

Bringing Research To Life



April 16, 2024





OUR PURPOSE

To advance the science of water to improve the quality of life for all communities.

OUR VISION

The science and knowledge we generate allow the water sector to provide high-quality, safe, accessible, and affordable water services that contribute to healthy, resilient communities and a sustainable global environment.

OUR MISSION

To help our subscribers discover opportunities and solve problems by delivering actionable water research to meet the needs of the communities they serve.



BY THE NUMBERS

AS OF 8/31/2023

SUBSCRIBERS

 **963** UTILITIES

 **67** MANUFACTURERS

 **62** CONSULTANTS

FUNDED RESEARCH

 **\$81** MILLION

 **\$49** MILLION CASH
*Contractually Funded
Research*

 **\$32** MILLION
COST SHARE

RESEARCH PORTFOLIO

 **264** ACTIVE
PROJECTS

 **66** CO-FUNDED PROJECTS
137 CO-FUNDERS

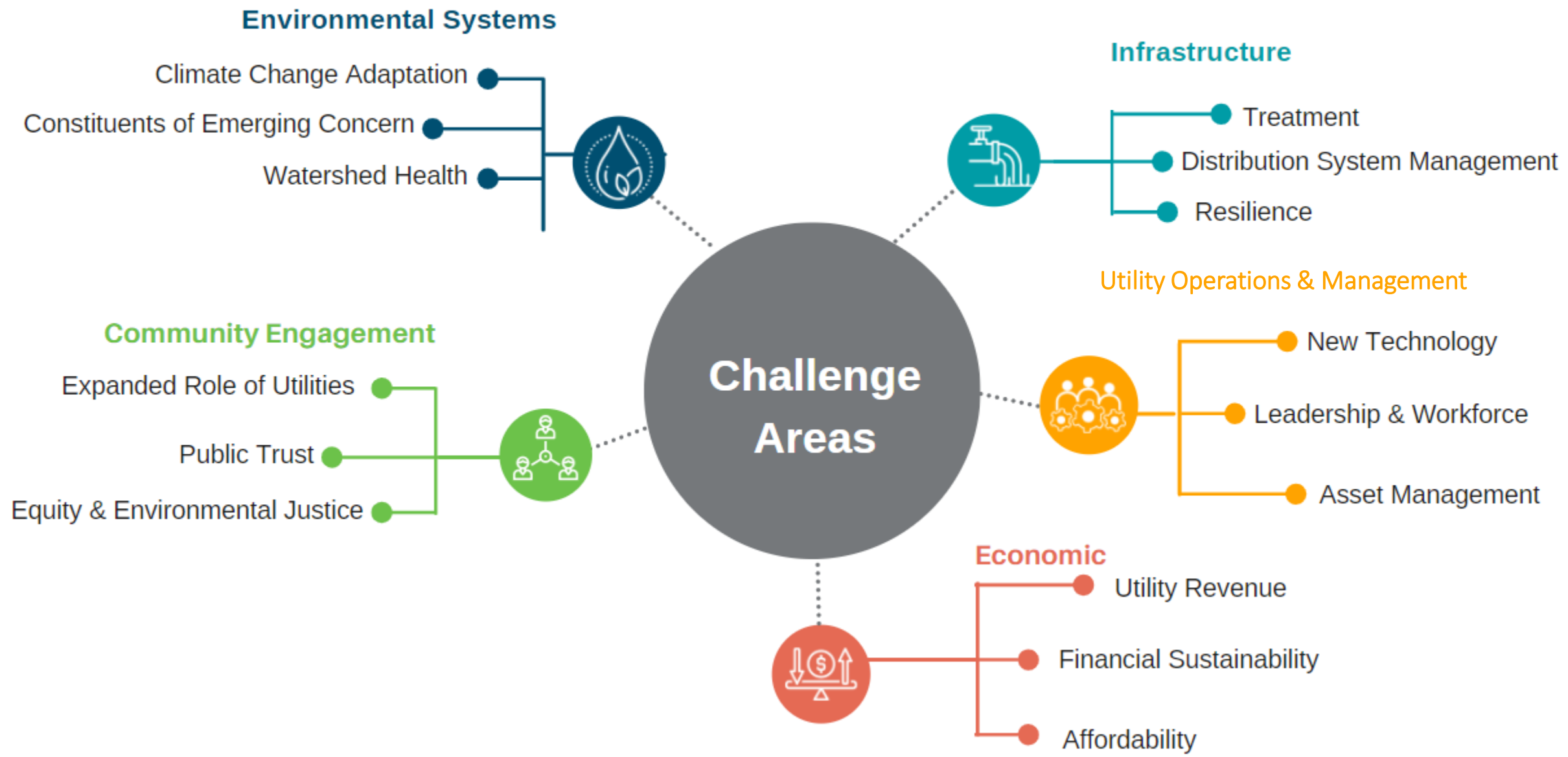
9 FEDERAL/STATE GRANTS

 **3** FEDERAL CONTRACTS

2 PRIVATE GRANTS

\$.78 OF EVERY DOLLAR SUPPORTS PROGRAM SERVICES

49 WRF STAFF



963 UTILITIES
129 SOLUTION PROVIDERS
(Manufacturers & Consultants)

\$81M
FUNDED RESEARCH

264
ACTIVE PROJECTS

\$.78
OF EVERY DOLLAR
SUPPORTS PROGRAM SERVICES

357M
MEDIA REACH

68,945
SOCIAL MEDIA FOLLOWERS

Most Visited Research Project Pages

1. [Residential End Uses of Water, Version 2 \(4309\)](#)
2. [Guidelines for Optimizing Nutrient Removal Plant Performance \(4973\)](#)
3. [PFAS One Water Risk Communication Messaging for Water Sector Professionals \(5124\)](#)
4. [Sampling and Monitoring Strategies for Opportunistic Pathogens in Drinking Water Distribution Systems \(4911\)](#)
5. [The Use of Next Generation Sequencing \(NGS\) Technologies and Metagenomics Approaches... \(4961\)](#)

Most Visited Website Resources

1. [Sampling and Monitoring Strategies for Opportunistic Pathogens in Drinking Water Distribution Systems Webcast](#)
2. [Guidelines for Optimizing Nutrient Removal Plant Performance Report \(4973\)](#)
3. [Greenhouse Gas Emissions in the Water Sector: Let's Uncover the Basics Webcast](#)
4. [Microplastic Monitoring, Management, and Messaging Throughout the Water Cycle Webcast](#)
5. [PFAS One Water Risk Communication Messaging for Water Sector Professionals, One Water Toolkit \(5124\)](#)

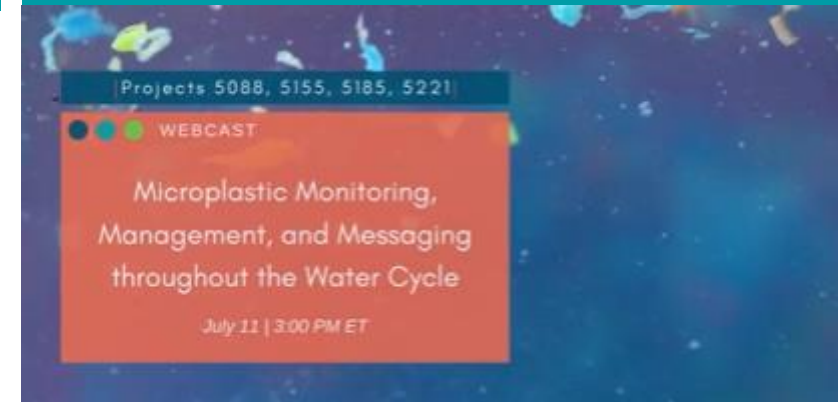
Top Visitor Countries

1. United States
2. Canada
3. India
4. China
5. Australia
6. United Kingdom
7. Germany
8. Ukraine
9. Philippines
10. Netherlands

Most Popular Topics

1. Climate Change
2. PFAS
3. Advanced Treatment
4. Lead and Copper
5. Integrated Planning & Water Management
6. Utility Management
7. Biosolids
8. Resource Recovery
9. Energy Optimization
10. Reuse

Most Popular Webcast



Top Social Media Post

[Middlesex Water CEO Dennis Doll Honored with NJBIZ Icon Award](#)



48M Reach

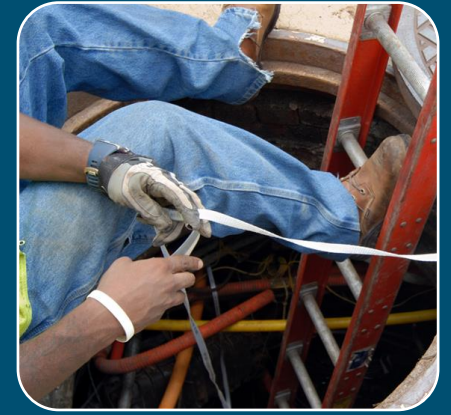
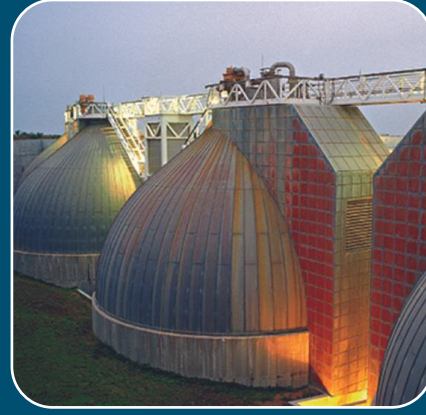
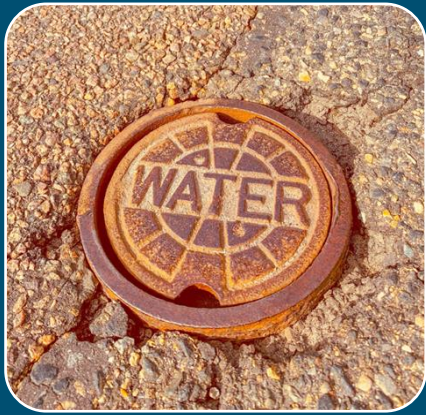
Top Social Media Post

[WRF Celebrates 50K Followers on LinkedIn!](#)



5K Impressions





Healthy Communities & Environment

- Holistic Watershed Management & Integrated Planning
- Monitoring Tools at Watershed & Sewershed Scale
- Receiving Water Quality Management

Treatment: Innovation and Optimization

- Treatment & Process Optimization
- Nature-based Solutions
- Diversifying Water Systems

Efficient Resource Use & Recovery

- Energy Efficiency, Intensification & Resource Recovery
- Climate Change Mitigation: Addressing Greenhouse Gases
- Nutrient Removal & Recovery
- Solids Management

Resilient Infrastructure

- Asset Management
- Distribution System Integrity & Water Quality
- Collection Systems Integrity & Water Quality Impacts

Utility Operations & Management

- Water Resource Planning
- Workforce Management
- Financial Management

Climate Risk Assessment & Adaptation, Communication, Environmental Justice, Digital Transformation

Optimizing Filter Operation in an Ozone-Biofiltration Plant to Reduce Selection for Opportunistic Pathogens in Drinking Water Production



PROJECT 4743

State-of-the-Science Review: Evidence for Pathogen Removal in Managed Aquifer Recharge Systems



PROJECT 4957

Evaluation of Source Separated Organic Feedstock Pretreatment and Management Practices



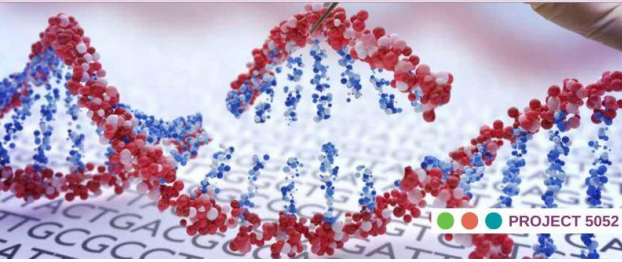
PROJECT 5037

Holistic Approach to Improved Nutrient Management



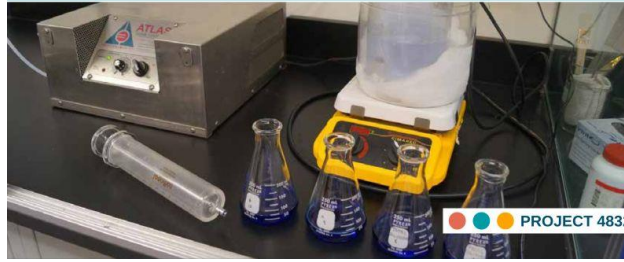
PROJECT 4974

Standardizing Methods with QA/QC Standards for Investigating the Occurrence and Removal of Antibiotic Resistant Bacteria/Antibiotic Resistance Genes in Surface Water, Wastewater, and Recycled Water



PROJECT 5052

Evaluation of CEC Removal by Ozone/BAF Treatment in Potable Reuse Applications



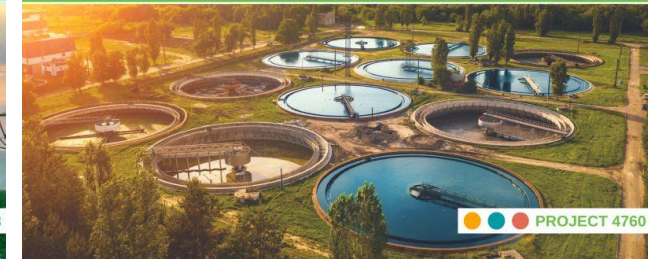
PROJECT 4832

Potential of Oilfield Produced Water for Irrigation in California



PROJECT 4993

Establishing Additional Log Reduction Credits for WWTPs



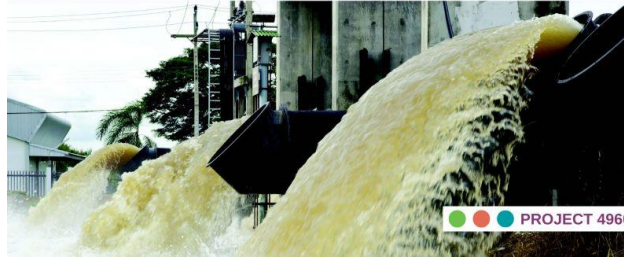
PROJECT 4760

Framework for the Development of a Utility Research Program



PROJECT 5166

An Enhanced Source Control Framework for Industrial Contaminants in Potable Reuse



PROJECT 4960

Evaluation of Tier 3 Validation Protocol for Membrane Bioreactors to Achieve Higher Pathogen Credit for Potable Reuse



PROJECT 4959

Characterization and Contamination Testing of Source Separated Organic Feedstocks and Slurries for Co-Digestion at Resource Recovery Facilities



PROJECT 4915

Leveraging Pretreatment Programs for One Water Initiatives: Synthesis of Best Practices and Path Forward



PROJECT 4971

Resilience Practical Framework for Water Infrastructure User's Guide



PROJECT 5014

Integrating Real-Time Collection System Monitoring Approaches into Enhanced Source Control Programs for Potable Reuse



PROJECT 5048

Developing Guidance for Assessment and Evaluation of Harmful Algal Blooms and Implementation of Control Strategies in Source Water



PROJECT 4912

Potable Reuse Demonstration Design & Communication Toolbox



Assessing the State of Knowledge and Research Needs for Stormwater Harvesting



Seismic and Multi-Hazard Conference



Pathogen Removal Credits for Wastewater Treatment: Guidance for Study Plans and Reporting



Determining the Role of Organic Matter Quality on PFAS Leaching from Sewage Sludge and Biosolids



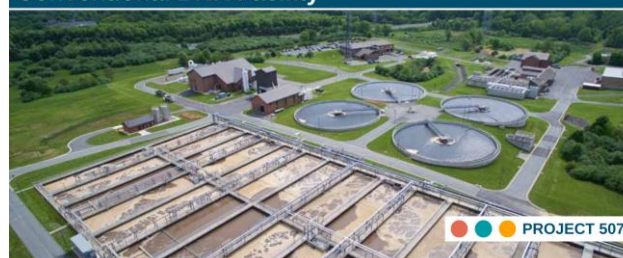
The Use of Next Generation Sequencing Technologies and Metagenomics Approaches to Evaluate Water and Wastewater Quality Monitoring and Treatment Technologies



PROJECT PAPER

Advancement of Densification to Implement and Achieve More Efficient BNR Processes: Granule Generation, Retention and Management

Demonstration of Progressive Carbon Efficient Nitrogen with Biological Phosphorous Removal in a Conventional BNR Facility



PROJECT PAPER

Assessing the Microbial Risks and Impacts from Stormwater Capture and Use to Establish Appropriate Best Management Practices



New Techniques, Tools, and Validation Protocols for Achieving Log Removal Credit Across NF and RO Membranes



Sampling and Monitoring Strategies for Opportunistic Pathogens in Drinking Water Distribution Systems



Public Health Benefits and Challenges for Blending of Advanced Treated Water with Raw Water Upstream of a Surface Water Treatment Plant in DPR



Assessing the Microbial Risks and Impacts from Stormwater Capture and Use to Establish Appropriate Best Management Practices



Enhanced Evaluation of the Removal of Contaminants of Emerging Concern in Decentralized Water Reuse Systems by Non-Targeted Analysis



Risk Benefit Assessment of Chlorite as a Co-Disinfectant for Nitrification Control in Chloraminated Drinking Water Systems



Identifying the Amount of Wastewater That Is Available and Feasible to Recycle in California

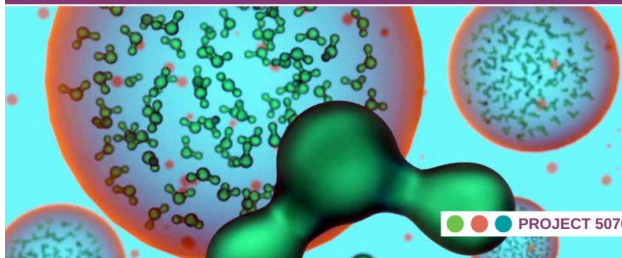


Understanding the Impacts of Wastewater Treatment Performance on Advanced Water Treatment Processes and Finished Water Quality



PROJECT 4833

Investigation of Nanobubble Technology for the Removal of MIB and Geosmin from Drinking Water



PROJECT 5070

Use of DNA Nanostructures as Viral Surrogates in Potable Reuse Applications



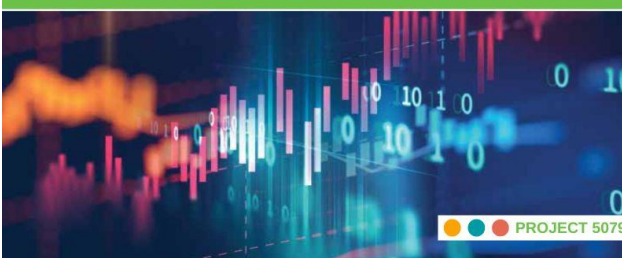
PROJECT 5104

Guidelines for Optimizing Nutrient Removal Plant Performance



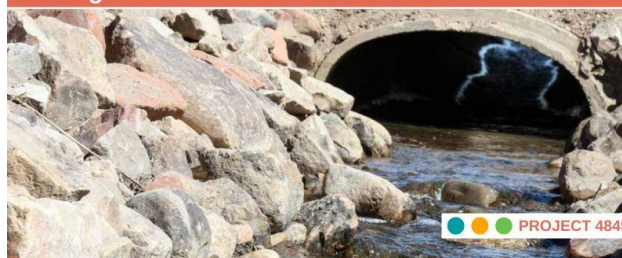
PROJECT 4973

Water Reuse and Beyond—Water Quality Monitoring Methods, Data, and Interpretation



PROJECT 5079

Exploring Cost-Benefit Analysis of Post Long-Term Control Plan Approaches to Wet Weather Management



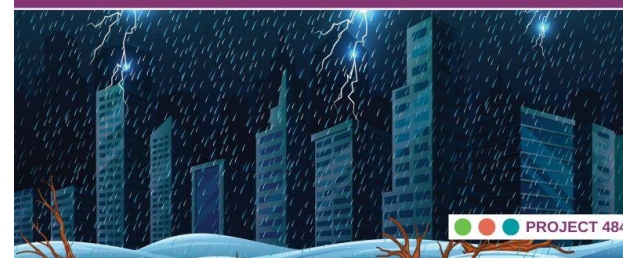
PROJECT 4849

Practical Considerations for the Incorporation of Biomass Fermentation into Enhanced Biological Phosphorus Removal



PROJECT 4975

Enhancement of Resilience to Extreme Weather and Climate Events: Proactive Flood Management



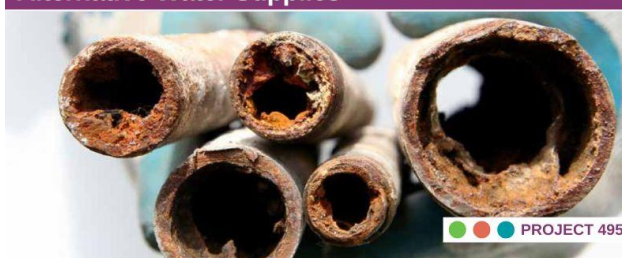
PROJECT 4842

Guidance for Using Pipe Rigs to Inform Lead and Copper Corrosion Control Treatment Decisions



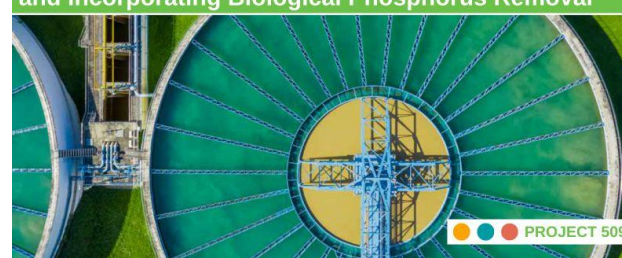
PROJECT 5081

Considerations and Blending Strategies for Drinking Water System Integration with Alternative Water Supplies



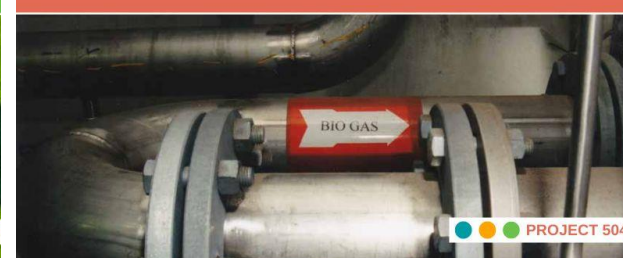
PROJECT 4953

When a Detour Becomes a Shortcut: Going Full-Scale with PdNA Strategy for Mainstream Deammonification and Incorporating Biological Phosphorus Removal



PROJECT 5095

Biogas Harvester Demonstration



PROJECT 5045

Advancing Benefits and Co-Benefits Quantification and Monetization for Green Stormwater Infrastructure: An Interactive Guidebook for Comparison Case Studies



PROJECT 5105

Addressing Impediments and Incentives for Agricultural Reuse



PROJECT 4956

Identifying Causes and Controls for Intermittent Nitrate Release from Granular Activated Carbon



PROJECT 5046

Holistic Approaches to Flood Mitigation Planning and Modeling under Extreme Events and Climate Impacts



PROJECT 5084

William A. Tarpeh, PhD

Assistant Professor of Chemical Engineering, and by Courtesy,
of Civil & Environmental Engineering
Stanford University

*Selective, Regenerable Adsorbents for
Electrochemical Wastewater Nitrogen Recovery*

Press Release: [WRF Presents \\$100K Research Award To Advance Wastewater Resource Recovery](#)

Interview: [Turning Waste into Gold with Dr. William Tarpeh](#)





THE
**Water
Research**
FOUNDATION®

Thank You!