PNCWA Water Reuse Track September 14

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	Tuesday Sept 14			
	Ripples of change creating our future			
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2	8:45 AM	13A	State focused partnerships towards advancing reuse in Idaho, Oregon and Washington	Nick Smith, Jacque Klug and Holly Tichenor
3	10:30 AM	13B	So you need a permit in the Pacific Northwest…now what?	ID, OR and WA State Regulators
4	11:15 AM	13B	Water Reuse: Waste of Time or Innovative	Jay Irby
Lunch	12:00 PM		LUNCH	Lunch
5	1:15 PM	20A	Launching Community Recycled Water Use Through Collaborative Planning for Multiple Drivers	Todd Miller
6	2:00 PM	20A	Using Research to Inform Community Decisions about Recycled Water Use	Jacque Klug
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Session 1

PNCWA Session 13A 8:00 am to 8:45 am

Title: The National Water Reuse Action Plan (WRAP) and what it means for the Pacific Northwest

Abstract

The National Water Reuse Action Plan (WRAP) adopts a proactive approach to strengthening the security, sustainability, and resilience of our nation's water resources. It builds on more than four decades of water reuse expertise and promotes a growing collaboration among federal, state, local, and private sector reuse efforts. The first iteration of the WRAP was released in February 2020 and included over 80 partners who reflect a diverse cross section of the water user community.

The WRAP collaborative continues to grow through the addition of new partnerships and actions that address challenges and barriers and fulfill state, tribal, and water sector needs related to water reuse. More than 100 organizations are currently driving progress on over 40 actions across 11 strategic themes (e.g., finance support, policy coordination, integrated research) which demonstrate the meaningful advancements that action leaders and partners have made across the sector. Progress on action implementation is highlighted through the WRAP Online Platform, which promotes transparency and accountability by reflecting the current implementation status for all WRAP actions.

The success of the WRAP is directly tied to contributions and collaborations from members of the water community. Ultimately, the effort seeks to ensure that water reuse is accessible, straightforward to implement, and sensitive to local needs.

This session will focus on WRAP progress that addresses barriers to reuse across a range of topics including technical, institutional, and financial and will demonstrate cross-action collaboration, identify potential gaps, and exemplify the evolving nature of the WRAP. The session will also recognize and highlight the diversity of action leaders and partners and invite involvement from participants.

A standing goal of the WRAP is to enhance and grow partnerships across the water user community to facilitate integrated action and daylight progress and examples of water reuse.

Presenters Sharon Nappier and Ashley Harper

Professional Biography Dr. Sharon Nappier

Sharon Nappier
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Office of Water, National Program Leader for Water Reuse
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Dr. Sharon Nappier is the National Program Leader for Water Reuse in the Office of Water at the United States Environmental Protection Agency. She specializes in environmental health microbiology and quantitative microbial risk assessment; and most recently helped develop the National Water Reuse Action Plan (WRAP), which was released on February 27, 2020. Sharon holds a BS degree in Biology and Environmental Science from The George Washington University; a MSPH degree from the University of North Carolina at Chapel Hill in Environmental Sciences and Engineering; and a PhD from the Johns Hopkins Bloomberg School of Public Health in Environmental Health Engineering.

Professional Biography Ashley Harper

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Environmental Protection Agency
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Ashley Harper is a team member on the newly formed Water Reuse Team in the Office of Water at the United States Environmental Protection Agency. She recently served as an U.S. Embassy Science Fellow in Ulaanbaatar Mongolia; while there she worked to advance the public health priorities set by the Mongolian government. Ashley holds a BS degree in Geography from Texas State University and an MPH in Environmental Public Health from The George Washington University.

Session 2

PNCWA Session13A 8:45 am to 9:30 am

Title: State focused partnerships towards advancing reuse in Idaho, Oregon and Washington

Abstract

This session will focus on showcasing results form a series of three professionally moderated workshops held in each state (Idaho/Oregon/Washington) with industrial, agricultural, utilities and municipal reuse stakeholders. The workshops provided opportunities for the participants to network and share various needs and challenges including operational and maintenance, permitting/regulatory, funding and public perception concerns. The workshops culminated in a series of recommended actions for WRA-PNW teams and interested groups from each state. These action items are part of an overall effort to support operators, policy makers, utility manager and interested parties involved in water reuse as a water resource.

Presenters Nick Smith, Jacque Klug and Holly Tichenor

Professional Biography Nick Smith

Nick Smith, P.E.
Stantec and WRA-PNW President
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Nick Smith, P.E. – Mr. Smith is a licensed Civil Engineer with 20 years experience with Stantec Consulting Services Inc. out of Boise Idaho. Mr. Smith is currently serving as WateReuse-Pacific Northwest Section President and is a practicing process engineer with focus on resource recovery along with his additional role as Principal Project Manager within Stantec.

Professional Biography Jacque Klug

Jacque Klug
King County and WRA-PNW Past President
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Jacque Klug is a project manager for King County's Wastewater Treatment Division in Seattle, Washington, supporting customer development, permitting, capital projects, policy development and communication planning efforts relating to King County's Recycled Water Program. Jacque has worked in the water resource field for twenty years and has experience in policy development, planning and permitting on a variety of water issues including water rights, groundwater management, reclaimed water, instream flows, watershed planning and salmon recovery. Jacque has served as the President of the American Water Resources Association Washington State Chapter and is the Past President of the

WateReuse Association Pacific Northwest Section. She is a graduate of Duke University and the University of Washington.

Professional Biography Holly Tichenor

Holly Tichenor
Brown and Caldwell
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Holly Tichenor, Brown and Caldwell Vice President, is a strategic communications expert that supports stakeholder coordination, communications and strategy for integrated water and reuse program solutions. She specializes in stakeholder alignment, strategic plan framework development, and community outreach and communications. She leads Brown and Caldwell's Oregon operations including client and staff development. Holly worked closely with the WR PNW Board to facilitate a series of discovery workshops to advance water reuse initiative for the region.

Session 3

PNCWA Session 13B: Water Reuse - Livestream 10:30 am to 11:15 am

Title: So you need a permit in the Pacific Northwest…now what?

Abstract

Regulators from Idaho, Oregon and Washington will discuss the steps for obtaining a permit to use recycled or reclaimed water in their state.

Presenters Pat Heins, Shawn McKone, and Tressa Nicholas

Professional Biography Pat Heins

Pat Heins
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Pat Heins has over 25 years of experience working in environmental compliance. He started out working as an analyst for an environmental laboratory and an assistant environmental compliance manager for a manufacturing facility, before working as a consultant for 14 years. Pat started working for Oregon Department of Environmental Quality in 2014 in the NW region and is now working in DEQ's headquarters as the state biosolids and recycled water program coordinator. He also serves as a permit writer for individual and statewide Water Pollution Control Facility permits.

Professional Biography Shawn McKone

Shawn McKone
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Shawn McKone a senior Environmental Engineer in Ecology's Northwest Regional office. He has been with Ecology for 17 years working as a municipal facility engineer responsible for writing and managing NPDES and reclaimed water permits as well as reviewing and approving engineering documents for new or modified treatment facilities. In late 2015 he became part of Ecology's internal team tasked with helping to develop the state's reclaimed water rule and was part of Ecology's internal technical review team for developing the state's "Reclaimed Water Facilities Manual" or "Purple Book". Shawn has also been part of Ecology's internal team charged with overseeing revisions to the "Criteria for Sewage Works Design manual" or "Orange Book" since 2006.

Professional Biography Tressa Nicholas

Tressa Nicholas

Idaho Department of Environmental Quality
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Tressa Nicholas serves as a Wastewater Analyst for the Idaho Department of Environmental Quality's State Wastewater Program. In her role, she provides technical support in wastewater and water reuse, serves as the State Biosolids Coordinator and organizes training for wastewater professionals. Tressa has a Master's of Science in Civil Engineering and a Bachelor of Science in Biochemistry. She has over 17 years of experience working with recycled water and wastewater projects. In 2015, at the 30th annual WateReuse Symposium, she received the David Requia Presidents award for her outstanding leadership and initiative as a champion for WateReuse. She currently serves on the National Blue Ribbon Commission for Onsite Non-potable Water Systems.

Session 4

PNCWA Session 13B: Water Reuse - Livestream 11:15 am to 12:00 pm

Title: Water Reuse: Waste of Time or Innovative Opportunity?

Abstract

21 years ago, a small community located just North of Boise decided to lay down some roots. 7 years later, another planned community sprang up. As we all know, there are some rather large obstacles immediately North of Boise that create some interesting infrastructure challenges that would be far too costly for these small communities to encumber. As luck would have it, there was an option. Hidden Springs and Avimor both made a bold decision to build and operate their own wastewater renewal facilities and find beneficial uses for the renewed water onsite as opposed to piping several miles and lift stations to the nearest municipal treatment plant or becoming point source dischargers. These decisions created incredible growth potential as it allowed the communities to reduce treatment costs for their residents, it allowed builders to build without exorbitant connection fees, and it helps keep irrigation costs low because they didn't have to purchase irrigation water from the municipal supplier. This presentation will take a look at the current situations for both of these communities, some lessons that have been learned over the years, and provide insight for any engineers or operators looking to pursue reuse, and how both parties should work together to accomplish the needs of their constituents.

Presenter Jay Irby

Professional Biography Jay Thomas Irby

Jay Irby, PO
OMCS General Manager
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Jay Irby P.O. is an expert in the water renewal industry as co-owner of Operations Management and Consulting Services. He has served in the water renewal industry for over 10 years with the City of Boise at both the West Boise and Lander Street Water Renewal Facilities. He joined the Operations Management and Consulting Service's team in February of 2016. He graduated from Nampa Christian in 2002. He currently holds a Professional Wastewater Operator Class 4 license, an Idaho Wastewater Treatment Class 4 and an Idaho Wastewater Collections Class 4 license as well as a Wastewater Land Application license. He has served and is currently serving a term on the Southwest Idaho Operators Section which is a non-profit group that provides industry related education opportunities for maintaining licensure. He served on the Idaho Operator's Conference Committee as a planner in 2016 and in 2019 served on the Idaho Reuse and Operator's Conference Committee. He is an avid fisherman and has a tremendous sense of pride in protecting Idaho's natural resources and citizens.

Session 5

PNCWA Session 20A: Water Reuse - Livestream 1:15 pm to 2:00 pm

Title: Launching Community Recycled Water Use Through Collaborative Planning for Multiple Drivers

Abstract

The Eugene/Springfield Metropolitan Wastewater Management Commission (MWMC) is preparing to launch its first-ever outside-the-fence recycled water use. This milestone is being reached after a decade-long planning process to explore, study, and collaborate on "the right water at the right time at the right place." The MWMC is now looking to break ground on construction of Class A recycled water facilities combining creative use of existing infrastructure, partnerships to demonstrate meaningful and growth-oriented applications, and establishing the MWMC as community water resource partner with an eye toward future regulatory compliance and climate resiliency assets.

Presenter Todd Miller

Professional Biography Todd Miller

Todd Miller
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Todd has been working toward water resource and environmental restoration and protection for over 30 years in a career spanning local government, small and large companies, and nonprofit organizations. Currently, Todd is an Environmental Services Supervisor leading planning and policy support for the MWMC's capital improvement program at the City of Springfield, where he is entering his 15th year of service. Todd's background is as an Oregon registered geologist with a BS in Biology-Geology and an MS in Environmental Studies.

Session 6

PNCWA Session 20A: Water Reuse - Livestream 2:00 pm to 2:45 pm

Title: Using Research to Inform Community Decisions about Recycled Water Use

Abstract

Contaminants of Emerging Concern (CECs) is the term applied to a broad array of trace chemicals that come from consumer, commercial and industrial products that are measurable in the environment. CECs are generally unregulated. Wastewater effluent and recycled water has been identified as a potential source of CECs. This session will describe CEC research projects being done to examine CEC presence in recycled water and the risk of CEC exposure from uses of recycled water for food crop irrigation and groundwater recharge. The research study design will be presented along with preliminary research results. The session will describe how research is being shared within the community and informing community discussions about the future of reuse in the respective regions. These presentations will provide a research and communication framework for communities that can be applied in discussing CECs and risk.

Presenter Jacque Klug

Professional Biography Jacque Klug

Jacque Klug
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Jacque Klug is a project manager for King County's Wastewater Treatment Division in Seattle, Washington, supporting customer development, permitting, capital projects, policy development and communication planning efforts relating to King County's Recycled Water Program. Jacque has worked in the water resource field for twenty years and has experience in policy development, planning and permitting on a variety of water issues including water rights, groundwater management, reclaimed water, instream flows, watershed planning and salmon recovery. Jacque has served as the President of the American Water Resources Association Washington State Chapter and is the Past President of the WateReuse Association Pacific Northwest Section. She is a graduate of Duke University and the University of Washington.

Session 7

PNCWA Session 20B: Water Reuse - Livestream 3:00 pm to 3:45 pm

Title: Case Study for Datacenter Cooling Water Reuse

Abstract

The Quincy Water Reuse Utility (QWRU) has just been commissioned by the City of Quincy to treat non-contact cooling water for reuse back into a portion of the Quincy datacenters. Microsoft, Washington Department of Ecology, US Bureau of Reclamation, and the Quincy-Columbia Irrigation District have played major roles in the success of this utility; the first of its kind in the State of Washington. Non-contact cooling water blowdown is treated to remove cations and anions that reduce the efficiency of evaporative cooling and helps to reduce the volume of cooling water used. In the past, potable water has been used for cooling water; however, this water is very hard and contains high levels silica. Both components negatively impact the cooling equipment; requiring additional equipment maintenance to retain the equipment's cooling efficiency. The QWRU treats the cooling water to remove hardness and silica before being pumped back to the datacenters for cooling water. Cooling requires make-up water to replace from 60 to 80 percent water loss due to evaporation. Make-up water is provided by USBR M&I Water, potable water and, in the future, municipal Class A water. The QWRU consists of 10 distinct and specific water treatment unit processes to provide reuse water suitable for cooling. The QWRU is capable of providing from 2,304,000 to up to 3,600,000 gallons of treated water per day. Residuals from the treatment system is managed with on-site evaporation ponds and sludge management systems. The QWRU saves a precious potable water resource in an arid region of Washington State and will save up to 398,000,000 gallons of potable water in a year; enough to provide 5,450 residents potable water for a year.

Presenter Bob Davis

Professional Biography Bob Davis

Bob Davis
Worley Group
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Bob Davis has been delivering water projects for over 45 years both inside and outside of the United States. His experience in all as aspects of a water project; study, design, construction, commissioning & start-up, operator training, and troubleshooting provides client with high quality, cost-effective water facilities. With a Master's Degree in Civil Engineering (Water Emphasis) from the University of Illinois, Bob started his career in the Pacific Northwest in Corvallis, Oregon with CH2M HILL. After traveling throughout the United States and some over-seas experience, he is now back in the Pacific Northwest; a great place to live and work. Over the last 3 years, Bob's assignment has been to deliver the Quincy

Water Reuse Utility to treat and reuse non-contact cooling water from the Quincy datacenters with multiple make-up water options.

Presentation Development with:
Bob Davis, Worley Group - Presenter
Pat Haley, City of Quincy
Ariel Belino, City of Quincy
Carl Worley, City of Quincy
Brien Waldron, Microsoft
Robert Moyer, Microsoft

Session 8

PNCWA Session 20B: Water Reuse - Livestream 3:45 pm to 4:45 pm

Title: Strategic Planning: the key to internal alignment and program momentum

Abstract

Can't seem to reach agreement? Often times, project progress is stifled by a difference of opinions. How can we create alignment among technical professionals, management, elected officials, and ratepayers?
Meaningful engagement, clear goals, consistent communications can create the synergy needed to get complex programs off the ground and the momentum required to carry them out. Even within a divided community, strategic planning can identify common threads, shared values, and a desired vision of the future.
Using regional and interstate case studies, we will discuss how strategic planning, inclusive communications, and two-way engagement create alignment, public trust, and confidence in water reuse solutions. This interactive session will provide you with the tools and tactics needed to turn barriers into breakthroughs.

Presenter Haili Matsukawa

Professional Biography Haili Matsukawa

Haili Matsukawa, MPPA
Strategic Communications Project Manager
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Haili Matsukawa is an accomplished communications professional with Water Systems Consulting, Inc. (WSC), specializing in strategic planning, community outreach, stakeholder coordination for water

agencies. Before joining WSC, Haili served as a Management Analyst for the City of Ventura, responsible for the department's water efficiency programs, outreach, and engagement efforts. She has developed and executed strategic communication plans for complex initiatives, including advanced capital improvement programs, water supply projects, and utility rate increases.

With years of experience working as a public servant, Haili brings a strong understanding of the emerging challenges and opportunities facing local government and public utilities. Haili is a thoughtful facilitator with a passion for community-driven solutions.
She holds a Bachelor of Science in Environmental Science and a Master of Public Policy and Administration. With years of experience working as a public servant, Haili brings a strong understanding of the emerging challenges and opportunities facing local government and public utilities.