel budgets, water professionals can still obtain further education and training at their own pace through this program. The online training courses

thoroughly cover operation, design, and engineering with topics ranging from wastewater fundamentals to emerging topics in the industry. Whether participants want an introduction to wastewater treatment, a refresher course in wastewater operations, or education on new, intellectually stimulating topics, this WEF program provides something for everyone through both fundamental and accelerated courses available to anyone with an internet connection. Visit [www.wef.org](http://www.wef.org) to see the other options and venues WEF offers for training and professional development.

*Michelle Burkhart may be reached at [michelle.burkhart@ch2m.com](mailto:michelle.burkhart@ch2m.com) and Doug Allie at [dallie@goblesampson.com](mailto:dallie@goblesampson.com)*



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# SSO and DWO Regulatory Trends

By John Evans, P.E. and Deborah Chase, LEED AP, HDR Engineering

Sanitary Sewer Overflow (SSO) and dry-weather Combined Sewer Overflow (DWO) prevention and reduction are becoming hot topics within the wastewater community. Interest in these topics is being driven by increasing customer expectations as well as increased scrutiny by state, regional, and federal regulators to meet desired service levels in an effort to protect receiving waters. This article summarizes the latest regulatory initiatives and policies aimed at reducing and/or eliminating SSOs and DWOs. The article will also discuss the most common causes of overflows and steps that utilities can take to comply with these policies and prepare for EPA compliance audits.

The EPA sets national enforcement strategies every three years to address pollution problems, including those covered by the Clean Water Act. We all know that policies and focus may change from one administration to the next, and Lisa Jackson, EPA administrator selected by the current administration, has made it clear that "Protecting America's Waters" is one of the agency's seven key themes to focus their work and noted that the EPA will revamp enforcement strategies to achieve greater compliance across the board.

Over the past decade, the EPA enforcement focus in the areas of wastewater and stormwater control has expanded from wet-weather CSO compliance to include SSO and DWO reduction. A key element of the 2008 – 2010 national EPA strategy document focuses on reducing DWOs and SSOs. To implement this strategy, EPA Region 10 (which covers the states of Alaska, Washington,

Oregon and Idaho) set goals to conduct compliance audits at wastewater utilities. The goal related to CSOs is to audit 100% of all combined sewer systems serving populations of 50,000 or more and to prioritize those with a population less than 50,000. The goal related to SSOs is to audit 100% of large (treatment of 100 MGD design flow or greater) utilities and associated satellite systems and 50% of the medium (10 to 100 MGD) utilities and associated satellite systems.

The next three year strategy cycle (2011-2013) will address the remaining combined systems and separate sewer system utilities that are greater than 10 MGD as well as including municipal separate storm sewer systems ("MS4s"). Region 10 audits began in 2004 and first focused on Idaho, where EPA has primacy. These audits were completed in 2008, as was a review of the one facility in Alaska meeting the criteria. Oregon was addressed next, and the audits began in Washington in 2009. The Region 10 Compliance Officer expects to complete all audits to meet the goals by 2015.

EPA Region 10 compliance audits generally follow the Nine Minimum Controls and Long-Term Control Plan EPA guidance documents for combined sewer systems and the 2005 CMOM Assessment EPA guidance document for separate sanitary sewer systems. For both types of systems, in addition to attention to overflow performance, a special emphasis is placed on Asset Management and demonstrating comprehensive knowledge of the system. The results of the audit are documented in an audit report and can lead to a letter acknowledging compliance, a warning letter, a Notice of Violation (NOV), a fine, and/or a Compliance Order.

## Preparing for the Audit

EPA Region 10 views having an asset management program as a best practice to ensure compliance with the Clean Water Act. In this context, it means understanding how your system operates, knowing the condition of the system, using data to make appropriate decisions, and tracking performance. Examples that demonstrate this understanding and appropriate approaches include:

1. Completing an inventory of sewer assets (e.g. in a GIS database) to ensure that all pipes, manholes and other structures can be tracked.
2. Ensuring that all sewer pipes and control structures with an elevated risk of an O&M related SSO or DWO are placed on an appropriate cleaning frequency and being able to demonstrate knowledge of the frequency as well as historical findings for each pipe.



***“EPA Region 10 views having an asset management program as a best practice to ensure compliance with the Clean Water Act. In this context, it means understanding how your system operates, knowing the condition of the system, using data to make appropriate decisions, and tracking performance.”***

3. Identifying and inspecting sewer assets with an elevated risk of a structural failure through appropriate inspection technologies and addressing the defects in an appropriate fashion.
4. Having a force main condition assessment program, including appurtenances such as air relief valves.
5. Identifying sewer assets with a potential hydraulic capacity limitation and ensuring adequate capacity in those assets.
6. Having an optimized pump station O&M program focusing on prevention of both mechanical and power related overflows.
7. Having a FOG program designed to address the nature and extent of any FOG related issue within the utility's service area.
8. Conducting Inflow and Infiltration (I&I) studies and developing strategies to address any significant I&I problems.

In EPA Region 10, the primary causes of SSOs and DWOs are O&M related (roots, grease, debris, etc) with other causes such as structural failure, capacity limitations, and vandalism being secondary. Having an accurate understanding of the nature and extent of any SSO or DWO issue at your utility and an appropriate and documented approach to dealing with the issues is paramount.

## Reporting Requirements

Utilities that hold NPDES permits must report overflows to the agency with primacy, which is EPA in Idaho, Department of Environmental Quality (DEQ) in Oregon and the Department of Ecology (Ecology) in Washington. The EPA definition of overflows includes the following:

- SSOs (sanitary sewer overflows) - Spilled raw sewage into streets, basements, receiving water bodies, etc.; flooding from the portion of the collection system owned by the municipal entity prior to treatment. While basement backups not caused by a portion of the system owned by the municipal entity are also SSOs, the municipal entity is not always legally responsible for reporting them.
- CSOs (combined sewer overflows) - Excess wastewater discharged through NPDES permitted outfalls during periods of rainfall or snowmelt when capacity of the sewer system or treatment plant is exceeded.
- DWOs (dry weather overflows) - Overflows from combined sewer outfalls during dry weather; prohibited under the NPDES program.

At present, each state has different requirements or requests for SSO reporting based on whether the utility is a permit holder or not. As an example, in Washington State, NPDES permittees must report

all SSOs to Ecology as part of their discharge permits. In regard to satellite systems owners, these entities do not currently have NPDES permits. For satellite collection system owners, Ecology requests that all SSOs be reported initially by calling the applicable regional office and following up with a more detailed written report within 5 days of knowing of the SSO event. Ecology is currently investigating what other states are doing in terms of SSO reporting and permitting and is evaluating regulatory approaches to address this issue.

## Still Waiting for a Visit by the EPA?

Expect a visit sooner rather than later (between now and 2015). The best strategy for preparing for an audit is to be ahead of the curve. Understanding the nature and extent of any SSO or DWO issue at your utility is the place to start. Then, developing and implementing key elements of your asset management strategy now, when there is time to plan, is much more effective and efficient than trying to develop something in the weeks prior to an audit or as a requirement of an Order.

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## Focus on Corvallis, Meduri Farms, Lakehaven Operators

*“They were on the cover of what?”*

PNCWA's own Dan Hanthorn, Dawn Hanthorn and Chris McCalib are the featured “Top Performing Operators” in July and in August's *Treatment Plant Operator Magazine*. Dawn and Dan graced the cover of the July issue, and Chris gets his own spread in the August issue.

Excerpts from the July article featuring Dan and Dawn Hanthorn (page 38, by Trude Witham, photos by Peter Krupp) “Two Paths, One Mission”:

*“Dan and Dawn Hanthorn are a successful team, by marriage and profession. They support each other in their jobs and their lifelong passion for water and wastewater treatment. While they have earned several awards and are active in the community, their goal is to simply “make a difference.”*

*The Hanthorns met on the job. She landed her first internship at the Corvallis treatment plant, and Dan was her coach. “At the time, wastewater treatment was an untraditional role for women, and I needed all the encouragement I could get,” she recalls. “Dan gave me a lot of that and showed me how to be a professional in the field.”*

Excerpts from the August article featuring Chris McCalib (page 26, by Jim Force, photos by Seth Bynum) “Always Looking Forward”:

*“We're a staff of experienced and seasoned operators who've been around awhile,” says assistant wastewater operations manager Norman Cook. “But Chris inspires us, makes us excited to get to the plant.” As a result, the district's treatment operations are popular with prospective employees eager to give their time. At present, four non-paid interns work with McCalib and his staff, learning the processes and building their resumes.*

*Working with his team, McCalib has created a collaborative environment where people work together to deploy innovations in wastewater treatment and energy management, and where it's standard procedure to plan for the future.*

*LUD general manager Don Perry agrees: “He makes my job easier. I've been involved in wastewater treatment, coming up through the ranks. So I know how hard it is to meet permits. Chris is really focused on the quality of the water we produce and is doing things I never thought were possible.”*

*If you missed the hard copies of the July and of the August Treatment Plant Operator™ Magazine, you can find the Hanthorn article at <http://www.tpomag.com/editorial/view/2952/Two-Paths-One-Mission> and the McCalib article at <http://www.tpomag.com/editorial/view/3038/Always-Looking-Forward>*

*Thank you to TPO Editor Ted Rusleth for permission to excerpt.*



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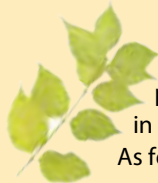
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# The World of Biosolids—Never a Dull Moment

By Brian Hemphill, PNCWA Biosolids Committee Chair



As one of PNCWA's new committees, the Biosolids Committee is very excited to participate in this issue of the newsletter. It allows us to feature several of the interesting aspects in the world of biosolids. The topic touches on many areas, both inside the treatment facilities and out.



Inside the plant, the solids processing system represents an enormous investment, and developing technologies promise to improve performance and economics as presented in the article on dewatering studies at the Salmon Creek WWTP.

As featured in the article on co-digestion opportunities, biosolids processing systems are receiving increasing recognition for their

energy production potential, and as an important element of improvement of the management organic wastes.

Outside the plant, biosolids management continues to draw attention from all directions. Eugene's poplar farm, which is fertilized with biosolids, is an outstanding example of a highly visible and proactive beneficial use program. The article on the many activities of the NBMA demonstrates the many facets of biosolids management with ongoing public concerns and cutting edge research.

## Dewatering Difficulties Prompt Pilot Testing at Salmon Creek WWTP

By Kay Hust with Doug Allie and Heather Stephens

The Salmon Creek WWTP in Vancouver, WA has two 825,000 gallon anaerobic digesters that run in series. Approximately 48,000 gallons of digested sludge is dewatered daily on one of two 2-meter belt filter presses. When the belt presses were installed, 18% solids were typical, but gradually over the years the percentage has dropped to today's average 13% cake solids. Staff has been working to optimize the belt filter presses to increase the dewatered solids content and minimize the volume of biosolids hauled to land application sites from nearby Cowlitz County to central Washington.

The Salmon Creek WWTP serves a largely residential area, with only four very small industries providing minimal flow to the system. Although reduction of volatile solids is good, they are about ten percent higher than at other facilities this size. Plant staff have found no influent or treatment process characteristics that would contribute to the decline in the solids content of the dewatered sludge, but the wash water system pressure is lower than the manufacturer's specification.

Staff sent digested sludge samples to multiple manufacturers with differing dewatering technologies and were told the sludge was difficult to dewater and required a higher than typical polymer dose. Pilot testing of a centrifuge and screw press yielded 19-20% solids, while a rotary fan press pilot test produced roughly the same dewatered sludge content as the current belt presses. All manufacturers suggested that experimentation with different polymers



SCREW PRESS AT THE SALMON CREEK WWTP

may yield better results, though no significant difference was noted in polymer trials conducted prior to pilot testing. These results are preliminary, and additional testing is anticipated before final conclusions are drawn.

One of the main objectives is to figure out why these particular solids are having such difficulty releasing water, and if the high polymer consumption can be minimized. If you have questions or would like further insight to the dewatering pilots, please feel free to contact Kay Hust, wastewater operations manager, at 360.397.6118 x7004.

# A Poplar Approach to a Sustainable Future



By Mario Croce,  
City of Eugene

The Cities of Eugene and Springfield and Lane County, Oregon formed the Metropolitan Wastewater Management Commission (MWMC) which for more than 25 years has operated and maintained the regional wastewater treatment facilities, which include the Water Pollution Control Facility (regional treatment plant), the Biosolids Management Facility, Biocycle Farm, and more than 800 miles of sewer lines and 50 pump stations. The average wet weather design flow for the plant is 75 mgd, dry weather flow is 49 mgd and the peak design flow is 175 mgd. MWMC is just completing a \$200 million upgrade that increased treatment capacity and improved the quality of treated water and biosolids.

The MWMC solids processing and biosolids recycling system produces about 5,000 dry tons per year from three anaerobic digesters. The biosolids are pumped six miles north to the Biosolids Management Facility that has facultative sludge lagoons (FSL), a belt filter press dewatering facility, air drying beds, aerated static pile composting, and now the Biocycle Farm.

**D**ramatic changes in cropping practices, rural development, land use regulations, and transportation costs in the Lower Willamette Valley motivated MWMC to look at different avenues for biosolids recycling. One avenue was hybrid poplars, which are a great crop for biosolids and recycled water application because they combine a long growing season with large water and nutrient requirements due to their rapid growth rate.

MWMC's newest option is the 596 acre Biocycle Farm that utilizes hybrid poplar trees as a dedicated reuse site. In 2004, 156 acres and the first of three Management Units (MUs) of trees were planted. Since then, two more MUs of 122 and 116 acres have been planted, expanding the



BIOCYCLE FARM, CITY OF EUGENE, OR

KEN VANDERFORD PHOTO

Biocycle Farm to 400 acres and 88,000 trees. The design concept is to expand beneficial use practices, control the scheduling of site farming activities, and to recover some of the capital and O&M costs of the project through the sale of the trees. The Biocycle Farm is a sustainable solution for the beneficial use of biosolids and recycled water for harvesting and replanting an agriculturally viable crop.

**T**he Biocycle Farm allows on-site recycling of up to 40 percent of MWMC's annual biosolids production. The MWMC Biosolids program credits its long term success to its cradle to grave philosophy, maintaining quality control by close management from the initial processing to final field application. Biosolids are applied using ten hard hose reels. Unlike many hose reels that use a large impact gun for irrigation, these have two large, low-trajectory fan nozzles that are about two feet off the ground to minimize aerosol drift and maximize irrigation accuracy below the tree limbs. Currently, the Biocycle Farm has the capacity to beneficially reuse 1900 dry tons of biosolids and 100 MG of recycled water per year.

The Biocycle Farm operation dramatically increases the flexibility of the MWMC biosolids program, and provides economical and environmentally beneficial recycling of a significant portion of the biosolids and recycled water produced in the area. With MWMC's goal to achieve an economically viable agricultural operation, a regional market study was commissioned to evaluate existing and alternative markets for hybrid poplar saw logs. Final marketing results are expected in four to six years and will depend on assumptions of costs, productivity, and product prices at the time of harvest.

*Mario Croce may be reached at [Mario.Croce@ci.eugene.or.us](mailto:Mario.Croce@ci.eugene.or.us)*



# Spreading Biosolids Good News

*Adapted from an article by Maile Lono, Northwest Biosolids Management Association (NBMA)*

While the Pacific Northwest can be fraught with gray skies and steady drizzle, biosolids recycling has had a much sunnier forecast. With 88% beneficially used in the region, sound biosolids management has found a home in the Northwest. This was not without hard work and heartache, however. Biosolids recycling is not always well-received, even with a solid environmental benefit. Bad publicity about any biosolids program can negatively impact every biosolids program. It didn't take long for wastewater agencies in the Northwest to realize that it was important to band together to provide a unified regional voice on biosolids management. Northwest Biosolids Management Association (NBMA) is a cooperative of more than 200 public wastewater agencies, sewer districts, and private companies in Washington, Oregon, Idaho, Alaska, and British Columbia that are spreading the word about beneficial biosolids use and networking to produce publications, fund university involvement and research, and shape biosolids regulations. Together, they are finding sustainable and environmentally sound options for biosolids management.

People today are concerned about microconstituents because the media has drawn attention to them and studies have shown their persistence in wastewater treatment and aquatic and soil environments. In a national biosolids survey, Oregon and Washington stated that concerns about microconstituents are a top pressure, along with the perceived health risk associated with land application. Research to

date has shown that the human health risks of exposure to microconstituents through biosolids are slight, while a much higher risk is associated with common medications. Still, continued research on risk pathways will answer questions surrounding the presence, fate, and degradation of microconstituents in biosolids and the environment.

Nearly half of NBMA's annual budget is dedicated to biosolids research, including microconstituents. NBMA and its member agencies are funding research on trace organic chemicals and pathogens and their potential effects on the environment following land application that will help biosolids managers respond to questions from community members and regulators. The University of Washington (Seattle) is researching the fate of estrogenic compounds in biosolids and in reclaimed water applied to turf grass, with initial results indicating estrogens are not mobile in soils. UW also is evaluating the potential use of biosolids with high iron content to reduce bioavailability of lead and arsenic in contaminated soils.

Biosolids programs have also felt the pressure of making cost-effective management decisions for their communities while minimizing their environmental footprint. To address this concern, researchers are studying potential markets for biosolids blends on urban soils and evaluating greenhouse emissions from the variety of end-use options for biosolids.



KRISTEN MCIVOR AND SALLY BROWN, UNIVERSITY OF WASHINGTON, EVALUATE PLANT GROWTH FROM THE VARIOUS TREATMENT PLOTS IN KING COUNTY'S BIOSOLIDS & RECLAIMED WATER DEMONSTRATION GARDEN.

Because public perception plays a major role in how biosolids are accepted and utilized, NBMA's research and demonstration objectives aim to increase public use of biosolids and to raise community awareness of wastewater treatment and its products. For example, UW helped the City of Tacoma integrate its TAGRO Exceptional Quality biosolids products into community gardens, including an organic garden in a low-income housing development that donates surplus food to local food banks, providing research plots to demonstrate the safety and benefits of using biosolids on food crops. Following this success, TAGRO and Tacoma Public Library offer free container-gardening classes that give participants a container of TAGRO potting soil and plant starts to take home.

*The NBMA will host the 2010 Biosolids Management Conference in Chelan, WA on September 19-21. For more information, please visit the NBMA website at [www.nwbiosolids.org/](http://www.nwbiosolids.org/) or Maile Lono may be reached at [maile.lono@nwbiosolids.org](mailto:maile.lono@nwbiosolids.org)*





# Co-digestion in the Pacific Northwest



PILOT TESTING AT THE TACOMA CENTRAL TREATMENT PLANT OF HAULED LIQUID WASTE FOR CO-DIGESTION



COLUMBIA BOULEVARD ANAEROBIC DIGESTERS

By Tom Chapman and Chris Muller, Brown and Caldwell

Rising energy costs, concerns about global climate change and more effective use of existing infrastructure have led a variety of utilities to explore the concept of co-digestion. Co-digestion is simply the digestion of an organic substrate in combination with sewage sludge in an anaerobic digester. These other organic substrates have included fats, oils and grease (FOG); food scraps; dissolved air flotation sludges from food processing pretreatment programs; glycerol from biodiesel production; glycol from airport deicer; and other high strength wastes. Well known co-digestion programs in North America include East Bay Municipal Utility District (EBMUD), the City of Toronto, and Milbrae, California.

The benefits of accepting these products, relative to sludges, is that they typically demonstrate high degrees of degradability, greater than 75 percent on a volatile basis, and greater biogas yields. Relatively small amounts of material can significantly increase biogas production at a plant. For example, at the Watsonville, California WWTP, the addition of 6,500 gallons per day of brown grease to the 1.5 MG primary digester increased biogas production from 113,000 cf/day to 166,000 cf/day. The plant also reported improvements in the reduction of volatile solids through the digester, as the grease appeared to provide a synergistic benefit.

Most plants use the additional gas to fire engine generators to produce electricity and heat, with some of the larger programs substantially offsetting their power and fossil fuel demand. Other beneficial biogas end-uses can include scrub and sale, such as practiced by King County's South Plant, or direct sale to local businesses such as Portland's Columbia Boulevard Plant which sells gas to a nearby manufacturer. Lakehaven Utility district at its Redondo WWTP in Des Moines, WA is currently setting up a pilot testing to accept and utilize beverage waste (beer, wine, colas, simple syrups, packaged coffee and energy

drinks) from a local recovery vendor based in Tacoma. This is part of their ongoing cogeneration project that will ultimately be installed at the facility utilizing two Stirling Flexgen 43 kW units. The outcome of various pilots in similar applications using this liquid product have been very favorable, typically with one gallon of waste byproduct producing 10 cubic feet of biogas.

Regardless of the biogas end-use, co-digestion can assist in the economic justification of cogeneration projects, which can be difficult to justify in the Pacific Northwest where hydropower is prevalent and power rates are relatively low. However, initiatives such as Washington's Energy Independence Act, Oregon's Renewable Energy Portfolio Standards, the Energy Trust of Oregon, and Oregon's Business Energy Tax Credit, improve the economics through tax credits or sale of renewable energy credits (RECs). Co-digestion projects also offer revenues from tipping fees along with the increased quantity of biogas, often improving the economic potential of a desired cogeneration project.

Interest in cogeneration is growing in the Pacific Northwest although the number of operating programs is limited, likely due to low utility costs. Investigating the available substrates has identified potential for improved waste management disposal and lower costs, benefiting both the municipal agencies and ratepayers. The City of Tacoma just completed a comprehensive feasibility analysis of accepting hauled liquid waste, and Metro Vancouver is constructing a pilot receiving facility. Two other Oregon agencies, the City of Gresham and Clean Water Services, are in the planning stage for grease receiving facilities that would be fed to digesters with the goal of increasing biogas production and boosting the output of cogeneration systems. The City of Corvallis has successfully digested glycerol from a nearby biodiesel processor.

Tom Chapman may be reached at [tchapman@brwnncald.com](mailto:tchapman@brwnncald.com) and Chris Muller at [cmuller@brwnncald.com](mailto:cmuller@brwnncald.com)

# WEF Files Joint Brief on Biosolids with Supreme Court

On April 16, WEF co-filed an amicus (friend of the court) brief in an appeal by three utilities (the city and county of Los Angeles and Orange County Sanitation Districts) to the U.S. Supreme Court to consider issues related to the Kern County, California, biosolids land application litigation. The litigation was initiated when the Kern County introduced a ban on the land application of biosolids generated outside the county. The April 16 brief was co-filed with the National Association of Clean Water Associations (NACWA), the North East Biosolids and Residuals Association (NEBRA) and the Northwest Biosolids Management Associations (NBMA).

WEF filed its own amicus brief on this case in 2008 in the 9th Circuit Court. According to Chief Technical Officer Eileen O'Neill, "WEF's involvement in this brief is a continuation of our efforts to inform consideration of this case. Our earlier brief focused on the science underlying the efficacy of biosolids land application. The appeal to the Supreme Court, however, relates to interstate commerce issues involved in the Kern County ban and so this is the focus of the new joint brief." A very low percentage of cases that are appealed to the Supreme Court are accepted for consideration, but according to WEF President Paul Freedman, "It is important that WEF



help move this case forward. WEF does not advocate a specific wastewater solids management option but rather believes these are decisions best made by individual utilities. WEF also supports the primacy of EPA and state regulation/ oversight of biosolids land application." Freedman also noted that, "As communities look for more ways to recycle resources, biosolids land application can be an important consideration."

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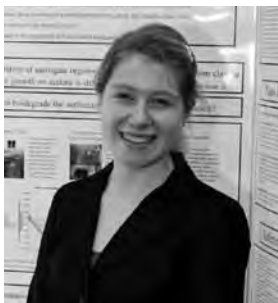
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## Oregon and Washington Students Compete in Stockholm Junior Water Prize



MARLEY IREDALE / WASHINGTON

PNCWA sponsored two students in this year's Stockholm Junior Water Prize (SJWP) competition in St. Louis this June. Repeat winner Marley Iredale represented Washington with her project: *An Evaluation of Invasive Tunicates in Pleasant Harbor*. The Oregon finalist was Laurie Rumker and her project was *Toxicity of Surfactant, Degradation by Straight-Chain Hydrocarbon-Degraders and the Potential for Organoclay Biodegradation*.



LAURIE RUMKER / OREGON

Other finalists from Washington were Josiah MacDonald (*Can you breathe without oxygen? Effect of the presence of a bridge on the mixing of water in a canal setting*) and Cynthia Van Wingerden (*Does Oxygenation of Water Decrease the Turbidity of Water?*)

Oregon fielded seven other finalists:

- *Optimizing Linear Motion Direct Drive Ocean Buoys* by Tim Donnelly
- *A Study of Using Soil Columns to Purify Grey Water* by Houmin Huang
- *Can Oil and Water be Separated Through the Use of a Vortex?* by Patrick Murphy
- *Potential Impacts of Ocean Acidification on Shells of Bivalve Molluscs* by Laura LaGessee

- *The Effects of Seawater Acidification on Laminaria Kelp and Tetraselmis Algae* by Lila Neahrng
- *Effects of Solar and High Temperature Treated Water Stored in PET, PC, and BPA-free Bottles on Allium cepa Root Growth* by Erynne van Zee
- *The Effect of Flowing vs. Stagnant Water on Water Quality* by Todd Josi

PNCWA has supported the U.S. Stockholm Junior Water Prize (SJWP), as have other WEF Member Associations that select and sponsor state winners and their science teachers to attend the national competition. The SJWP program encourages student interest in water-related issues, and the competition is open to projects aimed at enhancing the quality of life through improvement of water quality, water resources management, water protection, and water and wastewater treatment. For more information about SJWP, visit [www.wef.org](http://www.wef.org).

The volunteer judges who reviewed the Oregon and Washington student papers were Catherine Chertudi, Amy Kyle, Marcos Lopez, Mark Smith, Susie Vanderburg, Mark Taratoot, and Sheri Wantland.

## Adopt-a-School Winners



The PNCWA Public Education Committee has awarded \$4,700 to nine schools in Oregon and one in Washington to help fund water education programs and connect the students with their wastewater utilities. Funding comes from the Public Communications Camp workshop the committee sponsors.

This year's schools and their projects:

- Corvallis High School: \$500 for Dixon Creek Restoration; pH meter, field guides, test kits, plankton net, etc.
- Calapooia Middle School: \$200 for Calapooia Community Garden; posts, cement, weed barrier, topsoil, wood chips, fencing, gloves, sprinkler
- Arbor School of Arts & Sciences: \$500 for Saum Creek Monitoring; temp probe, pH, turbidity and DO sensors, lab books
- Century High School: \$500 for honors biochemistry research projects; lab equipment and chemicals
- Crescent Valley High School: \$450 for Crescent Valley Arboretum; native plants

- City View Charter School: \$500 for water quality testing; temp probe, pH, turbidity and DO sensors, lab books
- Rachel Carson Environmental Middle School: \$500 for Willow Creek Restoration; pH paper, DO ampoules, dip nets, calculator, books, stopwatches
- North Albany Middle: \$250 for riparian plant growing; potting soil, plants containers fertilizer, shovels, wheel barrow
- Ashland Middle School: \$750 for Rain Garden & Wetland Project; instructor, bus for tour
- And Washington's Lincoln High School will receive \$550 for water and wastewater treatment facility tour



# What Works!

*By Ron Moeller, PNCWA Plant Operations and Maintenance Committee Chair*

The PNCWA Plant Operations and Maintenance Committee (POMC) has been busy since the last Newsletter was published. Two webinars on Asset Management and Computerized Maintenance Management Systems (CMMS) have been developed and presented. Work is in progress to put together a Pre-Conference Workshop and technical sessions for the PNCWA Annual Conference. Now we would like to ask for your help. Specifically, we would like to be able to share your successes in developing solutions to plant O&M problems. If they are problems to you, they are likely problems at other facilities and your solutions would likely be applicable there as well. Just because your solution seems obvious to you does not mean that it is obvious to others. Just because a paper clip is an obvious solution to clipping papers together does not mean that it was always so. Someone came up with the initial idea, which is now obvious to us all.

So please share your “paper clips” with your fellow WEF members. Your solutions can be simple or complex, dealing with minor nuisances or major issues. A simple example of what we are looking for is a solution developed at the Wastewater Treatment Plant in Tillamook, Oregon. At the headworks, fine screenings are discharged into a garbage can. Unfortunately, the can had a tendency to blow over during high winds, creating both a mess and extra work for the plant staff. So, they came up with the idea of using an old slide gate and bungee cords to hold the can in place. Problem solved! A photo of the setup is shown to the right.

Thanks to plant operators Vern Ressler, Donita Parks, and Bryan Durbin for sharing their great idea! Please send us your great ideas so we can share them with your peers. Photos, descriptions and contact information can be sent to POMC member Richard Finger at [dick.finger@att.net](mailto:dick.finger@att.net) or to POMC Vice-Chair Monica Anderson at [manderson@ci.wilsonville.or.us](mailto:manderson@ci.wilsonville.or.us). The POMC will work with you to write up your solutions and make them available to others in future “What Works!” articles.



## Operator in Training

*By Max Hildebrand*



DAVE GEHRING AND SON LANCE AT  
MCMINNVILLE WWTP

For six years now, Dave Gehring has brought his son Lance to work at the McMinnville WWTF on Bring Your Child to Work Day. This April 22, Lance, who is now 13, joined his dad to help make the rounds and check out the plant. Lance and I talked about the important work done by operators to protect the environment. Bring Your Child to Work Day is a great way to introduce young people to the profession. It won't be long before Lance joins the ranks of the operator guild, and we can always use a smart young person to help take up the reins.

Dave Gehring started in 1984 with summer internships at the City of Bend and Inn of the Seventh Mountain, then went to Sunriver Utilities for seven years, City of Bend for two years, and has worked for the City of McMinnville since 1994. His education is Linn Benton Community College and he holds Level III certifications in wastewater and collections.



# On Finding Leaders

*By Bill Bertera, Executive Director,  
Water Environment Federation*



The great majority of not-for-profit organizations in North America are directed and managed by volunteers. Most associations do not have staff. In fact, most not-for-profit organizations are home grown organizations at the state and local level founded and managed to serve needs not addressed by the private sector or government; and they are run by “regular” people...people with other lives. Consequently, most associations look more like a typical WEF Member Association than they do like WEF itself.

Still, leading not for profit organizations is an increasingly difficult thing, even smaller, local organizations...and it is time consuming even if one has the interest. New and rapid communication devices require new skill sets in our leaders and place even more demands on them. Technology does not lessen workloads, it increases them. Not only do we expect our volunteer leaders to lead, we expect them to lead with some immediacy. Unreasonably, we expect them to put aside other professional and personal interests and deal with ours...NOW.

This is not a realistic expectation, and if pushed too hard, can result in discouraging otherwise willing and able volunteers. So we have to recruit and choose carefully and with the knowledge that few volunteers are without conflicts of time and interest.

The constraints of diminished time and the need for new skill sets in association management make recruiting and choosing volunteer leadership an important mandate for our associations...and we have to plan for it.

The first step is to realize that not everyone with time and good intentions is automatically qualified to lead. Leadership requires skills that not all of us have...and most of us are not leaders. That is why it is important to know what we need in our leaders before we name them. These skills and talents are called “qualifications”.

Qualifications are in the eye of the beholder. We all see someone different in the mirror in the morning than our good friends see when they bump into us on the street. Somehow that morning mirror vision tends to show someone younger, slimmer, and more intelligent. Perceptions, of course, are not realities...they are misguided observations. Increasingly, our organizations are less tolerant of misguided observations. We need to know what we want and we need a plan for getting it, or we will fail. Leadership is no exception.

Volunteers with the time and the desire to lead need to know this too. There is more to leading than just offering ourselves up and wielding a gavel. Leadership, even uncompensated leadership of a not-for-profit association, is an important job and not without its risks and obligations as well as rewards. Natural leaders are a rare blessing and the need for leadership is too important to leave to chance. One of the most effective strategies for addressing

the leadership gap is to identify potential leaders early on and help educate them in the art of leadership itself.

Whether we find natural leaders or create our own, qualifications still matter, and topping the list are people skills...those that have to do with listening, mediating and empathizing. Volunteer organizations are just that and no one is there for much other than the satisfaction of serving. Serving should not be too much like real work. The leader’s job is to make sure that it is not...to get the work done, but to make the experience rewarding.

Knowing your MA and how it works and what it needs is important. That means that service on the critical MA committees of membership, finance, and planning is important. It also helps to understand what boards do and how they are supposed to work. Setting direction and implementing are two different things. One is a board’s job, the other falls to individual leaders and members. And finally, and perhaps most important of all, an open mind, an ability to work as part of a team, a willingness to make decisions...and oh, yes, a sense of humor is essential.

In most volunteer organizations the task of identifying, attracting and sometimes choosing leaders falls to a nominating committee of some sort. But nominating committees do more than just choose leaders. They also decide, implicitly or explicitly, what kind of leadership an organization needs or should have and advises the organization on how best to provide for that leadership over time. In this sense, the MA nominating committee may be the most important committee in the organization. Who sits on it, their values and their sense of the future for the organization are critical. It is not an honorary or unimportant job.

**Section Leaders**—email your news and pictures to your Regional Director and copy the newsletter editor, [wantlands@cleanwaterservices.org](mailto:wantlands@cleanwaterservices.org).

## Puget Sound Section

is holding quarterly meetings. This is a great opportunity to learn what is happening in our industry, to network and get CEUs. The meetings are posted on the PNCWA website calendar. If you have a topic of interest you would like more information about or a presentation you would like share, contact Jim Pitts at [jim.pitts@king-county.gov](mailto:jim.pitts@king-county.gov)

## Northwest Washington Section

recently reformed with the help of a few hard working volunteers and the help of Ed Kolling of HDR Engineering. Officers were elected last April and the new board members have a passion for promoting and educating the operators and staff in their area which includes Snohomish, Skagit, Whatcom and Island Counties. Quarterly Section meetings are held in various locations for all members to be able to attend, and they usually offer a plant tour for operators to gain experience and earn CEU's for certification requirements. Meetings have been well-attended and the next will be on August 18 in Bellingham. We plan elections at the end of the year to give new members a chance to participate, and helping with next year's Northwest Regional Short School is a great training and networking opportunity. If you have not heard from us, please e-mail our secretary Tamara Adams at [adamst@lyndenwa.org](mailto:adamst@lyndenwa.org) so we can keep you up to date. Feel free to contact any of our officers with questions you may have.

- President Gil Bridges, Mukilteo Water & Wastewater [glib@mukilteowater.org](mailto:glib@mukilteowater.org)
- Vice President Bill Fullmer, City of Mount Vernon [billf@ci.mount-vernon.wa.us](mailto:billf@ci.mount-vernon.wa.us)
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- Secretary Tammy Adams, City of Lynden [adamst@lyndenwa.org](mailto:adamst@lyndenwa.org)
- Director Position 1: Larry Littrell, Lake Stevens Sewer District [llittrell@lkstevenssewer.org](mailto:llittrell@lkstevenssewer.org)
- Director Position 2: Ric Saavedra, City of Arlington [rsaavedra@ci.arlington.wa.us](mailto:rsaavedra@ci.arlington.wa.us)

# Section NEWS

## Southwest Idaho Section

By the time you read this the 2010 Idaho Water and Wastewater Operators Conference will have come and gone. A lot of preparation went into the conference and SWIOS is appreciative of the efforts put into it by our Conference Committee and trainers. Hopefully you were able to attend and take advantage of the great classes. We were happy to award 6 full conference registration scholarships totaling \$900.00 to: Bobby Withrow and Robert Ford, City of Kuna; Crystal Green and Curt Schoonoever, City of Meridian; Richard Ledbetter, City of Idaho City; and, Robert Emery, City of Boise. Hopefully SWIOS can continue the scholarship program far into the future. SWIOS thanks our long time Secretary/Treasurer Dean Smith for his years of service. He has accepted a new position with the Washington State Department of Ecology. Best of luck to you Dean and welcome to our new Secretary/Treasurer Brad Bjerke from Forsgren Engineering.

## Southwest Washington Section Richard Farwell Remembered

Richard T. Farwell, an operator at the Salmon Creek Wastewater Treatment Plant, passed away at work on March 24 from a heart attack. Richard was 44 years young, and had worked at the plant since May 2006. Richard took an interest in the field because his father worked as an operator, and he was tutored by many other operators as he learned the trade, and will be missed by all. Richard operated the smallest activated sludge facility (Stella) that Ecology permits, and ended up at one of the larger permitted activated sludge plants. As a well rounded operator, Richard was able to fit in and became a valued employee and friend. Carl Jones of Washington Department of Ecology said, "Another unsung hero's voice is stilled." He will be dearly missed.

### FROM THE PRESIDENT *Continued from page 3*

the older worker and there are few slots for newer workers. We need young professionals but cannot hire them until the positions actually open, and therein lies the problem. We can see the need on the horizon, we can plan for the eventuality, but we cannot fill vacancies that do not exist yet. Much like the nursing shortage of the 80s and 90s, our shortage will occur and worsen before the planned remedy can be implemented.

There is much for us to accomplish over the next decade and many hurdles to clear—the economy, the sections, operator training, environmental regulation, and decreasing skilled workforce, to name a few. We can take inspiration from those who did the job before us. The next decade will be exciting, fraught with innovation and change. The challenges are there and once again, PNCWA will be part of the solution.

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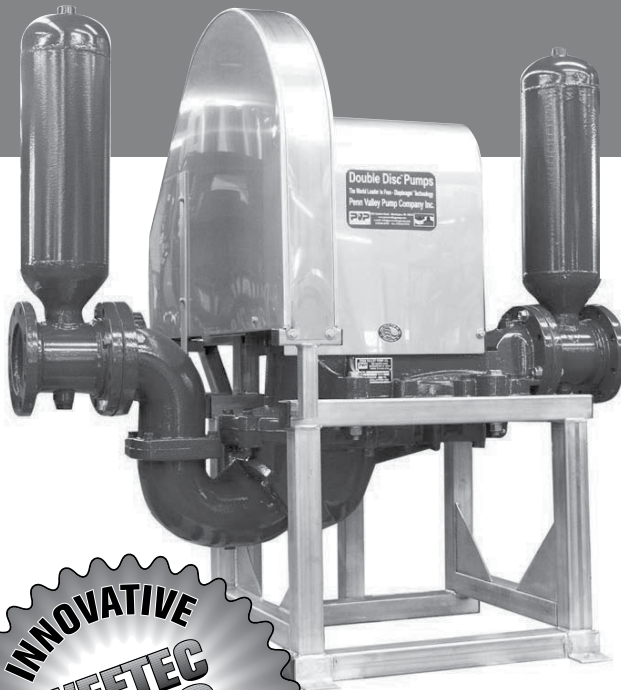
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- Understand the legislative and regulatory environment
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- Influence decisions and outcomes affecting our members' businesses.



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WWEMA is constantly developing proactive legislative and regulatory agendas through WWEMA's Legislative/Regulatory committee, addressing current issues in the water and wastewater sector. Sometimes these regulations find us strengthening our voice by interacting with other Associations to make Congress take notice of the magnitude this industry has on policy issues. WWEMA has partnering agreements with AWWA, WEF and WQA. This does not preclude WWEMA from working with other organizations to send a clear and concise message to Congress on issues facing our industry.

WWEMA's bi-monthly Washington Analysis newsletter tracks the latest developments in the international arena,

legislative and regulatory initiatives, state activities, and industry trends. The Washington Forum provides insightful knowledge from the nation's Federal policy makers on future laws and regulations and international trade activities affecting demand for members' products and services in the municipal and industrial sectors.

The Annual Meeting (for members only) explores business trends and market opportunities in the water and wastewater industry for municipal/industrial applications and to facilitate networking among member companies. Another of WWEMA's annual events is the Presidents Council, to discuss critical issues on the minds of our members' senior executives. Sharing best

practices between member companies on pursuing export business is achieved through the Global Competitiveness Committee.

Our membership is constantly growing and with our strong base of returning members, WWEMA has branched out in offering opportunities to Manufacturers Representatives and Distributors, offering another aspect and insight into today's challenges to get your equipment into the marketplace. If you would like to learn more about WWEMA and its members, please visit us at [www.wwema.org](http://www.wwema.org) to find out how you, too, can become a member of this premier organization.

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#### Four Preconference Workshops, Sun. Oct. 24

- Disinfection of Reclaimed Water
- Advanced Activated Sludge Training
- The Good...the Bad...and the Ugly: Making Treatment-System Design Operator-Friendly
- FOG—"WATTS" in it for you?

Monday Morning - October 25		Registration			
7:00 - 5:30		Opening Session			
8:00 - 9:30		Break & Ops Challenge Viewing Time			
9:30 - 10:00		4-Person Operations Challenge			
9:30 - 2:45		Session 1	Session 2		
		Session 3	Session 4		
		Session 5	Session 6		
10:00 - 10:45	Phosphorus Treatment Reducing TP for Spokane RPWRF Next Level of Treatment <i>Larry Esvell, Esvell Engineering</i>	Stormwater Seattle Public Utility's Climate Change and Drainage & Wastewater Adaptation Strategy <i>Gary Michael Schimek, Seattle Public Utilities</i>	Collections Miles Crossing Vacuum Sewer System Project <i>Philip H. Smith, Murray, Smith &amp; Associates, Inc.</i>	Sustainability Is Saving Energy Really Saving Money? (How to sort through the hype and save the planet without going broke) <i>Darold Allen Woodward, Parametrix</i>	Operations Two Steps to Longer Pump & Motor Life <i>Joe Edwin Evans, Pump Tech, Inc.</i>
10:45 - 11:30	Effects of Surface Re-Aeration on the Biological Phosphorus Removal Process <i>Matt James Winkler, University of Idaho</i>	Public Involvement & Education What's New and Neat from WEF to Meet Your Public Communications Challenges <i>Linda Kelly, Water Environment Federation</i>	Design Considerations for Selection of Pipe Material for Large Diameter CSO Force Main <i>Patty Nelson, City of Portland</i>	Triple Bottom Line +- Decoding Complex, Alternative Evaluations to the Public <i>Susanna Leung, Carollo Engineers</i>	Startup and Initial Operation of a Greenfield Enhanced Nutrient Removal Wastewater Treatment Facility <i>Vince Maillard, GHD</i>
11:30 - 11:45					
Monday Afternoon - October 25					
11:45 - 1:00	PNCWA Business Luncheon The 10 Types of Sewer Hydraulics - Using Scattergrams to Identify Hydraulic Performance & Sewer Capacity Robbers <i>Paul Mitchell, ADS Environmental Services</i>				
1:00 - 1:45	Coeur d'Alene WWTP Low P Demo - Results from the First Six Months of Pilot Operation <i>Mario Benisch, HDR Engineering</i>	Building Community Support for Stormwater Programs <i>Elizabeth Sagmiller, City of Keizer</i>	Unique Challenges Drive Innovative Solutions - Lake Oswego's Buoyant Interceptor Sewer Takes Shape <i>Jon Holland, Brown and Caldwell</i>	Getting the Jump on Water Pollutants Before They Jump into Pre-Treatment <i>Debra Kay Taets, Pollution Prevention Resource Center</i>	Foaming in the Secondary Process <i>Mike Re &amp; Gary Young, CH2M HILL OMI</i>
1:45 - 2:30	Innovative Phosphorus Control to Turn Struvite Headaches into Increased Revenue <i>Peter Schauer, Black &amp; Veatch</i>	Want Your Message Heard? Join a Choir - The Local Benefits of Participating in Regional Efforts <i>Alicia Lawver, City of Tacoma</i>	Energy Sustainability, Running a Greener Plant <i>Barry Halgrimson, Wonderware PacWest</i>	Energy Sustainability, Running a Greener Plant <i>Barry Halgrimson, Wonderware PacWest</i>	Odor and Air Quality Basics <i>Mark Smith, Brown and Caldwell</i>
2:30 - 2:45	Break & Ops Challenge Viewing Time				
2:45 - 3:30	Low Phosphorus Wastewater Treatment for Plummer, Idaho <i>Alan Gay, USKH, Inc.</i>	Getting to Know Your Privately-Owned Facilities <i>Tony Gilbertson, Clean Water Services</i>	Solutions to the Pump Suction Rag Ball Issue <i>Brian Casey, Carollo Engineers</i>	Achieving Energy Efficiency at Your WWTP with Help from Energy Trust of Oregon <i>Walt Minkeski, Consultant</i>	Nitrification Cycle <i>Terry Dokken, CH2M HILL OMI</i>
3:30 - 4:15	Moscow, Idaho BNR & Effluent Filtration to Meet Restrictive Phosphorus Limits and Water Reuse Criteria <i>Cory Baune, J-U-B Engineers</i>	City of Eugene's Waterfowl Management Outreach Program <i>Rob Hallett, City of Eugene Parks and Open Space</i>	Deterioration of Two Critical Force Mains Due to Corrosion <i>Susan Gierga, Murray, Smith &amp; Associates, Inc.</i>	The Future of Green Energy Technologies (Solar, Wind, Fuel Cells, and Algae) <i>Tom Mossinger, Carollo Engineers</i>	Excavation and Trench Safety <i>John Shawcroft, Veolia Water NA</i>
4:15 - 5:00	Design and Construction of Low Phosphorus Demonstration Pilot Facility <i>Michael Scott Zellner, HDR Engineering</i>	Rain Gardens <i>Kim Ashmore, City of Centralia</i>	Innovative Approaches to Design and Construction - Clay Pipe <i>Colleen Faith Grady Harold, City of Portland</i>	Energy Master Plan, South Bayside System Authority <i>Michael Hyland, CDM</i>	Horizontal Directional Drilling <i>Ted Foltz, Michels Corporation</i>
5:00 - 7:00	Manufacturers Reception— Exhibit Hall				
7:00	Monday Night Fun Night				
					Plant Tour Redmond Water Pollution Control Facility 2:45 - 5:00

# PNCWA 2010

## Building Professional Excellence in Water Quality™

### Schedule Highlights:

Sunday: 4 Preconference Workshops, Community Service Project, Open to All Ops Challenge, Meet and Greet Monday: Opening Session, Tech Sessions, Business Luncheon, 4-person Ops Challenge, Plant Tour, Mfr Opening Reception Tuesday: Operators Breakfast, Exhibit Hall, Tech Sessions, Plant Tour, Section Exchange, Micro-Brew Tasting, Awards Banquet Wednesday: Plant Tour, Tech Sessions, CEU forms turn in

Tuesday Morning - October 26		Registration							
7:00 - 5:30		Operators Breakfast							
7:00 - 8:00		Session 7	Session 8	Session 9	Session 10	Session 11	Session 12		
8:00 - 8:45		Emerging Contaminants	Utility Management	Reuse	Digestion	Innovative Planning & Approaches	Disinfection		
A Pollution Prevention Focus for Reducing Toxics <i>Janet Gillaspie, Oregon Association of Clean Water Agencies</i>		Capital Prioritization: Which projects should I do? When? Why? And how do I update my priorities? <i>Brady Fuller, CH2M HILL</i>		Meridian Class A Reclaimed Water Program Update <i>Clint Dolsby, City of Meridian</i>		Creating Digester Capacity through Improved Mixing <i>Michelle Burkhart, CH2M HILL</i>		Protocol for Improved Ultraviolet Disinfection Design and System Optimization <i>Bill Benko, Carollo Engineers</i>	
8:45 - 9:30		Occurrence and Removal of Trace Organic Indicator Compounds During Secondary Treatment at Full-Scale WWTPs <i>Tanja Rauch-Williams, Carollo Engineers</i>	APWA Accreditation Program: Guiding Your Organization Through a Comprehensive Assessment Process <i>John Peterson, Clark Regional Water District</i>	Water Reuse - A Multifaceted Resource <i>Mike Chandler, Bowen Collins &amp; Associates</i>		Annacis Island Wastewater Treatment Plant Co-Digestion Facility <i>Greg Moen, HDR Engineering</i>		Design & Operation of Open Channel UV Disinfection Systems <i>Mathias Boeker, ITT Water &amp; Wastewater U.S.A.</i>	
9:30 - 10:30		<b>Break - Exhibit Hall</b>						<b>PNCWA Section Exchange 10:30-Noon</b>	
10:30 - 11:15		Microconstituents - Science, Regulation and Implication <i>Daniel E. Cubagno, PBS Engineering &amp; Environmental</i>	New Developments in Laboratory Management: The New TNI Standard <i>Keith Chapman, City of Salem</i>	Four Small Scale Reuse Projects for Four Different Types of Puget Sound Utility Agencies <i>John C. Wilson, BHC Consultants</i>		Thar She Blows! Severe Foaming and Overflows Caused by Rapid Expansion of Digester Contents <i>Thomas Chapman, Brown and Caldwell</i>		Put Your Lights On: Design and Construction of a Large UV Facility at Central Valley Water Reclamation Facility, Salt Lake City, Utah <i>Cynthia L. Braiz, Brown and Caldwell</i>	
11:15 - 12:00		Monitoring, Regulation, and Management of Endocrine Disrupting Chemicals (EDCs) in Wastewater Treatment and Effluent Discharge <i>David L. Clark, HDR Engineering</i>	Hitting the Financial Wall: The Impacts of Regulatory Drivers on Rate Making and Customer Bill Impacts <i>Shawn Koorn, HDR Engineering</i>	Validation Testing of a High Rate Disk Filter for Water Recycling Applications <i>Keith Bourgeois, Carollo Engineers</i>		Post-Aerobic Digestion with Bioaugmentation Pilot Study - City of Meridian, ID WWTP <i>William Leaf, CH2M HILL</i>		Reduce, Reuse, Recycle: Capturing Savings at the Pendleton Wastewater Treatment Plant <i>Michael Humm, Kennedy/Jenks</i>	
12:00 - 1:15		<b>Buffet Luncheon</b>							

Read all the abstracts online at [www.pncwa.org](http://www.pncwa.org)

## Preconference Workshops, Sunday Oct. 24

### Disinfection of Reclaimed Water

Sunday October 24 1:00 PM-5:00 PM

Sponsored by: PNCWA Water Reuse Committee

#### Speakers:

Michael Cook, Idaho DEQ  
Mark Mason, Idaho DEQ  
Jim McCauley, Washington DOE  
Jonathan Gasik, Oregon DEQ  
Randy Zollinger/Mark Chandler, Bowen Collins & Associates  
Andy Salveson, Carollo Engineers  
Yujung Chang, HDR Engineering  
Matt Noesen, CH2M HILL

### FOG—"WATTS" in it for you?

Sunday October 24 1:00 PM-5:00 PM

Sponsored by: PNCWA Source Control Committee

#### Speakers:

Vince Chavez, Clean Water Services  
Clayton Brown, Clean Water Services  
Ed Gilmore, Clackamas County WES  
Heather Stephens, Kennedy/Jenks Consultants  
Dick York, FOG Energy  
Skip Feeney, Linko Data Systems

### The Good...the Bad...and the Ugly: Making Treatment System Design Operator Friendly

Sunday October 24 1:00 PM-5:00 PM

Sponsored by: PNCWA Plant Operations and Maintenance and Collections Committees

#### Speakers:

Ron Moeller, Kennedy/Jenks Consultants  
Carrie Pak, Clean Water Services  
Ed Griffenberg, HDR Engineering  
Kay Hust, Clark County Public Works  
Vic Coles, Collection System Consulting

# PNCWA 2010

Building Professional Excellence in Water Quality™

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Tuesday Afternoon - October 26

Buffet Luncheon						
12:00 - 1:15	Session 13	Session 14	Session 15	Session 16	Session 17	Session 18
	<b>Nitrogen Treatment</b>	<b>Utility Management</b>	<b>Water Quality</b>	<b>Plant Design &amp; Operation</b>	<b>Innovative Planning &amp; Approaches</b>	<b>Peak Flow Treatment</b>
1:15 - 2:00	Emerging Side Stream Nitrogen Removal Technologies <i>Mario Benisch, HDR Engineering</i>	Planning, Financing, and Constructing Wastewater Treatment Facilities in Challenging Economic Times <i>J. Michael Reed, Oak Lodge Sanitary District</i>	South Puget Sound Dissolved Oxygen Study <i>Andrew T. Kolosseus, Washington Department of Ecology</i>	Trends in Outfall Design and Construction <i>Bill Fox, Cosmopolitan Engineering Group</i>	Getting the Best for Less: Partnerships Pay Off in MBR System Construction at La Center, Washington <i>Jennifer Coker, Kennedy/Jenks</i>	Innovative Approaches Enhance Performance of High-Rate Treatment Systems <i>Jyh-Wei (Al) Sun, CDM</i>
2:00 - 2:45	Identifying Optimal Process Improvement Strategy for Nitrogen Removal at the Rock Creek and Durham AWWTFs <i>Jeff McCormick, Carollo Engineers</i>	Case Study: How the City of Bend is Implementing Their CWMIS Program <i>Paul Roy, City of Bend</i>	WEF's Government Affairs Update from Washington DC <i>Bob Matthews, CDM</i>	Implementation of State-of-the-Art High Efficiency Trickling Bioreactors to Meet Regulatory Requirements and Treat Odors at the Sand Island WWTP in Honolulu <i>Dale D. Mark, Azzuro</i>	The Chesapeake Bay Experience: Impact of Regulatory Programs on Design, Operation and Cost of WWTPs <i>Rhodes Copithorn, GHD</i>	An Economic Approach to Off-Line Storage: A Means of Mitigating SSOs <i>Matt Crow, CDM</i>
2:45 - 3:00	<b>Break - Exhibit Hall</b>					
	<b>Reuse</b>	<b>Reuse</b>		<b>Plant Operations</b>	<b>Greenhouse Gas</b>	<b>Pretreatment &amp; FOG Collection</b>
3:00 - 3:45	Upgrade of the Big Gulch WWTP Oxidation Ditches for Energy Efficiency and Improved Nitrogen Removal <i>Thomas Coleman, Mukilteo Water and Wastewater District</i>	Environmental Risk Assessment for a Proposed Reclaimed Water Project in Kitsap County, WA <i>Kara Warner, Golder Associates</i>	Spokane River TMDL - Charting a Course on Interstate Allocations <i>Paul Klatt, J-U-B Engineers</i>	Stirred not Shaken, Anoxic/Anaerobic Zone Mixer Sizing <i>Peter Schauer, Black &amp; Veatch</i>	Increasing CHP Productivity while Reducing Biosolids Volume and Climate Changing Gases <i>Richard V. York, FOG Energy Corp.</i>	Ten Years of Success in a Beneficial Partnership <i>Lilly Longshore, City of Vancouver, WA</i>
3:45- 4:30	Nitrogen Treatment Strategies at Budd Inlet WWTP <i>Patrick Roe, HDR Engineering</i>	Regulations and Sustainability Drive Innovative Water Recycling Program in Corvallis, Oregon <i>Preston Van Meter, Kennedy/Jenks</i>	Impact of Key EPA Science Advisory Board Technical Findings <i>William T. Hall, Hall &amp; Associates</i>	Solving the City of Tacoma's High Effluent TSS Problems: Unexpected Causes of Deflocculation <i>Richard Kelly, Brown and Caldwell</i>	Prioritizing Energy Conservation and Minimization of Greenhouse Gas Emissions at the Arlington WWTP <i>Tom Giese, Kennedy/Jenks</i>	Ammunition Manufacturing <i>Kelly Lynn Graham, City of Bend</i>
4:30 - 5:15	Treating Lagoon Effluent for Ammonia-N using a Nitrifying Trickling Filter: Results of a Pilot Study <i>Kiersten Lee, University of Idaho</i>	Water Reuse for a New City in Oregon: Solutions for Southeast Damascus <i>Emily Callaway, CH2M HILL</i>	The Impact of Advanced Nutrient Removal on Phosphorus Bioavailability <i>Michael Brett, University of Washington</i>	Particle Size Separation Implications on COD Removal before BNR: A Case Study at Heyburn, Idaho <i>Remy Newcombe, Blue Water Technologies</i>	NCRA Septic to Sewer Greenhouse Gas Evaluation <i>Ho-ping Wei, MMH Americas</i>	Case Study on Pinellas County's Regional Approach to FOG and the Implementation of a Regional Manifest Tracking System <i>Skip Feeney, Linko Data Systems</i>
5:15 - 7:00	<b>Beer Tasting - Exhibit Hall</b>					
7:00 - 9:00	<b>PNCWA Awards Banquet</b>					

Read all the abstracts online at [www.pncwa.org](http://www.pncwa.org)

## Facility Tours—no extra charge!

We are again offering the plant tours at no extra charge but to ensure a seat registration is required.

## Redmond Water Pollution Control Facility

Monday October 25 2:45–5:00PM

## City of Bend Water Reclamation Facility

Tuesday October 26 8:00–9:30AM

## Sunriver Environmental LLC at Sunriver Resort

Wednesday October 27 8:00–10:15AM

## Ops Challenge—Due to space considerations, Ops Challenge will be held separately this year from the Exhibit Hall.

The Sunday Meet & Greet will be the time for the anyone-can-join-in, fun competition and the 4-person competition will be held on Monday from 9:30 AM-3:00 PM. Breaks will be scheduled in the Ops Challenge area for viewing the competition.

## Operators—Read this!

**Operators Breakfast**—This year the Operators Breakfast is offered at no extra cost for operators but registration is required. Others interested in attending may register for the usual \$15.

Earn up to 2.1 CEUs (requested) for Sun-Wed.

## Annual Conference & Exhibition

October 24-27

The Riverhouse

**BEND, OR**



# PNCWA 2010

## Building Professional Excellence in Water Quality™

### Deadlines:

- Conference registration early bird rates to August 31
- Preregistration ends October 15
- Hotel room block and rates deadline: Book by September 23!

		Registration					
		Session 19	Session 20	Session 21	Session 22	Session 23	Session 24
7:00 - 1:00		<b>Advanced Treatment</b>	<b>Collections &amp; Pump Stations</b>	<b>GIS-SCADA-Asset Management</b>	<b>Solids Treatment</b>	<b>Inflow &amp; Infiltration</b>	<b>Construction</b>
8:00 - 8:45	Quantification of SBOD5 & FBOD5 Removals via Coupled Biological Contact Reactor & Ballasted High Rate Clarification System for Wet Weather WW Treatment Apps <i>Matthew Cotton, Kruger</i>	A Comprehensive Review of Alternatives to Increase Sewer Capacity <i>Tom Perry, Murray, Smith &amp; Associates</i>	When Bad Things Happen to Good Plants: Developing a Managed Maintenance Approach <i>Roy Brandon, Brown and Caldwell</i>	Data Overhead - Making GIS Integration a Reality in Sewer Modeling <i>Richard T. Wiebe, J-U-B Engineers</i>	To Foam, or Not To Foam: Evaluating Causes for ATAD Foaming at Tacoma's Central Treatment Plant <i>David Wingate, Brown and Caldwell</i>	If I Had to Do This Over... A Twelve-Step Program to a Successful I/I Study <i>Patrick L. Stevens, ADS Environmental Services</i>	Prequalification - A Defensive Measure in Today's Bidding Climate <i>Robert K. Lee, Brown and Caldwell</i>
8:45 - 9:30	WASAC: A Sustainable and Near-Carbon Neutral Secondary Process <i>Jeff McCormick, Carclo Engineers</i>	Developing a Large-Diameter Sewer Rehabilitation Program <i>James Hansen, Brown and Caldwell</i>	Three Simple Steps to SCADA Systems Security <i>Gilbert Kwan, Harris Group</i>	Feasibility of Using a "Dry Fermentation" Process for Energy Recovery from Biosolids and Other Solid Waste Streams <i>Brian Eis, Parametrix</i>	Public Money for I&I Reduction on Private Property <i>John Hendron, RH2 Engineering</i>	The "Approach" Construction Dewatering Specification <i>Larry West, Kleinfelder</i>	The "Approach" Construction Dewatering Specification <i>Larry West, Kleinfelder</i>
9:30 - 10:15	Advanced Oxidation with UV Light and Peroxide for Reclamation of Water for Indirect Potable Reuse <i>David S. Murray, Brown and Caldwell</i>	From Rags to Riches <i>Craig B. Anderson, Murray, Smith &amp; Associates</i>	MBR <i>Thor Young, GHD</i>	Applying Control System Standards to Implement a Control System Replacement at an Existing Operating Plant <i>Kevin Stively, Brown and Caldwell</i>	Innovative Long-Term Regional Biosolids Management Study in Eastern Ventura County <i>Lakshmi Priya Dhanapal, Kennedy/Jenks</i>	Maximizing Secondary Clarifier Capacity with Three-Dimensional Modeling <i>Randal W. Samsstag, Carollo Engineers</i>	Sometimes It Takes a BIG Team to Do the Job - Alternative Delivery of Cogeneration through the Washington ESPC Process <i>Jeremy Holland, HDR Engineering</i>
10:15 - 10:30							
10:30 - 11:15	Batch Controlled Membrane Biological Reactor <i>Dave Holland, Aqua Aerobics</i>	Membrane Bioreactor and the High Flow Biological Treatment System for the Cox Creek WRF <i>Thor Young, GHD</i>	The Home Stretch - Approaching Start-Up of a State of the Art, Sustainable MBR <i>Jason Diamond, GE Water &amp; Process Technologies</i>	How to Use Your Existing SCADA for Energy Management <i>Don Best, HDR Engineering</i>	Class A Biosolids Produced with Closed Alkaline Process <i>Charles Michael Wanstrom, Schwing Bioset</i>	Lessons from the First WWTP DBO in Oregon <i>Jadene Torrent Stensland, City of Wilsonville</i>	Lessons from the First WWTP DBO in Oregon <i>Jadene Torrent Stensland, City of Wilsonville</i>
11:15 - 12:00	Conversion of an Oxidation Ditch to the MLE Process to Increase Capacity <i>John P. Wilson, Gray &amp; Osborne</i>						
7:00 - 1:00							

Read all the abstracts online at [www.pncwa.org](http://www.pncwa.org)

### Conference Headquarters Hotel

The Riverhouse Hotel  
3075 N. Business 97, Bend OR 97701  
(800) 547-3928  
[www.riverhouse.com](http://www.riverhouse.com)

- On the Deschutes River
- Part of the Convention Center complex
- Group rates "Pacific Northwest Clean Water Association"

— Two-night minimum stay required

### Additional Accommodations

Shilo Inn Suites Hotel - Bend  
3105 OB Riley Rd., Bend OR 07701  
(541) 389-9600  
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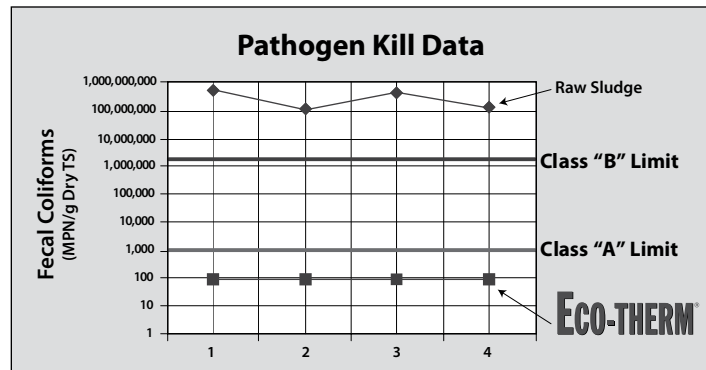
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# What's Keeping You Up At Night? *by Nan Cluss, PNCWA Manager*

According to a recent newsletter article from Content Management Corporation, membership surveys done every five years or so to gauge members' needs are no longer adequate for really understanding what members want from an association. When members are asked what they want from the association they either don't respond or have a hard time clarifying what that would be.

The article suggests that the better question to members is: What's keeping you up at night? Hopefully the answer is nothing. But if work-related issues are keeping you from a sound sleep, send me an e-mail ([nancluss@pncwa.org](mailto:nancluss@pncwa.org)) or mail in an anonymous card with what's keeping you up at night. Then when your volunteer leaders are trying to figure out how PNCWA can help members with the challenges they face, they'll know what the core issues are for a range of our membership. The PNCWA August Advance is a yearly in-person meeting where the future

of the association is the focus. How do we help our members succeed? What concrete steps laid out today will result in supporting you in what you do in the years ahead? In a world of change, those questions can't be asked just once every five years. The volunteer leaders of PNCWA are constantly looking for solutions to those questions.

### What Keeps Me Awake?

As odd as my husband finds this, I sometimes wake up in the middle of the night having just dreamt that it is Tuesday of conference week with the Awards Banquet just hours away and we haven't determined the winners yet. Please go online and nominate your peers and projects of merit by the extended August 10 deadline so that we can get this handled and I can (hopefully) stop having this ridiculous dream!

### Who Remembers Back When?

Bob Pailthorp was PNCWA President about the time the logo was designed.

The name was Pacific Northwest Pollution Control Association (PNPCA), but the rest of the logo has remained the same. That was about 35 years ago and as he pointed out in a recent e-mail it is as appropriate today as it was back then.

He'd like to document a short history of the origin of the logo but the details are sketchy. If memory serves him right it was developed by a designer of a small firm in Western Washington. If you can add anything to this, let me know. Otherwise I'll schedule time to go through old files in storage to see what I can find. I am impressed that the designer came up with something that still works so well today.



Nan Cluss



Michael Rainey

## GE Water & Process Technologies

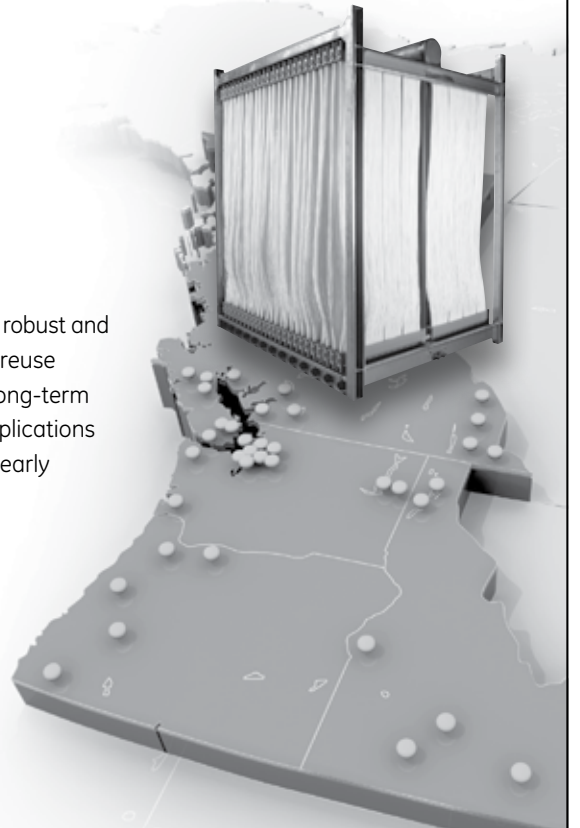
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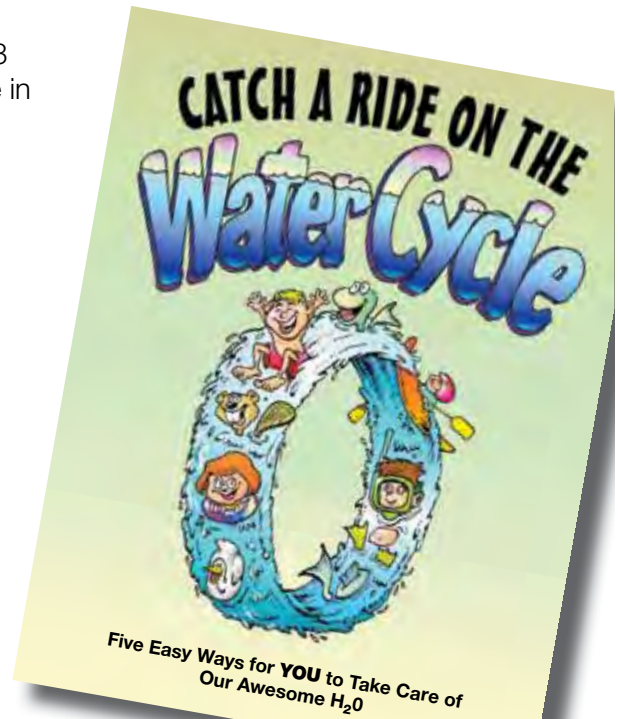
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## PNCWA Environmental Stewardship Scholarship Fund

*"There is no question that our industry has steep challenges ahead. I can't think of a better way to make your mark on our industry than to help bring in the best and brightest."*



— Steve James, J-U-B Engineers  
PNCWA Scholarship Committee Chair  
PNCWA Past President

- Scholarship funds are placed into a dedicated account
- In addition to individual tax deductible donations, scholarship support opportunities include:  
Named scholarships so that an individual or companies can sponsor an ongoing or memorial scholarship

Contact Nan Cluss, 208.455.8381 or go to [www.pncwa.org/page/scholarship](http://www.pncwa.org/page/scholarship) for more info.

Donations to the PNCWA Scholarship Fund are fully tax deductible. PNCWA is a 501 (c) 3 non-profit organization.



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## Welcome new members!



The people listed to the right have become members of PNCWA from March through 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 and how you would like to be involved.

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Dan Beckley, LOTT Alliance  
Keith Bowers, Multifarm Harvest  
Jon Brown, Fremont County Sewer  
Borek Busta, LOTT Alliance  
Todd Carlson, Pierce County  
Kem Carr, Lake Chelan Reclamation District  
Sam Castro, City of Auburn  
Steven Cole, Pierce County  
Maury Cornia, Pierce County  
John Damitio, LOTT Alliance  
Ricky Allen Dosch, Pierce County  
Cliff Eberwein, City of Ocean Shores  
Mark Emery, Pierce County  
David Eshleman  
Jim Farrell, Lake Stevens Sewer District  
Rodger Fraine  
Minoru Fujitani  
Jenifer Galatas, City of Everett  
Steve Gaschler, City of Damascus  
Shawna Gill  
Ian Grant, City of Shelton  
Dale Harris, City of Tacoma  
Mikiko Heitzman  
Kimberly Kelsey, Brown & Caldwell  
Benjamin Kinney, Eagle Sewer District  
Travis Kirk  
David Kopchynski  
Brett Lefor, Pierce County  
Dan Lostutter, Fremont County Sewer  
Mollie Mangerich, City of Meridian  
Ron Marrow, City of Eugene  
John McClellan, City of Everett  
Duane McFall, Lake Stevens Sewer District  
Ryan Morris, City of Pullman  
Eric Nigg, Oregon DEQ  
Jeff Olson  
Kara Peck  
Teresa Peterson, HDR Engineering  
Justin Provolt, WSU  
Martyn Quinn, WA Dept of Ecology  
Matthew Recknagel, WSU  
Isaac Reinholdt, WSU  
Jason Robinson, Pierce County  
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Michael Slevin, City of Tacoma  
Jack Smith, Pierce County  
Fred Snoderly  
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Erick Sund, Pierce County  
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**FOR MORE INFORMATION, PLEASE CONTACT:**

Layne McWilliams, PE, JD  
*Water & Wastewater Sector Specialist*  
971-244-8581  
[Layne.McWilliams@EnergySmartIndustrial.com](mailto:Layne.McWilliams@EnergySmartIndustrial.com)

  
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**Lucas WWTP**  
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**Fairhope WWTP**  
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