June 27th-29th 2023

TUESDAY		on Systoms: Operations	& Maintananca Safaty Assat Managament
IUESDAY		n Systems. Operations	& Maintenance, Safety, Asset Management
	7:30-7:45am	Event Opens: Q&A, Getting Started	
	7:45-8:00am	Opening Announcements	
	8:00-9:00am	Title:	
			Empowering Operators: Harnessing Al-Driven Tools Amid Challenges in Wastewater Treatment
#1			
		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 Al-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 Al 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
	40.40 40.20	Dunale	presentation.
#2	10:10-10:20am		Francisco Versa Cheff What does it weelly mean?
#3	10:20-11:20am		Empowering Your Staff - What does it really mean? Mark Poling and Hannah Thomascall
	Moderators:	Presenter:	Clean Water Management; Spokane County
	woderators:	Company/Organization:	Clean Water Management, Spokane County
		Brief Description:	
		·	We'll evalue amousting and anabling your toom to get through featuring callaboration, areating
		·	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,
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			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.
		Lunch	
	1:00-2:00pm	Title:	Implementation of Telemetered Water Quality Sensors in the Sanitary Collection System - 2023
#5		D	Update Lacen Cook
	NO1 4	Presenter:	Jason Cook Clean Water Services
	Moderators:	Company/Organization:	
	Hunter BD	Brief Description:	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.
#C	2:00-2:10pm	Break	Why My Brand Now Equipment Chalco Dettles and Della
#6	2:10-3:10pm	Title:	Why My Brand-New Equipment Shakes, Rattles, and Rolls
	Madaut	Presenter:	John Koch, PE
	Moderators:	Company/Organization:	HDR, Inc.
		Brief Description:	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.
			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 Stated 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.
		Brief Description:	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: 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: Cured-in-place pipe (CIPP) full length lining CIPP spot repair 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.
-		2 Boothphon.	
			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

WEDNESD 66/28/2023 73-67-45am Period Peri		4:20-4:30pm	Closing Remarks/Daily Wrap Up	
F3-93-746am Cevel Opens (DAK Celling Started F3-84-80 compound period promocomends F3-80-900 compound period period Celling Started Celling Star				
### 3.00-9-00-00 Title:	WEDNESD	06/28/2023		
### \$30.9.00 presenter Moderators:		7:30-7:45am	Event Opens: Q&A, Getting Started	
Moderators:		7:45-8:00am	Opening Announcements	
Moderators: Grompany/Organization: Case study FIST Firmises of 30 Jinch and 27-inch diameter concrete pipe rehabilitated with light-10PE ining. Challenges included pressures in access of 100 ppt, steep stopes greater than 4 percent trousing a valley, and deep spe between pulsed points.	#8	8:00-9:00am		
Brief Description: Case study for 1.5 miles of 30-linch and 27-linch disnester concept pipe rehabilitated with light HDPE image. Challenges included pressures in except of 101 pipe, steep slopes greater than a porcent through a valley, and wake gaps between pulled pints. Personter: Moderators: Company/Organization: Group Floridand, BES Brief Description: Presenter: Moderators: Brief Description: Presenter: Moderators: Brief Description: Presenter: Wiles Moderators: Brief Description: Presenter: Yikeut More Clogged Piper? Using Spool Marketing to Improve System Outcomes Rachol Carrett and Lynn Knapp Moderators: Brief Description: Brief Description: Wiles Wiles Moderators: Brief Description: Wiles Moderators: Brief Description: Wiles Moderators: Brief Description: Wiles Moderators: Wiles Moderators: Brief Description: Wiles Moderators: Wiles Moderators: Brief Description: Wiles Wiles Moderators: Brief Description: Brie				
### State St		Moderators:		
9.30-9-19am Presertor 9.10-10-10-10am Presertor 10-10-10-10am Presertor 10-10-10am Presertor 10-10-10am Presertor 10-10-10am Presertor 10-10-10am Presertor 10-10-10am Presertor 10-10am P			Brief Description:	
9.00-9:10am 99 9:10-10:10am 17tite: Don't Be a Stuck PIGI Moly Nause-McCord and Jacobs Eng (potential partner) Moderators: Gempsny/Organization: City of Portland RES Break Oracle Company/Organization: Have you ever wondered, whats UP with my wastewater pressure pipes? Well, BES in the City of Portland RES Break 10-10-10-10 and presenter: Wiseal More Clogged Pipes? Using Social Marketing to Improve System Outcomes Presenter: Passarter Presenter: Rachel Carrett and Lynn Knapp Moderators: Company/Organization: Brown and Caldwell, Season and Caldwell and Caldwell, Season and Caldwell and Caldwell Caldwell, Season and Caldwell and Lynn Knapp Brown and Caldwell, Season and Caldwell and Lynn Knapp In this season, Rachel Garrett of Brown and Caldwell and Lynn Knapp Carcopy will expense exwermens around problematic behavior change? In this season, Rachel Garrett of Brown and Caldwell and Lynn Knapp of Calcadia Community In this season, Rachel Garrett of Brown and Caldwell and Lynn Knapp of Calcadia Community In this season, Rachel Garrett is Strategic Communications. She that as Gardwell change? In this season, Rachel Garrett is Strategic Communications. She that as BA in Signation and and Caldwell and Lynn Knapp of Calcadia Community (see Scaladia for Brown and Caldwell and Lynn Knapp of Calcadia Community (see Scaladia for Brown and Caldwell and Lynn Knapp of Calcadia Community (see Scaladia for Brown and Caldwell and Lynn Knapp of Calcadia Community (see Scaladia for Brown and Caldwell and Lynn Knapp of Calcadia Community (see Scaladia for Brown and Caldwell and Lynn Knapp of Scaladia for Brown and Caldwell and Lynn Knapp of Scaladia for Brown and Caldwell and Lynn Knapp of Scaladia for Brown and Caldwell and Lynn Knapp of Scaladia for Brown and Caldwell and Lynn Knapp of Scaladia for Brown and Caldwell and Lynn Knapp of Scaladia for Brown and Caldwell and Lynn Knapp of Scaladia for Brown and Caldwell and Lynn Knapp of Scaladia for Brown and Caldwell and Lynn Knapp of Scaladia for Brown and Caldwell and Lynn Knapp of				
### 11:0-11:30an Break ### 11				percent through a valley, and wide gaps between pulled joints.
### 11:0-11:30an Break ### 11		0.00 0.4000	Prock	
Presenter:	#9			Don't Be a Stuck PIG!
Moderators: Company/Organization: Ciry of Portland, BSS	<i></i>	5.10-10.10am		
Brief Description:		Moderators:		
Portland is working on just this. Since 2017 Moley has been working with millwrights, consultan and aging infestructive to get this information. 10:10-10-20am Break 10:20-11:20am Title: Presenter: Company (Organization: Break Presenter: Robind Gurett and Lynn (Napp) Moderators: Company (Organization: Break Presenter: Robind Gurett and Lynn (Napp) Moderators: Company (Organization: Break Presenter: Robind Gurett and Lynn (Napp) Break Presenter: Robind				Have you ever wondered, whats UP with my wastewater pressure pipes? Well, BES in the City of
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Presenter: Rob Peacock, PE		11:20-11:30am	Break	,
Moderators: Company/Organization: Kennedy Jenks	#11	11:30-12:30pm	Title:	Pipeline Renewal & Replacement Targets Lower Risk and O&M Demands
The City of Tigard has a goal to replace all water system pipe every 100 years. In 2022 the Cit used History and GIS to develop an algorithm to assesses risk and rank pipeline replacement priority, then aligned with human intelligence to develop a 15-year plan to replace 44 miles of a including the majority of the City's aging cast iron pipe. This presentation reviews the intersect of Council goals, Staff anecdotes, and data analysis in development of an ongoing Capital Improvement Plan. 12:30-1:00pm			Presenter:	Rob Peacock, PE
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Presenter: Jen Murphy	#13	1:00-2:00pm Moderators: 2:00-2:10pm 2:10-3:10pm Moderators: 3:10-3:20pm	Lunch Title: Presenter: Company/Organization: Brief Description: Break Title: Presenter: Company/Organization: Brief Description:	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. Utilizing Acoustics to Enable Condition Based Maintenance in Gravity Sewer Systems Gene Hallum InfoSense, Inc. 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. Doing More With Less: Adaptable Tools for Prioritizing System Repairs Scott Duren, PE and Adam Donald, PE Water Systems Consulting 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.
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	Moderators:	Company/Organization:	Parametrix
		Brief Description:	NEED INFO
	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:	How to Be Successful in the Wastewater Business
<i>"</i> 10	0.00 0.000	Presenter:	Michelle Beason, PE
	Moderators:	Company/Organization:	National Plant Services
	Widuerators.	Brief Description:	NEED INFO
		Brief Description.	INCLUDING O
	0.00 0.40	Durate	
"40	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		Solutions for Pump Plugging
#10	11.30-12.30pm		, 55 5
		Presenter:	Rich Owens
	Moderators: Hunter BD	Company/Organization:	Owens Pump
	nunter BB	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	keep your pump from plugging. Equipment features and advantages and disadvantages.
	12:30-1:30pm 1:30-2:30pm		
	12:30-1:30pm 1:30-2:30pm	Lunch Title:	keep your pump from plugging. Equipment features and advantages and disadvantages. Energy Efficiency Optimization for Water and Wastewater Systems.
#19			
#19		Title:	Energy Efficiency Optimization for Water and Wastewater Systems.
#19			
#19	1:30-2:30pm	Title: Presenter:	Energy Efficiency Optimization for Water and Wastewater Systems. Kelson Redding Energy Trust of Oregon 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.
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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.
		Closing Remarks/Daily Wrap Up	
Track B \	Nastewater	Operations: Basics & Beyo	ond, 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 Al-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:		Triplepoint Environmental
1	Moderators:	Company/Organization: Brief Description:	
		Company/Organization:	Triplepoint Environmental 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.
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2	10:10-10:20am	Company/Organization: Brief Description: Bio Break	Triplepoint Environmental 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: Nondetect down to water temperatures of 1C. Brady O'Leary is a co-founder of Triplepoint Environmental, a company focusing exclusively on wastewater lagoons. He bush Process Improvements at LOTT Jen Murphy, Engineer
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		Drief Descriptions	NEED INFO
1 2		Brief Description:	NEED INFO
	4:20-4:30pm	Closing Remarks/Daily Wrap Up	
WEDNESD	00/00/0000		
WEDNESD	06/28/2023	Frank Onema, OSA Catting Stantad	
	7:30-7:45am 7:45-8:00am	Event Opens: Q&A, Getting Started Opening Announcements	
#8	8:00-9:00am	Title:	Large Diameter Structural Pressure Pipe Rehabilitation: 30-inch Tight-fit HDPE Case Study
,,,	0.00-3.00am	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	9:00-9:10am 9:10-10:10am	Break	Your DEQ Online
#3	9. 10-10. IUaiii	Title: Presenter:	Jessica Lorenz
	Moderators:	Company/Organization:	DEQ
1	Moderatore.	Brief Description:	The Wastewater Operator Certification program transitioned in early March 2023 to a new cloud-
		P	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		DEQ Operator Certification Basics
	10.20 11.200	Presenter:	Kimi Grzyb
	Moderators:	Company/Organization:	DEQ
1		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		
#11	11:30-12:30pm		Pump Performance Assessment: A Panacea for Predictive Maintenance?
	Moderators:	Presenter: Company/Organization:	Jen Murphy, Engineer
1			Parametrix Engineering NEED INFO
1 2		Brief Description:	NEED INFO
		Brief Description:	
	12:30-1:00pm	Brief Description: Lunch Title:	NEED INFO Pumping to Greater Heights- City of Portland Collaborative 3D BIM Driven Pump Station Upgrades
2	12:30-1:00pm 1:00-2:00pm	Brief Description: Lunch Title: Presenter:	NEED INFO Pumping to Greater Heights- City of Portland Collaborative 3D BIM Driven Pump Station Upgrades Jen Murphy, Engineer
#12	12:30-1:00pm	Brief Description: Lunch Title: Presenter: Company/Organization:	Pumping to Greater Heights- City of Portland Collaborative 3D BIM Driven Pump Station Upgrades Jen Murphy, Engineer Parametrix Engineering
2	12:30-1:00pm 1:00-2:00pm	Brief Description: Lunch Title: Presenter:	Pumping to Greater Heights- City of Portland Collaborative 3D BIM Driven Pump Station Upgrades Jen Murphy, Engineer Parametrix Engineering A presentation about a City of Portland pump station upgrade project that benefited from 3D
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#12 1	12:30-1:00pm 1:00-2:00pm Moderators: 2:00-2:10pm 2:10-3:10pm	Brief Description: Lunch Title: Presenter: Company/Organization: Brief Description: Break Title: Presenter:	Pumping to Greater Heights- City of Portland Collaborative 3D BIM Driven Pump Station Upgrades Jen Murphy, Engineer Parametrix Engineering A presentation about a City of Portland pump station upgrade project that benefited from 3D modeling to make design descisions. An Incident Investigation - at the City of Portland WWTP Lauren Wilcox, HSSE Manager City of Portland, BES Review of a near miss LOTO safety incident, to include a root cause analysis and corrective
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1	1	Brief Description:	Hands on demonstration of equipment monitoring connected to condition assement (may need
			space outside).
	2		
	10:10-10:20am		
#17	10:20-11:20am		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	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		
#18	11:30-12:30pm		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
	2		that can be easily analyzed and utilized to make operational decisions
		Lunch	
#19	1:30-2:30pm	Title:	3D Virtual Reality - Project Design
		Presenter:	Jen Murphy, Engineer
	Moderators:	Company/Organization:	Parametrix Engineering
1	1		A hands on demonstration of 3D modeling to vizualize, build and manage projects building a true
		Brief Description:	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	1		
			Will present process control testing and analysis best practices for activated sludge operation. I
			dentify key parameters and expected ranges. Discuss operational response options to out of
		Brief Description:	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	1		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
		Brief Description:	contributing factors, corrective actions and lessons learned.
	2		
	4:50-5:00pm	Closing Remarks/Daily Wrap Up	
Track C	Source Co	ontrol/Pollution Prevent	on: Industrial
Track C		ontrol/Pollution Preventi	on: Industrial
	June 27		on: Industrial
	7 June 27 7:30-7:45am	Event Opens: Q&A, Getting Started	on: Industrial
TUESDAY	7:30-7:45am 7:45-8:00am		
	7 June 27 7:30-7:45am	Event Opens: Q&A, Getting Started Opening Announcements Title:	Empowering Operators: Harnessing Al-Driven Tools Amid Challenges in Wastewater Treatment
TUESDAY	7 June 27 7:30-7:45am 7:45-8:00am 8:00-9:00am	Event Opens: Q&A, Getting Started Opening Announcements Title: Presenter:	Empowering Operators: Harnessing Al-Driven Tools Amid Challenges in Wastewater Treatment Keaton Larson Lesnik
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#3	10:10-10:20am		A City with a Dvinkling Droblem
πJ	10:20-11:20am	1	A City with a Drink(ing) Problem Leah Rohan
	Madaustana	Presenter:	Lean Ronan Walla Walla
L .	Moderators:	Company/Organization:	
'		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	2		distinction pay for their share of the approach.
_	11:20-11:30am	Break	
#4	11:30-12:30pm		SCAP: A Public-Private Partnerhsip for Catch Basin Maintenance
		Presenter:	Eric Lambert; Christa Britton
	Moderators:	Company/Organization:	Clark County; City of Gresham
1	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	2		
	12:30-1:00pm	Lunch	
	1:00-2:00pm	Title:	The Application of Analysis, Planning and the Incident Command System Structure in the NW to Support
#5			Emergency Response of Emerging Threats to Oregon's Waterways
		Presenter:	Don Pettit
	Moderators:	Company/Organization:	ODEQ
1			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
		Brief Description:	effort is needed.
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	2:00-2:10pm	Break	
#6	2:10-3:10pm	Title:	Roadside Emergencies & Hazard Awareness
		Presenter:	Dustin Ross
	Moderators:	Company/Organization:	ODOT
1	1		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-
		Brief Description:	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
	Moderate	Presenter:	Kyle Bean, Field Operations Supv.
	Moderators:	Company/Organization:	Water Environment Services Senior staff turnover ungrading CIS inventories and the Maintenance Management System. Covid 10
1			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
		Brief Description:	service to our customers.
2	2		
-	4:20-4:30pm	Closing Remarks/Daily Wrap Up	
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WEDNEST	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	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.
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		i	
	9:00-9:10am	Break	
#9		Break Title:	Stress Testing the Sandy Wastewater Treatment Plant
	9:00-9:10am		Stress Testing the Sandy Wastewater Treatment Plant Keith Scranton
	9:00-9:10am	Title:	

#10	1 10:10-10:20am 10:20-11:20am Moderators:		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. Full-scale Demonstration of Energy and Carbon-efficient BNR Dr. Pusker Regmi Brown and Caldwell 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) conductions and the process of the
			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 turndown 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.
3	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.
	11:30-12:30pm	Title:	Novel Food Waste Pre-Processing and Systematic Co-Digestion to
#11		Presenter:	Enhance Biogas Production and Improve Solids Treatment Bhargavi Subramanian
	Moderators:	Company/Organization:	Kennedy and Jenks
<u> </u>	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.
		Lunch	
#12	1:00-2:00pm	Title:	Garnering stakeholder understanding and support for wastewater infrastructure projects
	Modorstara	Presenter:	Shelly Parini-Runge
<u> </u>	Moderators:	Company/Organization:	WES

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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. ##14 3:20-4:20pm Title: Presenter: Moderators: Cenan Water Services Cenan Water Services Clean Water Services Clean Water Services 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 ment to accomplish, in BNR. (i.e. MLE, A/O, A2O, Bardenpho, West Bank, SSEBPR etc.) 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 Si in Chemistry, Colorado State University; MSEE, Illinois institute of Technology. He is an Oregon DEQ Wastewater System Operator, Treatment, Grade IV, 12610 ##15 8:00-9:00am Title: Transformation through innovation: Sedron's Varcor Time Eventon Moderators: 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(CC) dry solids, and aqueous ammonia. Multiple Varcor sa er unrings arosis the country processing different waste teams including septage, biocolids, manure, and stillage. This energy efficient technology takes up a much annalize recogning industry for over 20 years. In this built and led teams at several companies, selling and managing deals valued in excess of 57 Billion. He Wees his career progression as going from focusing on financial health to individual physical health to the health of the planet. Process Configuracy Process Configuracy Processors as going from focusing on financial health to the health of the planet. Processors are unring agons the countr				
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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 Chris Maher Moderators: Company/Organization: Clean Water Services 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 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 ##10 ##10 ##10 ##10 ##10 ##10 ##10 #				Chris has a BS in Chemistry, Colorado State University; MSEE, Illinois
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9:00-9:10am Break #16 9:10-10:10am Title: Compliance Pitfalls Presenter: Johnny Leavy	THURSDA'	3:20-4:20pm Moderators: Hunter BD 4:20-4:30pm June 29 7:30-7:45am 7:45-8:00am 8:00-9:00am	Title: Presenter: Company/Organization: Brief Description: Closing Remarks/Daily Wrap Up Event Opens: Q&A, Getting Started Opening Announcements Title: Presenter:	Process Configurations for Biological Nutrient Removal Chris Maher Clean Water Services 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.) 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 Transformation through Innovation: Sedron's Varcor Tim Evenson 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 steams 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 WVTPs. 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
#16 9:10-10:10am Title: Compliance Pitfalls Presenter: Johnny Leavy	THURSDA' #15	3:20-4:20pm Moderators: Hunter BD 4:20-4:30pm June 29 7:30-7:45am 7:45-8:00am 8:00-9:00am Moderators:	Title: Presenter: Company/Organization: Brief Description: Closing Remarks/Daily Wrap Up Event Opens: Q&A, Getting Started Opening Announcements Title: Presenter:	Process Configurations for Biological Nutrient Removal Chris Maher Clean Water Services 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.) 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 Transformation through Innovation: Sedron's Varcor Tim Evenson 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 steams 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 WVTPs. 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
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Initiation Company/organization City of Medicina	THURSDA #15	3:20-4:20pm Moderators: Hunter BD 4:20-4:30pm June 29 7:30-7:45am 7:45-8:00am 8:00-9:00am Moderators:	Title: Presenter: Company/Organization: Brief Description: Closing Remarks/Daily Wrap Up Event Opens: Q&A, Getting Started Opening Announcements Title: Presenter: Brief Description: Break Title:	Process Configurations for Biological Nutrient Removal Chris Maher Clean Water Services 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.) 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 B5 in Chemistry, Colorado State University; MSEE, Illinois Institute of Technology. He is an Oregon DEQ Wastewater System Operator, Treatment, Grade IV, 12610 Transformation through Innovation: Sedron's Varcor Tim Evenson 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 steams 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. 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.
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10:10-10:20am Break	1		Brief Description:	How to avoid pitfalls of commonly overlooked NPDES permit requirements.
16-13-1-13-20am Nave			Brief Description:	now to avoid pitialis of confinionly overlooked NPDES perfilit requirements.
10.20-11.20am Telescenter:		10:10-10:20am	Brook	
Presenter: Deep Secretary Deep Sec				Control Loop Descriptions Process and Instrumentation Drawings and Programmable Logic Controllers
Moderators: Company/Organization: Abstract	#17	10.20-11.20aiii	ride.	
Number Description: Claims Water Services Community Company (Company (Compan	#11		Dresenter:	
Hunter 8D Order Description: Abornote: Control Loop Descriptions and Process and Instrumentations are two types of drawings that assist in building treatment systems in waterwater treatment plants. Their usefulness bowever continues log after programmable large Controllers (PCC) and where they six the control of equipment in the treatment plants. Their usefulness bowever continues log after programmable large Controllers (PCC) and where they six the control of equipment in the treatment plant. 2		Moderators:		
Control Loop Descriptions and Process and Instrumentations are two types of drowings that assists in building treatment systems in wastewater treatment plants. Their useful insign between continuous log after constructions in bilential and Operations began. The presentation focuses on what control Loop Descriptions are, and how they can be used into be fauther. We then come the functions of Descriptions are, and how they can be used into the fauther used by the plant of the plant which they are added to the fauther with the control of ingenium of Comparing Control Con	1			
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construction is finished and Operations begins. This presentation focuses on what Control Loop Descriptions are, and how they can be used not the future. When cover the furctions of Programmable Logic Controller, PICLS and where they sit in the control of equipment in the treatment Johns. 2 2 3 4 5 5 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7				
Programmable topic Controllers IPLCs) and where they sit in the control of equipment in the treatment plant. 2				
plant. 2 Joel Bonchen, Senior Operations Joel Bonchen, Senior Operati				Descriptions are, and how they can be used into the future. We then cover the functions of
Second Secretary Company of Versional Presentation of Presentation Second Sec				Programmable Logic Controllers (PLCs) and where they sit in the control of equipment in the treatment
Analyst 35 years of experience in which I've assisted in the Design, sulfing and Operation of Visateware Treatment Failties, Software Usense Certification Part-time Instructor at Cluckamas Community College 11:20-11:30am Break 11:30-12:30pm Title: 11:30-13:30am Sreak Albuny't Wiff Dewatering and Compost Upgrade Visits Storess 11:30-13:30am Community College Visits Storess 11:30-13:30am Sreak Albuny't Wiff Dewatering and Compost Upgrade Visits Storess 11:30-13:30am Sreak Visits Storess 11:30-13:30am Sreak Visits Storess 12:30-13:30am Sreak Visits Storess 13:30-13:30am Sreak Visits Storess 14:30-13:30am Sreak Visits Storess 15:30-13:30am Sreak Visits Storess				plant.
and Operating of Wastewater Treatment Facilities. Grade in Waste Water License Certification Part-time instruction of Leckansa Community College ### 11:20-11:30am Title: ### Albany's WRF Dewatering and Compost Upgrade ### Water Streets Moderators:	2			Joel Borchers, Senior Operations
11:20-11:30am Break 11:30-12:30pm Title: Albamy's WRF Dewatering and Compost Upgrade Presenter: Stran Streets Moderators: Company/Organization: City of Albamy There is stranger of the City of Albamy Water Reclamation Facility. Bits presented from the Record Commonly College with the Albamy's Water Reclamation Facility. Bits presented from the Record Commonly College with the Albamy's Water Reclamation Facility. Bits presented from the Record Commonly College with the Albamy's Water Reclamation Facility. Bits presented from the Record Commonly College with the Albamy's Water Reclamation Facility. Bits presented from the Record Commonly College with the Albamy's Water Reclamation Facility. Bits presented from the Record Commonly College with the Albamy's Water Reclamation Facility. Bits presented with the City of Albamy and Albamy's Water Reclamation Facility. Bits presented with record water water. 12:30-1-30pm United Strain States with the City of Albamy water and the City of Albamy water and the City of Albamy water water and the City of Albamy water water and the City of the Water Reclamation Facility and the associated man made treatment water and the City of the Water Reclamation Facility and the associated man made treatment water and the City of the Water Reclamation Facility and the associated man made treatment water and the City of Albamy water Treatment on the Water Reclamation Facility and the associated man made treatment water water and the Water Reclamation Facility and the associated man made treatment water water and the Water Reclamation Facility and the water Reclamation Facility and the Strainger Water Reclamation F				
## 13				
### 113-01-23:0pm Title: Albany's WRD Powtering and Compost Upgrade Presenter: Geompany/Organization: City of Albany City of Albany			-	Certification Part-time Instructor at Clackamas Community College
Moderators: Organization:	#40			all Lugge at the control of
1 Nucler BD 1 Hunter BD 1 Frief Description: 1 Hunter BD 1 Frief Description: 2 Brief Description: 2 Brief Description: 3 Brief Description: 4 Brief Description: 5 Brief Description: 6 Brief Description: 6 Brief Description: 7 Brief Description: 8 Brief Description: 9 Brief Descrip	#18	11:30-12:30pm		
1 Hunter BD Brief Description: This isesson will throndle the history behind the need for a composting project, compost facility construction, facility study, and composting pasics.		Madayataya		
construction, facility start up, and composting basics. 2	4			· · · ·
Size Erlan Sevens is the Treatment Plant Supervisor for the City of Albamy Water Reclamation Facility, Prinar graduated from Limit 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 vaster, waterwater, and industrial waterwater felds. Most of his pack of the vaster, find dustrial waterwater felds. Most of his pack of a state of the-art membrane bio reactor, he spent felds. Most of his pack of a state of the-art membrane bio reactor, he spent felds. Most of his pack of a state of the-art membrane bio reactor, he spent felds. Most of his pack provisor size agast 2013, overseeing the operation of the Water, Knivroment, and Technology Department at Lim Benton Community College. Enrish has been with the City of Albamy as WET Terestent Experisor Company/ College. Enrish has been with the City of Albamy as WET Terestent Experisor Community and department of the Water, Knivroment, and Technology Department at Lim Benton Community College. Enrish has been with the City of Albamy as Protection of the Water Reclamation Facility and the associated man-made treatment wettends of Tables, Water Reclamation Facility and the associated man-made treatment wettends of Tables, Water Reclamation Facility and the associated man-made suppression of the Water Reclamation Facility and the associated man-made suppression of the Water Reclamation in Science Presents of Water Reclamation in Science Presents on Water Reclamation in Science Presents of Science Presents on Water Reclamation in small flows and designers use to design and troubleshoot biological nitrogen removal systems. Local Department of the Presents of Water Reclamation in small flows and designers use to design and troubleshoot biological nitrogen removal systems. Local Department of Water Reclamation in Science Presents of Water Recl]	nunter DD	blier bescription.	, , , , , , , , , , , , , , , , , , , ,
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Water/Mastewater Technology, He has spent his fifteen year career workpling in various capacities in the vaster, watewater, and industrial watewater 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 to be reactor. He spent four years in the disconsector as controcted faculty and department co-chair of the Water, Environment, and Technology Department at Linn Benton Community. College. Brian has been with the City of Idahaya as WRF Technology Department at Linn Benton Community. College. Brian has been with the City of Idahaya as WRF Technology Department at Linn Benton Community. Overseing the operation of the Water Reclamation Facility and the associated man-made treatment wetlands Talling Water Gardens. ### 13:00-2:30pm Under Company/Organization: The Biology of Nitrogen Removal in Wastewater Dott Banney				· · · · · · · · · · · · · · · · · · ·
water, wastewater, and industrial wastewater fields. Not of his professional career was spent with the City of Hermistoria Recycled Water Department assisting in day-to-day operations and stratup of a state-of-the-art membrane bio reactor. He spent four years in the education sector as contracted faculty and department och-air of the Water, Environment, and Technicument, and Stratum of the Water, Environment, and Technicument, and Technicum				
City of Hermiston's Recycled Water Department as stassing 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 oc-chair of the Water, Environment, Jepan Government at Linn Benton Community College, Brian has been with the City of Albany as WET echanger 1972, overseing the operation of the Water Reclamation Facility and the associated man-made treatment wetlands Talking Water Gardens. ### 12:30-1:30pm title: ### 19:130-3:30pm Title: Moderators:				
of-the-art membrane bio reactor. He spent four years in the education sector as contracted faculty and department co-chain of the Water, Environment, and Text units Beaton Community College. Brian has been with the City of Albany as WRF Treatment Plant Supervisor since August 2021, overseining the operation of the Water, Environment, and Text Plant Supervisor since August 2021, overseining the operation of the Water Reclamation Facility and the associated man-made treatment wetlands Talking Water Gardens. ### 13:30-2:30pm Title:				· · · · · · · · · · · · · · · · · · ·
College. Priar has been with the City of Albany as WRF Treatment Plant Supervisor since August 2021, weresheigh the operation of the Water Reclamation Facility and the associated man-made treatment wetlands Talking Water Gardens. ##19				
overseing the operation of the Water Reclamation Facility and the associated man-made treatment wetlands Talking Water Gardens. 1:30-2:30pm				department co-chair of the Water, Environment, and Technology Department at Linn Benton Community
### 12:30-1:30pm Bunch ### 13:00-2:30pm Title: The Biology of Nitrogen Removal in Wastewater ### Presenter: Optil Barney Moderators: Company/Organization: City of vancouver 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 trobbelshoot biological nitrogen removal in wastewater, focusing on the similarities and introduce the concepts and terms that engineers and designers use to design and trobbelshoot biological nitrogen removal systems. 2				College. Brian has been with the City of Albany as WRF Treatment Plant Supervisor since August 2021,
## 19 1:30-1:39pm Unitable ## 1:30-2:30pm Presenter: Dott Ramey Presenter: Dott Ramey Presenter:				overseeing the operation of the Water Reclamation Facility and the associated man-made treatment
##9 1:30-2:30pm Title: The Biology of Nitrogen Removal in Wastewater Presenter: Dottl Ramey				wetlands Talking Water Gardens.
Presenter: Octit Ramey				
Moderators: Company/Organization: City of vancouver 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 trouble-blood biological introgen removal systems. 2	#19	1:30-2:30pm		
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 Feigneering group, and has worked in environmental fields of wastewater, industrial pretreatment, onsite wastewater, and hazardous waste/materials. In 2017 Dotti completed her Ph. D. a the CO School Of Mines, focusing hereath 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 enterpy, nutrients, and water, while reducing energy requirements. 230-240pm Break 240-340-340 pm Title: Struvite: Methods of Prevention, Removal And Recovery Presenter: Moderators: 1 Struvite: Methods of Prevention, Removal And Recovery Presenter: 8 Brief Description: 2 Clean Water Services 1 Struvite: Methods of Prevention, Removal And Recovery 2 As 4-3-550pm Break 2 Struvite: Methods of Prevention, Removal And Recovery 3 4-40-3-550pm Break 2 Struvite: Methods of Prevention, Removal And Recovery 3 4-40-3-550pm Break 4 Sto-5-50pm Break 5 Struvite: Methods of Prevention, Removal And Recovery At Clean Water Services WRRF Presenter: Brett Laney Moderators: 1 Clean Water Services 1 Description: 2 Struvite: Methods of Prevention, Removal And Recovery At Clean Water Services WRRF Presenter: Brett Laney Moderators: 1 Opposition of the struvite Recovery At Clean Water Services WRRF Presenter: 1 Description: 1 Description: 1 Description: 1 Description: 2 Struvite: Methods of Prevention, Removal And Recovery At Clea				,
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Brief Description: Dott Ramey is a Professional Engineer with works with the Vancouver WA Mastewater Engineering group, and has worked in environmental fields of wastewater, industrial pretreatment, onsite wastewater, industrial pretreatment, onsite wastewater, and hazardous waste/materials. In 2017 Dotti completed 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. #20 2:40-3:40 pm Title: Struvite: Methods of Prevention, Removal And Recovery Presenter: Brett Laney		Moderators.	Company/Organization:	'
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4:50-5:00pm Closing Remarks/Daily Wrap Up ADULT CPR AED ADD ON LAST DAY 30 \$ 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: Adult CPR/AED via the American F Presenter: Moderators: Brief Description: 1 2 9:00-9:10am Break #16 9:10-10:10am Title: Presenter: Moderators: Company/Organization: Adult CPR/AED via the American Red Cross for Wastewater Operators facilitated by Lisa Hillyard \$30	#20	2:30-2:40pm 2:40-3:40 pm Moderators: 3:40-3:50pm 3:50-4:50pm	Brief Description: Brief Description: Break Title: Presenter: Company/Organization: Break Title: Presenter: Company/Organization:	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. 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. Struvite: Methods Of Prevention, Removal And Recovery Brett Laney Clean Water Services This presentation will cover why and where struvite forms, and common strategies for prevention, removal and recovery Lessons Learned From A Decade Of Phosphorus Recovery At Clean Water Services' WRRF Brett Laney Clean Water Services This session will cover initial assumptions about Ostara's technology vs 10 years of operating performance,
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	1		Brief Description:	Certificate Cost (Casil of Veriffio) offsite Lisa miliyaru is all Authorized Outreach Ooma Trailler iii both
	2		·	General Industry and Construction. She has been teaching Industrial Safety for over 15 years. Lisa has
		10:10-10:20am	Break	been employed with Clackamas Community College since 2014. During the first years of
#17		10:20-11:20am	Title:	the COVID pandemic, Lisa completed a degree in Environmental Health and Safety and became
			Presenter:	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
		Moderators:	Company/Organization:	American Red Cross. Please bring cash or venmo onsite. Lisa Hillyard has taught CPR/AED since 2008.
	1	Hunter BD	Brief Description:	American Red Cross. Please bring cash or venmo onsite. Lisa Hillyard has taught CPR/AED since 2008.
	2			
		11:20-11:30am	Break	
#18		11:30-12:30pm	Title:	
			Presenter:	
		Moderators:	Company/Organization:	
	1	Hunter BD	Brief Description:	
	2			
		12:30-1:30pm	Lunch	
#19	#19	1:30-2:30pm	Title:	
			Presenter:	
		Moderators:	Company/Organization:	
	1		Brief Description:	
	2		Brief Description:	
		2:30-2:40pm	Break	
#20		2:40-3:40 pm	Title:	
			Presenter:	
		Moderators:	Company/Organization:	
	1		Brief Description:	
	2			
		3:40-3:50pm	Break	
#21		3:50-4:50pm	Title:	
			Presenter:	
		Moderators:	Company/Organization:	
	1		Brief Description:	
	2			
		4:50-5:00pm	Closing Remarks/Daily Wrap Up	