

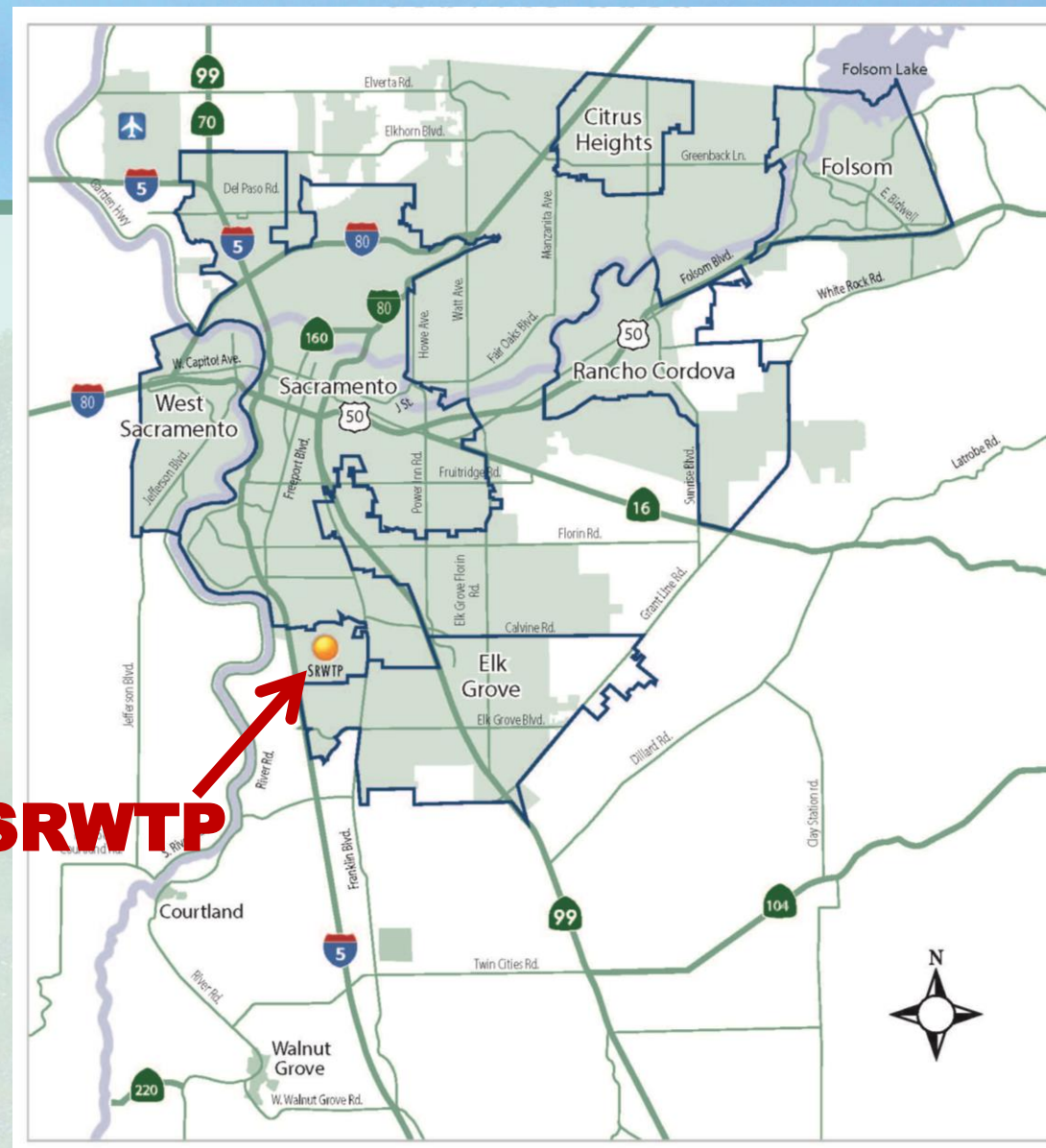
EchoWater Project



Our Service Area & Governance

Today, Regional San serves about 1.6 million residents in 386 square mile service area in unincorporated Sacramento County; cities of Elk Grove, Citrus Heights, Folsom, Rancho Cordova, Sacramento, West Sacramento; and communities of Walnut Grove and Courtland

17 Board Members representing Counties and Cities served



Milestones in Sacramento's Wastewater Treatment

1970s

- 22 separate wastewater collection and treatment systems in Sacramento region
- Many discharged into local waterways, many into the American River and Sacramento River
- Clean Water Act passed in 1972

1973

- **Sacramento County, the City of Sacramento and, the City of Folsom** form Sacramento Regional County Sanitation District (Regional San)

1976

- District begins construction of the Sacramento Regional Wastewater Treatment Plant (SRWTP)
- Treatment Plant Construction completed and operational in 1982

Permit Background

- Major Permit Revision Issued December 2010
- Nitrification and Denitrification by May 11, 2021
 - Interim Average Monthly Ammonia Limit 39 mg/L
 - New Average Monthly Ammonia Limit 2.1 mg/L
- Filtration Completion deadline May 9, 2023
- Permit Compliance Initially Estimated at \$1.5 - \$2.1 billion
- Built a \$20 million pilot facility to select technologies

EchoWater Challenges

- Concurrent projects
- Operating Facility
- Bid Challenges
- Weather

January 11, 2017 – Post Rain Event



Ammonia Milestone Accomplished

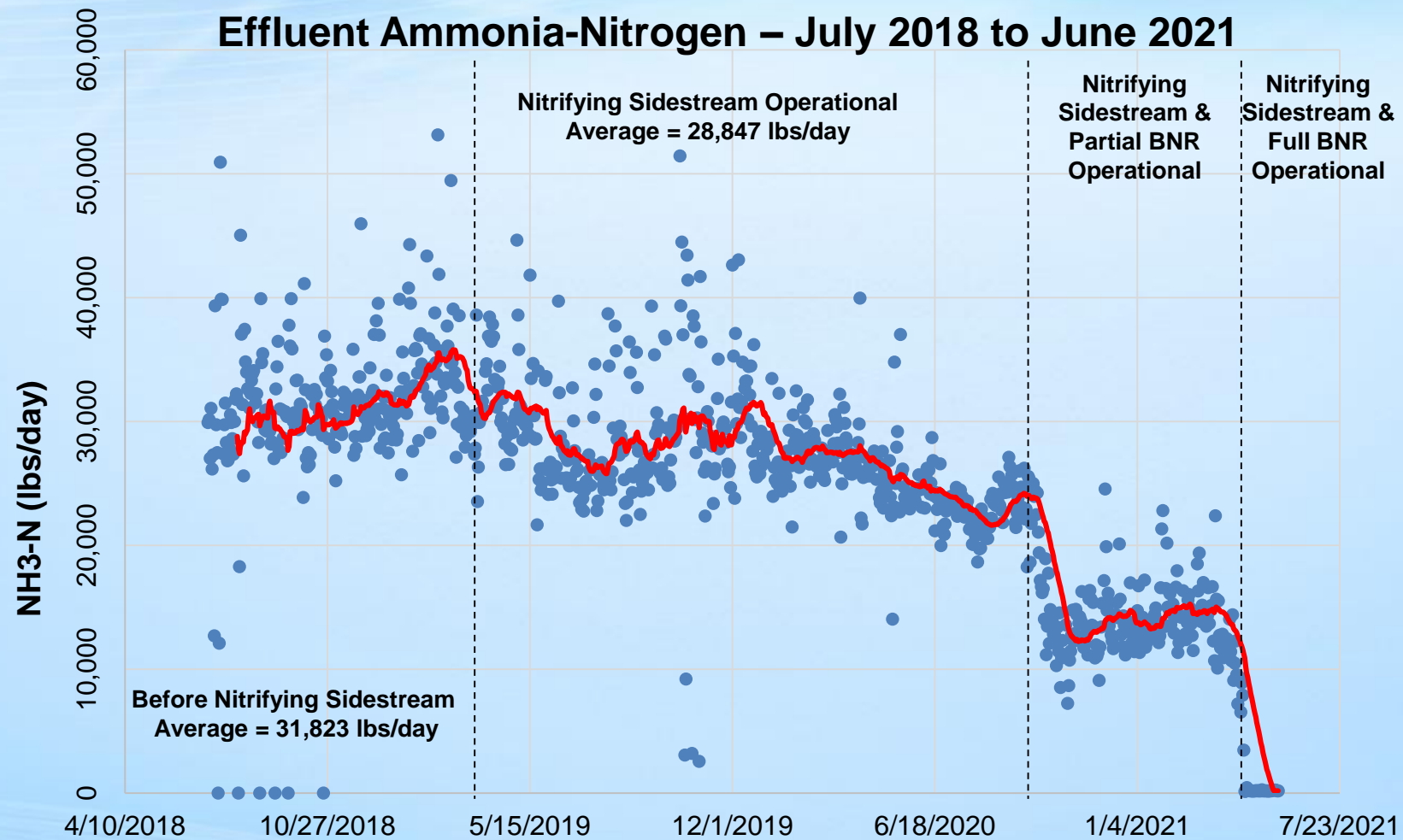
- NST on line March 2019
- Required to remove 3.5 million pounds by May 1, 2021.
- Removed 3.5 million pounds by August 1, 2020.
- Removed 5.2 million pounds by May 1, 2021-
 - so about 1.7 million pounds more than required.
- NST reduced chlorine usage to control odor.
 - \$2.6 million in annual savings (chlorine and bioxide)



Ammonia Milestones Accomplished

- Keeping the Plant Operational
 - “... we stopped using the old heart of the treatment process and began treating the entire plant flow through the new heart ...”;
Prabhakar Somavarapu, April 22, 2021.





Ammonia Milestone Accomplished

- BNR Construction Continues
- 100% of Flow to BNR on April 19, 2021

Final Effluent in ESB-D, Before and After Full BNR Treatment



Aerial: 3/31/2021



Aerial: 5/01/2021

Tertiary Milestone on Track

- Title 22 Tertiary Permit Deadline of May 9, 2023
- Tertiary Compliance Expected November 2022, 6 Months Early!



Questions?