	Motor Treatment	Water Distribution	Wastewater Collection	Mostawatas Treatment
15th	Water Treatment Proctor: AWWA	Proctor: Josh Manson	Wastewater Collection Proctor: Andy Blondell	Wastewater Treatment Proctor: Caleb Trammell
1 0 011	Room:Cascade West	Room:Cascade West	Room:Umpqua Hall	Room:Umpqua Hall
7:00 REC	GISTRATION BEGINS & BREAKFAST	Noom.cascade West	Room.ompqua Han	Room.ompqua Han
8:00 - 9:00		mereck, President PNCWA, W,WW, FUTURE	OF WATER - 1A	
5.00	RETHOTE STEARER LATER RAIT	1	2	3_1
9:05 - 10:05	Vendor Display	AMI Options and Water Distribution Management Systems Bridget Garlinghouse Consolidated Supply Company	Utilizing Acoustic Inspection to Prioritize Sewer Cleaning Gene Hallum InfoSense, Inc.	Solutions for Pump Plugging Rich Owens Owens Pump & Equipment
10.05 10.15	W, WW	W	WW	W, WW
10:05 - 10:15				
10:15- 11:15	4 Mixing and TTHM Removal in Potable Water Tanks Harvy Hibl Ixom Medora / Ixom Watercare W	5_PGL Practical Guide to locating Water (including non-metallic pipes) & Sewer Brian Moss RJM Equipment Sales, Inc W. WW	<b>Vendor Display</b> <i>W. WW</i>	3_2  Revolutionizing Sludge Dewatering  Rich Owens  Owens Pump & Equipment  WW
11:15 - 11:20		,	,	
11:20 - 12:20	6 Summation of the importance of water conservation Chris Bennett Correct Equipment	5_PGW Practical Guide to Water Leak Detector & Non-metallic water pipe locating Brian Moss  RJM Equipment Sales, Inc  W. WW	7 CCTV Operation Basics (Pipeline Assessment) Andrew Blondell Roseburg Urban Sanitary Authority  WW	3_3 Simple Industrial Waste Water Treatment / Pre- Treatment Rich Owens Owens Pump & Equipment  WW
42.22 4.42		<i>w, w.</i>		
12:20 - 1:10	LUNCH	9		
1:10 - 2:10	8_2 THM Mitigation in Water Distribution Systems through Tank Mixing UGSI Ethan Brooke	Operators Math Workshop 4 Hour Session Lance Mason Brown and Caldwell W, WW	CCTV Operation Basics (Pipeline Assessment)  Continued  Andrew Blondell  WW	3_4  Wastewater Screening Options  Rich Owens  Owens Pump & Equipment  WW
2:10 - 2:15	BREAK			
2:15 - 3:15	10 Technology selection drivers or he Portland Water Bureau Filration Facility Tyler Kane Carollo	Operators Math Workshop 4 Hour Session Continued Lance Mason <i>W, WW</i>	Submersible Pump and Preventive Maintenance Dave Olson Xylem inc. W, WW	4 Benefits of Energy Efficient Mixing / Circulation in Partial Mix and Facultative Wastewater Ponds Harvy Hibl Ixom Medora / Ixom Watercare WW
3:15 - 3:20	BREAK			
3:20 - 4:25	12 Using Data to Make Informed Water infrastructure Decisions Mike Uthe Mueller Water Products W	Operators Math Workshop 4 Hour Session Continued Lance Mason	Submersible Pump and Preventive Maintenance 2 Hour Session W, WW	14  Chemical Root Control  Dan Lawrence  Rootx  WW
4:25 - 4:30	BREAK			
4:30 - 5:30	Continued 2 Hour Session	Operators Math Workshop 4 Hour Session Continued Lance Mason	15 Rehabilitation of Sewers - Is geopolymer an option  Rob Lee	16 Assessing Wastewater Microbials Ecology Caleb Trammell
	w	w, ww	Leeway Engineering WW	Jacobs <b>WW</b>

Proctor: AWWA Room: Cascade West Room: Room: Cascade West Room: Cascade West Room: Cascade West Room: Room: Cascade West Room: Cascade Room: Room: Cascade Room:		Water Treatment	Water Distribution	Wastewater Collection	Wastewater Treatment			
	16th							
Vendor Display		Proctor: AWWA	Proctor: Josh Manson	Proctor: Andy Biorideli	Proctor: Caleb Trammell			
Vendor Display   17_1   Ductile 101: Learning Objectives   John Johnson   McWane Ductile   John Johnson   McWane Ductile   Vic. W/W   Vendor Display   Activated Sulgey Process Control - Power Prior testing the collections system   Continued   Protecting the collections system   Continued   Continued   Continued   Vic. W/W   Vendor Display   Protecting the collections system   Doug Troyer   Underground Tech   Vic. W/W   Vendor Display   Protecting the collections system   Doug Troyer   Underground Tech   Vic. W/W   Vendor Display   Protecting the collections system   Doug Troyer   Underground Tech   Vic. W/W   Vendor Display   Protecting the collections system   Doug Troyer   Underground Tech   Vic. W/W   Vendor Display   Protecting the collections system   Doug Troyer   Underground Tech   Vic. W/W   Vendor Display   Protecting the collections system   Doug Troyer   Underground Tech   Vic. W/W   Vendor Display   Protecting the collections system   Doug Troyer   Underground Tech   Vic. W/W   Vendor Display   Protecting the collections system   Doug Troyer   Underground Tech   Vic. W/W   Vic. W/		Room: Cascade West	Room: Cascade West	Room: Umpqua Hall	Room: Umpqua Hall			
8.80-900   Section 1.00   Section 1.	7:15 - 8:00 B	O BREAKFAST						
Sheldon Teeples   Jon Gasik   Oregon DEQ   W/W   Worder Display   Protecting the collections system   Continued		Vendor Display		How to better Clean & Televise	Activated Sludge Process Control -			
### Substite Electronics   W.				·				
9.00 - 9.05 BREAK  20 17_2 Corrosion Protection Basics for Ductile from Pipelines & The effective Use of the Updated AWWA C-105 Standard Design Oncision Mode (DMN)	9:00			· ·				
9:05 - 10:05    Second Emerging Technologies Chris McCalib (Corrosion Protection Basics for Ductile from Pipelines & The effective Use of the Use of Ductile from Pipelines & The effective Use of the Use of Ductile from Pipelines & The effective Use of the Use of Ductile from Pipelines & The effective Use of the Use of Ductile from Pipelines & The effective Use of the Use of Ductile from Pipelines & The effective Use of the Use of Ductile from Pipelines & The effective Use of the Use of Ductile from Pipelines & The effective Use of the Use of Ductile from Pipelines & Use of Ductile from Pipelines & Use of Ductile from Pipelines & Use of Devon Burson in Replacement in Replac		147, 147,147			•			
20	0.00 0.05	·	w, ww	ww	ww			
Solid Emerging Technologies Chris McCalib Treatment Equipment Company Chris McCalib Treatment Equipment Company Chris McCalib Treatment Equipment Company McWane Ductile WW.WW.WW.WW.WW.WW.WW.WW.WW.WW.WW.WW.WW.	9.00 - 9.03		17.2		21			
Chris McCalib   John Johnson   McWane Ductile   W, WW   W, W, WW   W, WW   W, WW   W, WW   W, W, WW   W, W, W, W   W, W, W, W   W, W, W, W   W, W, W, W   W,	9.05 - 10.05		Corrosion Protection Basics for Ductile Iron Pipelines & The effective Use of the Updated AWWA C-105 Standard Design					
10:5 - 10:15 BREAK  The Dalles Dog River Pipeline Replacement Company WW		Solid Emerging Technologies	Decision Model (DDM)	Vendor Display	Protecting the collections system			
1005 - 10-15 BREAK  The Dalles Dog River Pipeline Replacement Repl		Chris McCalib	John Johnson		Doug Troyer			
10.15 - 10.15 BREAK  The Dalles Dog River Pipeline Replacement Rep		Treatment Equipment Company	McWane Ductile		Underground Tech			
The Dalles Dog River Pipeline Replacement		WW	w, ww	W, WW	ww			
The Dalles Dog River Pipeline Replacement	10:05 - 10:15	BREAK						
Replacement Devon Burton Devon DeQ			23	19_2				
R. Brady Fuller, PE   22		• ,	Practices	SSO Overflow Response	•			
11:12-11:20 11:20-		R. Brady Fuller, PE	US Pipe	Jon Gasik				
11:15-11:20 11:20- 11:20- 12:20 12:20 12:20 13-5  SCADA in the Cloud Advanced Control System Jonathan Frank W. W. W. Pressure Monitoring Nicole Kaiser Syrinix W. W		22		Oregon DEQ				
24 25 25 Calming the Network with High-res Pressure Monitoring Nicole Kaiser Syrinix W Wastewater Process Science and Control Workshop Lance Mason Brown and Caldwell W W W W W W W W W W W W W W W W W W		W	w, ww	ww	ww			
11:20-   12:20   12:20   13:								
11:20-   SCADA in the Cloud	11:15 - 11:20	) BREAK						
12:20-1:10 LUNCH  26 Chemicals in Water and Wastewater Applications Jeff Zachman Cascade Columbia Distribution W, WW Modern lift station design and RFP Z8 Abur Session Mark McElroy Thermos Fisher W, WW Modern lift station design and RFP W, WW	11:15 - 11:20		25	9 2	3 5			
1:10 - 2:10  1:10	11:20 -	24  SCADA in the Cloud  Advanced Control System  Jonathan Frank	Calming the Network with High-res Pressure Monitoring Nicole Kaiser Syrinix	Wastewater Process Science and Control Workshop Lance Mason Brown and Caldwell	Wastewater Sludge Pumping Solutions Rich Owens Owens Pump & Equipment			
Chemicals in Water and Wastewater Applications Jeff Zachman Cascade Columbia Distribution W, WW  Pat Hart Continued	11:20 - 12:20	24  SCADA in the Cloud  Advanced Control System  Jonathan Frank  W, WW	Calming the Network with High-res Pressure Monitoring Nicole Kaiser Syrinix	Wastewater Process Science and Control Workshop Lance Mason Brown and Caldwell	Wastewater Sludge Pumping Solutions Rich Owens Owens Pump & Equipment			
2:10 - 2:15  BREAK  Fundamentals of Elecrochemistry 28  2:15 - 3:15  Ark McElroy Thermos Fisher W, WW  3:15 - 3:25  BREAK  Fundamentals of Elecrochemistry W, WW  Modern lift station design and RFP Xylem - Flygt  Wastewater Process Science and Control Workshop Thermos Fisher W, WW  W, WW  Work Modern lift station design and RFP Wastewater Process Science and Continued Www  3:15 - 3:25  BREAK  Fundamentals of Elecrochemistry Continued Continued Continued Continued Continued Continued Continued Continued Mike McElroy Thermos Fisher W, WW W, WW W, WW W, WW W, WW W WW W	11:20 - 12:20	24  SCADA in the Cloud  Advanced Control System  Jonathan Frank  W, WW  LUNCH	Calming the Network with High-res Pressure Monitoring Nicole Kaiser Syrinix W	Wastewater Process Science and Control Workshop Lance Mason Brown and Caldwell	Wastewater Sludge Pumping Solutions Rich Owens Owens Pump & Equipment  WW			
Fundamentals of Elecrochemistry 28 2:15 - 3:15 Ank McElroy Thermos Fisher  3_7  Wastewater Process Science and Control Workshop Thermos Fisher  Wastewater Process Science and Control Workshop Thermos Fisher  Wastewater Process Science and Control Workshop Thermos Fisher  Wastewater Process Science and Continued Rich Owens Owens Pump & Equipment  WW  WW  Wastewater Process Science and Continued  Www  WW  WW  Wastewater Process Science and Continued  Continued Continued Control Workshop Mike McElroy Thermos Fisher W, WW W, WW W, WW W, WW W, WW W, WW W WW W	11:20 - 12:20 12:20 - 1:10	SCADA in the Cloud Advanced Control System Jonathan Frank W, WW  LUNCH 26 Chemicals in Water and Wastewater Applications Jeff Zachman Cascade Columbia Distribution	Calming the Network with High-res Pressure Monitoring Nicole Kaiser Syrinix  W  27  AMI - Beyond The Meter Read Pat Hart Ferguson	Wastewater Process Science and Control Workshop Lance Mason Brown and Caldwell    WW  Wastewater Process Science and Control Workshop  Continued	Wastewater Sludge Pumping Solutions Rich Owens Owens Pump & Equipment  WW  3_6  Simplicites in Grit Removal Rich Owens Owens Pump & Equipment			
2:15 - 3:15  2:15 - 3:15  2:15 - 3:15  2:15 - 3:15  Agric More Session Mark McElroy Thermos Fisher W, WW M, WW Modern lift station design and RFP Mike McElroy Mike McElroy Mike McElroy Thermos Fisher  Continued Modern lift station design and RFP Mike McElroy Mike McElroy Mike McElroy Thermos Fisher W, WW M, WW M, WW M, WW M, WW M, Wastewater Process Science and Control Workshop Continued Control Workshop Mike McElroy Thermos Fisher M, WW Mastewater Process Science and Continued Mastewater Process Science and Control Workshop Mastewater Process Science and Control	11:20 - 12:20 12:20 - 1:10 1:10 - 2:10	SCADA in the Cloud Advanced Control System Jonathan Frank  W, WW  LUNCH  26 Chemicals in Water and Wastewater Applications Jeff Zachman Cascade Columbia Distribution  W, WW	Calming the Network with High-res Pressure Monitoring Nicole Kaiser Syrinix  W  27  AMI - Beyond The Meter Read Pat Hart Ferguson	Wastewater Process Science and Control Workshop Lance Mason Brown and Caldwell    WW  Wastewater Process Science and Control Workshop  Continued	Wastewater Sludge Pumping Solutions Rich Owens Owens Pump & Equipment  WW  3_6  Simplicites in Grit Removal Rich Owens Owens Pump & Equipment			
3:15 - 3:25  BREAK  Fundamentals of Elecrochemistry  Continued  Rebecca Singer  Wastewater Process Science and Control Workshop  Beneficial Reuse of Biosolids  Rebecca Singer  Www.  Ww.  Ww.  Ww.  Ww.  Ww.  Ww.  W	11:20 - 12:20 12:20 - 1:10 1:10 - 2:10	SCADA in the Cloud Advanced Control System Jonathan Frank  W, WW  LUNCH  26 Chemicals in Water and Wastewater Applications Jeff Zachman Cascade Columbia Distribution  W, WW  BREAK	Calming the Network with High-res Pressure Monitoring Nicole Kaiser Syrinix  W  27  AMI - Beyond The Meter Read Pat Hart Ferguson  W	Wastewater Process Science and Control Workshop Lance Mason Brown and Caldwell    WW  Wastewater Process Science and Control Workshop  Continued	Wastewater Sludge Pumping Solutions Rich Owens Owens Pump & Equipment  WW  3_6  Simplicites in Grit Removal Rich Owens Owens Pump & Equipment  WW			
Fundamentals of Elecrochemistry Modern lift station design and RFP  Continued Continued Continued Control Workshop Mike McElroy Thermos Fisher W, WW W, WW W, WW WW WW WW WW  30  Beneficial Reuse of Biosolids Rebecca Singer  Wastewater Process Science and Control Workshop Continued Rebecca Singer	11:20 - 12:20 12:20 - 1:10 1:10 - 2:10	SCADA in the Cloud Advanced Control System Jonathan Frank  W, WW  LUNCH  26 Chemicals in Water and Wastewater Applications Jeff Zachman Cascade Columbia Distribution  W, WW  BREAK Fundamentals of Elecrochemistry 28 2 Hour Session Mark McElroy Thermos Fisher	Calming the Network with High-res Pressure Monitoring Nicole Kaiser Syrinix  W  27  AMI - Beyond The Meter Read Pat Hart Ferguson  W  Modern lift station design and RFP 29  Simon Cartwright Xylem - Flygt	Wastewater Process Science and Control Workshop Lance Mason Brown and Caldwell  WW  Wastewater Process Science and Control Workshop Continued  WW  Wastewater Process Science and Control Workshop	Wastewater Sludge Pumping Solutions Rich Owens Owens Pump & Equipment  WW  3_6 Simplicites in Grit Removal Rich Owens Owens Pump & Equipment  WW  3_7  Package Lift Stations for Fast Retrofits Rich Owens Owens Pump & Equipment			
Thermos Fisher Xylem - Flygt W, WW WW WW WW	11:20 - 12:20 - 1:10 - 2:10 2:10 - 2:15	SCADA in the Cloud Advanced Control System Jonathan Frank  W, WW  LUNCH  26 Chemicals in Water and Wastewater Applications Jeff Zachman Cascade Columbia Distribution  W, WW  BREAK Fundamentals of Elecrochemistry 28 2 Hour Session Mark McElroy Thermos Fisher  W, WW	Calming the Network with High-res Pressure Monitoring Nicole Kaiser Syrinix  W  27  AMI - Beyond The Meter Read Pat Hart Ferguson  W  Modern lift station design and RFP 29  Simon Cartwright Xylem - Flygt	Wastewater Process Science and Control Workshop Lance Mason Brown and Caldwell  WW  Wastewater Process Science and Control Workshop Continued  WW  Wastewater Process Science and Control Workshop	Wastewater Sludge Pumping Solutions Rich Owens Owens Pump & Equipment  WW  3_6 Simplicites in Grit Removal Rich Owens Owens Pump & Equipment  WW  3_7  Package Lift Stations for Fast Retrofits Rich Owens Owens Pump & Equipment			
w, ww ww ww	11:20 - 12:20 - 1:10 1:10 - 2:10 2:10 - 2:15 2:15 - 3:15	SCADA in the Cloud Advanced Control System Jonathan Frank  W, WW  LUNCH  26 Chemicals in Water and Wastewater Applications Jeff Zachman Cascade Columbia Distribution  W, WW  BREAK Fundamentals of Elecrochemistry 28  2 Hour Session Mark McElroy Thermos Fisher  W, WW  BREAK Fundamentals of Elecrochemistry Continued	Calming the Network with High-res Pressure Monitoring Nicole Kaiser Syrinix  W  27  AMI - Beyond The Meter Read Pat Hart Ferguson  W  Modern lift station design and RFP 29  Simon Cartwright Xylem - Flygt  W, WW  Modern lift station design and RFP Continued	Wastewater Process Science and Control Workshop Lance Mason Brown and Caldwell  WW  Wastewater Process Science and Control Workshop Continued  Wastewater Process Science and Control Workshop Continued  Wastewater Process Science and Control Workshop Continued	Wastewater Sludge Pumping Solutions Rich Owens Owens Pump & Equipment  WW  3_6 Simplicites in Grit Removal Rich Owens Owens Pump & Equipment  WW  3_7  Package Lift Stations for Fast Retrofits Rich Owens Owens Pump & Equipment  WW  30 Beneficial Reuse of Biosolids			
	11:20 - 12:20 - 1:10 1:10 - 2:10 2:10 - 2:15 2:15 - 3:15	SCADA in the Cloud Advanced Control System Jonathan Frank  W, WW  LUNCH  26 Chemicals in Water and Wastewater Applications Jeff Zachman Cascade Columbia Distribution  W, WW  BREAK Fundamentals of Elecrochemistry 28  2 Hour Session Mark McElroy Thermos Fisher  W, WW  BREAK Fundamentals of Elecrochemistry Continued Mike McElroy	Calming the Network with High-res Pressure Monitoring Nicole Kaiser Syrinix  W  27  AMI - Beyond The Meter Read Pat Hart Ferguson  W  Modern lift station design and RFP 29  Simon Cartwright Xylem - Flygt  W, WW  Modern lift station design and RFP Continued Simon Cartwright	Wastewater Process Science and Control Workshop Lance Mason Brown and Caldwell  WW  Wastewater Process Science and Control Workshop Continued  Wastewater Process Science and Control Workshop Continued  Wastewater Process Science and Control Workshop Continued	Wastewater Sludge Pumping Solutions Rich Owens Owens Pump & Equipment  WW  3_6 Simplicites in Grit Removal Rich Owens Owens Pump & Equipment  WW  3_7  Package Lift Stations for Fast Retrofits Rich Owens Owens Pump & Equipment  WW  30 Beneficial Reuse of Biosolids			
	11:20 - 12:20 - 1:10 1:10 - 2:10 2:10 - 2:15 2:15 - 3:15	SCADA in the Cloud Advanced Control System Jonathan Frank  W, WW  LUNCH  26 Chemicals in Water and Wastewater Applications Jeff Zachman Cascade Columbia Distribution  W, WW  BREAK  Fundamentals of Elecrochemistry 28  2 Hour Session Mark McElroy Thermos Fisher  W, WW  BREAK  Fundamentals of Elecrochemistry 27  Continued Mike McElroy Thermos Fisher	Calming the Network with High-res Pressure Monitoring Nicole Kaiser Syrinix  W  27  AMI - Beyond The Meter Read Pat Hart Ferguson  W  Modern lift station design and RFP 29  Simon Cartwright Xylem - Flygt  W, WW  Modern lift station design and RFP Continued Simon Cartwright Xylem - Flygt	Wastewater Process Science and Control Workshop Lance Mason Brown and Caldwell  WW  Wastewater Process Science and Control Workshop Continued  Wastewater Process Science and Control Workshop Continued  Wastewater Process Science and Control Workshop Continued	Wastewater Sludge Pumping Solutions Rich Owens Owens Pump & Equipment  WW  3_6 Simplicites in Grit Removal Rich Owens Owens Pump & Equipment  WW  3_7  Package Lift Stations for Fast Retrofits Rich Owens Owens Pump & Equipment  WW  30  Beneficial Reuse of Biosolids Rebecca Singer			

4741	Water	Wastewater	Special Topic - Wastewater	Special Topic - Cross Connect			
17th	Proctor: AWWA	Proctor: Josh Manson	Proctor: Andy Blondell	Proctor: Caleb Trammell			
	Room: Cascade West	Room:Cascade East	Room:Umpqua Hall	Room:Pacific Hall			
7:15-8:00	BREAKFAST						
7.13-0.00	8 3	26	19_3	32			
	Disinfection Residual Control in	Oregon DEQ WQ Panel -	13_3	Cross Conection Specialist Certification			
	Water Distribution Systems	Permitting/ Permit Limits	Activated Sludge Basics	Renewal			
8:00 - 9:00	UGSI	State of Oregon - DEQ	Oregon DEQ				
	Ethan Brooke	Jeffrey Navarro	Jon Gasik	Mike Biesemeiser			
	Ethan Brooke	seniey ivavairo	John Gushk	WINCE DIESEMEISER			
	W	WW					
	38	33_1					
	Lood and Group Billing Street						
9:05 -	Lead and Copper Rule Revisions	Book latera Book at Table		CHa (Canta)			
10:05	Service Line Inventory	Regulators Round Table		6 Hour Session			
	Oregon Health Authority	Oregon DEQ					
	Kari Salis	Jeff, Kimi, Pat, Suzie					
	W	WW					
10:05 - 10:1	5 BREAK						
	34	33_2					
	Tri City Water & Sanitary						
10:15 -	Authority Water Treatment Plant						
11:15	Tour	DEQ Operator Certication Basics					
11.15		Oregon DEQ					
	Brian Kelly	Kimi Grzyb					
	w	ww					
11:15 -							
11:20		11:15 - 11:20 BREAK					
BREAK							
		35					
11:20 -		Flushing Awesome: A Northwest Pipes Update					
12:20							
		City of Cancouver WA					
		Frank Dick					
12:20 1:10	W W	WW	ww	W, CCS			
12:20-1:10	LUNCH	36	37				
	3		Field Trip: Roseburg Wastewater				
	Expectations from an OR-OSHA inspection		Treatment Plant				
	Expectations from all off oother inspection						
1:10 - 2:10	Larry Fipps						
	OR-OSHA						
			Caleb Trammell				
		w, ww	Jacobs				
		,					
	Confined Space Entry						
	Commed Space Entry						
2:15 - 3:15	Larry Fipps						
	OR-C	OSHA					
W, WW WW WW W, CC							
OREGON OPERATOR CONFERENCE ENDS							