- An integrated membrane (UF/RO) skid mounted system using Dow membranes, rated for 10gpm and plumbed into our reclaim water influent line. Set up as single-pass but with capability for double-pass configuration.

- Currently being used for studies on operational optimization, brine management and microbiological treatment for potable reuse
Advanced Oxidation Process (AOP) unit

• WEDECO integrated Ozone and UV-AOP containerized system
• Ozone and UV-AOP are effective for the attenuation of bulk and trace organic compounds in wastewater effluents.

< Xylem WEDECO 8HC Ozone generator and UV reactor >

< Attenuation of trace organic compounds by ozonation, n=15 >

< Reduction of bulk fluorescence by ozone >
Ozone-biological activated carbon (BAC)

- Biological activated carbon receiving ozonated wastewater effluent has been studied for the abatement of trace organic compounds.

< Attenuation of trace organic compounds throughout the BAC system, n=15 >
On-line monitoring sensors

- Various real-time on-line sensors can monitor anomaly of water treatment efficacies.

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Fluidized Bed Crystallizer Reactor

- Aim: Remove inorganic contaminants and investigate organic contaminants removal
- Experiment designs: pHs 10.5, 11, 11.5, 12

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• Utilizing the microbial process of anaerobic oxidation of ammonium to N2 using nitrite as terminal electron acceptor

• Conducting parallel test of Anitamox and Anammox to study process control and optimization
Chemical Analysis Capabilities

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Agilent 6460 Triple Quad LC/MS

Agilent 7890B GC System