



CITY OF MERCER ISLAND

UTILITY BOARD SPECIAL VIDEO MEETING

Tuesday, December 8, 2020 at 5:00 PM

BOARD MEMBERS:

Chair Tim O'Connell, Vice Chair Tom DeBoer
Board Members: Stephen Majewski
George Marshall, Stephen Milton,
William Pokorny, and Brian Thomas

LOCATION & CONTACT

Mercer Island City Hall – Zoom Meeting
9611 SE 36th Street | Mercer Island, WA 98040
Phone: 206.275.7706 | www.mercerisland.gov

In compliance with the Americans with Disabilities Act, those requiring accommodation for meetings should notify the Staff Liaison at least 24 hours prior to the meeting at 206.275.7706.

Virtual Meeting Notice

The virtual meeting will be broadcast live on Zoom and recorded and saved on the City's [YouTube Channel](#)

Join by Telephone at 5:00 PM: To listen to the meeting via telephone, please call **253.215.8782** and enter Webinar ID **872 3112 9897** and Password **917603** when prompted.

Join by Internet at 5:00 PM: To watch the meeting over the internet via your computer, follow these steps:

- 1) Click [this link](#)
- 2) If the Zoom app is not installed on your computer, you will be prompted to download it.
- 3) If prompted for Webinar ID, enter **872 3112 9897**; Enter Password **917603**

For the safety and wellbeing of the public and staff, the City strongly recommends that community members attend the meeting by viewing the live feed of the video conference on the City's [YouTube Channel](#), or on [MI-TV Channel 21](#).

CALL TO ORDER & ROLL CALL, 5:00 PM

REGULAR BUSINESS

1. Approve the minutes of the November 10 Special Video Meeting
2. Booster Station & Water Vulnerability/Risk Assessment Project Updates
Recommended Action: Receive project updates and provide feedback.
3. Review 2021 Utility Board Workplan
Recommended Action: Receive report and provide feedback.

OTHER BUSINESS

4. Next Meeting

ADJOURNMENT



UTILITY BOARD MINUTES SPECIAL VIDEO MEETING NOVEMBER 10, 2020

CALL TO ORDER & ROLL CALL

Chair O'Connell called the meeting to order at 5:04 pm from a remote location.

Vice Chair DeBoer and Board Members Stephen Majewski, George Marshall, Stephen Milton, William Pokorny, and Brian Thomas participated remotely using a video teleconferencing platform by Zoom.

Council Liaison Lisa Anderl was absent.

Public Works Director Jason Kintner and several staff members participated remotely.

REGULAR BUSINESS

Review and consider approving the October 14, 2020 Minutes

It was moved by Thomas; seconded by Marshall to:

Approve the minutes.

A roll call vote was conducted, and the results were as follows:

Passed 7-0

FOR: 7 (DeBoer, Majewski, Marshall, Milton, O'Connell, Pokorny, and Thomas)

SCADA Project Update

Public Works Director Kintner introduced the SCADA project topic and members of the Brown and Caldwell Team. Brown and Caldwell provided a presentation that addressed the following:

- Project Background:
 - Sewer Collection System – 18 Pump Stations
 - Water Distribution System – 5 sites currently monitored
 - SCADA Criticality to Utility Operations
 - Drivers for SCADA Project
 - Project Objectives & Timeline
 - Engineer's Construction Cost Estimate - \$329K to \$465K
- Water Sites Design Review:
 - Project Scope of Work
 - Design Package Structure
 - Pump Stations at First Hill, SPU Station 171, South Fire, North Fire, and Reservoir
 - Construction Sequencing and Constraints
- Update on SCADA Replacement at Sewer Sites:
 - Ventilation Study
 - Sewer Site SCADA Construction
 - Anticipated Bid – Mid 2022
 - Anticipated Construction – 2022-2023
- Next Steps:
 - Finalize water bid documents
 - Bid Authorization – December 1 City Council Meeting
 - Bid Award – January 2021
 - Construction – May to September 2021
 - Sewer Site SCADA Design – Mid-2021

The Utility Board discussed the project and presentation; no formal motion was taken.

Director Kintner noted that the City is applying for FEMA Grants and that the SCADA project will be part of the application package. Director Kintner will report back to the Utility Board the grant's outcome.

2020 Comprehensive Garbage, Recyclables, & Compostables Report

Director Kintner introduced the Recology Team, explaining that the Solid Waste contract was established just over a year ago and that Recology was present to provide the annual report and discuss the 2021 rates.

Kevin Kelly introduced the Recology team and provided a presentation that addressed the following:

- 2020 Year in Review:
 - Waste Diversion Operations (Missed Collection Rate, COVID-19 Response, Customer Service, and Outreach Pre and Post COVID-19)
- 2021 Rate Increase
 - Inflation Adjustment based on the CPI for a 12-month period
 - Recycling Rate Adjustment based on the weighted average of two measurements conducted annually. A credit or debit adjustment is made in January of each year.

The Utility Board discussed the presentation and asked the Recology Team follow up questions; no formal action was taken.

Review Utility Board Workplan & Next Meeting

Director Kintner discussed the Utility Board Workplan and previewed the December meeting. Director Kintner will coordinate with the City Clerk and confirm the Utility Board's next meeting date, which presumably will be December 8.

ADJOURNMENT

There being no additional business, the Special Video Meeting adjourned at 6:28 pm.

Attest:

Tim O'Connell, Chair

Deborah A. Estrada, City Clerk



Project Updates: Booster Station & Risk Resiliency

December 8, 2020

Presentation Overview

- Review Booster Chlorination Station Project
 - Background
 - Project Components
 - Construction Timeframe
- Introduction to Risk & Resiliency project
 - Background
 - Review Project





Booster Chlorination Station

Background

- DOH required long-term Action Plan to reduce the risk of future contamination
- City needs to maintain chlorine levels that are higher than SPU purveyor systems
- Three main strategies avoid future contamination in the distribution system
 1. Maintain positive pressure at all times
 2. Maintain adequate disinfectant residuals
 3. Prevent cross connections
- City pursued design and construction of permanent system
 - Utility Board & Council Presentations
 - Project included in 2019-2020 CIP Budget



Figure 1. City of Mercer Island – Coliform Response Action Plan

(updated February, 2018)

Disinfectant Residual Increase and Maintenance

- ✓ Booster Disinfection
 - ✓ Meeting inactivation goals
 - ✓ Mixers not needed at reservoirs
 - ✓ Design for permanent system 60% complete
- Construction in 2018
- ✓ Flushing to Reduce Water Age
 - ✓ Adequate residual maintained Island-wide
- ✓ Evaluate Chlorine Demand
 - ✓ Primarily pipe walls
- Main Cleaning
 - ✓ Initial UDF trials completed
 - Additional training & UDF Q1-Q2 2018
 - ✓ Desk-top comparison of technologies
 - Ice pigging Q1 2018

Reduce Contamination Risks

- Retrofit Vaults
 - 100% of Combined PRV Vaults
 - ✓ Work completed Q2 2015
- Stand Alone Vaults
 - ✓ Inspections
 - ✓ Twice during wet season
 - ✓ All active/known vaults
 - Retrofits on-going
- ✓ Cross Connection Control Program
 - ✓ Ordinance adopted 6/15/15
 - ✓ Developed policies and procedures for program operation
 - ✓ One FTE Water Quality Tech
 - ✓ On-line test report submittal system
 - ✓ Updated and modified educational materials
 - ✓ Certification letters/surveys sent to homeowners

Operating Procedures and Documentation

- ✓ Pressure Control
 - ✓ Purchased and tested 2 high-speed data loggers
 - ✓ Tested bypass valve
 - ✓ Tested of other locations
 - ✓ Good pressure control verified
 - ✓ Verified SCADA capabilities
- ✓ Development of written SOPs
 - ✓ Joined SOP Clearinghouse and obtained templates
 - ✓ Water Quality Monitoring SOP'S
 - ✓ Water Service Assessments SOP'S
 - ✓ UDF Flushing SOP
 - ✓ Water Main Shutdown SOP'S
 - ✓ On-going: Living documents

Water Quality Monitoring

- ✓ Event Response and Transition Monitoring
 - ✓ > 2900 samples met goal
 - ✓ > 350 negative coliform samples
 - ✓ Complete Q2 2015
- ✓ Chlorine Surveys
 - ✓ Adequate residual at hydrants and dead-end locations
- ✓ Permanent TCR Plan
 - ✓ Plan approved by DOH 7/12/16
 - ✓ Sample stands installed
 - ✓ Began Q3 2015
 - ✓ Chlorine Residual Plan (Q1 2016)
- ✓ Surveillance Monitoring
 - ✓ Equipment purchase and training
 - ✓ Began June 2015
 - ✓ On-going
- ✓ On-line analyzer upgrades Q4 2015
- ✓ Installed on-line analyzer at entrance of distribution system
- ✓ Monthly CL₂ reporting to DOH

- ✓ = Complete
- = Underway

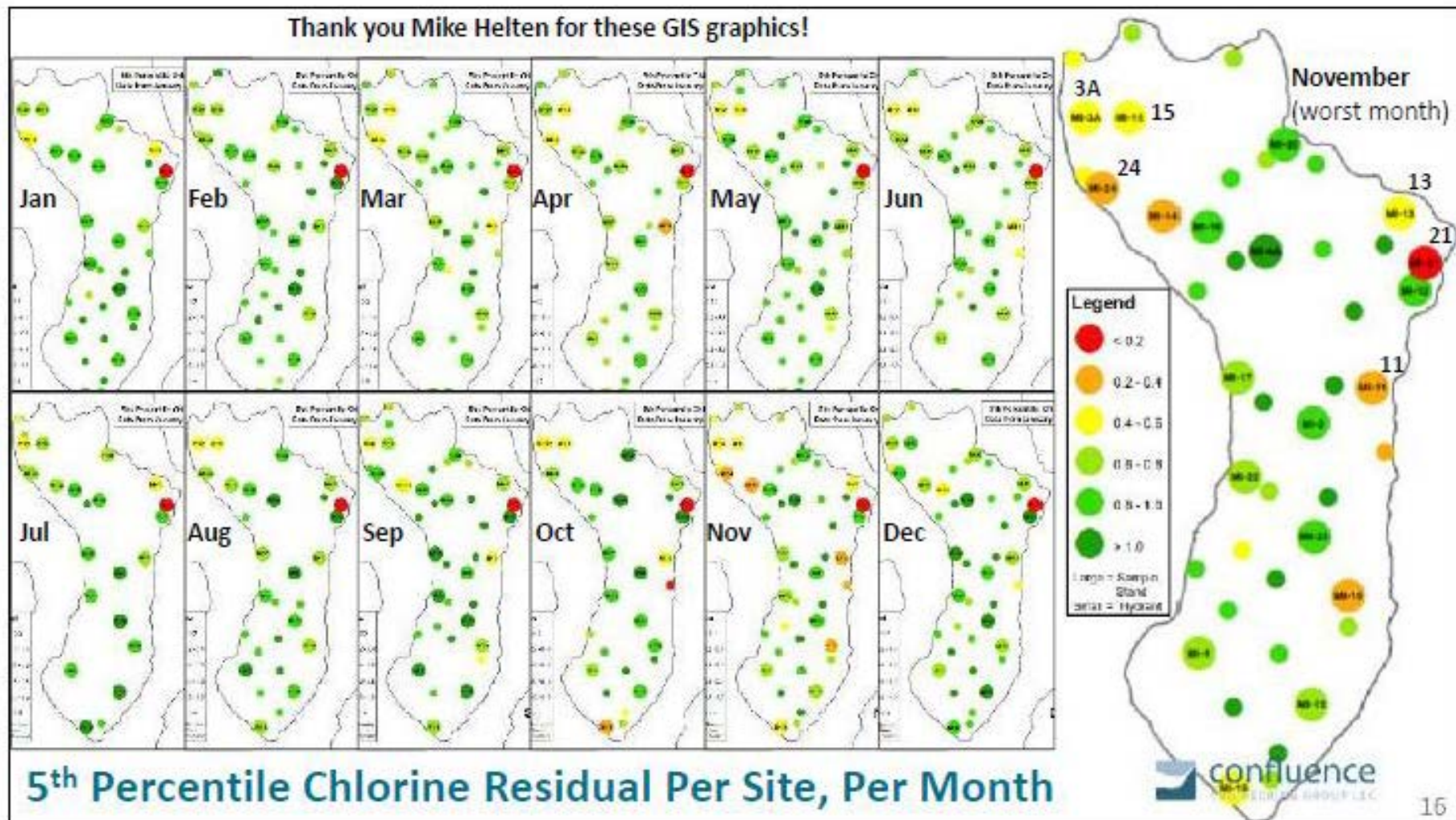


Booster CL2 Design

- In 2016, City consulted with HDR Engineering to design the new Booster Chlorination Station
- Draft Completed in December 2018
- Distribution System Complexity
 - City's chlorine residual goal is to achieve ≥ 0.6 mg/L in 95 percent of samples collected
 - City's sampling nearly tripled post Advisory Event
 - HDR's model would not provide adequate chlorine levels to the entire City



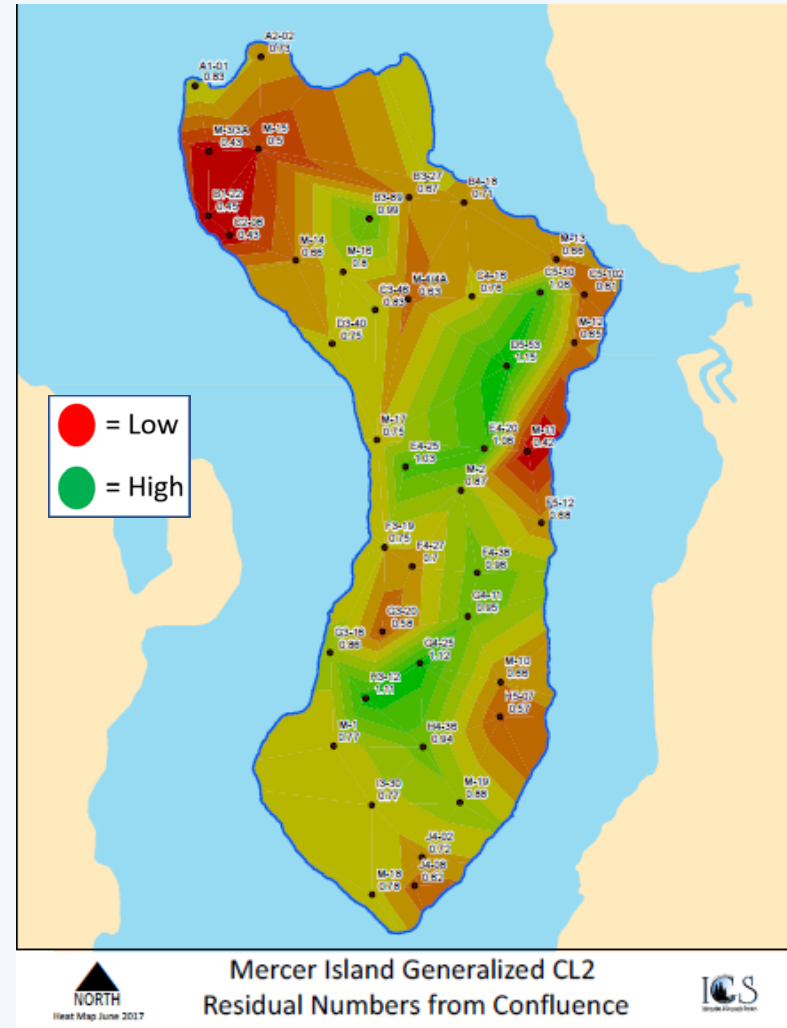
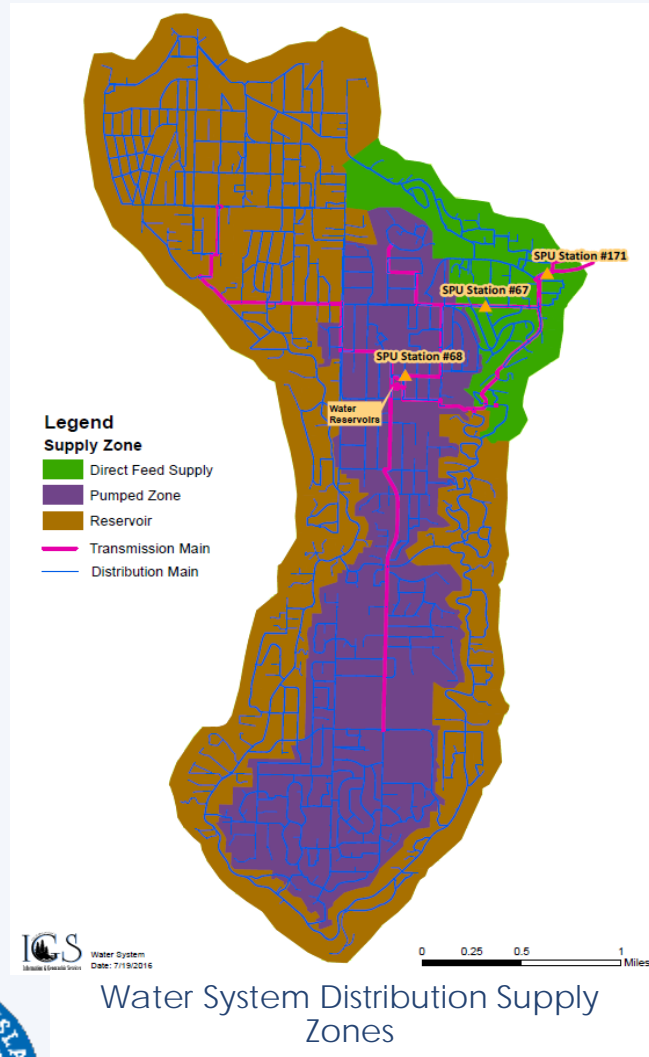
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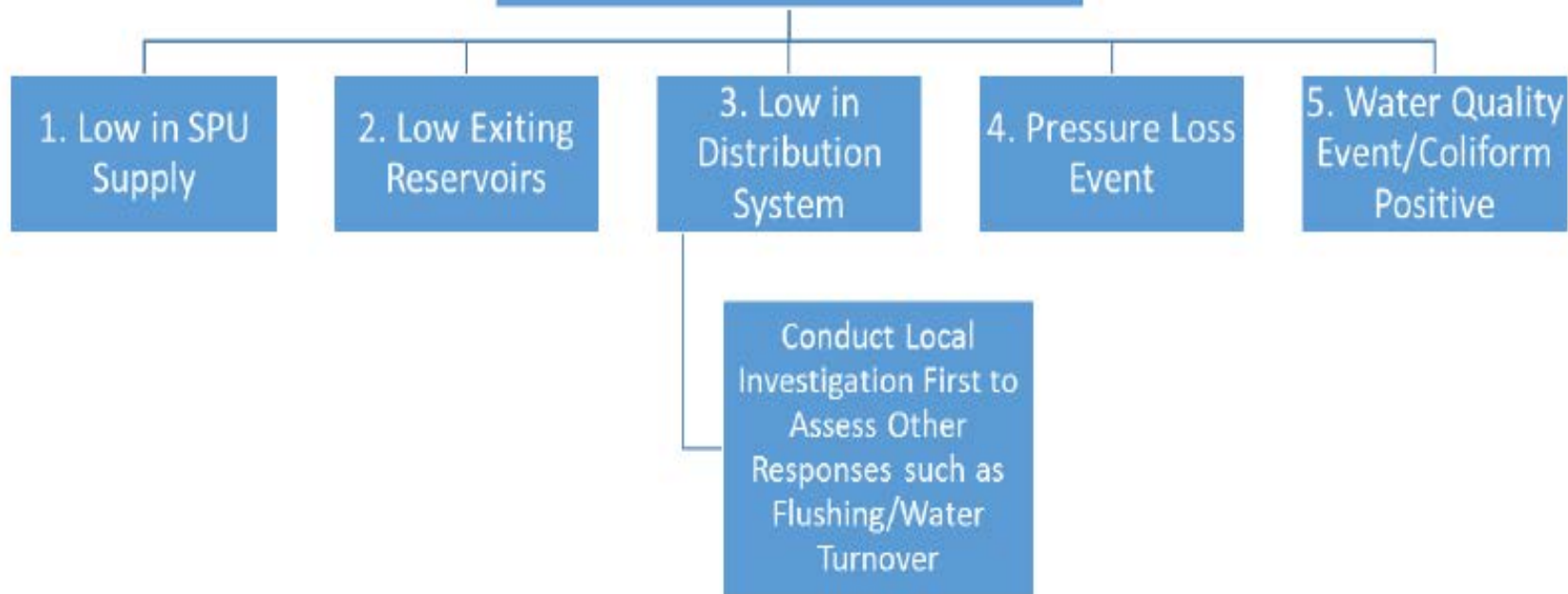
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Data Driven Decisions



Booster Disinfection Usage Scenarios



Value Engineering

- City partnered with Carollo Engineers in 2019
- Reviewed and analyzed design/operations of the proposed system from HDR
 - Recommend revised design
- Project will continue into June 2021
 - Finalize hydraulic analysis for injection and flow scenarios
 - Complete final report & design



Updated Design

- Finalizes design of a permanent booster disinfection system at City's Reservoir and Main Pump Station
- Additional tasks:
 - Modifications at SPU Meter 68
 - Decommissioning aging supply main
 - Adjust pipes to direct all flow through reservoirs
 - Add mixers at reservoirs to thoroughly mix reservoir tanks
 - Install Cl2 dosing at reservoirs



Updated Timeframe

- Project included in 2021-2022 CIP Budget
- Finished 50% design
- Final design: March 2021
- Bid project: Spring 2021
- Construction begins: Summer 2021

Questions?





Risk and Resilience Assessment & Emergency Response Plan

Background

- On October 23, 2018, Congress signed the America's Water Infrastructure Act (AWIA)
 - Builds on 2002 Safe Drinking Water Act
- Requires City to conduct a Risk and Resilience Assessment (RRA) of community's water system and prepare a corresponding Emergency Response Plan (ERP)
 - Upon completing each task, City needs to self-certify with the EPA informing that it complies with AWIA
- City will need to update the RRA every 5 years



Project Requirements

City solicited RFQ Summer 2020

1. Risk & Resiliency Assessment

Assess City's water system infrastructure and overall system operations, including hazards

Deadline for RRA: June 30, 2021

2. Emergency Response Plan

Develop strategies, recommendations, and other actions the City can implement to improve water system resiliency, reduce risks, and mitigate impacts from hazards

Deadline for ERP: December 31, 2021



Scope

RRA

- Characterize assets and threats
- Analyze consequences, vulnerability, threats, and risk/resilience
- Manage risk and resilience

ERP

- Review existing ERP from 2002 act
- Incorporate new hazard and risk updates
- Mitigation activities
- Update response procedures
- Train staff on ERP





Questions?

Meeting Date
January 12
February 9
March 9
April 13
May 11
June 8
July 13
August 10
September 14
October 12
November 9
December 14
To Be Scheduled:

Utility Board

DRAFT 2021 Work Plan

2nd Tuesday

Agenda Item
Adopt 2021 UB Work Plan
Water Meter Replacement Contract & Project Update
SCADA Project Update (Sewer Construction & Implementation Timing)
NPDES Annual Report
Sustainability Work Plan Update & PW Projects
Risk & Resiliency & ERP Report
Board Elections
Booster CL2 Project Update & Authorization
2021 CIP Updates
Recess
Stormwater & EMS Rate Discussion/Recommendation
Recology Solid Waste Annual Report
Sewer & Water Rate Discussion/Recommendation
Recess
COVID/EOC Lessons Learned

Utility Board 2012 Work Plan

Meeting Date
10-Jan
14-Feb
13-Mar
10-Apr
8-May
12-Jun
10-Jul
14-Aug
11-Sep
9-Oct
13-Nov

To Be Scheduled:

Project Field Trips (Proje

Agenda Item

No meeting

Review Utility Billing Policies (Francie) Possibly could be ready for March.

EMS Cost of Service (Francie)

Utility CIP Preview (Staff)

Sewer Budget and Rates (Francie)

Storm Water Budget and Rates (Francie)

Water Budget and Rates (Francie)

EMS Rates (Francie)

ect Managers)