



Metro Water Reclamation Dist of Greater Chicago

Subscriber Involvement Report 2017 to 2024

Main Contact

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Summary

A summary of your involvement with the Water Research Foundation from 2017 to 2024 is given below. You detailed involvement and engagement with our research results follows in the remainder of the report.

- 1 organization included in Metro Water Reclamation Dist of Greater Chicago's subscription
- 139 staff with WRF accounts
- 24 staff served/serving on WRF planning bodies
- 75 products ordered, representing a total research value of \$14,395,230
- 14 webcasts viewed
- 24 research projects that involved Metro Water Reclamation Dist of Greater Chicago
- 21 active research projects involving Metro Water Reclamation Dist of Greater Chicago

WRF Project 04901 - Combining Nitrite-Shunt/Anammox Processes with Side-Stream EBPR Process for Simultaneous and Sustainable Nitrogen and Phosphorus Removal

WRF Project 04907 - Leading Water Utility Innovation

WRF Project 04975 - Practical Considerations for the Incorporation of Biomass Fermentation into Enhanced Biological Phosphorus Removal

WRF Project 05031 - Occurrence of PFAS Compounds in US Wastewater Treatment Plants

WRF Project 05082 - Investigation of Alternative Management Strategies to Prevent PFAS from Entering Drinking Water Supplies and Wastewater

WRF Project 05121 - Development of Innovative Predictive Control Strategies for Nutrient Removal

WRF Project 05137 - Unregulated Organic Chemicals in Biosolids: Prioritization, Fate and Risk Evaluation for Land Application

WRF Project 05142 - Data-Driven Process Control for Maximization of Energy and Resource Efficiency - A

WRF Project 05171 - Cost-Effective Approaches for Control of Multiple Constituents of Emerging Concern (CECs)

WRF Project 05173 - Feasibility of Full-Scale Implementation of LED UV Disinfection

WRF Project 05176 - Integrating Climate Change Impacts with Wet Weather Management, Capital Improvement, and Stream Network Enhancement



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Summary (Continued)

- 21 active research projects involving Metro Water Reclamation Dist of Greater Chicago (Cont.)
 - WRF Project 05178 - Preparing the Water Sector to Embrace Technology: Skillsets and Enterprise Management Approaches for the Digital Age
 - WRF Project 05180 - Incorporating Equity and Social Dimension into Community Climate Adaptation Planning and Watershed Management
 - WRF Project 05181 - Improved Equity & Environmental Justice in Asset Management
 - WRF Project 05186 - Diversity, Equity, and Inclusion Best Practices for the Water Sector Workforce
 - WRF Project 05187 - Beyond Net Zero: Advancing Interdependencies Between Utility Greenhouse Gas Emission Reductions and Water-Energy Nexus-Food Nexus
 - WRF Project 05188 - Establishing Industry-Wide Guidance for Water Utility Life Cycle Greenhouse Gas Emission Inventories
 - WRF Project 05189 - Quantifying the Impact of Artificial Intelligence/Machine Learning-Based Approaches to Utility Performance
 - WRF Project 05206 - Developing an Environmental, Social, and Governance Framework for Water Utilities
 - WRF Project 05216 - Cured-in-Place-Pipe (CIPP) Rehabilitation Emissions Study
 - WRF Project 05221 - Impact of Solid Stream Treatment on Microplastics in Biosolids

* Summary data includes involvement by employees of organizations included in this subscription which is not included in the details.

Subscription History (Total Commitment: \$1,047,041)

Start Date	End Date	Commitment	Subscription Type
01/01/2023	12/31/2023	\$164,702	MBRUTILITY- ONEWATER
01/01/2022	12/31/2022	\$156,859	MBRUTILITY- WW
01/01/2021	12/31/2021	\$152,290	MBRUTILITY- WW
01/01/2020	12/31/2020	\$152,290	MBRUTILITY- WW
01/01/2019	12/31/2019	\$144,900	MBRUTILITY- WW
01/01/2018	12/31/2018	\$138,000	MBRUTILITY- WW
01/01/2017	12/31/2017	\$138,000	MBRUTILITY- WW



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Board of Directors (BOD) Membership

2021 - 2023 Perkovich, Brian Member

Planning Committee Membership

2022 - 2023	Perkovich, Brian	Finance Committee	Member
2021 -	Kozak, Joseph	Techlink Reviewer	TechLink Reviewer
2021 -	Oskouie, Ali	Techlink Reviewer	TechLink Reviewer
2021 -	Schipma, Jane	Techlink Reviewer	TechLink Reviewer
2019 - 2021	Zhang, Heng	Advisory Committee - Nutrients Treatment: Intensification, Reliability, and Efficiency	Member

Issue Groups/Workshop Participation

2013 Minarik, Thomas Testing and Refinement of the Trace Organics Screening Tool

Other Project Participation

Funding Year		Project Value
2023	Developing an Environmental, Social, and Governance Framework for Water Utilities [#5206]	\$305,778
	Partner	
	Participating Utility	
	WRF Share: \$0.00	
	Cost Share: \$0.00	
	3rd Party In Kind: \$5,000.00	
	Total Contribution: \$5,000.00	
2022	Beyond Net Zero: Advancing Interdependencies Between Utility Greenhouse Gas Emission Reductions and Water-Energy Nexus-Food Nexus [#5187]	\$266,000



Other Project Participation (Continued)

Funding Year

Project Value

Participating Utility

WRF Share: \$0.00
 Cost Share: \$0.00
 3rd Party In Kind: \$15,000.00

Total Contribution: \$15,000.00

2022 Cost-Effective Approaches for Control of Multiple Constituents of Emerging Concern (CECs) [#5171] \$437,903

Participating Utility

WRF Share: \$0.00
 Cost Share: \$0.00
 3rd Party In Kind: \$6,000.00

Total Contribution: \$6,000.00

2022 Diversity, Equity, and Inclusion Best Practices for the Water Sector Workforce [#5186] \$187,800

Participating Utility

WRF Share: \$0.00
 Cost Share: \$0.00
 3rd Party In Kind: \$10,350.00

Total Contribution: \$10,350.00

2022 Establishing Industry-Wide Guidance for Water Utility Life Cycle Greenhouse Gas Emission Inventories [#5188] \$237,361

Partner

Participating Utility

WRF Share: \$0.00
 Cost Share: \$0.00
 3rd Party In Kind: \$99,560.00

Total Contribution: \$99,560.00

2022 Feasibility of Full-Scale Implementation of LED UV Disinfection [#5173] \$679,932

Participating Utility

WRF Share: \$0.00
 Cost Share: \$0.00
 3rd Party In Kind: \$2,860.00

Total Contribution: \$2,860.00



Other Project Participation (Continued)

Funding Year		Project Value
2022	Improved Equity & Environmental Justice in Asset Management [#5181]	\$415,171
	Participating Utility	
	WRF Share: \$0.00	
	Cost Share: \$0.00	
	3rd Party In Kind: \$10,000.00	
	Total Contribution: \$10,000.00	
2022	Incorporating Equity and Social Dimension into Community Climate Adaptation Planning and Watershed Management [#5180]	\$224,100
	Participating Utility	
	WRF Share: \$0.00	
	Cost Share: \$0.00	
	3rd Party In Kind: \$10,000.00	
	Total Contribution: \$10,000.00	
2022	Integrating Climate Change Impacts with Wet Weather Management, Capital Improvement, and Stream Network Enhancement [#5176]	\$499,720
	Participating Utility	
	WRF Share: \$0.00	
	Cost Share: \$0.00	
	3rd Party In Kind: \$15,000.00	
	Total Contribution: \$15,000.00	
2022	Preparing the Water Sector to Embrace Technology: Skillsets and Enterprise Management Approaches for the Digital Age [#5178]	\$160,000
	Participating Utility	
	WRF Share: \$0.00	
	Cost Share: \$0.00	
	3rd Party In Kind: \$8,000.00	
	Total Contribution: \$8,000.00	



Other Project Participation (Continued)

Funding Year		Project Value
2022	Quantifying the Impact of Artificial Intelligence/Machine Learning-Based Approaches to Utility Performance [#5189]	\$1,774,479
	Participating Utility	
	WRF Share: \$0.00	
	Cost Share: \$0.00	
	3rd Party In Kind: \$33,400.00	
	Total Contribution: \$33,400.00	
2021	Data-Driven Process Control for Maximization of Energy and Resource Efficiency - A [#5142]	\$879,404
	Participating Utility	
	WRF Share: \$0.00	
	Cost Share: \$0.00	
	3rd Party In Kind: \$0.00	
	Total Contribution: \$0.00	
2021	Unregulated Organic Chemicals in Biosolids: Prioritization, Fate and Risk Evaluation for Land Application [#5137]	\$948,708
	Participating Utility	
	WRF Share: \$0.00	
	Cost Share: \$9,500.00	
	3rd Party In Kind: \$25,000.00	
	Total Contribution: \$34,500.00	
2020	Investigation of Alternative Management Strategies to Prevent PFAS from Entering Drinking Water Supplies and Wastewater [#5082]	\$793,734
	Co-Funding Organization	
	WRF Share: \$5,000.00	
	Cost Share: \$0.00	
	3rd Party In Kind: \$5,000.00	
	Total Contribution: \$10,000.00	



Other Project Participation (Continued)

Funding Year		Project Value
2019	Definition, Framework, and Maturity Assessment for Intelligent Water Systems [#5039]	\$337,777
	Participating Utility	
	WRF Share: \$0.00	
	Cost Share: \$0.00	
	3rd Party In Kind: \$5,000.00	
	Total Contribution: \$5,000.00	
2019	Occurrence of PFAS Compounds in US Wastewater Treatment Plants [#5031]	\$899,693
	Co-Funding Organization	
	WRF Share: \$5,000.00	
	Cost Share: \$0.00	
	3rd Party In Kind: \$15,000.00	
	Total Contribution: \$20,000.00	
2018	Practical Considerations for the Incorporation of Biomass Fermentation into Enhanced Biological Phosphorus Removal [#4975]	\$1,312,160
	Participating Utility	
	WRF Share: \$0.00	
	Cost Share: \$0.00	
	3rd Party In Kind: \$240,900.00	
	Total Contribution: \$240,900.00	
2018	The Use of Next Generation Sequencing (NGS) Technologies and Metagenomics Approaches to Evaluate Water and Wastewater Quality Monitoring and Treatment Technologies [#4961]	\$490,015
	Participating Utility	
	WRF Share: \$0.00	
	Cost Share: \$0.00	
	3rd Party In Kind: \$17,418.00	
	Total Contribution: \$17,418.00	



Other Project Participation (Continued)

Funding Year

Project Value

2017

Combining Nitrite-Shunt/Anammox Processes with Side-Stream EBPR Process for Simultaneous and Sustainable Nitrogen and Phosphorus Removal [#4901]

\$918,771

Participating Utility

WRF Share: \$0.00

Cost Share: \$0.00

3rd Party In Kind: \$10,000.00

Total Contribution: \$10,000.00

2017

HYPOWERS: Hydrothermal Processing of Wastewater Solids [#4755]

\$8,825,987

Participating Utility

WRF Share: \$0.00

Cost Share: \$0.00

3rd Party In Kind: \$0.00

Total Contribution: \$0.00

Total Project Value: \$20,594,493



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Tailored Collaboration Project Participation

Funding Year		Project Value
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2022	Cured-in-Place-Pipe (CIPP) Rehabilitation Emissions Study [#5216]	\$784,520
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Participating Utility

WRF Share: \$0.00

Cost Share: \$0.00

3rd Party In Kind: \$0.00

Total Contribution: \$0.00

2022	Impact of Solid Stream Treatment on Microplastics in Biosolids [#5221]	\$234,125
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Participating Utility

WRF Share: \$0.00

Cost Share: \$0.00

3rd Party In Kind: \$5,740.00

Total Contribution: \$5,740.00

2018	Leading Water Utility Innovation [#4907]	\$1,159,978
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Participating Utility

WRF Share: \$0.00

Cost Share: \$0.00

3rd Party In Kind: \$6,732.00

Total Contribution: \$6,732.00

Total Project Value: \$2,178,623

Project Advisory Committee (PAC) Participation

		Project Value
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2023 - 2025	Straka, Levi	Enhanced Aeration and Scum Recovery for Physical Removal of PFAS from Wastewater [#5212]	\$211,844
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2021 - 2025	Brose, Dominic	Acid+ Digestion [#5108]	\$210,000
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2021	Vick, Justin	Stream Restoration as a BMP: Crediting Guidance [#5075]	\$75,000
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2021 -	Zhang, Heng	Advancement of Densification to Implement and Achieve More Efficient BNR Processes: Granule Generation, Retention and Management [#5130]	\$200,000
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Project Advisory Committee (PAC) Participation (Continued)

Project Value

2021 - 2024	Zhang, Heng	Biorecovery of Nutrients from Municipal Wastewaters with Co-production of Biofuels and Other Bioproducts [#5146]	\$0
2020	Kratzer, Joseph	Climate-Resilient Planning for Urban Stormwater and Wastewater Utilities: Workshop Proceedings [#5001]	\$124,789
2020 - 2024	Zhang, Heng	Implementation of Innovative Biological Nutrient Removal Processes through Improvement of Control Systems and Online Analytical Measurement Reliability and Accuracy [#5087]	\$303,939
2019 - 2023	Cox, Albert	Occurrence of PFAS Compounds in US Wastewater Treatment Plants [#5031]	\$899,693
2018 - 2022	Patel, Kamlesh	Unlocking the Potential of Mixed-Microbial Fermentation for Enhancing Carbonaceous Resource Recovery from Organic "Wastes" [#4900]	\$231,312
2017 - 2018	Kozak, Joseph	Advancing the Oxygenic Photogranule Process for Energy Positive Wastewater Treatment [#4865]	\$15,000
2017 - 2018	Vick, Justin	Case Study for Crediting Water Quality Benefits from Stream Restoration [#4844]	\$27,487
2016 - 2018	Kumar, Kuldip	Developing Exposure and Toxicity Data for Priority Trace Organics in Biosolids [#4867]	\$396,270
2016 - 2019	Patel, Kamlesh	Application of Peracetic Acid for Municipal Wastewater Processes [#4805]	\$1,190,529
2016 - 2018	Rijal, Geeta	Evaluating Fate of Coliphages in WRRFs and Potential Costs to Reduce Coliphages in WRRF Effluents [#4880]	\$370,745
2015 - 2017	O'Connor, Catherine	Design and Validation Protocols for UV Disinfection Systems [#4791]	\$542,000
2015 - 2018	Patel, Kamlesh	Sustainable Struvite Control Using Residual Gas from Digester Gas Cleaning Process [#4825]	\$353,814
2013 - 2019	Zhang, Heng	Efficient, Cost-Effective Nutrient Removal from Wastewater [#4827]	\$594,594
2012 - 2017	Kumar, Kuldip	Effluent Organic Nitrogen Produced Within Wastewater Treatment Plants [#1773]	\$0



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Project Advisory Committee (PAC) Participation (Continued)

Project Value

Total Project Value: \$5,747,016



75 www.waterrf.org Downloads
Total Research Value: \$14,395,230

www.waterrf.org Downloads

10/12/2023	Moran-Andrews, Judith	Characterizing, Categorizing, and Communicating Next-Generation Nutrient Removal Processes for Resource Efficiency [4976]
07/26/2023	Mellin, Jason	Integrated Methods for Wastewater Treatment Plant Upgrading and Optimization [04CTS5PDF]
06/22/2023	Pluth, Thais	Building Workforce Skills for Intelligent Water Operations [4663]
06/22/2023	Pluth, Thais	Defining Attributes and Demonstrating Benefits of Intelligent Water Systems [EXECSUM-4614]
06/22/2023	Pluth, Thais	Defining Attributes and Demonstrating Benefits of Intelligent Water Systems [SENG4C15PDF]
06/05/2023	Oskouie, Ali	Minimization of Odors and Corrosion in Collection Systems, Phase 1 [04CTS1PDF]
06/01/2023	Kozak, Joseph	Advancing Low Energy Biological Nitrogen and Phosphorus Removal [PIS-5083]
06/01/2023	Mellin, Jason	Guidance Manual for Polymer Selection in Wastewater Treatment Plants [D0013PDF]
06/01/2023	El-Naggar, Essam	Occurrence, Proliferation, and Persistence of Antibiotics and Antibiotic Resistance during Wastewater Treatment [EXECSUM-WERF1C15-1]
06/01/2023	Mellin, Jason	Polymer Characterization and Control in Biosolids Management [D43007PDF]
06/01/2023	Kozak, Joseph	Stabilization of Main Plant Nitrification/Denitrification Performance [U4R12PDF]
06/01/2023	Kozak, Joseph	Understanding the Impacts of Low-Energy and Low-Carbon Nitrogen Removal Technologies on Bio-P and Nutrient Recovery Processes [4819]
05/26/2023	Kozak, Joseph	Beyond Nutrients: Recovering Carbon and Other Commodity Products from Wastewater [NTRY3R13PDF]
05/04/2023	Mellin, Jason	Fundamental Methods for Optimizing Residuals Dewatering [90891]
01/26/2023	Brose, Dominic	High-Tech Analysis of Low-Tech Methods for Sustainable Class A Biosolids Production, Phase II [4947]
01/26/2023	Brose, Dominic	Towards a Renewable Future: Assessing Resource Recovery as a Viable Treatment Alternative: State of the Science and Market Assessment [NTRY1R12APDF]



www.waterrf.org Downloads (Continued)

01/23/2023	Moran-Andrews, Judith	WERF/CRTC Protocols for Evaluating Secondary Clarifier Performance [D13002PDF]
01/03/2023	Yang, Fenghua	Nitrogen Reduction Technology Solutions for Ocean Discharges: Biofilm Anammox, A20, and IFAS Bioreactors [EXECSUM-5134]
12/02/2022	Brose, Dominic	Developing Exposure and Toxicity Data for Priority Trace Organics in Biosolids [4867]
12/01/2022	Cox, Albert	Understanding Pyrolysis for PFAS Removal [PIS-5107]
11/29/2022	Oskouie, Ali	Minimization of Odors and Corrosion in Collection Systems, Phase 1 [04CTS1PDF]
11/18/2022	Patel, Kamlesh	Next Generation Tools for Assessing Death and Decay of Critical Wastewater Bacteria [U1R12PDF]
11/16/2022	Zhang, Heng	Aerobic Granular Sludge for Biological Nutrient Removal [NUTR5R14HPDF]
11/11/2022	Zhang, Heng	Characterizing, Categorizing, and Communicating Next-Generation Nutrient Removal Processes for Resource Efficiency [4976]
11/11/2022	Zhang, Heng	Characterizing, Categorizing, and Communicating Next-Generation Nutrient Removal Processes for Resource Efficiency: Appendix E: Completed Data Collection Sheets [PROJECTPAPER-4976-1]
11/11/2022	Zhang, Heng	Development and Implementation of a Process Technology Toolbox for Sustainable Biological Nitrogen Removal Using Mainstream Deammonification (#4855) [STAR_N2R14PDF]
11/11/2022	Zhang, Heng	Estimating the Comammox Contribution to Ammonia Oxidation in Nitrogen Removal Systems [4884]
11/11/2022	Zhang, Heng	Understanding the Impacts of Low-Energy and Low-Carbon Nitrogen Removal Technologies on Bio-P and Nutrient Recovery Processes [4819]
09/09/2022	Kumar, Kuldip	Technologies for Sidestream Nitrogen Removal [NUTR1R06WPDF]
08/29/2022	Zhang, Heng	Evaluating the Impacts of Cold and Wet Weather Events on Biological Nutrient Removal in Water Resource Recovery Facilities [NUTR1R06SPDF]
08/29/2022	Zhang, Heng	Striking the Balance Between Nutrient Removal in Wastewater Treatment and Sustainability [NUTR1R06NPDF]
08/29/2022	Zhang, Heng	Understanding the Impacts of Low-Energy and Low-Carbon Nitrogen Removal Technologies on Bio-P and Nutrient Recovery Processes [4819]



www.waterrf.org Downloads (Continued)

06/29/2022	Straka, Levi	Develop and Demonstrate Fundamental Basis for Selectors to Improve Activated Settleability: Phase II Lab Investigation [01CTS4APDF]
06/29/2022	Straka, Levi	Develop and Demonstrate Fundamental Basis for Selectors to Improve Activated Sludge Settleability and Selector Diagnostic Tool [01CTS4PDF]
05/26/2022	Pluth, Thais	Application of Big Data for Energy Management in Water Utilities [EXECSUM-4978]
05/17/2022	Cox, Albert	Data-Driven Process Control for Maximizing Resource Efficiency [PIS-5141]
05/17/2022	Cox, Albert	Definition of a Smart Utility - How to Be a Digital Utility and the Framework for an Intelligent Water System [SOW-5039]
05/17/2022	Cox, Albert	Nitrogen Reduction Technology [PIS-5117]
05/17/2022	Cox, Albert	Occurrence of PFAS Compounds in US Wastewater Treatment Plants [SOW-5031]
05/17/2022	Cox, Albert	The Use of Next Generation Sequencing (NGS) Technologies and Metagenomics Approaches to Evaluate Water and Wastewater Quality Monitoring and Treatment Technologies [SOW-4961]
05/09/2022	Pluth, Thais	Leveraging Big-Data and Deep Learning for Economical Condition Assessment of Wastewater Pipelines [4902]
04/26/2022	Pluth, Thais	Studying the Fate of PFAS through Sewage Sludge Incinerators [PIS-5111]
04/26/2022	Pluth, Thais	Understanding Pyrolysis for PFAS Removal [PIS-5107]
04/25/2022	Kumar, Kuldip	A Guide to Net-Zero Energy Solutions for Water Resource Recovery Facilities [ENER1C12PDF]
04/22/2022	Kumar, Kuldip	N2O and CH4 Emission from Wastewater Collection and Treatment Systems: Technical Report [CC6C10BPDF]
03/21/2022	Kumar, Kuldip	Nitrogen Reduction Technology [PIS-5117]
01/18/2022	Pluth, Thais	Application of Big Data for Energy Management in Water Utilities [4978]
11/22/2021	Pluth, Thais	Application of Big Data for Energy Management in Water Utilities [SOW-4978]
09/20/2021	Cox, Albert	Treatment Mitigation Strategies for Poly- and Perfluorinated Chemicals [4322]
09/08/2021	Yang, Fenghua	Advancing Low Energy Biological Nitrogen and Phosphorus Removal [PIS-5083]



www.waterrf.org Downloads (Continued)

09/08/2021	Yang, Fenghua	Demonstration of Progressive Carbon Efficient Nitrogen with Biological Phosphorous Removal in a Conventional BNR Facility [SOW-5071]
09/08/2021	Yang, Fenghua	Development and Implementation of a Process Technology Toolbox for Sustainable Biological Nitrogen Removal Using Mainstream Deammonification (#4855) [STAR_N2R14PDF]
09/08/2021	Yang, Fenghua	Partial Denitrification Anammox as Alternative Pathway to Achieve Mainstream Short-Cut Nitrogen Removal [SOW-5027]
09/08/2021	Yang, Fenghua	Practices to Enhance Internal Fermentation of Side-Stream Secondary Sludge and Mixed Liquor Suspended Solids for Biological Phosphorus Removal [SOW-4975]
07/29/2021	Brose, Dominic	Occurrence of PFAS Compounds in US Wastewater Treatment Plants [SOW-5031]
07/07/2021	Kumar, Kuldip	A Guide to Net-Zero Energy Solutions for Water Resource Recovery Facilities [ENER1C12PDF]
05/18/2021	Pluth, Thais	State of Knowledge of Endocrine Disruptors and Pharmaceuticals In Drinking Water [91228]
04/29/2021	Brose, Dominic	An Electrochemical Reactor to Minimize Brominated DBPs in a Conventional Treatment Plant [91202]
04/29/2021	Moran-Andrews, Judith	Develop and Demonstrate Fundamental Basis for Selectors to Improve Activated Sludge Settleability and Selector Diagnostic Tool [01CTS4PDF]
04/25/2021	Zhang, Heng	Advanced Oxidation and Transformation of Organic Contaminants [4241]
03/04/2021	Zhang, Heng	White Paper - Microplastics in Aquatic Systems: An Assessment of Risk [CEC7R17PDF]
01/07/2021	Podczerwinski, Edward	Development of a Community-Based Lead Risk and Mitigation Mode [SOW-4965]
01/07/2021	Podczerwinski, Edward	Real-Life Enterprise Resilience: Literature Review [PROJECTPAPER-4734-1]
08/20/2020	Kozak, Joseph	Practices to Enhance Internal Fermentation of Side-Stream Secondary Sludge and Mixed Liquor Suspended Solids for Biological Phosphorus Removal [SOW-4975]
06/30/2020	Cox, Albert	Biosolids Research Summit [5055]
06/25/2020	Cox, Albert	Biosolids Research Summit [5055]



www.waterrf.org Downloads (Continued)

06/10/2020	Vick, Justin	Holistic Approach to Improved Nutrient Management: A Pre-Workshop Webcast [PRESENTATION-4974-1]
04/29/2020	Oskouie, Ali	Innovations in Dewatering Sludges [02CTS3PDF]
03/19/2020	Vick, Justin	Fate of Pharmaceuticals and Personal Care Products Through Municipal Wastewater Treatment Processes [EXECSUM-03-CTS-22UR-1]
11/14/2019	Kozak, Joseph	Filter Maintenance and Operations Guidance Manual [EXECSUM-90908]
11/14/2019	Kozak, Joseph	Microbial Activity on Filter-Adsorbers [EXECSUM-90606]
09/26/2019	Kumar, Kuldip	Developing Exposure and Toxicity Data for Priority Trace Organics in Biosolids [4867]

Webcast Viewed

11/09/2023	Schipma, Jane	Assessing Water Quality Monitoring Needs, Tools, Gaps, and Opportunities for Potable Water Reuse [WEBCAST-5079-1]
10/17/2023	Storino, Louis	Long-Term Vulnerability Assessment and Adaptation Plan for SFPUC [WEBCAST-4703-1]
08/11/2023	Kozak, Joseph	Greenhouse Gas Emissions in the Water Sector: Let's Uncover the Basics! [WEBCAST-021623]
02/16/2023	Lefler, Yvonne Moran-Andrews, Judith Patel, Kamlesh Patten, Renee Qin, Dongqi	Greenhouse Gas Emissions in the Water Sector: Let's Uncover the Basics! [WEBCAST-021623]
02/15/2023	Zhang, Heng	Per- and Polyfluoroalkyl Substances (PFAS) in Water: Background, Treatment and Utility Perspective [WEBCAST-PFAS053118-1]
08/29/2022	Zhang, Heng	Optimize Nutrient Removal WRRF Operations [WEBCAST-4973-10]
08/29/2022	Zhang, Heng	Strategies to reduce O&M Cost in Nutrient Removal WRRFS [WEBCAST-4973-6]
10/15/2021	Brose, Dominic	PFAS in Biosolids Under a Land Application Scenario: Biotic Weather, Leaching, and Transport [WEBCAST-5042-1]
08/06/2021	Cox, Albert	Constituents of Emerging Concern and the Emerging Technologies to Treat Them: Past, Present, and Future [WEBCAST-PLB-2021-2]



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Webcast Viewed (Continued)

03/12/2019

Tsega, Atakilt

Fostering Innovation Within Utilities [WEBCAST-4642-1]



Metro Water Reclamation Dist of Greater Chicago

Subscriber Involvement Report 2017 to 2024

Involvement Report Glossary

3rd Party In Kind. The value of non-cash contributions that a participant provides to a WRF project.

Co-Funding Organization. An organization that contributes cash to fund a research project payable to WRF.

Co-Principal Investigator (Co-PI). An individual involved with the Principal Investigator in the execution of a project.

Cost Share. The portion of allowable costs that the contractor, subcontractor or third-party participant contributes to a WRF project.

Participating Utility. An organization that provides third-party contributions or other material support to a WRF research project but does not enter into a contractual relationship with WRF, the contractor or a subcontractor.

Principal Investigator (PI). The contractor's employee with primary responsibility to ensure that all terms and conditions of a contract are met.

Project Advisory Committee (PAC). A group of independent volunteers assembled by WRF to provide an independent technical review, assistance, and/or expertise to a WRF project.

WRF Share. The amount of money the Co-Funding Organization contributes to fund a research project.