Regional Recycled Water Program Update

Engineering and Operations Committee
Item 6a
December 9, 2019
Outline

- Demonstration Plant Activities
  - Grand Opening
  - Operations and Testing
  - Schedule
- Panel and Regulatory Activities
- Program Activities
- Next Steps
Grand Opening Event
October 10, 2019 - Approximately 250 attendees
Demonstration Plant Process Train

Chemical Feed Systems
Reverse Osmosis
MBR – Membrane Modules
UV Light/Advanced Oxidation Process
MBR – Aerobic and Anoxic Tanks

Demonstration Plant
3-D Rendering
Demonstration Plant Pre-Testing Activities

- Continued Weekly Coordination & Operational Meetings
  - Metropolitan
  - LACSD
  - Project Consultants
- Monitoring & Maintenance
- Microbial Method Development
- Start-up Operations
Monitoring & Maintenance

Analyzer Maintenance

Sample Analyses

Field Sampling

Chemical Tote Handling

E&O Committee
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December 9, 2019
Process Testing and Microbial Method Development

Pathogen Analyses Training

Denitrification Reactor Test Setup

Bench-Scale Testing

Sanitation Districts’ Brine Test Platform
Start-up Operations

- Biological Acclimation
- Bioreactor Sampling
- Equipment Troubleshooting
Demonstration Plant Testing

Pre-testing
- Equipment Testing and Process Acclimation (3 months)

Phase 1
- Baseline Performance Testing (4 months)

Phase 2
- Challenge Testing and Evaluation (8 months)
Independent Scientific Advisory Panel

- Title 22 Regulations require independent panel of experts to review alternative approaches for meeting existing regulations (e.g., application of Membrane Bioreactor)

- National Water Research Institute commissioned to secure panel for demonstration project

- Panel will help guide demonstration project
  - Testing and monitoring approach
  - Water quality, operations data and reporting
  - Regulatory engagement
Focus Areas covered on Dec. 4-5, 2019

Process Technology
- Testing Approach
- Operational Criteria

Monitoring and Analysis
- Microbial Sampling
- Analytical Methodology

Raw Water Augmentation
- Conceptual Approach
- Technology Considerations
Independent Scientific Advisory Panel
Final ISAP report available by early 2020
Raw Water Augmentation (RWA)

State Water Resources Control Board released a revised DPR Framework in August 2019

- Staff provided verbal and written comments on framework

- Joint support letter for RWA Expert Panel
  - Metropolitan, LADWP & Santa Clara Valley Water District

- Research to support and inform regulation in progress
### Demonstration Facility Testing Schedule

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<th>Activity</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
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<td>Construction/Commissioning</td>
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<td>MBR Regulatory Testing</td>
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<td>Process Optimization &amp; Design Criteria Testing</td>
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<td>ISAP/Regulator Engagement</td>
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<td>Raw Water Augmentation Development</td>
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- Completion
- ISAP Meeting No. 2 (Dec. 4 and 5), Regulator Meeting No. 7 (Dec. 5)
Program Outreach Activities

Full Tour Program Launched

Public Tours

Group Tours

School Tours

E&O Committee

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December 9, 2019
Next Steps for Program

- **White Papers**
  - July 23, 2019
  - Letters of Intent

- **Workshop #1:** Implementation and DPR Considerations
  - Early 2020

- **Workshop #2:** Planning, Agreements and Financial Considerations
  - Early 2020

- **Board Action on Next Steps**
  - Mid 2020

**Done**
Innovative Partnership Opportunity
Southern Nevada Water Authority

- Metropolitan and SNWA collaboration and partnership history
  - Colorado River water supply
  - Water quality, treatment technologies, and laboratory methods
- SNWA assessing future long-term supply needs
- Explore partnership opportunities in Program development
  - Letter of Intent
  - Coordination on 2026 Colorado River Operating Guidelines
Metropolitan’s Recycled Water Website

A NEW SOURCE OF WATER FOR SOUTHERN CALIFORNIA

Water is too precious to use just once. So the Metropolitan Water District of Southern California is making a major investment in a potential water recycling project that will reuse water currently sent to the ocean.

www.mwdh2o.com/RRWP