NEW Water Update

Municipal & Industrial Partner Meeting

June 18, 2026

NEW Water
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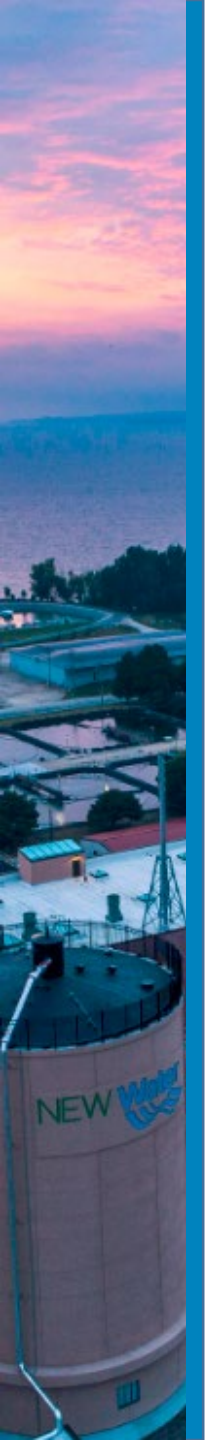
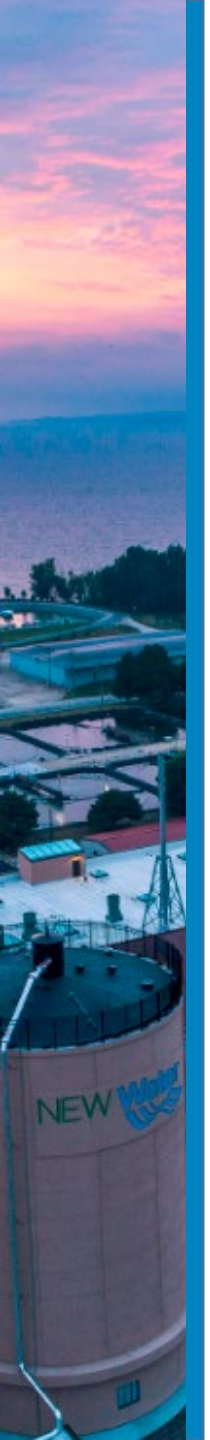


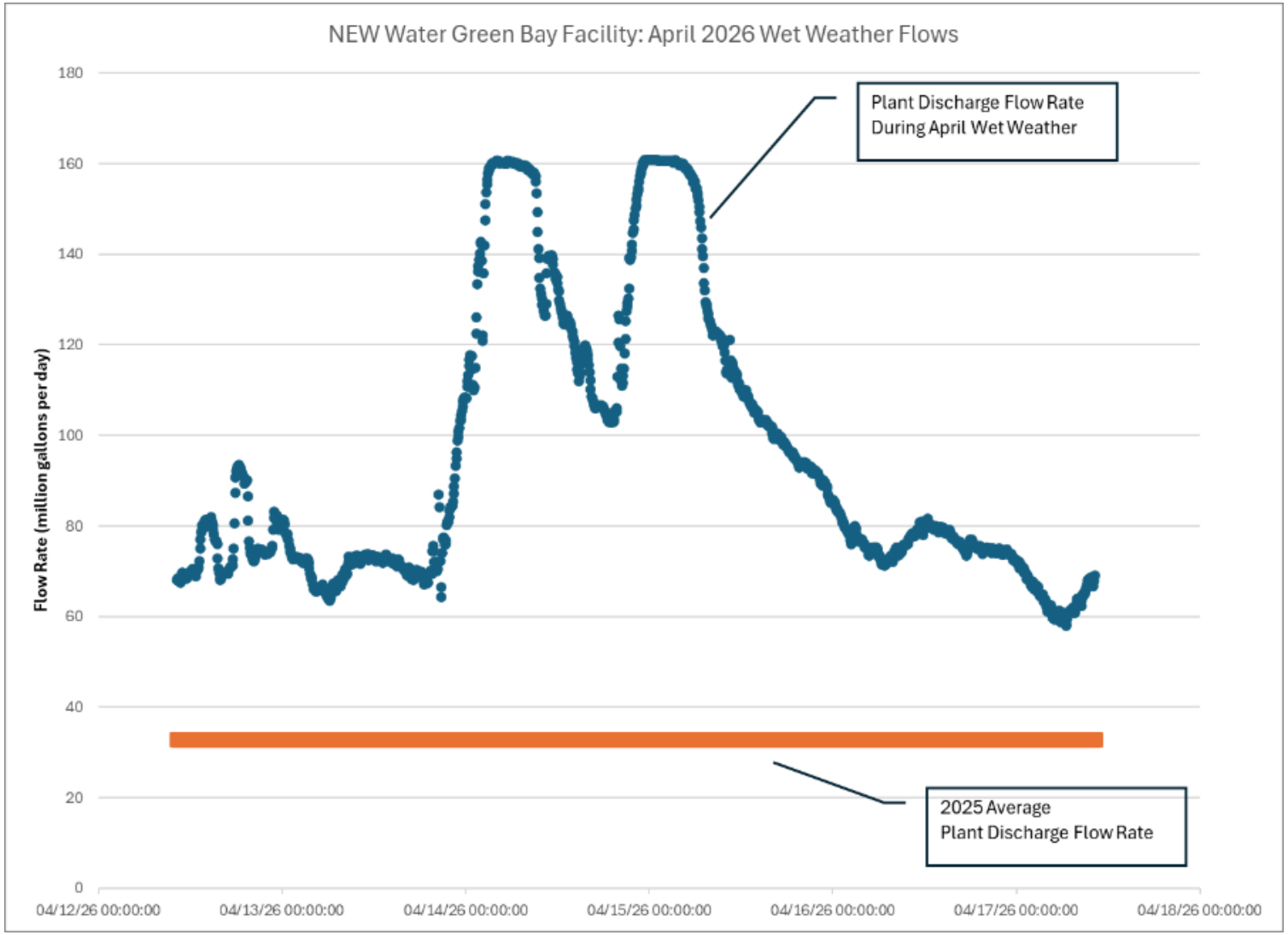
Today's Agenda

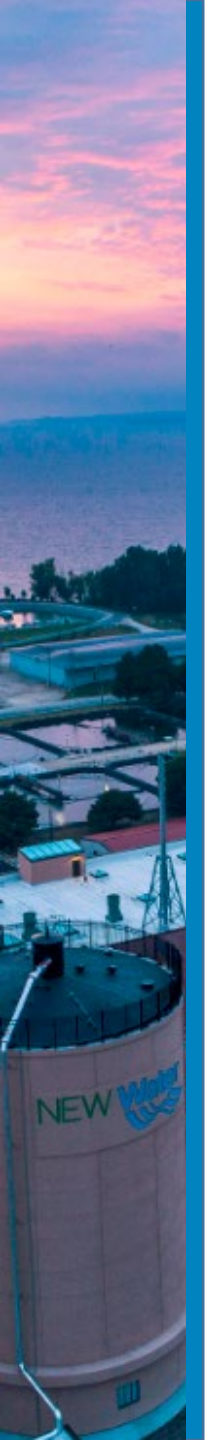
- **Executive Director Updates**
  - High-flow events
  - Budget / finance update
  - Strategic Plan – thank you, and update
- **Project Updates**
  - CIP / project updates – Lisa Sarau, Director of Technical Services
  - South Plant Mixing Enhancement Study – Tyler Biese, Staff Engineer

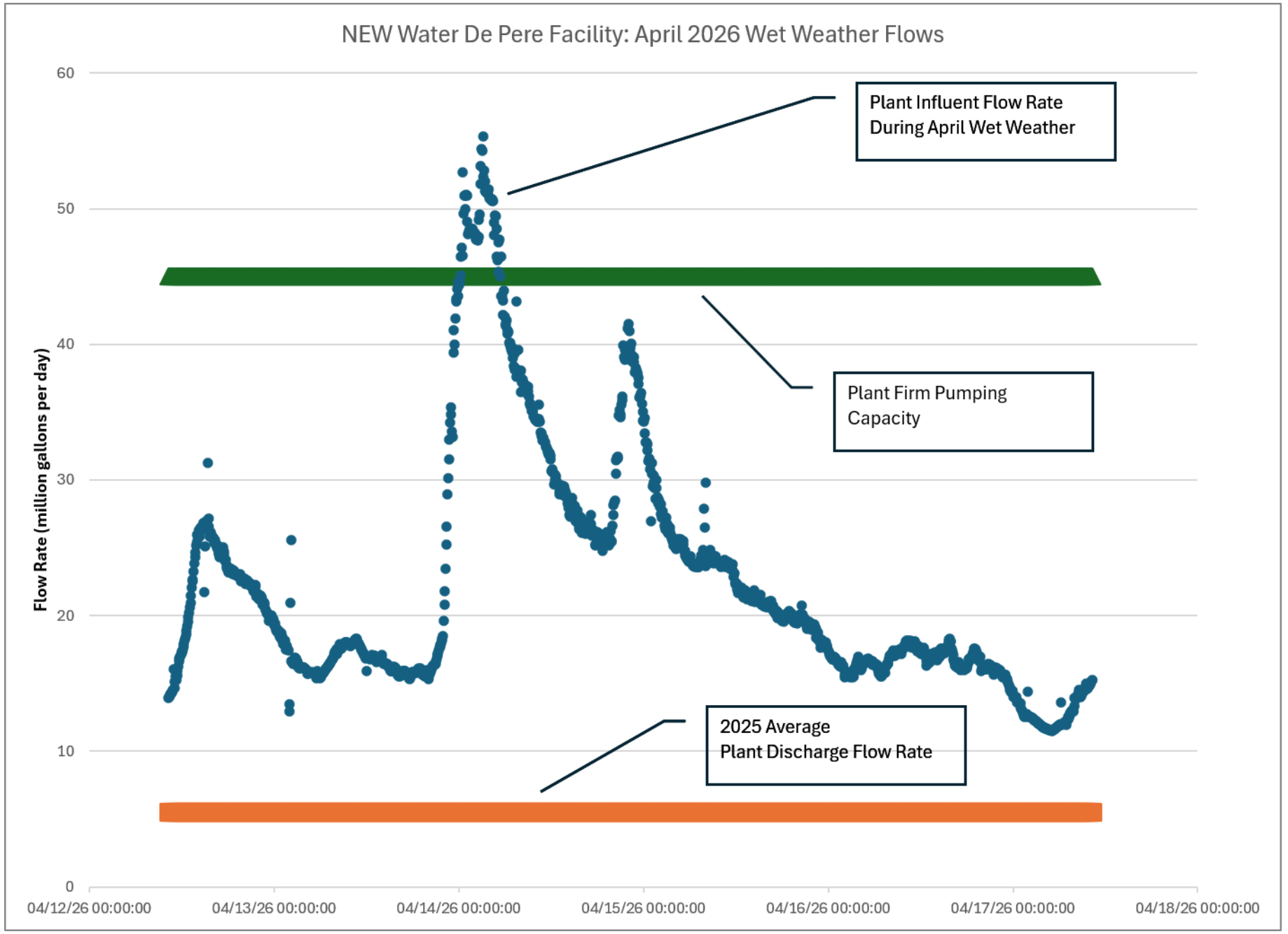


Executive Director Updates: High Flow

- We received **5 times** average flow during April's wet weather
- This is due to I&I
- *It is important to note that **I&I increases our operating costs**, causes risk to private property, and utilities' capacity, that is intended for community growth.*



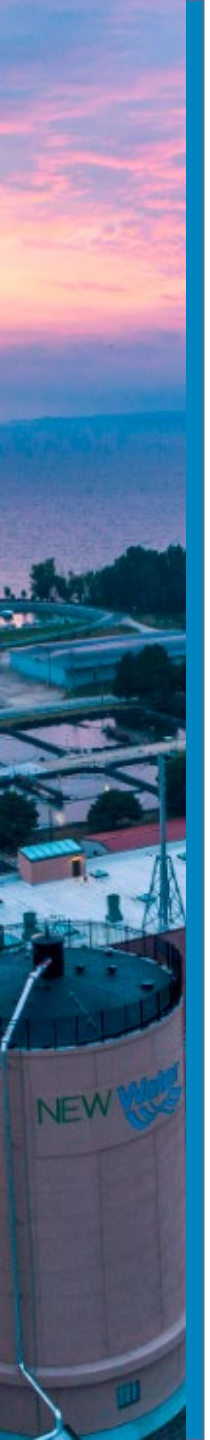




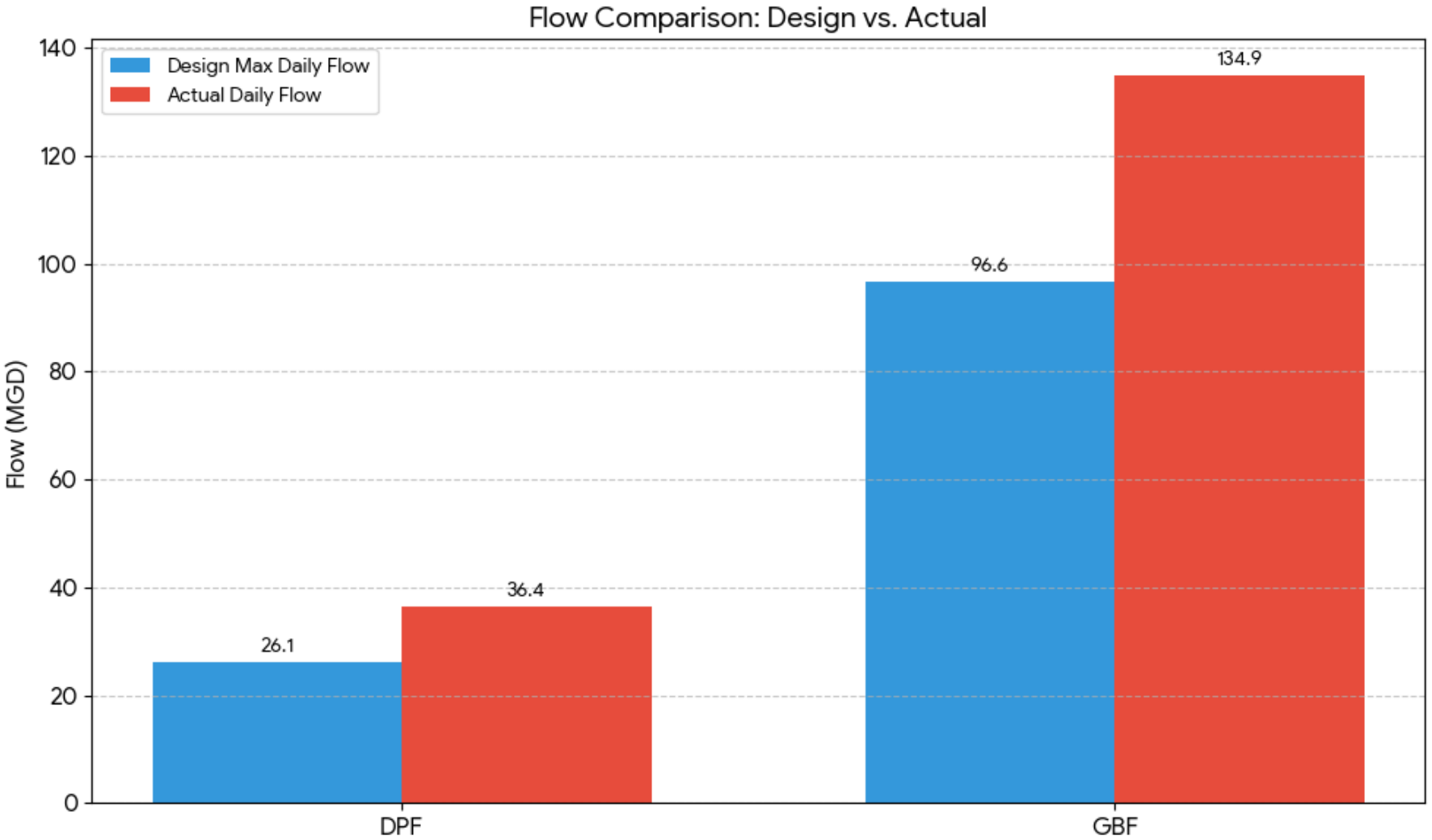
April Wet Weather

Exceeded firm pumping capacity at both plants

Projects underway to expand firm pumping capacity

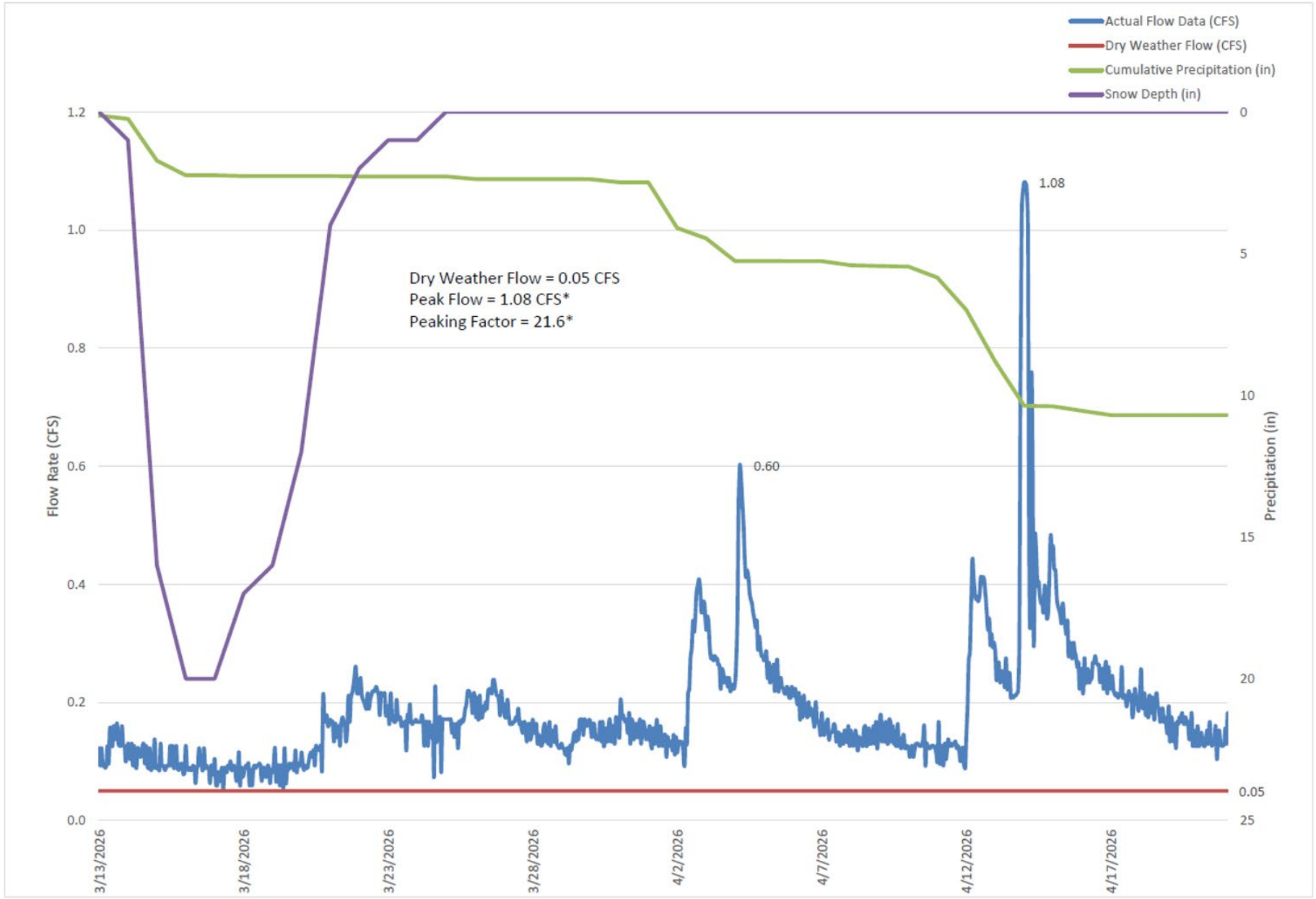


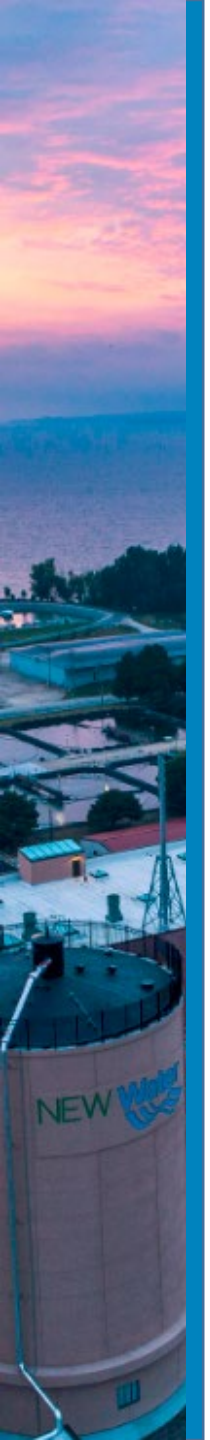
GBF and DPF Treatment Plants



Exceeded daily max flow design by 40% at both plants

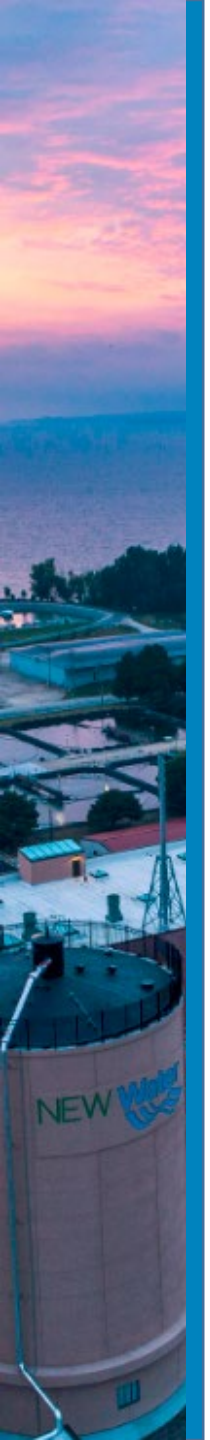
High Flow: Collection System Example





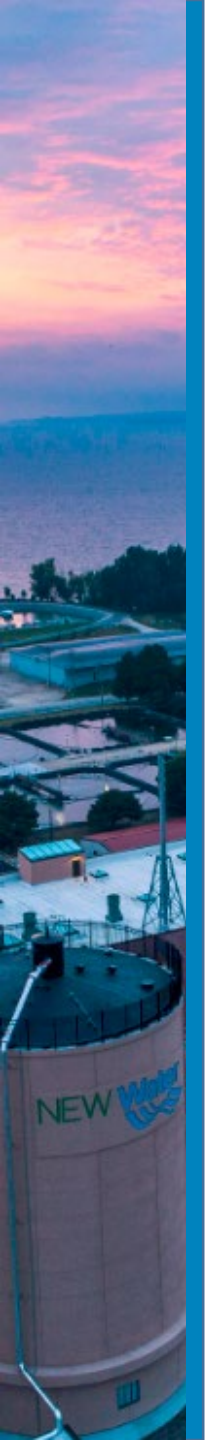
High Flow Event Takeaways

- **Importance of continued wastewater infrastructure investment**
  - Reliability of facilities
  - Customer system Inflow & Infiltration reduction needed
- **Importance of strong relationships**
  - Municipal customers to inform and coordinate efforts in the field
  - Septage haulers to assist in the field
  - Industrial customers responding to call for reducing flows
  - Thank you!!

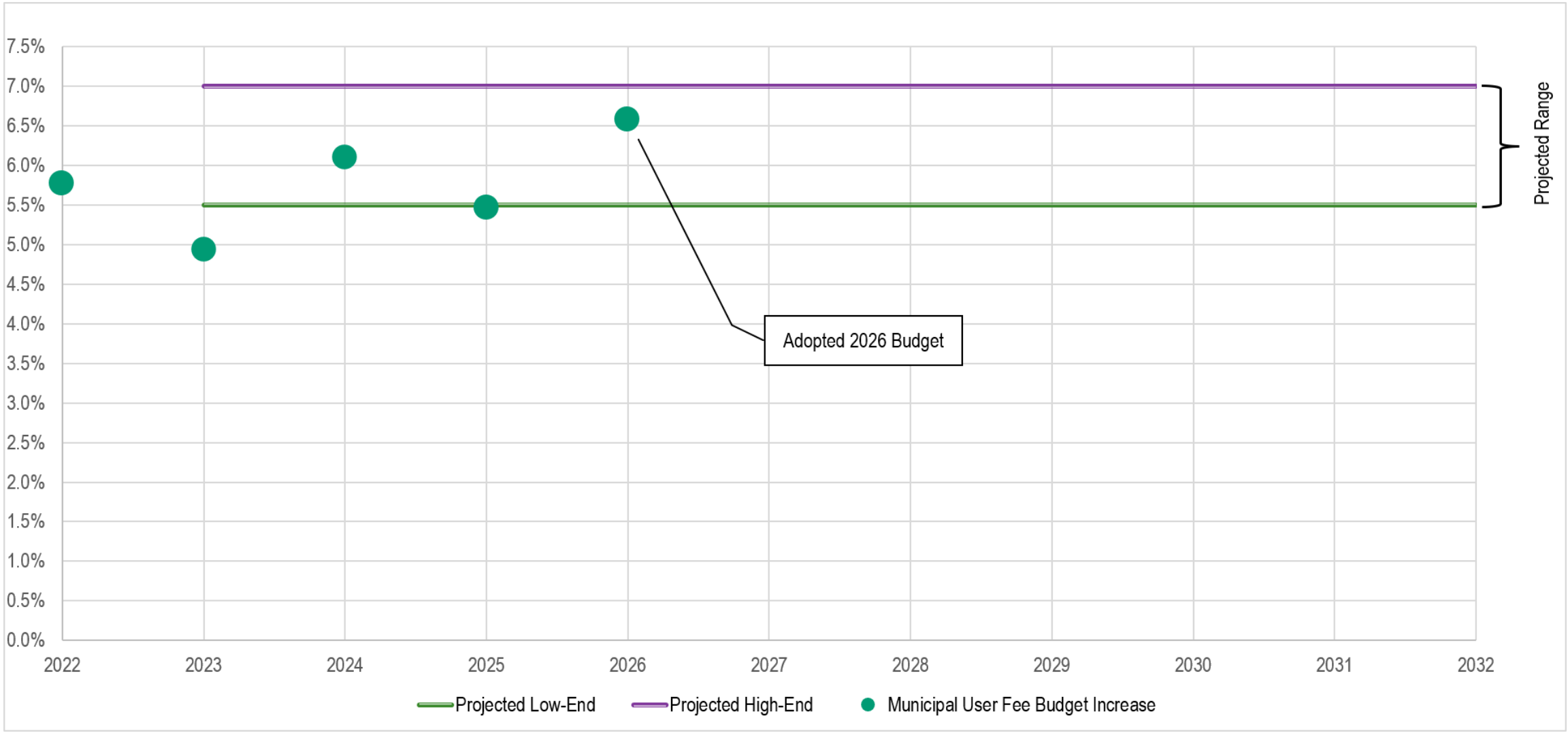


Executive Director Financial Updates

- Clean Water Fund – Advocating for Cost Savings for Our Customers
  - Letters requesting continued funding support sent to Federal Elected Officials
  - Low-cost financing of critical wastewater projects – saves you $$
- 2027 Budget Process – Underway
  - Flows & loads projections coming – thank you in advance for your help
  - August: first budget workshop with Commission
  - September: budget-focused customer meeting

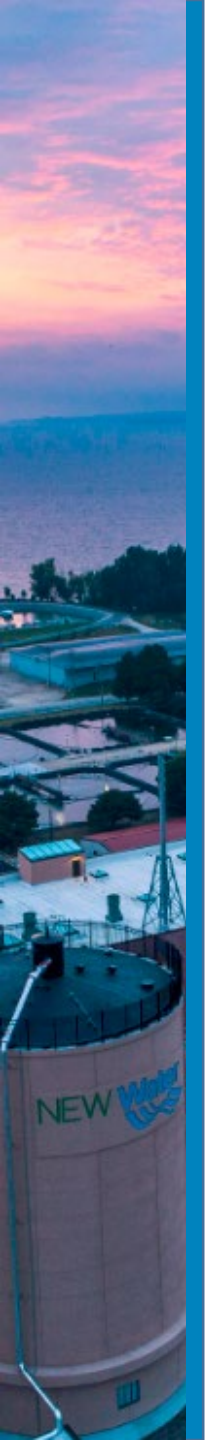


Budgeted Municipal User Fee Increases & Projected Range



Executive Director Updates: Strategic Plan

- Thank you to all who participated in the research phase
- Your input is important to us as we develop the plan



Project Updates

East River Interceptor Renewal Project and Downtown Interceptor Renewal Project

- Existing interceptor pipes have been in service since the 1930s
- Deterioration of concrete pipe and manholes
- Opportunity to significantly extend the service life of this infrastructure
- $31M capital cost

Project Updates

East River Interceptor Renewal Project & Downtown Interceptor Renewal Project

Construction Status

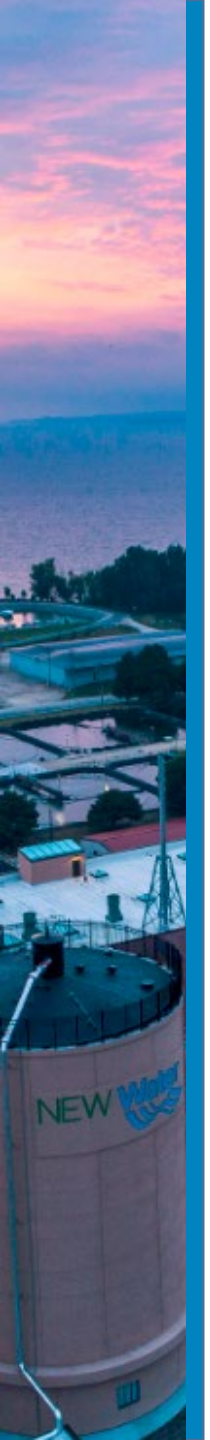
- East River Interceptor (ERI) project is substantially complete – working on punchlist items
- East Fox River Interceptor (EFR)
  - 42-inch pipe has been inserted
  - Have received delivery of some of the 48-inch pipe
- Fox River Crossing Interceptor (FRC)
  - 60-inch pipe has been ordered

Project Updates

GBF North Plant Clarifier Rehabilitation

- (4) Primary Clarifiers
- (8) Final Clarifiers
- Existing equipment in service continuously since 1975
- Experiencing drive failures, thinning metal in rake mechanism, floating weir troughs
- $41M capital costs

- Status – Construction ongoing
- Professional Engineer’s evaluation of the clarifier has been completed



Project Updates

GBF Thickening Improvements

- Project includes gravity thickener mechanisms, gravity belt thickeners, and supporting systems
- $28M capital costs

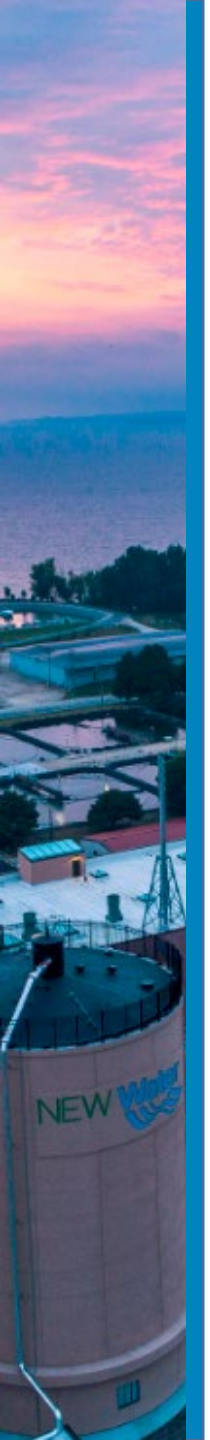
- Status – Construction ongoing

Project Updates

DPF Pumping and Headworks

- Existing equipment is undersized and has reached the end of its useful life
- Scope includes:
  - Replace screens and screenings washer/compactors
  - Replace influent pumps/increase capacity
  - Replace grit removal/washing equipment
- $24M capital cost

- Status – Construction ongoing



Project Updates

Construction Underway	Capital Estimate
GBF North Plant Clarifier Rehabilitation	$39.1M
GBF Thickening Improvements	$26.5M
DPF Pumping & Headworks	$24.3M
East River Interceptor Rehabilitation	$13.5M
Downtown Interceptors Renewal	$18.1M
Design Underway	
GBF Pumping and Headworks	$57M - $97M
East River Lift Station and Force Main	$12M - $14M
GBF Misc. Pumping and High Strength Waste Improvements	$4.5M to $7M
GBF Hot Oil Economizer Replacement	$3.5M to $5M

Ongoing uncertainty related to inflation, consultant and contractor availability, and supply chain impacts.

South Plant Mixing Enhancement Study Summary Presentation

Compressed Gas Mixing and Mixed Liquor Return to Facilitate Low Dissolved Oxygen (DO) Operation

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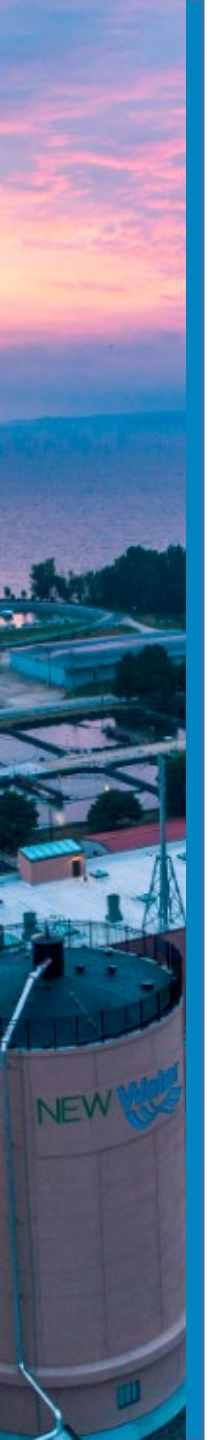
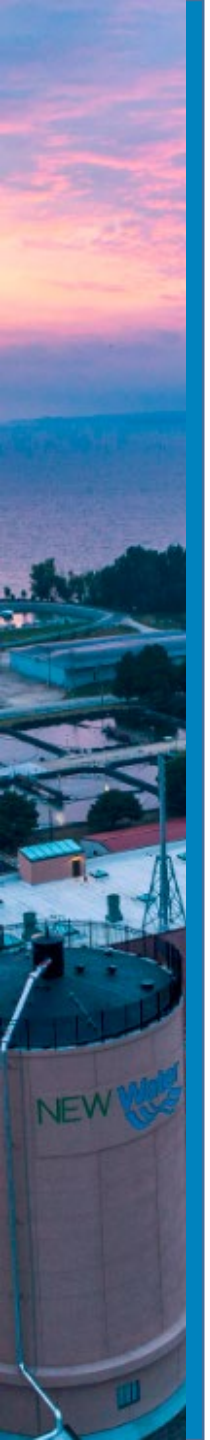


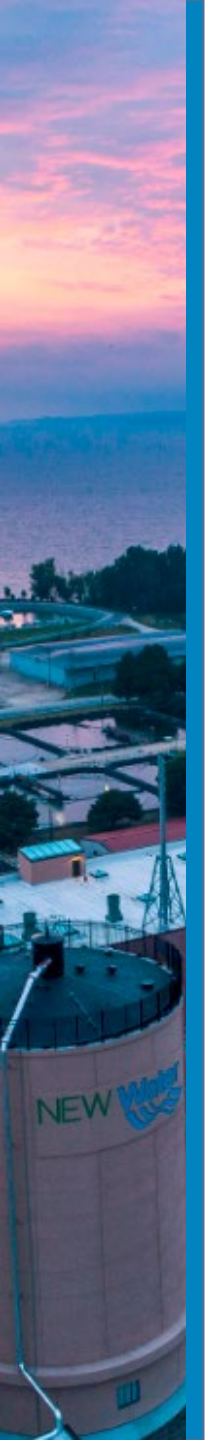
Agenda

- Wastewater Treatment Fundamentals
- Project Background
- Project Timeline
- Demonstration Basin Improvements
- Project Conclusions and Recommendations
- Next Steps: Research to Address Solids Settling Issues



Wastewater Treatment Fundamentals – Aeration Basin

1. Wastewater treatment relies on bacteria to break down organic matter and remove nutrients
2. Bacteria require dissolved oxygen (DO) to carry out biological treatment
3. Aeration is one of the largest energy costs in wastewater treatment operations



Wastewater Treatment Fundamentals – Clarifier

1. Bacteria are removed in settling tanks (clarifiers) before the treated water is discharged to the river
2. Poor settling sludge can:
   - Reduce clarifier capacity
   - Impact effluent quality

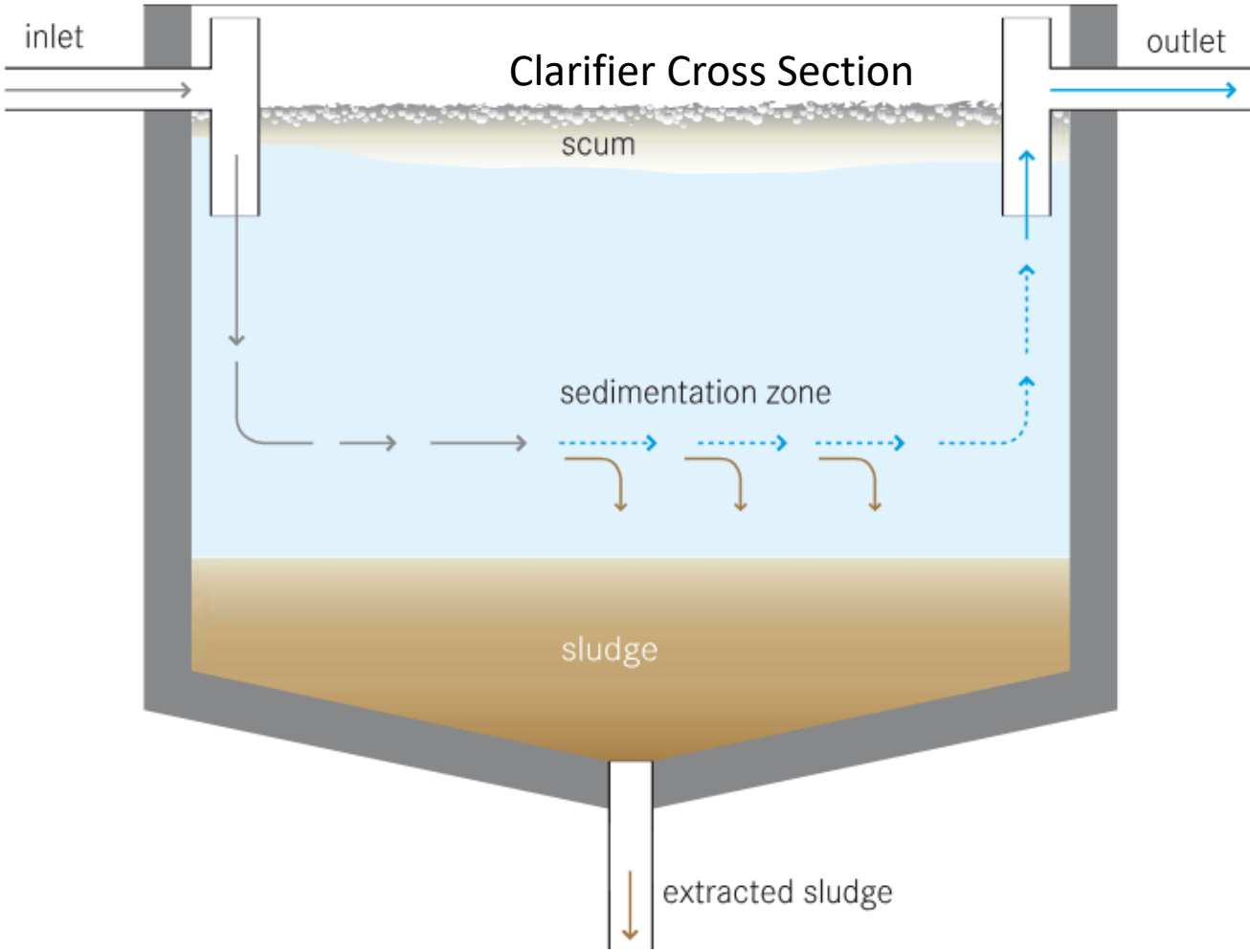
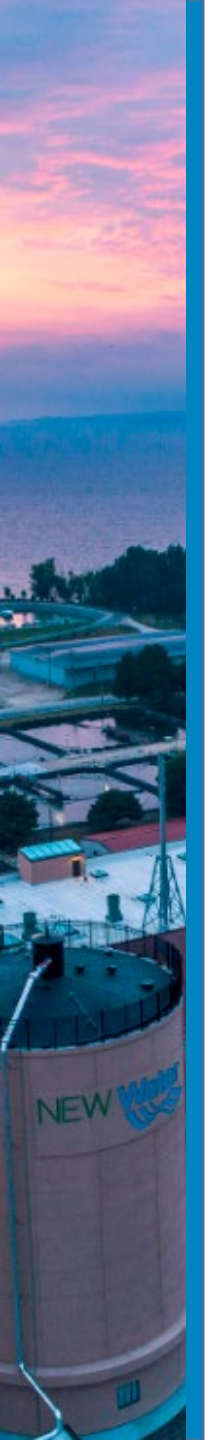
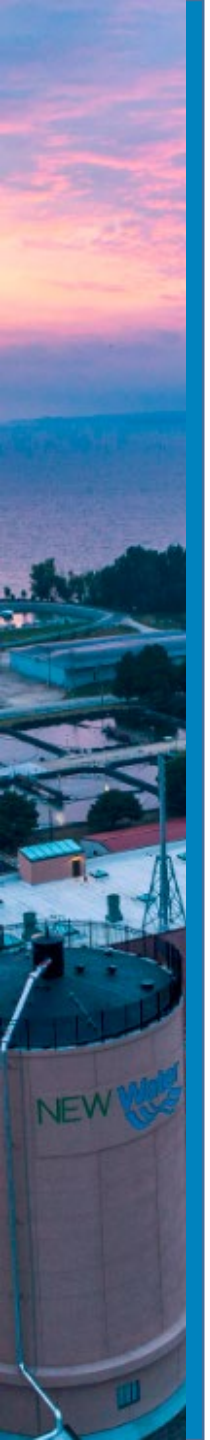


Image source: https://savree.com/en/encyclopedia/circular-primary-clarifier



Project Background

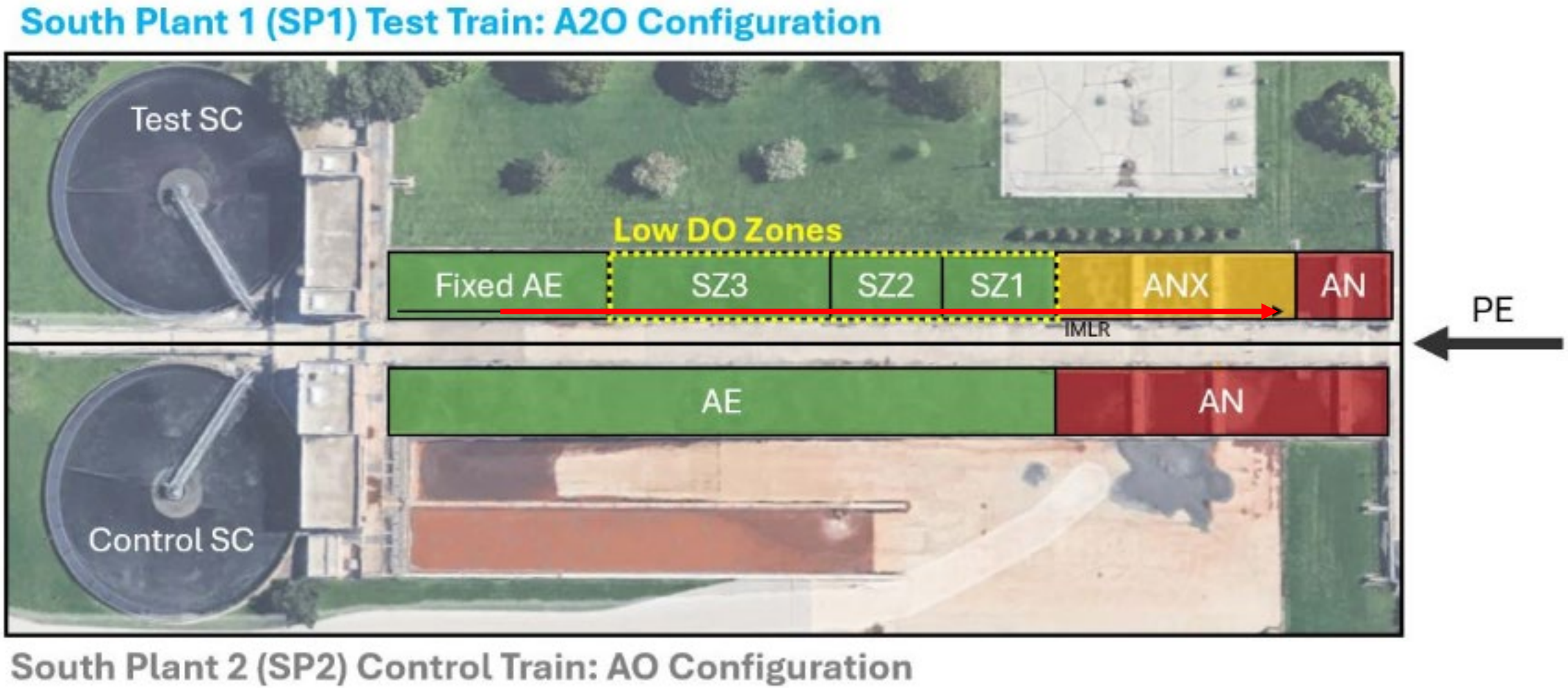
- Why low DO?
  - Potential energy savings (20-30% reduction projected)
  - Improved nitrogen removal
- What are unknowns of low DO operation?
  - Settleability challenges with low DO
  - Impact on phosphorus removal?
  - Aeration control
  - Mixing technology requirements



Project Timeline

1. Low DO operational strategies - 2019 Facility Plan
2. Equipment Purchase - April 2022
3. Startup of equipment - Early 2024
4. Equipment Optimization and Testing Period - 2024 – 2026
5. Final research report - March 2026

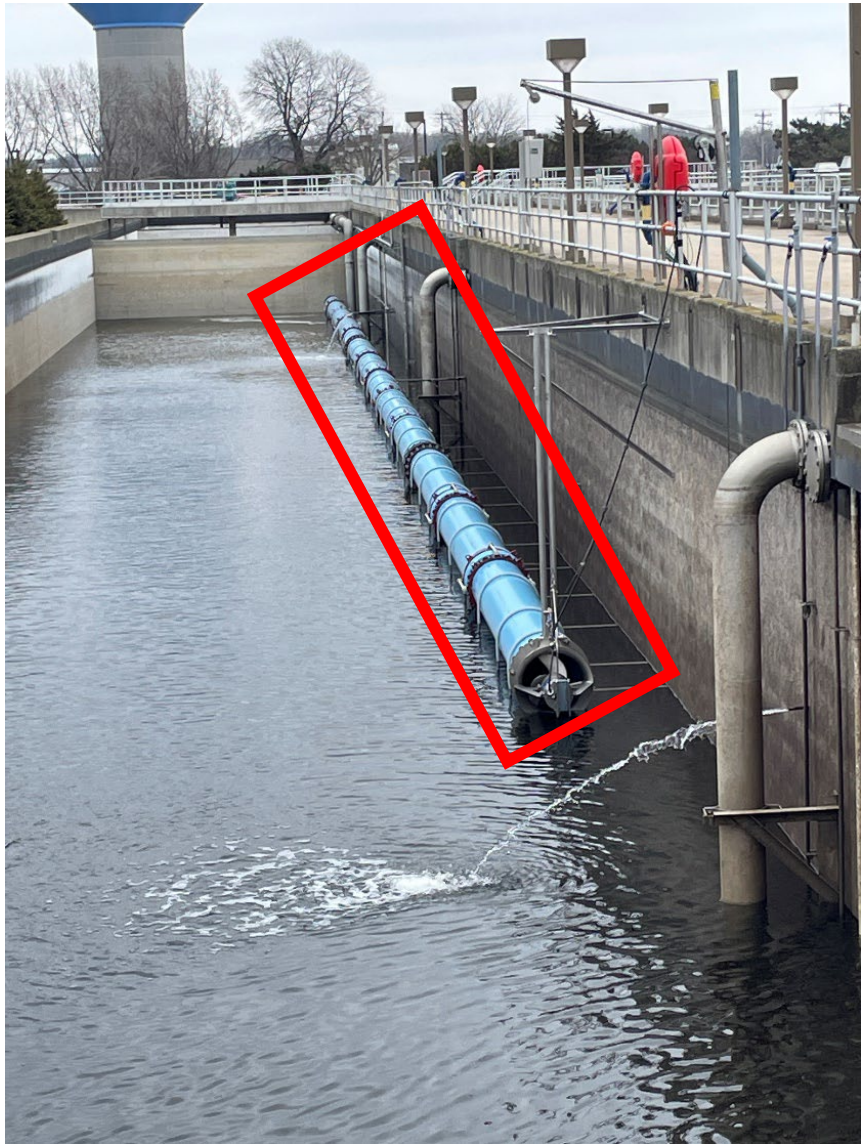
Demonstration Basin Improvements



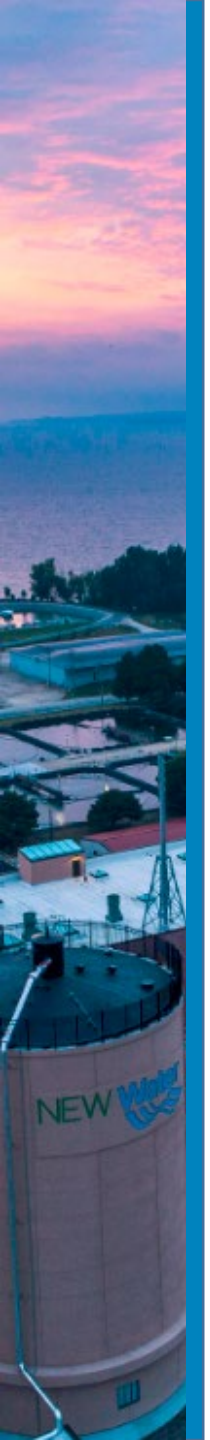
Demonstration Basin Improvements (Continued)

- Compressed Gas Mixing System Installation
- Mixed Liquor Recycle System Installation

Compressed Gas Mixing Installed in Aeration Zones



Mixed Liquor Recycle Pump



Project Conclusions and Recommendations

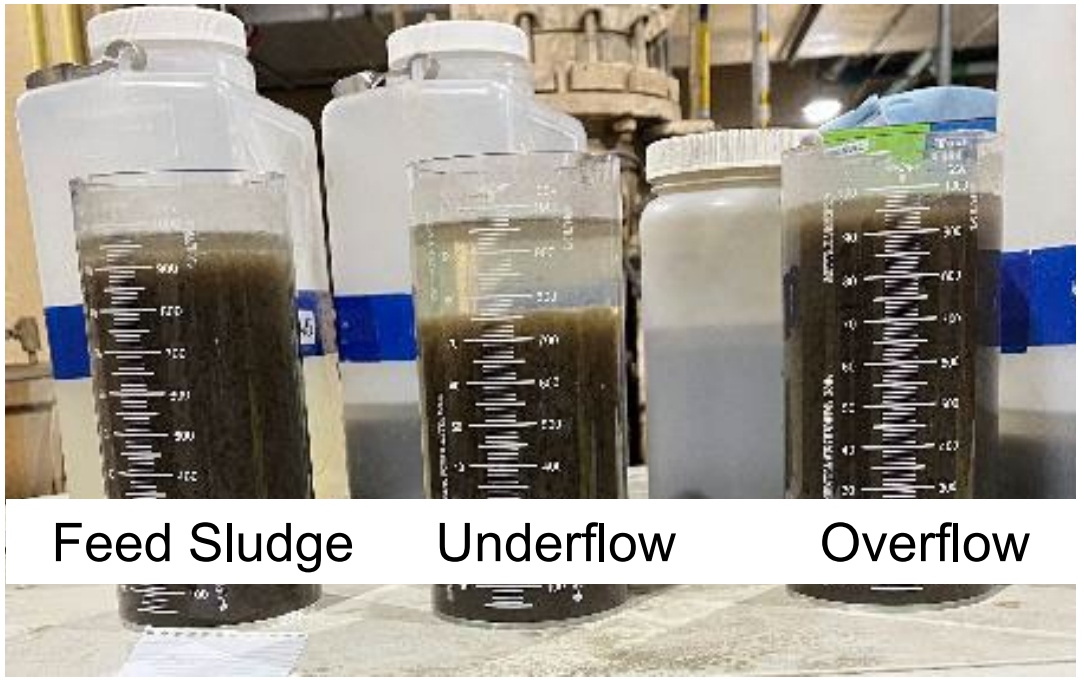
1. Lower aeration demand by ~ 30% during low DO operation
2. Improved Total Phosphorus removal with ~ 65% less chemical needed
3. Improved Total Nitrogen removal
4. Solids settleability was not made significantly worse and had a minimal impact on effluent quality

- *"Low DO A2O operation effectively achieved treatment and process goals at South Plant and is recommended for full-scale aeration basin upgrades"*

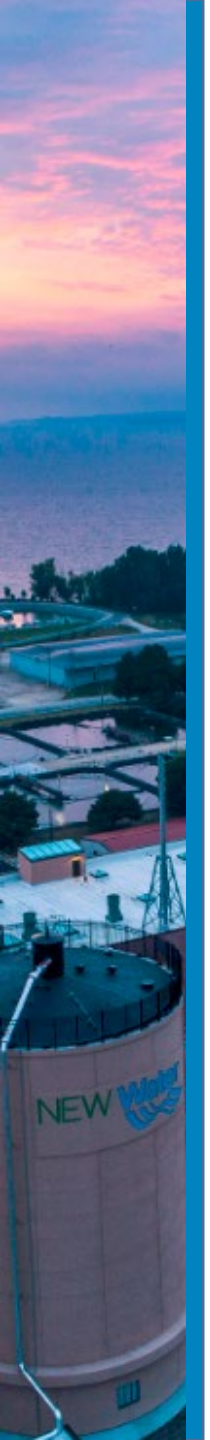
Next Steps: Research to Address Solids Settling Issues

1. Approval of Hydrocyclone Pilot Study equipment rental - August 2025
2. Document the impact of hydrocyclone selective wasting on sludge settleability

Hydrocyclone Equipment



Hydrocyclone Flowstreams



Questions?

Thank you for partnering to protect our most valuable resource, water

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