

TRACK A Collection Systems: Operations & Maintenance, Safety, Asset Management

TUESDAY	June 27		
	7:30-7:45am	Event Opens: Q&A, Getting Started	
	7:45-8:00am	Opening Announcements	
#1	8:00-9:00am	Title:	Empowering Operators: Harnessing AI-Driven Tools Amid Challenges in Wastewater Treatment
		Presenter:	Keaton Larson Lesnik
	Moderators:	Company/Organization:	Maia Analytica
		Brief Description:	Integrating artificial intelligence (AI) into the water and wastewater treatment sector presents a unique opportunity to enhance outcomes, despite the numerous challenges associated with its implementation. This discussion explores the development and adoption of AI-powered tools tailored for operators, while acknowledging the inherent complexities in refining and incorporating these technologies into daily operations. The focus is on user-friendly systems designed to optimize processes and streamline tasks. Emphasis is placed on the crucial role operations staff play in capitalizing on the opportunities offered by these tools, propelling the water sector towards a more innovative and resilient future.
			Bio: Dr. Keaton Lesnik, PhD, is the Co-Founder and Principal Engineer at MAIA Analytica, where he spearheads the research, development, and implementation of data-driven software platforms aimed at enhancing operational decision-making and workforce training in the water and wastewater industries. Dr. Lesnik obtained his PhD from Oregon State University, where he began his pioneering work in the application of machine learning to model complex environmental biotechnologies. With over 12 years of experience as a technical expert in wastewater projects, Dr. Lesnik has successfully deployed a number of AI pilots across the country, demonstrating his commitment to driving innovation in the water sector.
	9:00-9:10am	Break	
#2	9:10-10:10am	Title:	Update on the War on Wipes
		Presenter:	Frank Dick, PE
	Moderators:	Company/Organization:	City of Vancouver
		Brief Description:	This presentation will provide an update to last year's presentation on work by utility representatives and manufacturers to get state wipes labeling legislation passed. We will identify wastewater system issues with flushed wipes, and hear about working being done on the local, national and international level to address wipes through laws and policy.
			Bio: Frank has been with the City of Vancouver 15 years, all with wastewater. Previously he worked in semiconductor manufacturing. Frank has been active with wipes issues from the day he started with Vancouver, and over the years active in engagements with wipes manufacturers, WEF and NACWA and water organizations internationally. Frank was an adviser to legislative efforts that resulted in wipes labeling laws in 4 states, to which he will talk in detail during the presentation.
	10:10-10:20am	Break	
#3	10:20-11:20am	Title:	Empowering Your Staff - What does it really mean?
		Presenter:	Mark Poling and Hannah Thomascall
	Moderators:	Company/Organization:	Clean Water Management; Spokane County
		Brief Description:	We'll explore empowering and enabling your team to act through fostering collaboration, creating a climate of trust, facilitating relationships, strengthening others, enhancing self-determination, developing competence and confidence, and organizing work to build competence and ownership. We will talk about how all these elements combine to create empowerment that not only delivers greater job satisfaction for you and your team, but they also deliver better business results.
			Bio: Mark Poling is an independent consultant and sole proprietor of Clean Water Management, a consulting firm focusing on utility management. He is a member of the Water Environment Federation WISE Utility Management program team focused on helping utilities provide increased value through business process improvement. He has nearly 40 years of experience at Clean Water Utilities including utility management, water resource recovery facility operation, maintenance, design, and construction. Hannah Thomascall works at the Spokane County Regional Water Reclamation Facility managing the treatment plant. In addition to her work in wastewater, she has experience in regulatory compliance and environmental consulting. Hannah is the current chair of the PNCWA Sustainability and Biosolids Committee, serves on the PNCWA board, and is an active member of six other PNCWA Committees.
	11:20-11:30am	Break	
#4	11:30-12:30pm	Title:	How to Put a Pipe Through a Nature Park: Partnership and Communication
		Presenter:	Jadene Stensland, PE
	Moderators:	Company/Organization:	Clean Water Services
		Brief Description:	In early 2021, Clean Water Services began a two-year utility construction project to replace the 40 year old sanitary pipe which runs through the popular Tualatin Hills Nature Park, a 220-acre "crown jewel" nature and wildlife reserve. The project will also enhance the environment and wildlife habitat around Cedar Mill Creek. Ultimately, the project team created a 360-degree Virtual REality tool to allow the public to experience changes in vegetation growth during and after construction.

			Bio: Jadene Stensland, PE is the Principal Engineer at Clean Water Services. She was a PNCWA Stormwater Committee Past Chair. She has over 25 years of professional experience in municipal engineering, including prior work experience as a Deputy City Engineer. She has a MS in Bio-Resource (Ecological) Engineering with a minor in Civil Engineering from Oregon State University, a BS in Environmental Engineering from Cal Poly, SLO and a Professional Certificate in River Restoration from Portland State University. Additionally, she hold Level 3 operator certifications in water and wastewater treatment and conveyance.
	12:30-1:00pm	Lunch	
#5	1:00-2:00pm	Title:	Implementation of Telemetered Water Quality Sensors in the Sanitary Collection System - 2023 Update
		Presenter:	Jason Cook
	Moderators:	Company/Organization:	Clean Water Services
	Hunter BD		Clean Water Services has been developing telemetered, continuous water quality sensing network for the sanitary collection system in order to help protect the WRRF from harmful discharges. The challenges of developing such a network in such a difficult environment are considerable, but over the last 4 years CWS has been able to develop the technology, methods, and practices to overcome them. CWS is now moving out of the pilot phase into the full implementation phase and has already been successful in tracking down and eliminating two long-standing sources of upsets to the WRRFs. In this talk, CWS will discuss our path to the current state and our vision for the near and long-term future.
		Brief Description:	
	2:00-2:10pm	Break	
#6	2:10-3:10pm	Title:	Why My Brand-New Equipment Shakes, Rattles, and Rolls
		Presenter:	John Koch, PE
	Moderators:	Company/Organization:	HDR, Inc.
			Condition assessments have brought to the forefront many long term and ongoing issues with mechanical equipment. Finite element analysis (FEA), modal and vibration analysis has been employed during Level 3 and 4 stages of condition assessment to determine natural frequencies of the equipment, vibration frequencies and amplitudes as well as how to increase equipment natural frequency to reduce vibration. Many of the vibration issues encountered during condition assessments can be attributed to equipment installation and anchoring. Equipment is not as "stout" as it was 40 and 50 years ago which means its stiffness and mass is less. The reduction in materials allow manufacturers to be cost effective in this very competitive world. The old name brand manufacturers have been swallowed up by big corporations where the name of the game seems to be making money as their first priority. Quality, reliability, and longevity is on the third or fourth rung of their precedence. This overall philosophy has resulted in equipment that is more susceptible and prone to vibration.
		Brief Description:	
			Bio: John Koch is a licensed professional engineer with over 5 decades of varied experience in planning, design, construction, commissioning, troubleshooting and condition assessment of water and wastewater treatment and pumping facilities in the United States and Canada. He is a Senior Project Manager and Vice President at HDR for over half his career and is a Board Certified Environmental Engineer by the American Academy of Environmental Engineers and Scientists.
	3:10-3:20pm	Break	
#7	3:20-4:20pm	Title:	City of Bellevue Pipe Defect Evaluation and Trenchless Repairs
		Presenter:	Craig Cristensen, PE
	Moderators:	Company/Organization:	David Evans and Associates, Inc.
			This presentation covers efforts by the City of Bellevue, Washington to address a large backlog of sewer and storm drain pipe defects. First, David Evans and Associates, Inc. (DEA) and their consultant team (Jacobs Engineering Group and Osborn Consulting) worked with the City to: <ul style="list-style-type: none"> Track the pipes with defects using a large master spreadsheet and folders Prioritize the pipes with defects using existing information Evaluate the pipes with defects using CCTV video inspection, site visits, and survey Next, the consultant team created two design packages based on the recommended site and defect-specific repair method (trenchless or dig and repair). This presentation will focus more on the trenchless design package including the following repair methods: <ul style="list-style-type: none"> Cured-in-place pipe (CIPP) full length lining CIPP spot repair lining CIPP tee/lateral lining A combination of CIPP tee/lateral lining and full length lining Pipebursting This presentation will also include other relevant project experience involving trenchless construction methods.
		Brief Description:	
			Bio: Craig is a Project Manager at David Evans and Associates, Inc. where he has served special purpose districts and cities in western Washington for his entire career. In this capacity, he has gained the confidence of his clients to understand their needs beyond the project's limits, in the context of the agency's challenges and opportunities. His communication skills and organized project approach assure his clients that their projects are addressed efficiently and completely. He has design and project management experience in a wide variety of projects including sewer, water, and storm. He also has significant experience with projects using trenchless construction methods such as pipebursting, cured-in-place pipe lining, and sliplining. In his free time, he loves spending time with his wife and three young kids, playing basketball, working out, and volunteering at his church.

	4:20-4:30pm	Closing Remarks/Daily Wrap Up	
WEDNESD	06/28/2023		
	7:30-7:45am	Event Opens: Q&A, Getting Started	
	7:45-8:00am	Opening Announcements	
#8	8:00-9:00am	Title:	Large Diameter Structural Pressure Pipe Rehabilitation: 30-inch Tight-fit HDPE Case Study
		Presenter:	Daniel Buonadonna
		Moderators:	Company/Organization: Jacobs Engineering Group Inc.
		Brief Description:	Case study for 1.5 miles of 30-inch and 27-inch diameter concrete pipe rehabilitated with tight-fit HDPE lining. Challenges included pressures in excess of 100 psi, steep slopes greater than 40 percent through a valley, and wide gaps between pulled joints.
	9:00-9:10am	Break	
#9	9:10-10:10am	Title:	Don't Be a Stuck PIG!
		Presenter:	Molly Nause-McCord and Jacobs Eng (potential partner)
		Moderators:	Company/Organization: City of Portland, BES
		Brief Description:	Have you ever wondered, whats UP with my wastewater pressure pipes? Well, BES in the City of Portland is working on just this. Since 2017 Molly has been working with millwrights, consultants, and aging infrastructure to get this information
	10:10-10:20am	Break	
#10	10:20-11:20am	Title:	Yikes! More Clogged Pipes? Using Social Marketing to Improve System Outcomes
		Presenter:	Rachel Garrett and Lynn Knapp
		Moderators:	Company/Organization: Brown and Caldwell, Cascadia Consulting Group
		Brief Description:	Utilities are overwhelmed with competing needs, from system maintenance to capital projects. To compound the issue, system users often contribute to existing problems through detrimental behaviors such as rinsing FOG down drains and flushing wipes and trash. How can utilities not only increase awareness around problematic behaviors, but motivate behavior change? In this session, Rachel Garrett of Brown and Caldwell and Lynn Knapp of Cascadia Consulting Group will explore how applying a Community-Based Social Marketing (CBSM) framework can help motivate behavior change. CBSM can be a useful tool in many scenarios that utilities commonly face.
			Bio: Rachel Garrett is a Strategic Communications Specialist for Brown and Caldwell, who recently spent 8 years working for Seattle Public Utilities managing wastewater and stormwater-focused community engagement programs and communications. She has a BA in Spanish and an MA in Environmental Policy with a focus in Water Resource Management. Lynn Knapp is a Senior Associate at Cascadia Consulting Group, managing sustainability and behavior change projects for clients such as Seattle Public Utilities. She has a BS in Environmental Science and minor in Sociology from Huxley College of the Environment at Western Washington University.
	11:20-11:30am	Break	
#11	11:30-12:30pm	Title:	Pipeline Renewal & Replacement Targets Lower Risk and O&M Demands
		Presenter:	Rob Peacock, PE
		Moderators:	Company/Organization: Kennedy Jenks
		Brief Description:	The City of Tigard has a goal to replace all water system pipe every 100 years. In 2022 the City used History and GIS to develop an algorithm to assess risk and rank pipeline replacement priority, then aligned with human intelligence to develop a 15-year plan to replace 44 miles of pipe, including the majority of the City's aging cast iron pipe. This presentation reviews the intersection of Council goals, Staff anecdotes, and data analysis in development of an ongoing Capital Improvement Plan.
	12:30-1:00pm	Lunch	
#12	1:00-2:00pm	Title:	Utilizing Acoustics to Enable Condition Based Maintenance in Gravity Sewer Systems
		Presenter:	Gene Hallum
		Moderators:	Company/Organization: InfoSense, Inc.
		Brief Description:	This presentation provides an overview of using transmissive acoustics to rapidly screen small diameter gravity-sewer lines before deploying cleaning resources. The technology is called Sewer Line Rapid Assessment Tool, or SL-RAT, and used sound waves to quickly assess for blockages. The SL-RAT can provide an assessment in three minutes or less, meaning a two-person crew can inspect 10-20,000 feet per day.
	2:00-2:10pm	Break	
#13	2:10-3:10pm	Title:	Doing More With Less: Adaptable Tools for Prioritizing System Repairs
		Presenter:	Scott Duren, PE and Adam Donald, PE
		Moderators:	Company/Organization: Water Systems Consulting
		Brief Description:	Ongoing inspections and system data collection tools are rendering static master plans inadequate for utility planning. Additionally, inadequate historical spending in infrastructure has left a rising need for investment with limited budgets. Living toolsets that are continuously updated are necessary to meet the evolving needs. This presentation will showcase a range of prioritization tools, from simple GIS-based systems to more complex quantified risk comparisons to augment traditional master planning with tools sets that automatically adapt to updates in condition data.
	3:10-3:20pm	Break	
#14	3:20-4:20pm	Title:	Data, Analysis and the Future of I & C
		Presenter:	Jen Murphy

	Moderators:	Company/Organization:	Parametrix
		Brief Description:	NEED INFO
	Hunter BD		
	4:20-4:30pm	Closing Remarks/Daily Wrap Up	
THURSDAY	June 29		
	7:30-7:45am	Event Opens: Q&A, Getting Started	
	7:45-8:00am	Opening Announcements	
#15	8:00-9:00am	Title:	How to Be Successful in the Wastewater Business
		Presenter:	Michelle Beason, PE
	Moderators:	Company/Organization:	National Plant Services
		Brief Description:	NEED INFO
	9:00-9:10am	Break	
#16	9:10-10:10am	Title:	Siphon Cleaning and Inspection Tips and Tricks
		Presenter:	Michelle Beason, PE
	Moderators:	Company/Organization:	National Plant Services
		Brief Description:	Sanitary sewer siphons are the most challenging assets to inspect as they are designed to be continuously full of water, they have little to no redundancy, and with typically very high flow volumes. They are also located deep underground as they are designed to carry wastewater under roadways, channels, and water bodies, so dewatering and cleaning can be difficult. The construction and operation of inverted siphons will be explained, then an in-depth explanation of the strategies and troubleshooting.
	10:10-10:20am	Break	
#17	10:20-11:20am	Title:	Package Lift Stations for FAST Retrofits
		Presenter:	Rich Owens
	Moderators:	Company/Organization:	Owens Pump
	Hunter BD	Brief Description:	How to upgrade your lift station with minimal downtime and retrofit. What kind of equipment is available, and will it fit your specific station for quick retrofit and upgrade
	11:20-11:30am	Break	
#18	11:30-12:30pm	Title:	Solutions for Pump Plugging
		Presenter:	Rich Owens
	Moderators:	Company/Organization:	Owens Pump
	Hunter BD	Brief Description:	How to prevent plugging in wastewater collections. What are the options in equipment, or how to keep your pump from plugging. Equipment features and advantages and disadvantages.
	12:30-1:30pm	Lunch	
	1:30-2:30pm	Title:	Energy Efficiency Optimization for Water and Wastewater Systems.
#19		Presenter:	Kelson Redding
	Moderators:	Company/Organization:	Energy Trust of Oregon
		Brief Description:	Do the best you can with what you have, then upgrade where it is most beneficial and cost effective. The best approach to optimizing energy efficiency is to first consider how can we maximize the performance of the existing systems; only after these options are understood can we begin to consider capital efficiency improvements. This presentation, brought to you by Energy Trust of Oregon, will consider the most common opportunities to optimize water and wastewater facility energy use with both operations and maintenance practices and capital equipment upgrades. Additionally, we will cover resources that you can tap into to help in the process and attain incentive dollars for improvements.
		Brief Description:	Kelson Redding, P.E., C.E.M. Kelson is an experienced problem solver who uses his broad experience with industrial systems as both a professional engineer and a mechanic in pursuit of energy savings projects. He has worked with many water utilities in Oregon on behalf of Energy Trust of Oregon and has found that this is one of his favorite industries to work with because of the good people and level of opportunity.
	2:30-2:40pm	Break	
#20	2:40-3:40 pm	Title:	Topic TBD
		Presenter:	Sarah Liljefelt
	Moderators:	Company/Organization:	Dunn Carney LLP
		Brief Description:	NEED INFO
			Bio: Sarah Liljefelt is an attorney specializing in water rights, real property issues, municipal law, and water utility law. This of course includes easements and other access rights, which is the subject of her presentation today.
	3:40-3:50pm	Break	
#21	3:50-4:50pm	Title:	The Sewer Whisperer: "Listen Carefully, Your Sewer is Talking to You"
		Presenter:	Brogan Quist
	Moderators:	Company/Organization:	Smart Cover Systems

1		Brief Description:	This presentation reviews how customers can adopt unique and patented monitoring technology, which gives them data in the field that they did not have before. The monitors mount directly on the manhole covers - thereby eliminating the need for a confined space entry - and use ultrasonic sensors to monitor water levels. The remote monitors send data to a secure customer website, as well as sending out alarms, advisories, and maintenance alerts directly to the customer.
2			Bio: Brogan Quist has a Bachelors of Science Degree from Westmont College, located in Santa Barbara, CA. He has over 10 years of experience in the wastewater and technology sector. He first started in the industry by installing and maintaining monitoring devices in the field, beginning in 2008. He has completed over 500 site visits, troubleshooting, and installations. Currently, he works with customers in the Western region of the United states to help solve their wastewater/water collection system challenges by providing remote monitoring systems.
	4:50-5:00pm	Closing Remarks/Daily Wrap Up	
Track B Wastewater Operations: Basics & Beyond, Safety, Asset Management/ Technology/ Activated Sludge			
TUESDAY	June 27		
	7:30-7:45am		Event Opens: Q&A, Getting Started
	7:45-8:00am		Opening Announcements
#1	8:00-9:00am	Title:	Empowering Operators: Harnessing AI-Driven Tools Amid Challenges in Wastewater Treatment
		Presenter:	Keaton Larson Lesnik
		Moderators:	
		Company/Organization:	Maia Analytica
1		Brief Description:	Integrating artificial intelligence (AI) into the water and wastewater treatment sector presents a unique opportunity to enhance outcomes, despite the numerous challenges associated with its implementation. This discussion explores the development and adoption of AI-powered tools tailored for operators, while acknowledging the inherent complexities in refining and incorporating these technologies into daily operations. The focus is on user-friendly systems designed to optimize processes and streamline tasks. Emphasis is placed on the crucial role operations staff play in capitalizing on the opportunities offered by these tools, propelling the water sector towards a more innovative and resilient future
2			Dr. Keaton Lesnik, PhD, is the Co-Founder and Principal Engineer at MAIA Analytica, where he spearheads the research, development, and implementation of data-driven software platforms aimed at enhancing operational decision-making and workforce training in the water and wastewater industries. Dr. Lesnik obtained his PhD from Oregon State University, where he began his pioneering work in the application of machine learning to model complex environmental biotechnologies. With over 12 years of experience as a technical expert in wastewater projects, Dr. Lesnik has successfully deployed a number of AI pilots across the country, demonstrating his commitment to driving innovation in the water sector
	9:00-9:10am	Break	
#2	9:10-10:10am	Title:	Upgrading wastewater lagoons for cold-weather ammonia removal
		Presenter:	Brady O'Leary
		Moderators:	
		Company/Organization:	Triplepoint Environmental
1		Brief Description:	Wastewater lagoons were generally not designed for efficient or effective ammonia removal. With new and stringent ammonia regulations coming into enforcement around the country, many lagoon system operators are finding themselves out of compliance. This presentation will discuss why lagoon systems fail to nitrify, what can be done to improve nitrification in a lagoon, and will compare technologies to guarantee treatment that can meet even the strictest of limits: Non-detect down to water temperatures of 1C.
2		Bio	Brady O'Leary is a co-founder of Triplepoint Environmental, a company focusing exclusively on wastewater lagoons. He
	10:10-10:20am	Break	
#3	10:20-11:20am	Title:	BNR Process Improvements at LOTT
		Presenter:	Jen Murphy, Engineer
		Moderators:	
		Company/Organization:	Parametrix Engineering
1		Brief Description:	NEED INFO
2			
	11:20-11:30am	Break	
#4	11:30-12:30pm	Title:	Emergency Preparedness... Are You Ready?
		Presenter:	Ronnie Mompellier, Emergency Manager
		Moderators:	
		Company/Organization:	City of Portland, BES
1		Brief Description:	Preparing for an emergency takes planning and organization. This presentation will review emergency planning and preparation methods.
2			
	12:30-1:00pm	Lunch	
#5	1:00-2:00pm	Title:	Introduction to Controls Systems
		Presenter:	Jen Murphy, Engineer
		Moderators:	
		Company/Organization:	Parametrix Engineering
1	Hunter BD	Brief Description:	NEED INFO
2			
	2:00-2:10pm	Break	
#6	2:10-3:10pm	Title:	Real Time Process Control
		Presenter:	Jen Murphy, Engineer
		Moderators:	
		Company/Organization:	Parametrix Engineering
1		Brief Description:	NEED INFO
2			
	3:10-3:20pm	Break	
#7	3:20-4:20pm	Title:	Data, Analysis and the Future of I & C
		Presenter:	Jen Murphy, Engineer
		Moderators:	
		Company/Organization:	Parametrix Engineering

1		Brief Description:	NEED INFO
2			
	4:20-4:30pm	Closing Remarks/Daily Wrap Up	
WEDNESD 06/28/2023			
	7:30-7:45am	Event Opens: Q&A, Getting Started	
	7:45-8:00am	Opening Announcements	
#8	8:00-9:00am	Title:	Large Diameter Structural Pressure Pipe Rehabilitation: 30-inch Tight-fit HDPE Case Study
		Presenter:	Dan Buonadonna
		Moderators:	Jacobs Engineering Group Inc
1		Company/Organization:	Jacobs Engineering Group Inc
		Brief Description:	Case study for 1.5 miles of 30-inch and 27-inch diameter concrete pipe rehabilitated with tight-fit HDPE lining. Challenges included pressures in excess of 100 psi, steep slopes greater than 40 percent through a valley, and wide gaps between pulled joints.
2			
	9:00-9:10am	Break	
#9	9:10-10:10am	Title:	Your DEQ Online
		Presenter:	Jessica Lorenz
		Moderators:	DEQ
1		Company/Organization:	DEQ
		Brief Description:	The Wastewater Operator Certification program transitioned in early March 2023 to a new cloud-based system called Your DEQ Online. This tutorial will provide a demonstration of how to register and set up an account in Your DEQ Online.
2			Jessica Lorenz has over 15 years of experience working with organizations to promote learning and research. In her current role as a trainer for Oregon DEQ, she serves the regulated community by providing training, resources and outreach for Your DEQ Online. She has doctorate in education with a concentration in organizational leadership and development.
	10:10-10:20am	Break	
#10	10:20-11:20am	Title:	DEQ Operator Certification Basics
		Presenter:	Kimi Grzyb
		Moderators:	DEQ
1		Company/Organization:	DEQ
		Brief Description:	Content will cover how to get and stay certified, reciprocity, and opportunity for program feedback/questions.
2			Kimi is the coordinator of the DEQ OpCert Program
	11:20-11:30am	Break	
#11	11:30-12:30pm	Title:	Pump Performance Assessment: A Panacea for Predictive Maintenance?
		Presenter:	Jen Murphy, Engineer
		Moderators:	Parametrix Engineering
1		Company/Organization:	Parametrix Engineering
		Brief Description:	NEED INFO
2			
	12:30-1:00pm	Lunch	
#12	1:00-2:00pm	Title:	Pumping to Greater Heights- City of Portland Collaborative 3D BIM Driven Pump Station Upgrades
		Presenter:	Jen Murphy, Engineer
		Moderators:	Parametrix Engineering
1		Company/Organization:	Parametrix Engineering
		Brief Description:	A presentation about a City of Portland pump station upgrade project that benefited from 3D modeling to make design decisions.
2			
	2:00-2:10pm	Break	
#13	2:10-3:10pm	Title:	An Incident Investigation - at the City of Portland WWTP
		Presenter:	Lauren Wilcox, HSSE Manager
		Moderators:	City of Portland, BES
1		Company/Organization:	City of Portland, BES
		Brief Description:	Review of a near miss LOTO safety incident, to include a root cause analysis and corrective action plan as it relates to construction and operations.
2			
	3:10-3:20pm	Break	
#14	3:20-4:20pm	Title:	Too Hot! NPDES Temperature Mitigation
		Presenter:	Jen Murphy, Engineer
		Moderators:	Parametrix Engineering
1		Company/Organization:	Parametrix Engineering
		Brief Description:	NEED INFO
2		Hunter BD	
	4:20-4:30pm	Closing Remarks/Daily Wrap Up	
THURSDA June 29			
	7:30-7:45am	Event Opens: Q&A, Getting Started	
	7:45-8:00am	Opening Announcements	
#15	8:00-9:00am	Title:	Condition Assessment 1, 2, 3
		Presenter:	Mia Sabonavic, Brittany Downing, Ricky Davis
		Moderators:	City of Portland, BES Condition Assessment Team
1		Company/Organization:	City of Portland, BES Condition Assessment Team
		Brief Description:	How the City of Portland Columbia Boulevard WWTP has developed their Condition Assessment Program.
2			
	9:00-9:10am	Break	
#16	9:10-10:10am	Title:	Real Time Equipment Monitoring and Condition Assessment
		Presenter:	Mia Sabonavic, Brittany Downing, Ricky Davis
		Moderators:	City of Portland, BES Condition Assessment Team
		Company/Organization:	City of Portland, BES Condition Assessment Team

1		Brief Description:	Hands on demonstration of equipment monitoring connected to condition assement (may need space outside).
2			
	10:10-10:20am	Break	
#17	10:20-11:20am	Title:	Leveraging Data for Reporting and Decision Making
		Presenter:	Mia Sabonavic, Brittany Downing, Ricky Davis
	Moderators:	Company/Organization:	City of Portland, BES Condition Assessment Team
1	Hunter BD	Brief Description:	From data collection and information obtained through condition assessment, learn how to create reports to support asset management decision making.
2			
	11:20-11:30am	Break	
#18	11:30-12:30pm	Title:	Optimizing Data Management through eRIS
		Presenter:	Tim Kruse
	Moderators:	Company/Organization:	SUEZ Smart & Environmental Solutions
1	Hunter BD	Brief Description:	A tool that can help pull data from multiple systems and provide information that can be easily analyzed and utilized to make operational decisions
2			
	12:30-1:30pm	Lunch	
#19	1:30-2:30pm	Title:	3D Virtual Reality - Project Design
		Presenter:	Jen Murphy, Engineer
	Moderators:	Company/Organization:	Parametrix Engineering
1		Brief Description:	A hands on demonstration of 3D modeling to vizualize, build and manage projects building a true virtual reality experience.
2		Brief Description:	
	2:30-2:40pm	Break	
#20	2:40-3:40 pm	Title:	Foundations of Activated Sludge
		Presenter:	Mark Walter, Operations and Maint Specialist
	Moderators:	Company/Organization:	Water Dude Solutions
1		Brief Description:	Will present process control testing and analysis best practices for activated sludge operation. I identify key parameters and expected ranges. Discuss operational response options to out of range parameters. utilize case studies and data analysis to illustrate how tests are interpreted.
2			
	3:40-3:50pm	Break	
#21	3:50-4:50pm	Title:	Troubleshooting a Process Upset: City of Portland Columbia Boulevard WWTP
		Presenter:	Monica Stone, Process Control Supervisor
	Moderators:	Company/Organization:	City of Portland, BES
1		Brief Description:	An overview of the Columbia Boulevard WWTP, high rate secondary process and a recounting of a process upset during construction and a chemical supply shortage. The presentation will cover contributing factors, corrective actions and lessons learned.
2			
	4:50-5:00pm	Closing Remarks/Daily Wrap Up	

Track C Source Control/Pollution Prevention: Industrial

TUESDAY	June 27		
	7:30-7:45am	Event Opens: Q&A, Getting Started	
	7:45-8:00am	Opening Announcements	
#1	8:00-9:00am	Title:	Empowering Operators: Harnessing AI-Driven Tools Amid Challenges in Wastewater Treatment
		Presenter:	Keaton Larson Lesnik
	Moderators:	Company/Organization:	Maia Analytica
1		Brief Description:	Short Description: Integrating artificial intelligence (AI) into the water and wastewater treatment sector presents a unique opportunity to enhance outcomes, despite the numerous challenges associated with its implementation. This discussion explores the development and adoption of AI-powered tools tailored for operators, while acknowledging the inherent complexities in refining and incorporating these technologies into daily operations. The focus is on user-friendly systems designed to optimize processes and streamline tasks. Emphasis is placed on the crucial role operations staff play in capitalizing on the opportunities offered by these tools, propelling the water sector towards a more innovative and resilient future.
2			Dr. Keaton Lesnik, PhD, is the Co-Founder and Principal Engineer at MAIA Analytica, where he spearheads the research, development, and implementation of data-driven software platforms aimed at enhancing operational decision-making and workforce training in the water and wastewater industries. Dr. Lesnik obtained his PhD from Oregon State University, where he began his pioneering work in the application of machine learning to model complex environmental biotechnologies. With over 12 years of experience as a technical expert in wastewater projects, Dr. Lesnik has successfully deployed a number of AI pilots across the country, demonstrating his commitment to driving innovation in the water sector.
	9:00-9:10am	Break	
#2	9:10-10:10am	Title:	Protecting our Waterways: How to Leverage Microbial Source Tracking for Fecal Contamination Managemen
		Presenter:	Scott Harding
	Moderators:	Company/Organization:	LuminUltra Technologies
1		Brief Description:	Fecal contamination can wreak havoc on your waterways, resulting in fines, health risks, economic losses, and reputational damage. Identifying the source of contamination through Microbial Source Tracking (MST) can help reduce remediation times and costs, and allows you to take proactive measures to prevent future contamination. We discuss understand how MST works, when you should consider MST testing, and how to build an MST testing plan.
2			

	10:10-10:20am	Break	
#3	10:20-11:20am	Title:	A City with a Drink(ing) Problem
		Presenter:	Leah Rohan
	Moderators:	Company/Organization:	Walla Walla
1		Brief Description:	The City of Walla Walla is facing capacity issues at its wastewater treatment plant, requiring a multi-pronged approach. This presentation will take you through the multi-year enforcement of a juice processor and the decision to create a high-strength rate to ensure winemaking facilities, breweries, and distilleries pay for their share of the upgrades.
2			
	11:20-11:30am	Break	
#4	11:30-12:30pm	Title:	SCAP: A Public-Private Partnership for Catch Basin Maintenance
		Presenter:	Eric Lambert; Christa Britton
	Moderators:	Company/Organization:	Clark County; City of Gresham
1		Brief Description:	Private catch basins are one of the first lines of defense in preventing pollutants from reaching MS4s and local waterbodies. They require regular maintenance to remove accumulated sediment, but dramatic cost variabilities and the time needed to find and research companies can be barriers for businesses. The Stormdrain Cleaning Assistance Program (SCAP) overcomes these barriers by partnering with a vendor to offer a low set price and creating a simple form where businesses can sign up for maintenance. SCAP is a public-private partnership model with minimal costs to jurisdictions who benefit from getting data on catch basins cleaned and having a valuable tool to offer for getting maintenance done.
2			
	12:30-1:00pm	Lunch	
#5	1:00-2:00pm	Title:	The Application of Analysis, Planning and the Incident Command System Structure in the NW to Support Emergency Response of Emerging Threats to Oregon's Waterways
		Presenter:	Don Pettit
	Moderators:	Company/Organization:	ODEQ
1		Brief Description:	Oregon's waters and waterways, long threatened by typical hazardous substances (petroleum fuels, solvents, metals, etc.), are now being threatened by new products moved to and/or through the state. As Oregon has attempted to better understand the risks due to the volume of transport, storage and use of these products, the very nature of the Incident Command structure used in the PNW for over 25 years is being challenged. These threats and challenges come at a time when Oregon is also trying to plan for and mitigate risks from a Cascadia Subduction Zone earthquake. This presentation will cover the full range of new and newly identified risks to Oregon's lands, skies and waters from incidental hazardous material releases, and what Oregon Emergency Response Planners are doing to address these new challenges. Case studies will be used to highlight how planning leads to better response outcomes, and where additional effort is needed.
2			
	2:00-2:10pm	Break	
#6	2:10-3:10pm	Title:	Roadside Emergencies & Hazard Awareness
		Presenter:	Dustin Ross
	Moderators:	Company/Organization:	ODOT
1		Brief Description:	Public Workers are on the roads all day, it's just a matter of time before you could be first on scene with one of these hazards, will you know what to do? This session will cover the awareness of the many unexpected hazards you could come across while working on our roadways; motor vehicle crashes, Haz-mat spills, suspicious persons, crime scenes, etc.
2			Bio: Dustin Ross is a training specialist for ODOT.
	3:10-3:20pm	Break	
#7	3:20-4:20pm	Title:	Managing Wastewater & Stormwater Field Operations During Challenging Times
		Presenter:	Kyle Bean, Field Operations Supv.
	Moderators:	Company/Organization:	Water Environment Services
1		Brief Description:	Senior staff turnover, upgrading GIS inventories and the Maintenance Management System, Covid-19 shutdowns, wildfires and severe weather have posed significant challenges to wastewater and stormwater field operations. Learn how Clackamas Water Environment Services rose to the occasion to maintain service to our customers.
2			
	4:20-4:30pm	Closing Remarks/Daily Wrap Up	
WEDNESD 06/28/2023			
	7:30-7:45am	Event Opens: Q&A, Getting Started	
	7:45-8:00am	Opening Announcements	
#8	8:00-9:00am	Title:	Large Diameter Structural Pressure Pipe Rehabilitation: 30-inch Tight-fit HDPE Case Study
		Presenter:	Dan Buonadonna
	Moderators:	Company/Organization:	Jacobs Engineering Group Inc
1		Brief Description:	Case study for 1.5 miles of 30-inch and 27-inch diameter concrete pipe rehabilitated with tight-fit HDPE lining. Challenges included pressures in excess of 100 psi, steep slopes greater than 40 percent through a valley, and wide gaps between pulled joints.
2			
	9:00-9:10am	Break	
#9	9:10-10:10am	Title:	Stress Testing the Sandy Wastewater Treatment Plant
		Presenter:	Keith Scranton
	Moderators:	Company/Organization:	Veolia

	1	Brief Description:	Keith Scranton is a graduate of the Water & Environmental Technology program at Clackamas Community College and has a B.S. in Biochemistry from Portland State University. He began working with Veolia at the City of Sandy Wastewater and Drinking Water Systems in November of 2020 as an Operations and Maintenance Technician. Since then, he has operated the systems through the planning and construction phases of the CM/GC upgrade project, and he is regularly involved in the discussions between the city, construction crew, and engineering team. Currently, he is the Lead Operations and Maintenance Technician with a team of two other operators at full staff.
	2		
	10:10-10:20am	Break	
#10	10:20-11:20am	Title:	Full-scale Demonstration of Energy and Carbon-efficient BNR
		Presenter:	Dr. Pusker Regmi
	Moderators:	Company/Organization:	Brown and Caldwell
	1	Brief Description:	Abstract: The 26 mgd Seneca WRRF employs a 4-stage Bardenpho process, secondary clarifiers, and filters to meet stringent nutrient limits (total N of 4 mgN/L, total P of 0.27 mgP/L). One of the five process trains was converted to a test train that included the following changes:1) pumping of mixed liquor recycle (MLR) reduced from 400% to 200% of the influent flow; 2) ammonia-based aeration control (ABAC) to maintain dissolved oxygen (DO) levels in all aerated zones based on real-time ammonia probe readings; and 3) methanol addition discontinued. The ABAC operation uses real-time DO and ammonia measurements to adjust blower shutdown and valve positioning to meet the setpoints for the system. Real-time DO, ammonia, and nitrate data were tracked. In addition, weekly profiles of key N, P, and carbon compounds were measured throughout the biological test and control trains to document the complex reactions occurring throughout the process. Batch activity testing was also conducted to quantify the health of the microorganism activity for the key N and P removal pathways. Based on weekly profiles, the average test train effluent ammonia was less than 0.2 mgN/L, TIN was 1.9 mgN/L, and orthophosphate was less than 0.2 mgP/L. SND and post-anoxic denitrification were responsible for enhanced nitrogen removal in the test train. A high degree of P uptake occurred even at low DO conditions, resulting in very low effluent P. The low DO operation (~0.3 mg/L) achieved by ABAC resulted in SND and significant aeration savings compared to the other trains operated at higher constant DO (~1.5 mg/L). The test train removed > 4 mgN/L via denitrification in the post-anoxic zones without supplemental carbon and achieved similar effluent nitrate concentrations compared to the other trains, which do require supplemental carbon.
	2		Speaker Bio: Dr. Regmi is a wastewater innovation leader at Brown and Caldwell. He is a board-certified environmental engineer named 40 Under 40 awardee in 2022 by The American Academy of Environmental Engineers & Scientists. Pusker is credited with pioneering advanced biological nutrient removal technologies. He is the author of over 50 peer-reviewed publications and has served as principal investigator for multiple Water Research Foundation projects. He is currently a vice-chair of the WEF research and innovation symposium and vice-chair of WEF Research and Innovation for Strengthening Engagement (RISE).
	11:20-11:30am	Break	These changes are estimated to reduce energy and chemical costs (~\$500K/yr for the whole plant) resulting in decreased carbon footprint; and reduced economic impact to WSSC Water ratepayers. The results are very promising, and plans are underway to expand operation to the whole plant and implement at the rest of WSSC Water's WRRFs.
#11	11:30-12:30pm	Title:	Novel Food Waste Pre-Processing and Systematic Co-Digestion to Enhance Biogas Production and Improve Solids Treatment
		Presenter:	Bhargavi Subramanian
	Moderators:	Company/Organization:	Kennedy and Jenks
	1	Brief Description:	
	2		Dr. Bhargavi (Gavi) Subramanian is a Staff Scientist in the Applied Research Group based out of the San Francisco Bay Area offices of Kennedy/Jenks Consultants. Her focus areas include co-digestion of organic wastes, digestion operations optimization, digester foaming guidance, pilot and full-scale wastewater studies. Gavi regularly works with wastewater utilities on optimization of digester operations. She has nearly 5 years of experience in research and technology development of wastewater treatment. Gavi earned her Ph.D. in Environmental Engineering from Illinois Institute of Technology, Chicago.
	12:30-1:00pm	Lunch	
#12	1:00-2:00pm	Title:	Garnering stakeholder understanding and support for wastewater infrastructure projects
		Presenter:	Shelly Parini-Runge
	Moderators:	Company/Organization:	WES

1		Brief Description:	<p>Building Support for a Clean Water Future</p> <p>Background: Clackamas Water Environment Services (WES) provides clean water services to more than 200,000 people within Clackamas County. WES serves seven cities, plus urban and rural unincorporated areas. After the recent consolidation of sewer and surface water districts, WES created a new brand to unify its services around its shared mission to protect public health and the environment, and the region's economic vitality.</p> <p>Issue: The WES regionalized story is complex and often misunderstood. In addition, today's clean water utilities face a broad range of complex challenges, including rising costs and affordability, aging infrastructure, shifting regulatory requirements, enhanced customer expectations, competing stakeholder demands, and climate challenges. In addition, we're invisible.</p> <p>Approach: In 2021, WES planned and delivered a robust community engagement and discovery process called the Clean Water Exchange (Exchange). Participants in the Exchange ranged from stakeholders vested in WES' future, programs, and services to ratepayers with less existing familiarity with us and our services. To steer the process WES developed the following goals: Strengthen customer and stakeholder understanding,</p> <ul style="list-style-type: none"> · Create new clean water partnerships and advocates, and · Build trust through enhanced connections. <p>In response to the Exchange four strategic initiatives were created. The strategies were used to develop a Communications and Engagement Roadmap which will help WES chart a course for continuous improvement with its customers and stakeholders with the objective of engendering support for current and future watershed projects and programs. In addition, the Roadmap paints a picture for a more connected and inclusive future with the many diverse stakeholders, communities and people WES serves.</p> <p>Learn how your agency can adapt WES' model to chart</p>
2			
	2:00-2:10pm	Break	
#13	2:10-3:10pm	Title:	Influent Pump Station Flow Equalization at the Rock Creek AWRRF
		Presenter:	Chris Maher
	Moderators:	Company/Organization:	Clean Water Services
1		Brief Description:	Lesson covers the development and implementation of influent flow equalization, including data analytics, programming, and plant benefits such as energy efficiency, equipment runtime, process stability. and monitoring of collection system conditions.
2			Chris has 20 years experience as Certified Wastewater Treatment, Operator. Operation of advanced activated sludge and biological nitrogen and phosphorus removal processes. Chris has a BS in Chemistry, Colorado State University; MSEE, Illinois Institute of Technology. He is an Oregon DEQ Wastewater System Operator, Treatment, Grade IV, 12610.
	3:10-3:20pm	Break	
#14	3:20-4:20pm	Title:	Process Configurations for Biological Nutrient Removal
		Presenter:	Chris Maher
	Moderators:	Company/Organization:	Clean Water Services
1		Brief Description:	Lesson covers the fundamental biology of biological nutrient removal (phosphorus, ammonia, nitrate) and steps through the history and development of process flow diagrams and what they are meant to accomplish, in BNR. (i.e. MLE, A/O, A2O, Bardenpho, West Bank, SSEBPR etc.)
2	Hunter BD		Chris has 20 years experience as Certified Wastewater Treatment, Operator. Operation of advanced activated sludge and biological nitrogen and phosphorus removal processes. Chris has a BS in Chemistry, Colorado State University; MSEE, Illinois Institute of Technology. He is an Oregon DEQ Wastewater System Operator, Treatment, Grade IV, 12610
	4:20-4:30pm	Closing Remarks/Daily Wrap Up	
THURSDAY	June 29		
	7:30-7:45am	Event Opens: Q&A, Getting Started	
	7:45-8:00am	Opening Announcements	
#15	8:00-9:00am	Title:	Transformation through Innovation: Sedron's Varcor
		Presenter:	Tim Evenson
	Moderators:	Brief Description:	Sedron creates disruptive technologies that are fundamentally shifting the world from waste disposal to resource recovery. The Varcor is a liquid waste handling system that creates pathogen-free byproducts: clean water, class A(EQ) dry solids, and aqueous ammonia. Multiple Varcors are running across the country processing different waste streams including septage, biosolids, manure, and stillage. This energy efficient technology takes up a much smaller footprint than other waste processing methods and can be incorporated into WWTPs.
1			Prior to joining Sedron as the VP of Sales, Tim worked in the healthcare industry for over 18 years and the equipment leasing/financing industry for over 20 years. He has built and led teams at several companies, selling and managing deals valued in excess of \$7 Billion. He views his career progression as going from focusing on financial health to individual physical health to the health of the planet.
2			
	9:00-9:10am	Break	
#16	9:10-10:10am	Title:	Compliance Pitfalls
		Presenter:	Johnny Leavy
	Moderators:	Company/Organization:	City of Medford

1		Brief Description:	How to avoid pitfalls of commonly overlooked NPDES permit requirements.
2			
	10:10-10:20am	Break	
#17	10:20-11:20am	Title:	Control Loop Descriptions, Process and Instrumentation Drawings, and Programmable Logic Controllers usage in Wastewater Operations
		Presenter:	Joel Borchers
	Moderators:	Company/Organization:	Clean Water Services
1	Hunter BD	Brief Description:	Abstract: Control Loop Descriptions and Process and Instrumentations are two types of drawings that assist in building treatment systems in wastewater treatment plants. Their usefulness however continues long after construction is finished and Operations begins. This presentation focuses on what Control Loop Descriptions are, and how they can be used into the future. We then cover the functions of Programmable Logic Controllers (PLCs) and where they sit in the control of equipment in the treatment plant.
2			Joel Borchers, Senior Operations Analyst 35 years of experience in which I've assisted in the Design, Building and Operating of Wastewater Treatment Facilities. Grade IV Waste Water License Certification Part-time Instructor at Clackamas Community College
	11:20-11:30am	Break	
#18	11:30-12:30pm	Title:	Albany's WRF Dewatering and Compost Upgrade
		Presenter:	Brian Stevens
	Moderators:	Company/Organization:	City of Albany
1	Hunter BD	Brief Description:	This lesson will chronicle the history behind the need for a composting project, compost facility construction, facility start up, and composting basics.
2			Bio: Brian Stevens is the Treatment Plant Supervisor for the City of Albany Water Reclamation Facility. Brian graduated from Linn Benton Community College with an Associate of Applied Science in Water/Wastewater Technology. He has spent his fifteen-year career working in various capacities in the water, wastewater, and industrial wastewater fields. Most of his professional career was spent with the City of Hermiston's Recycled Water Department assisting in day-to-day operations and startup of a state-of-the-art membrane bio reactor. He spent four years in the education sector as contracted faculty and department co-chair of the Water, Environment, and Technology Department at Linn Benton Community College. Brian has been with the City of Albany as WRF Treatment Plant Supervisor since August 2021, overseeing the operation of the Water Reclamation Facility and the associated man-made treatment wetlands Talking Water Gardens.
	12:30-1:30pm	Lunch	
#19	1:30-2:30pm	Title:	The Biology of Nitrogen Removal in Wastewater
		Presenter:	Dotti Ramey
	Moderators:	Company/Organization:	City of Vancouver
1		Brief Description:	The presentation will provide an introduction into the biology behind nitrogen removal in wastewater, focusing on the similarities and difference between the biological communities we need to reliably remove nitrogen. We'll focus on general needs of the bacterial communities and introduce the concepts and terms that engineers and designers use to design and troubleshoot biological nitrogen removal systems.
2			Dotti Ramey is a Professional Engineer with over 30 years' experience in environmental engineering. She is currently works with the Vancouver WA Wastewater Engineering group, and has worked in environmental fields of wastewater, industrial pretreatment, onsite wastewater, and hazardous waste/materials. In 2017 Dotti completed her Ph.D. at the CO School of Mines, focusing her research on water reclamation in small flows and decentralized urban settings. While at Mines, she operated bench and pilot scale wastewater treatment systems to study long term feasibility for recovering energy, nutrients, and water, while reducing energy requirements.
	2:30-2:40pm	Break	
#20	2:40-3:40 pm	Title:	Struvite: Methods Of Prevention, Removal And Recovery
		Presenter:	Brett Laney
	Moderators:	Company/Organization:	Clean Water Services
1		Brief Description:	This presentation will cover why and where struvite forms, and common strategies for prevention, removal and recovery
2			
	3:40-3:50pm	Break	
#21	3:50-4:50pm	Title:	Lessons Learned From A Decade Of Phosphorus Recovery At Clean Water Services' WRRF
		Presenter:	Brett Laney
	Moderators:	Company/Organization:	Clean Water Services
1		Brief Description:	This session will cover initial assumptions about Ostara's technology vs 10 years of operating performance, the unexpected challenges, and how we've addressed them.
2			
	4:50-5:00pm	Closing Remarks/Daily Wrap Up	
ADULT CPR AED ADD ON LAST DAY 30 \$			
THURSDAY	June 29		
	7:30-7:45am		Event Opens: Q&A, Getting Started
	7:45-8:00am		Opening Announcements
#15	8:00-9:00am	Title:	Adult CPR/AED via the American Red Cross
		Presenter:	
	Moderators:	Brief Description:	
1			
2			
	9:00-9:10am	Break	
#16	9:10-10:10am	Title:	
		Presenter:	Adult CPR/AED via the American Red Cross for Wastewater Operators facilitated by Lisa Hillyard \$30 Certificate Cost (Each of Names) onsite Lisa Hillyard is an Authorized Outreach OSHA Trainer in both
	Moderators:	Company/Organization:	

1		Brief Description:	Certificate Cost (Cash or Venmo) onsite Lisa Hillyard is an Authorized Outreach OSHA Trainer in both General Industry and Construction. She has been teaching Industrial Safety for over 15 years. Lisa has been employed with Clackamas Community College since 2014. During the first years of the COVID pandemic, Lisa completed a degree in Environmental Health and Safety and became interested in wastewater treatment facilities and their operations. Lisa is offering an opportunity for participants to become certified in adult AED/CPR for \$30, which is the cost of the certificate from American Red Cross. Please bring cash or venmo onsite. Lisa Hillyard has taught CPR/AED since 2008.
2			
	10:10-10:20am	Break	
#17	10:20-11:20am	Title:	
		Presenter:	
		Moderators:	
1	Hunter BD	Company/Organization:	
		Brief Description:	
2			
	11:20-11:30am	Break	
#18	11:30-12:30pm	Title:	
		Presenter:	
		Moderators:	
1	Hunter BD	Company/Organization:	
		Brief Description:	
2			
	12:30-1:30pm	Lunch	
#19	1:30-2:30pm	Title:	
		Presenter:	
		Moderators:	
1		Company/Organization:	
		Brief Description:	
2		Brief Description:	
	2:30-2:40pm	Break	
#20	2:40-3:40 pm	Title:	
		Presenter:	
		Moderators:	
1		Company/Organization:	
		Brief Description:	
2		Brief Description:	
	3:40-3:50pm	Break	
#21	3:50-4:50pm	Title:	
		Presenter:	
		Moderators:	
1		Company/Organization:	
		Brief Description:	
2		Brief Description:	
	4:50-5:00pm	Closing Remarks/Daily Wrap Up	