

## **Pre-conference Workshop Overview**

### **PNCWA 2021 Annual Conference**

**Workshop: Find the Leader Within You**

**Date: Sunday, September 12<sup>th</sup>, 2020**

**Time: 9:00am – 4:30pm**

#### **Presenting Authors:**

Amy Dammarell

Doug Berschauer

Mark Poling

Ana Arango

Kristi Steiner

Erica Haide

#### **Abstract**

Discover your leadership potential! Whether you're an aspiring leader or one who's been there, join us for an exploration of leaders at their best. This workshop is based on the five leadership principals outlined in the book "The Leadership Challenge" by Kouzes and Posner. The workshop includes breakouts and table discussions to encourage shared learning. Participation in this workshop will help improve performance of operators, project coordinators, and/or current and aspiring supervisors and managers by helping them work effectively with peers. With a firm understanding of the five practices of exemplary leadership, participants will be valued employees, supervisors and managers, understanding what it takes to help lead truly outstanding performance.

#### **Learning Objectives**

Understanding of the five practices of exemplary leadership and how anyone can be a leader right where they are.

#### **Assessment**

We will follow up with a survey to gauge both how much the participants have learned as well as how much they have been able to apply the five practices.

#### **Outcome**

The curriculum is highly interactive with the material presented followed by specific activities at tables of six to eight to incorporate the learning. Participants will walk away with ready-to-implement skills to become compassionate and inspiring leaders within their organization and in their community.

### **Brief Biography and/or Qualifications**

Doug Berschauer has over 38 years of experience and is currently the Water Technology Lead at Parametrix. In this role, he is involved with cutting-edge technology and innovative approaches to solving the toughest water and wastewater problems. He is also a member of the Project Delivery Team at Parametrix where he reviews project performance and also conducts training throughout the company. Doug has also been a mentor and coach for over 24 years. In this capacity, he has helped folks in a number of areas, including public speaking, project management, and leadership. He has been a member of PNCWA since 1984. Doug is a past President and a recipient of the Arthur Sidney Bedell Award. He has a B.S. and M.S. in Civil Engineering from the University of Washington.

Amy Dammarell is an engineer, scientist, and project manager with 25 years of experience. Amy combines her biology and engineering background with the goal of integrating engineering solutions with the natural environment to find multi-objective solutions. Her focus includes restoration planning, permitting, and design along with natural resource analysis and serves in a broad range from technical team member to project manager. In addition to her technical role, Amy is actively involved in initiatives to drive professional development both for herself and others. At HDR, she facilitates a technical knowledge transfer program, serves as a leadership program facilitator, and shapes material development to support learning and development.

Ana Arango is a wastewater engineer with Jacobs in Boise, Idaho. She is a wastewater process engineer with more than 13 years of experience, both domestic and international, in the planning, design, and startup of wastewater treatment plants. Ana's responsibilities include facility planning, plant modeling, alternatives analysis, preliminary and conceptual design, final design, startup of different unit processes. She holds a Bachelor's degree in environmental engineering from Escuela de Ingeniería de Antioquia (Colombia) and a Master's degree in environmental engineering from Virginia Tech.

Kristi Steiner has almost nine years of experience in the water industry and is currently a design engineer and project manager with the Jacobs Engineering Group, where she focuses primarily on public stormwater and wastewater conveyance projects. In addition to her technical role at Jacobs, Kristi is actively involved in programs and initiatives geared toward developing young leaders in our industry. She is the PNCWA Board representative to the WEF House of Delegates, sits on the Steering Committee for the WEF Water Leadership Institute, and is part of the Utility Management Conference Young Professionals Summit leadership team for 2021 and 2022. She

has a B.S. in Civil Engineering from North Carolina State and M.S. in Civil Engineering from Virginia Tech.

Erica Haide has been a marketer in the water industry over the last six years and currently supports the Pacific Northwest market for Brown and Caldwell. She's been involved with PNCWA and WEF in leadership positions as well as supporting different committees throughout her time in the industry. She is currently the Students and Young Professionals (S&YP) Chair for PNCWA as well as the Marketing Vice Chair for the WEF/AWWA S&YP national summit, and was the most recent co-chair for the WEF emerging young professionals leadership (EYPL) workshop. Erica's passion for leadership, combined with her experience in communications makes for a compassionate and effective leader in this industry.

Mark Poling is a Strategic Business Associate with Clean Water Services and has more than 35 years of experience working for utilities; serving in a management role for more than 25. Mark is a Past President of the Pacific Northwest Clean Water Association and has served on the Water Environment Federation Board of Trustees. A certified Group 4 operator he also holds a B.S. from Grand Valley State and an M.S. in Environmental Engineering from the University of Washington.

<b>Agenda</b>	
<b>Topic</b>	<b>Time</b>
Welcome and Introductions	9:00 – 9:10
Workshop Outcomes (Group) Share desired workshop outcomes	9:10 – 9:30
Leadership Challenge Summary Overview of book and 5 Practices	9:30 – 9:45
Model the Way Clarify values by finding your voice and affirming shared values Set the example by aligning actions with shared values	9:45 – 10:20

<b>Break</b>	10:20 – 10:30
<p>Inspire a Shared Vision</p> <p>Envision the future by imagining exciting and ennobling possibilities  Enlist others in a common vision by appealing to shared aspirations</p>	10:30 – 11:15
<p>Challenge the Process</p> <p>Search for opportunities by seizing the initiative and by looking outward for innovative ways to improve  Experiment and take risks by constantly generating small wins and learning from experience</p>	11:15– Noon
<b>Lunch</b>	12:00 – 1:00
<p>Enable Others to Act</p> <p>Foster collaboration by building trust and facilitating relationships  Strengthen others by increasing self-determination and developing competence</p>	1:00 – 1:45
<p>Encourage the Heart</p> <p>Recognize contributions by showing appreciation for individual excellence  Celebrate the values and victories by creating a spirit of community</p>	1:45 - 2:30
<b>Break</b>	2:30 – 2:40
Leadership Values	2:40 – 3:20
Leaders Share their Journey – Invited Panel	3:20 – 4:20
Wrap up	4:20 – 4:30

## **Workshop: Watershed-Based Water Quality Management**

**Date: Sunday, September 12<sup>th</sup>, 2020**

**Time: 8:30am – 3:00pm**

### **Presenting Authors:**

Claudio H. Ternieden

James J. Pletl, PhD

Eleanor Ott

Jason Pappani

Bob Baumgartner

Caitlin Dwyer

Mike Ollivant

Jamie Pizialie

Danielle Stephan

### **Abstract**

Watershed-based permitting, water quality exchange, and water quality trading is forging its way into the minds of many regulators and permittees in the Pacific Northwest. The State of Oregon has met a high temperature water problem with a watershed-based solution that has had a successful outcome. Idaho has successfully implemented nutrient offsets by providing treatment to the Dixie Drain, and Washington State is working its way toward a General Permit for nutrient management for wastewater treatment plants that discharge to Puget Sound.

This workshop looks at lessons learned from an established watershed-based water quality management system in the Pacific Northwest and Nationally. It explores nutrient credit exchanges, point and non-point issues, bubble allocation, legislation, incentives and national strategies that will have a direct impact on the future of this region. Speakers from Oregon, Idaho, Washington, and Nationally will share their perspectives, thoughts, successes, and challenges on this complex and fascinating topic.

### **Brief Biography and/or Qualifications**

Claudio H. Ternieden

Senior Director,

Government Affairs and Strategic Partnerships

## Water Environment Federation

Claudio is the Senior Director for Government Affairs at WEF and directs WEF's legislative and regulatory efforts in Washington, DC with both Congress and federal agencies and works to represent water professionals in our nation's capital. Before coming to WEF, Claudio worked with Concurrent Technologies Corporation (CTC), a Department of Defense technologies innovator and integrator, and before that with the Water Environment Research Foundation (WERF) (now The Water Research Foundation) helping lead innovative research in infrastructure, disinfection, wet weather management, emerging contaminants, stormwater, climate adaptation, resilience, water reuse and decentralized systems. Claudio has also worked with the American Association of Airport Executives (AAAE) where he worked in regulatory and legislative issues associated with environmental management at airports. Previously, he worked with the US EPA in Washington, DC and helped in the development of numerous federal regulations. Before the US EPA, Claudio worked with the State of Indiana Department of Environmental Management (IDEM) supporting the implementation of the State's Great Lakes Water Quality Standards in NPDES permits, the pretreatment program, operators' certification program and the implementation of the drinking water capacity development program. Before working for the State of Indiana, Claudio directed the City of Elkhart, IN pretreatment enforcement program. Claudio also worked with the US Attorney's Office Major Crimes Division in New York City, NY, and the Hudson River Keepers in White Plains, NY. Claudio has a law degree from Pace University School of Law (White Plains, NY), a Master Degree in Public Policy from George Mason University (Arlington, VA), and a BA from Concordia College (Bronxville, NY).

Jamie Pizialie

US EPA Municipal Ombudsman

The Municipal Ombudsman is an independent, impartial, and confidential resource to assist municipalities in navigating EPA's Clean Water Act programs.

The Municipal Ombudsman will coordinate with EPA offices to assist communities in navigating EPA resources and to advocate for fair processes and uniform application of Clean Water Act policies. In general, the Ombudsman listens and learns about all perspectives on a process issue and may:

- Consider the applicable laws, regulations, policy, and data, and
- Talk with the municipality and stakeholders involved, and coordinate with EPA Officials

<https://www.epa.gov/ocir/municipal-ombudsman>

Jim Pletl:

James J. Pletl, PhD

Hampton Roads Sanitation District

## Director of Water Quality

Jim Pletl is the Director of Water Quality since December 2011. Previously, he was the Chief of Technical Services for five years. In that capacity, he managed HRSD's environmental monitoring and permitting program. He also served as an Environmental Scientist for 17 years, providing technical reviews and conducting planning for water quality studies. Dr. Pletl holds a bachelor's degree in Biology from Alfred University and a Ph.D. in Biological Oceanography from Old Dominion University. He also is a graduate of the Kenan-Flagler Water and Wastewater Leadership Program. He has served on three federal advisory committees for EPA and the Department of the Interior and several advisory groups to the Virginia Department of Environmental Quality. Dr. Pletl has also served on numerous Water Research Foundation WRF project oversight committees which define the goals and guide the work of WRF research relevant to wastewater utility issues. Dr. Pletl also serves on the Virginia Nutrient Credit Exchange Association Board of Governors.

Eleanor Ott  
Water Quality Program  
Washington State Dept. of Ecology

Eleanor Ott is a Senior Environmental Engineer in Ecology's Water Quality Program located in Olympia, WA. Eleanor serves as a technical permitting and policy lead where she works with permitting staff from all of Ecology's regions to implement new regulations and develop solutions to complex permitting problems. Eleanor spent the past year on special appointment from the Department of Ecology to develop the Puget Sound Nutrient General Permit for municipal WWTPs.

Jason Pappani  
Surface Water Bureau Chief  
Idaho DEQ

Jason Pappani is the Surface Water Bureau Chief with the Idaho Department of Environmental Quality (DEQ), overseeing the agency's implementation of components the Clean Water Act, including the Water Quality Standards, Monitoring and Assessment, TMDL, and Non-Point Source Management programs. Jason started work with the Department of Environmental Quality in 2007 as the Monitoring and Assessment Coordinator where he led field crews monitoring streams, rivers, and lakes throughout the state. Jason moved into water quality standards in 2015, and has previously worked as both a Water Quality Standards Scientist and the Water Quality Standards Lead.

Bob Baumgartner  
Regulatory Affairs Director  
Clean Water Services, Oregon

Bob Baumgartner has a BS in Fisheries Science and a MS in Environmental Engineering, both from Oregon State University. Bob currently serves as Clean Water Services (CWS) Regulatory Affairs Director where they work to enhance the environment and quality of life in the Tualatin River watershed through visionary and collaborative management of water resources in partnership with others. Bob's role at CWS is to make sure they anticipate and meet the future needs of the watershed. Prior to his current job, Bob worked for twenty years at Oregon Department of Environmental Quality (DEQ).

Caitlin Dwyer, Chair of the Governmental Affairs Committee  
[cdwyer@arlingtonwa.gov](mailto:cdwyer@arlingtonwa.gov)

Caitlin Dwyer is the Utilities Manager for the City of Arlington. She holds a Bachelor's degree in Biology with an emphasis in Neurobiology, Physiology and Behavior along with a Master's degree in Hydrogeology. Caitlin serves as the chair of the PNCWA's Government Affairs Committee and as the PNCWA's Washington State Northwest Section president. Prior to working for the City of Arlington, Caitlin worked for the Lake Stevens Sewer District as a Process Analyst, in Alaska for SLR Consulting as a Staff Scientist, and has spent a past life as an exercise rider at Santa Anita Park in southern California.

Mike Ollivant P.E.,  
 Vice Chair of the Governmental Affairs Committee  
[mollivant@parametrix.gov](mailto:mollivant@parametrix.gov)

Mike Ollivant is a Professional Engineer licensed in the State of Washington with over 40 years of experience providing engineering consulting services in the State of Washington for a variety of municipalities and Tribes ranging from wastewater conveyance and treatment systems to complete reclaimed water and underground injection control facilities. Mike is a past president of PNCWA (2013-2014) that participated in the development of the Governmental Affairs Committee for PNCWA. Mike has represented PNCWA and the States of Idaho, Oregon, and Washington at the National Water Policy Fly-in for over five years in Washington DC and has participated in development of wastewater standards and policies in Washington State.

<b>AGENDA</b>	
<b>TIME</b>	<b>TOPIC</b>
8:30	Workshop Introduction and Welcome – Caitlin Dwyer Chair, Mike Ollivant Vice Chair



8:45	<p>National Water Quality Trading Basics and Policy Resources  Claudio Ternieden, Senior Director, Government Affairs, WEF  Jamie Pizialie, EPA Municipal Ombudsman</p> <p>National Policies, Strategies and Legislation for Watershed Based Water Quality  Legislation and Funding</p>
9:30	Breakout Session
9:45	Post-breakout Q&A
10:00	<i>Break</i>

10:15	<p>Water Quality Management in Chesapeake Bay – Jim Pletl PhD Director of Water  Quality  Hampton Road Sanitation District</p> <p>Legislation  Nutrient Credit Exchange  Nutrient Trading  Successes and Challenges  Lessons Learned</p>
10:45	Breakout Session
11:00	Post-breakout Q&A
11:15	<p>Washington State Draft Water Quality Trading / Offsets Framework – Eleanor Ott,  Senior Environmental Engineer, Water Quality Program</p> <p>WA State Water Trading Program  Bubble allocation  Successes and Challenges</p>
12:15	<i>Lunch Break</i>
1:00	<p>Idaho Watershed Success Stories – Jason Pappani, Idaho DEQ</p> <p>Dixie Drain  Nutrient Treatment Offsets</p>

1:30	<p>Watershed Based Permitting a Success Story – Bob Baumgartner, Regulatory Affairs Director, Clean Water Services, Oregon Department of Environmental Quality</p> <p>What is a watershed based permitting Legislation and regulatory framework Incentives and future drivers – Climate Change Impacts CWS Story of implementing a watershed based permit Lessons learned Successes and Challenges Future considerations</p>
2:00	Breakout Session
2:15	Post-breakout Q&A
2:30	Pre-Conference Closing Remarks
	Evaluation

## **Workshop: Organics Diversion is Coming – from these Challenges come Opportunities**

**Date: Sunday, September 12<sup>th</sup>, 2020**

**Time: 1:00pm – 5:00pm**

### **Presenting Authors:**

Donnie Stallman 1

Anthony Tartaglione 2

Trung Le 1

Ashely Mihle 3

Jeff Maag 4

Niel Curley

Pat Heins

**1Brown and Caldwell; 2Black and Veatch; 3King County; 4City of Portland, BES;  
dstallman@brwncald.com, TartaglioneA@brwncald.com, tle@brwncald.com,  
Ashley.Mihle@kingcounty.gov, Jeff.Maag@portlandoregon.gov**

**Session Chair: Donnie Stallman, Brown and Caldwell; [dstallman@brwncald.com](mailto:dstallman@brwncald.com)**

**Categories/Topics: Treatment Innovation and the Future, Regulatory Challenges, Resource Recovery.**

**Keywords: Co-digestion, Organics Diversion, Biosolids, Sustainability, Resource Recovery**

### **Abstract**

Landfill organics diversion goals and regulations are becoming the norm for many municipalities in an effort to redirect organics to more sustainable outlets and reduce greenhouse gas emissions.

This workshop will discuss how landfill organics diversion regs/programs can lead to a push for more co-digestion at WWTPs and greater resource recovery. The workshop will cover status of organic diversion regulations in member states, co-digestion and biogas utilization program planning, greenhouse gas implications, and case studies for planning/executing co-digestion and biogas utilization projects.

### **Short Description**

The workshop will provide utility managers and operators with an overview of the regulatory climate for landfill organics diversion and the opportunities/challenges with planning and executing organics waste receiving/co-digestion programs.

## **Learning Objectives**

Attendees will come away with an understanding of how water resource recovery facilities (WRRFs) can be an important (and mutually beneficial) part of the strategy for diverting organics from landfills. Regulatory drivers within the member states will be covered. Attendees will learn key planning considerations for co-digestion/renewable energy projects/programs including cost/payback and greenhouse gas implications.

Two case studies will be presented from utilities within the member states going through project planning and execution and provide lessons learned from their experiences. Lastly, a facilitated group discussion will provide attendees insights into what other utilities are doing in the organics diversion space. The discussion will look at perceptions, challenges, and opportunities around organics diversion and renewable energy programs/partnerships.

## **Assessment**

The following will be used to assess that the participant has met the learning objectives:

1. Q&A session after each presentation
2. Facilitated discussion at the end of the workshop to interact with speakers

## **Outcome**

Attendees will gain understanding of the fundamentals, benefits, and challenges associated with implementing organics waste receiving/co-digestion programs.

## **Who Should Attend?**

Utility managers/leadership, plant managers, and plant staff who are interested in organics waste receiving and co-digestion programs as part of a resource recovery solution for diverting organic waste from landfills.

## **Brief Biography and/or Qualifications**

Mr. Tartaglione is a senior engineering manager that provides and develops comprehensive planning documents for municipal wastewater treatment plants and construction documents including plans and specifications for the designed expansion, rehabilitation and repair, upgrades, and improvements of water resource recovery facilities. He has a commitment to excellence and enthusiasm to create opportunities from challenges including resource recovery and recognition of "wastewater" as "resource-water". Anthony is a contributing author to Water Environmental Federation publications including 1) Design of Water Resource Recovery Facilities. Manual of Practice No. 8, 6th Ed., Water Environmental Federation Publication, 2017; 2) Energy in Water Resource Recovery Facilities, Manual of Practice No. 32, 2nd Ed., Water Environmental Federation Publication, 2021 and 3) Wastewater Treatment Fundamentals III, 1st Ed., Water Environmental Federation Publication, 2021.

Donnie Stallman is a wastewater treatment process/mechanical engineer in Brown and Caldwell's Design Services group. Mr. Stallman specializes in anaerobic digestion process design as well as mechanical design of related systems such as mixing, heating, covers, and sludge pumping systems. He received his Master of Science in Civil Engineering degree from the University of

Washington where he developed a predictive model for anaerobic digestion of food waste. Donnie is the current PNCWA Residuals and Biosolids Committee Chair.

Ashley Mihle is an environmental scientist and project manager with King County's Loop® biosolids program, where she works to develop new Loop products and increase awareness and support of Loop biosolids. She is co-chair of the Northwest Biosolids Outreach and Education Committee, which advances environmental sustainability through the beneficial use of biosolids and a board member of the Washington Organic Recycling Council. Ashley has a Master of Science and a Master of Public Administration from the University of Washington. She has over a decade of experience in project management, environmental compliance, soil science, biosolids, communications, market research, strategic planning, and business development.

Jeff Maag is a civil engineer with the City of Portland Treatment and Pumping Systems (TPSD) Division. He is project manager and design manager of the Columbia Boulevard Treatment Plant Organic Waste Receiving Facility (OWRF) which is expected to be constructed by fall of 2023. Prior to joining the City of Portland, Jeff was project manager on the FOG Receiving Station and Cogen Expansion projects at Gresham WWTP which resulted in the plant becoming the first energy net zero wastewater treatment plant in the northwest. He received a Bachelor of Science in Civil Engineering from the University of Wisconsin – Milwaukee.

<b>AGENDA</b>	
<b>TIME</b>	<b>TOPIC</b>
<b>1:00-1:10</b>	<b>Welcome &amp; Introductions</b>
<b>1:10-1:40</b>	<b>The Big Picture</b>
<b>1:45-2:25</b>	<b>Regulatory Round-up</b>
<b>2:30-3:15</b>	<b>Planning Co-digestion Projects (King County Case Study)</b>
<b>3:15-3:30</b>	<b>Refreshment Break</b>
<b>3:30-4:10</b>	<b>City of Portland Organics Diversion/Co-digestion Case Study</b>

**4:15-5:00**

**Facilitated Discussion**

**Workshop: Activated Sludge Virtual Plant Operator Training**

**Date: Sunday, September 12<sup>th</sup>, 2020**

**Time: 8:30am – 5:00pm**

**Presenting Authors:**

Paul Krauth

Tressa Nicholas

Chris Miccolis

Andy O'Neill

Workshop Organizers Name: Paul Krauth, P.E. Company/Institution Statepoint Engineering in conjunction with WEF Mailing Address 1080 East 4025 South, Millcreek, UT 84124 E-mail StatepointEng@gmail.com Phone (385) 707-3628

Workshop Co-Organizer Name: Tressa Nicholas Company/Institution Idaho Department of Environmental Quality Mailing Address 1410 North Hilton Boise, Idaho 83706 E-mail Tressa.Nicholas@deq.idaho.gov Phone (208) 890 -7008

**Abstract**

This workshop is designed to provide an introduction to treatment plant modeling using the OpTool simulator which is used in WEF's operations challenge competition. This operator friendly simulator is based upon a GPS X modeling software. Attendees will have an opportunity to download a working model to their laptop for short term usage. After familiarization with the model the workshop will focus on optimizing a treatment plants' operations through numerous case studies. This is a hands-on workshop. Both the Water Environment Federation and Hydromantis are providing the technical support for this workshop. Short Description An introduction to treatment plant modeling and optimization of existing processes Learning Objectives A general review of activated sludge processes particularly focusing on nutrient removal and hands-on usage of how computer-based plant modeling can provide another operational tool. Assessment There are four case studies there will be used in the workshop and require solving using the computer program. Outcome A practical knowledge of how computer based plant modeling is used. Who Should Attend While mainly focused on operational staff this workshop can provide a general introduction to plant modeling for anyone interested in the subject.

<b>AGENDA</b>	
<b>TIME</b>	<b>TOPIC</b>
8:30-9:00	• Introductory remarks and Review of Program

9:00-9:30	Process Modeling in Wastewater Treatment - background
9:30-10:00	Simulator use in water and wastewater (I)
10:00-10:30	BREAK / Q&A
10:30-11:00	Case Study Set 1: Basic Operations of Activated Sludge Systems
11:00 – 11:30	Case Study Set 2: (Aeration and Full Plant BNR)
11:30-1:00	Lunch
1:00 – 2:00	Case Study Set 3: (Wet weather effects, seasonality, and pretreatment)
2:00 - 3:00	Case Study Set 4 (Solids handling, digestion, disinfection)
3:00 – 3:30	BREAK / Q&A
3:30 – 4:30	Optimizing Wastewater Operations (Full Plant BNR, Aeration Energy)
4:30 - 5:00	Wrap Up



**Workshop: Hope for the Future: Using Envision to Improve Sustainability**

**Name of Primary Sponsoring Committee** *(list only those who you have sponsorship from!)*:

Sustainability Committee and WEF Envision Task Force

**Name of Sponsoring Organization or Institution if Outside of PNCWA:**

Institute for Sustainable Infrastructure (ISI)

**Date: Sunday, September 12<sup>th</sup>, 2020**

**Location: Virtual**

**Time: 8:00am – 12:00pm**

**Presenting authors:**

Justin Waples

Crystal Franco

John Phillips

Lindsey Geiger

Heidi Sowell

**Abstract**

Infrastructure is at the heart of addressing this key challenge of the 21st century, and the standards and methods of the past will not be adequate to meet the needs of the future. A new paradigm is required.

But how do infrastructure developers know whether their decisions are contributing to sustainability or not? How do they bring attention to the need for more sustainable infrastructure? How do they communicate around a shared understanding of what sustainability means? Envision provides a consistent, consensus-based framework for assessing sustainability and resilience in infrastructure. Envision:

- Sets the standard for what constitutes sustainable infrastructure;
- Incentivizes higher performance goals beyond minimum requirements;
- Gives recognition to projects that make significant contributions to sustainability; and

- Provides a common language for collaboration and clear communication both internally and externally.

Envision is a framework that includes 64 sustainability and resilience indicators, called 'credits', organized around five categories: Quality of Life, Leadership, Resource Allocation, Natural World, and Climate and Resilience. These collectively address areas of human wellbeing, mobility, community development, collaboration, planning, economy, materials, energy, water, siting, conservation, ecology, emissions, and resilience. These indicators collectively become the foundation of what constitutes sustainability in infrastructure.

Each of the 64 credits has multiple levels of achievement representing the spectrum of possible performance goals from slightly improving beyond conventional practice, to conserving and restoring communities and environments. By assessing achievement in each of the 64 credits, project teams establish how well the project addresses the full range of sustainability indicators and are challenged to pursue higher performance.

Through its Envision Sustainability Professional (ENV SP) credential, Envision recognizes and brings attention to individuals trained and dedicated to developing more sustainable infrastructure. When used as a self-assessment tool Envision helps practitioners better understand and recognize their project's contribution to sustainability. Through an optional process offered by ISI, Envision can also be used to receive third-party verification of a project assessment that gives public recognition to infrastructure projects that make exemplary progress toward sustainability.

This workshop will provide clean water professionals with an advanced understanding of Envision and the tools for assessing a clean water project through Envision. In this workshop, participants will learn about Envision from the Institute for Sustainable Infrastructure and receive an overview of the categories and credits. Understand the different ways to use Envision in a capital program portfolio. See examples of how different utilities use Envision and what are some lessons learned from experienced utilities. Learn about different tools to assessing projects through a go/no-go process. Learn how to do a self-assessment. Develop hands on self-assessment tools and walk away with a plan to institute Envision at their utility or company.

## **VI. Short Description:**

This workshop will provide an advanced understanding of Envision and the tools for assessing a project's sustainability. Participants will learn about Envision from the Institute for Sustainable Infrastructure and multiple wastewater utilities that have applied Envision both internally and pursued formal project awards. Hands-on activity will include an Envision self-assessment of a project, and an Envision Game Show. The workshop will count towards 2.0 CEs for maintain ENV SP credentials.

## **Learning Objectives:**

1. Participants will learn to use Envision to adapt a sustainability culture in a capital program and portfolio.
2. Participants will learn how to perform a self-assessment by utilizing the credit evaluation forms for "go/no-go" decisions and estimating points for potential award.

3. Participants will learn about other utilities lessons learned using Envision for planning and certification of projects.
4. Participants will perform a self-assessment of an example conveyance project (currently a project using Envision that is a pump station and forcemain).
5. Participants will receive PDH credits for ENV SP Certification (or annual renewal) for participating in workshop

**Describe the Interactive Components of the Workshop:**

1. Each participant will perform a self-assessment on the example project. ISI will set up a training platform for participants to participate on-line.
2. At the end of the workshop participants will participate in an Envision Trivia Game Show to review what has been learned through the day.

**Assessment:**

Each topic will have a short review and assessment. The end of the workshop will be an interactive evaluation.

**Outcome:**

This workshop will provide clean water professionals with an advanced understanding of Envision and the tools for assessing a clean water project through Envision. In this workshop, participants will learn about Envision from the Institute for Sustainable Infrastructure and receive an overview of the categories and credits. Understand the different ways to use Envision in a capital program portfolio. See examples of how different utilities use Envision and what are some lessons learned from experienced utilities. Learn about different tools to assessing projects through a go/no-go process. Learn how to do a self assessment. Develop hands on self-assessment tools and walk away with a plan to institute Envision at their utility or company.

**What are the Prerequisites for the Workshop?**

None. While previous exposure to Envision, registering an account on the ISI website, or obtaining the ENV SP credential would be beneficial, this workshop will not require any pre-requisites.

**Presenting Authors:**

Workshop Chair Name: John Phillips, ENV SP

**Company/Institution: Parametrix**

**Phone: 206-940-8769**

**E-Mail: [jmphilips@parametrix.com](mailto:jmphilips@parametrix.com)**

Brief summary of workshop leaders experience: is the Director of Integrated Watershed Management at Parametrix. John worked for King County managing the Combined Sewer Overflow Control Program. Over his 19-year career, He has managed and developed the Green Stormwater Infrastructure (GSI) and Climate Change Adaptation programs. His climate work has been referenced in both the IPCC and National Climate Assessment reports. He has worked on multiple Envision projects including the Georgetown Wet Weather Treatment Plant and adapting Envision into King County's sustainability review process for all projects. He is Past President of the Pacific Northwest Clean Water Association (PNCWA).

**IV. Workshop Facilitators/Speakers:**

Speaker #1 (Envision 101, 201)

Name: Lindsey Geiger

**Company/Institution: ISI**

Lindsey is the director of Education. Prior to joining ISI, Lindsey was at the American Water Works Association managing their sustainability portfolio. Lindsey holds a bachelor's degree in civil engineering from the University of Virginia in Charlottesville, VA, and a master's degree in environmental engineering from Michigan Technological University in Houghton, MI. She is a Professional Engineer (PE), registered in Colorado.

Speaker #2 (Developing Envision for In-house Use on small and large projects)

Name: Heidi Sowell, ENV SP

**Company/Institution: King County DNRP WTD**

*Heidi Sowell brings extensive sustainability and environmental planning experience to her role as the Sustainability Program Lead for King County's Wastewater Treatment Division (WTD), located in Seattle. She is responsible for the development of policies and programs that advance healthy natural environments, equitable and vibrant communities, cost-effective investments, and resilience to future climate disruptions. Heidi has been with WTD since 2011, managing sustainability, environmental planning, and community relations efforts in various capacities. Heidi earned her Master of Science in Environmental Science from Washington State University and has her undergraduate degree in Community and Environmental Planning from University of Washington.*

<b>AGENDA</b>
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TIME	TOPIC	INSTRUCTOR AND AFFILIATION
8:00 – 8:15	Welcome, Introductions, Workshop Agenda	Chris Ranck, Arcadis John Phillips, Parametrix
8:15- 9:00	Envision 101 & 201	Lindsey Geiger, ISI
9:00 – 10:00	Interactive Session #1: Envision Self-Assessment	Lindsey Geiger, ISI
10:00 – 10:45	Interactive Session #1: Review & Feedback	Lindsey Geiger, ISI
10:45 – 11:00	Networking Break	
10:00 – 10:45	Case Study #1: Sunset and Heathfield Pump Stations and Force Main Upgrade Project	Heidi Sowell, King County
10:45 – 11:30	Case Study #2: Sustainable Water Initiative for Tomorrow	Chris Willson, HRSD
11:30 – 11:50	Envision Interactive Q&A	John Phillips, Parametrix

11:50 – 12:00	Wrap up and Evaluation	Chris Ranck, Arcadis
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