

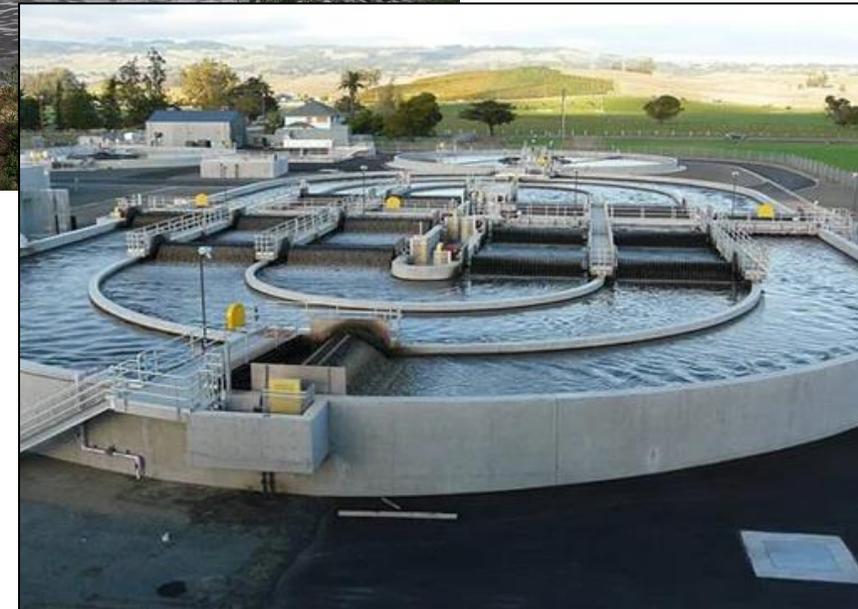
NIWOT SANITATION DISTRICT WASTEWATER TREATMENT FACILITY IMPROVEMENTS PROJECT

Niwot SRF Public Meeting
 December 14, 2023



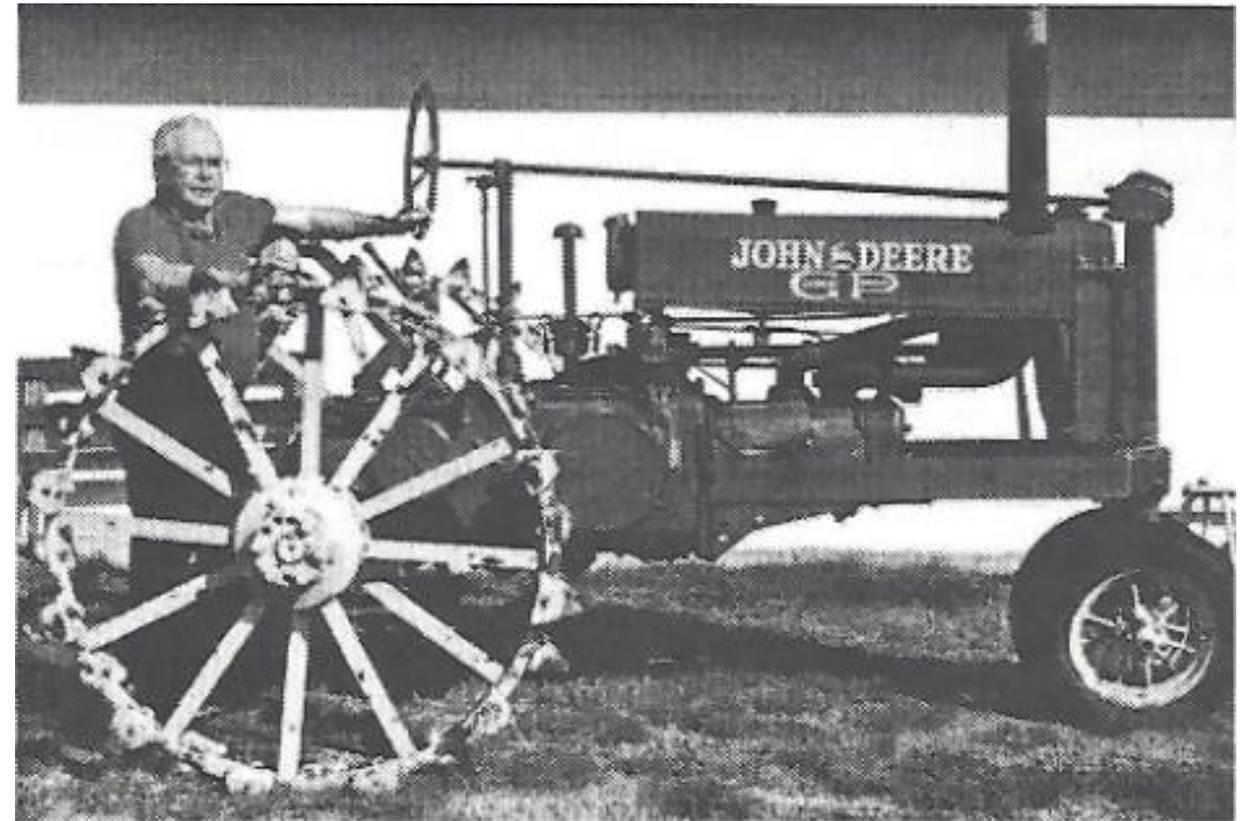
PRESENTATION OUTLINE

- History of Niwot Sanitation District
- Wastewater Treatment Overview
- Project Overview
 - Purpose
 - Background
 - Secondary Treatment
 - Selected Alternatives
- Environmental Impacts
- Project Funding
 - SRF Loan Application Process
- Project Delivery and Schedule



HISTORY OF NIWOT SANITATION DISTRICT

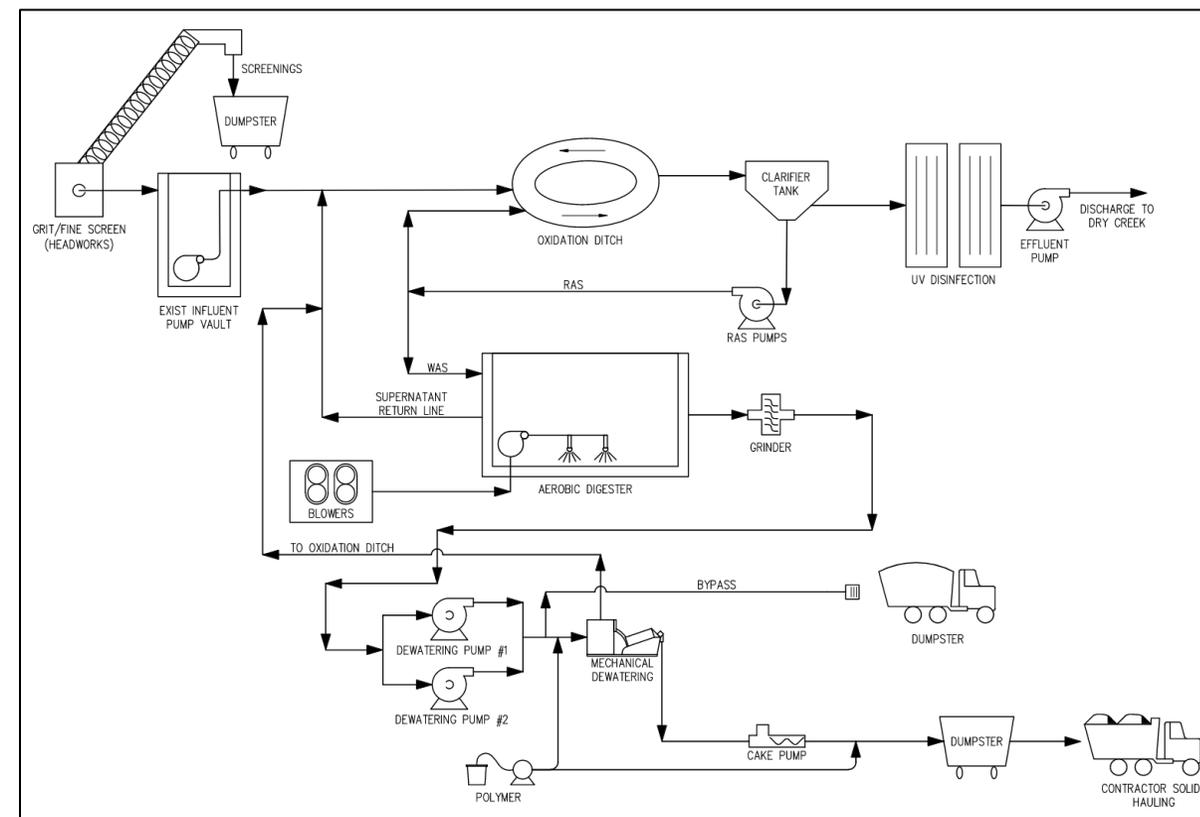
- Howard Morton formed Left Hand Water Association in 1958
- Morton held the first meeting for Niwot Sanitation in 1968 to address issues of groundwater contamination from outhouses
- Last improvements to the plant made in 2000
- Current capacity: 0.995 million gallons per day



Pictured: Howard "Mr. Niwot" Morton

WASTEWATER TREATMENT OVERVIEW

- Niwot Sanitation District owns and operates a Wastewater Treatment Plant (WWTP)
- Influent from sewer collection system is treated for organic loading and nutrient removal to comply with effluent limits per Niwot's Discharge Permit
- Treated effluent from the WWTP is discharged to Dry Creek



PURPOSE OF MEETING

- Provide project overview and update
- Public opportunity for feedback or questions on Environmental Assessment
- Consult and respond to interested or affected public members
- Satisfy requirements for the State Revolving Fund (SRF) loan
- Planned rate increases for debt service of loan



Existing Chlorine Contact Chamber to be reused for UV Disinfection

PROJECT PURPOSE AND DRIVERS FOR A NEW WWTP

- Address new and anticipated discharge limits from CDPHE
 - New Discharge Permit has a daily maximum Total Inorganic Nitrogen (TIN) of 10 mg/L
 - Existing WWTP cannot meet new TIN limit nor future Phosphorus limits
- Improve treatment process redundancy and resiliency



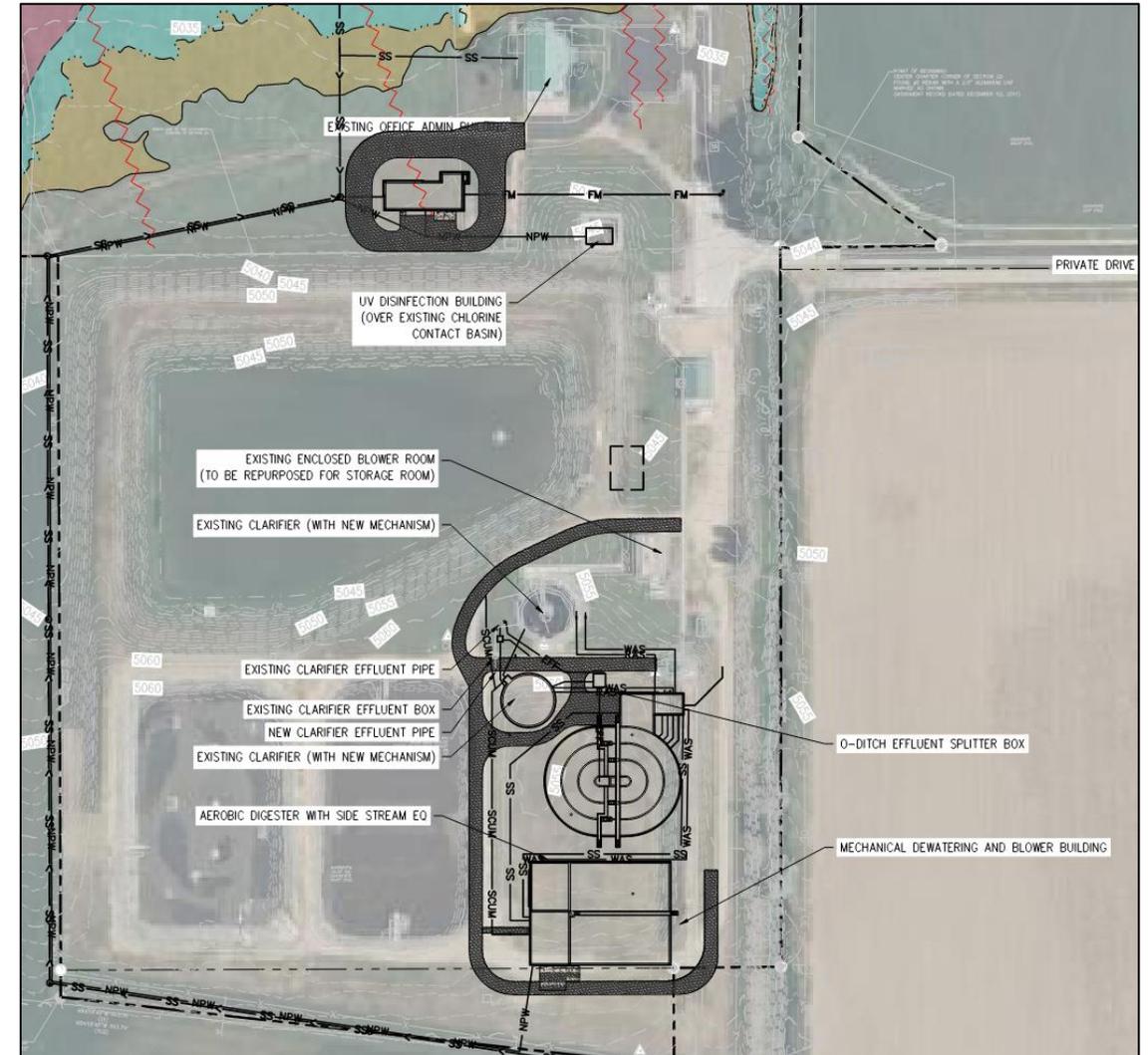
PROJECT PURPOSE AND DRIVERS FOR A NEW WWTP

- Replace aging infrastructure, equipment has reached end of useful life
 - Proactively mitigate costly emergency repairs
- Improve process efficiency and effluent quality through proven technologies



PROPOSED IMPROVEMENTS

- Headworks
 - Screening
 - Grit removal
- Influent pump station
- Secondary treatment
 - Oxidation ditch
 - Clarification
- Solids handling
 - Aerobic digestion
 - Mechanical dewatering
- UV disinfection



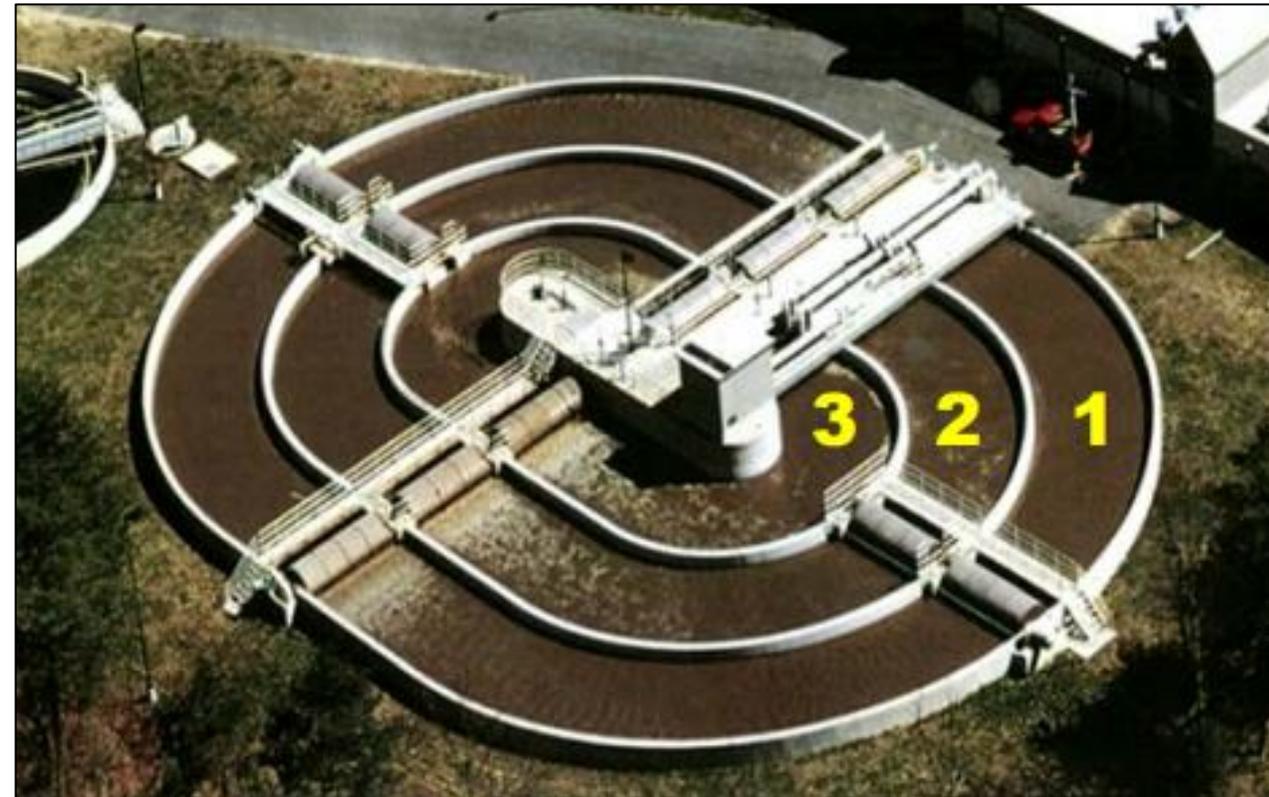
PROJECT BACKGROUND

- Alternative Assessment
 - Compared several treatment alternatives for each process stage on a 1-5 scale
 - Comparison of capital costs, operation and maintenance costs, process performance, operability, and qualitative parameters
 - Treatment Alternatives
 - A. Oxidation Ditch
 - B. Sequencing Batch Reactor (SBR)
 - C. A2O Process
 - Selected Treatment Alternative: Oxidation Ditch

Parameter	Weight	Alt A: O-Ditch	Alt B: SBR	Alt C: A2O Process
Operability	35%	4	3	2
Process Performance	30%	4	2	4
Aesthetics	5%	3	4	4
Constructability	5%	3	4	3
Footprint	5%	4	3	3
Capital Cost	20%	2.5	4	2
TOTAL	100%	3.6	3.0	2.8

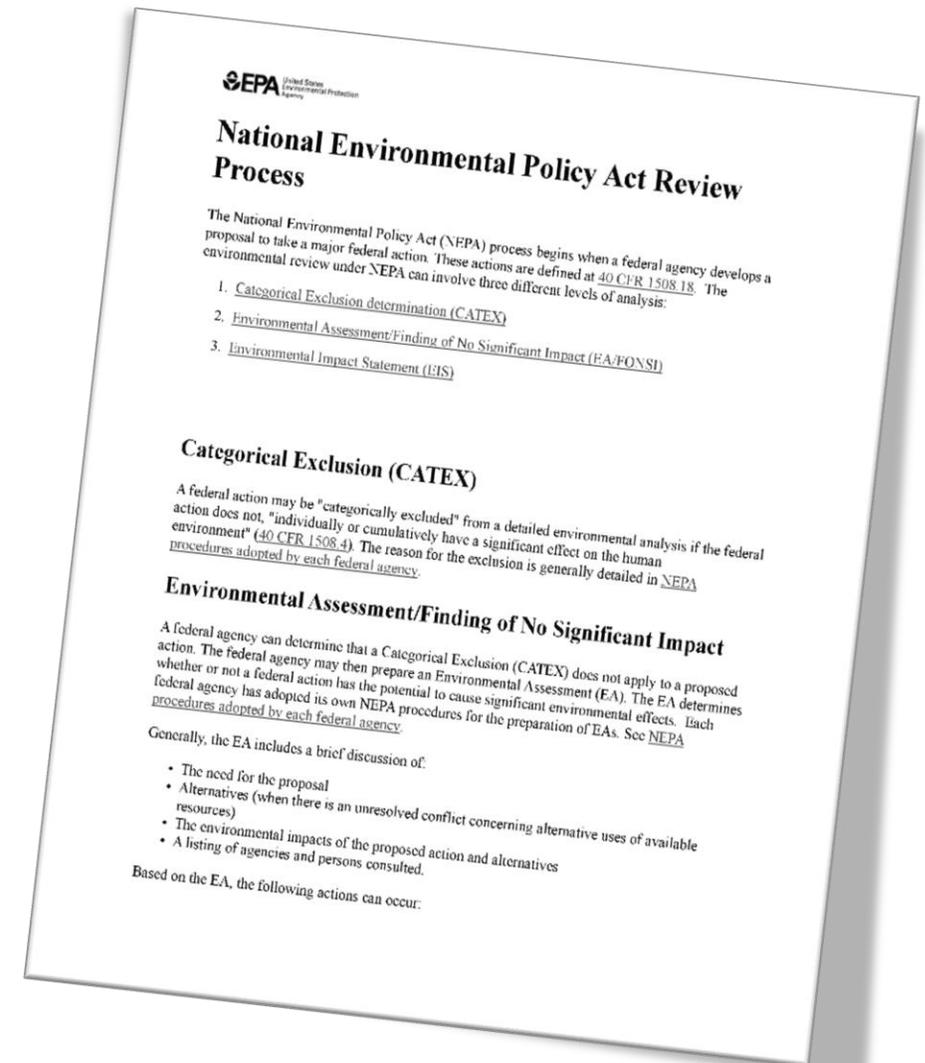
SELECTED ALTERNATIVE: OXIDATION DITCH

- Evoqua Orbal Oxidation Ditch
 - Three dedicated zones
 1. Outer: Aerated-Anoxic
 2. Middle: “Swing Channel”
 3. Inner: Low oxygen levels
 - Reliable performance with ability for high nutrient removal
 - Improved resiliency, efficiency, and redundancy
 - Energy efficient for biological treatment



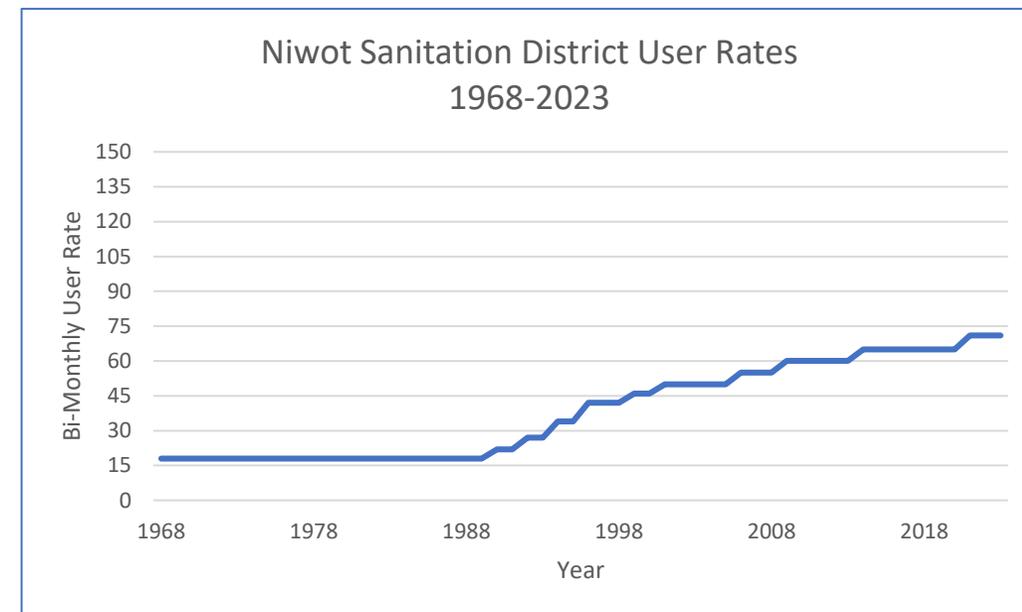
ENVIRONMENTAL ASSESSMENT

- Environmental Assessment Overview
 - An Environmental Assessment was completed for the SRF Funding Process in accordance with the National Environmental Policy Act and Section 106
 - Identified potential environmental resources:
 - SHPO - completed an archaeological survey
 - Boulder County
 - Boulder County Public Health
 - Boulder County Floodplain Manager
 - Colorado Division of Water Resources
 - Colorado Division of Wildlife
 - CDPHE Air Pollution Control Division
 - National Resources Conservation Service
 - US Army Corps of Engineers
 - US Fish and Wildlife Service
 - Anticipating Finding of No Significant Impact (30-day public notice will occur)



PROJECT FUNDING

- Funding
 - Total project cost is approximately \$27 Million
 - Based on 30 percent Cost Model
 - District is applying for an SRF loan through CDPHE
- SRF Funding Environment
 - SRF program has been significantly defunded for 2024
 - Funding is prioritized for disadvantaged communities
 - District has been proactive in finding alternative funding sources
- Municipal Bond Funds
 - \$20 Million revenue bonds at 5 percent interest rate for 30 years
 - Remaining project cost covered by District reserves
 - Plant improvement costs have been deferred over the last 20 years
 - User rates will increase from \$71 to \$198 bi-monthly effective 1/1/2024
 - Required to meet a debt service ratio of 1.25



PROJECT DELIVERY AND NEXT STEPS

Task	Anticipated Date
Site Location Application	Completed
Process Design Report	Completed
Public Meeting	Today
Final Plans and Specifications Submittal to CDPHE	January 4, 2024
SRF Loan Application	January 5, 2024
Anticipated Construction Start	Spring 2024
Construction Completion	January 1, 2026
Facility Begins Operation	February 1, 2026

QUESTIONS?

