

**City of San Mateo and the City of Foster City Estero
Municipal Improvement District
2050 Detroit Drive
San Mateo, California**

I. Respondent:

Pete Dalla-Betta, Laboratory Supervisor

II. Treatment Plant Characteristics:

- Wastewater Treatment
- 140,000 customers served
- ~35 employees

III. Innovation: New BNR/MBR facility design to accommodate storm-flows

A. Description

I'm going to be presenting data on the Biological Nutrient Removal (BNR) and Membrane Bio-Reactor (MBR) facility that is now in the design phase. It's being built to allow for dual function during storm-flow - Nitrogen (in the form of ammonia) & Phosphorus removal, and creating the potential for recycled water usage in the future. The presentation is called "New BNR/MBR facility design with dual-use clarifiers and chemically-enhanced primary sedimentation used to accommodate stormflows and avoid blending."

B. Type of Innovations

- New treatment process
- Optimization of existing resources

C. Motivation for Innovations

The MBR facility will be constructed to allow adequate Nitrogen and Phosphorus removal for upcoming nutrient restrictions that the current design is not capable of handling. It will also provide the City with the option to produce recycled water for distribution. The new facility will also help to avoid blending events during high stormflow events.

D. Barriers/Challenges

It has been difficult to convince the City that a great deal of funding must be used to maintain infrastructure that will be abandoned when the new plant it is in operations, or on equipment that will be expected to last for the lifetime of the new facility.

E. Effect on Staff Training

In the future it will require more highly trained operators and likely a change in the ratio of operator to maintenance staff as the level of technology and complexity increase with the new system.

F. Lessons Learned

Still learning!

IV. DROUGHT RESPONSE

Design of new MBR facility that will prepare the City for recycled water production and distribution.

V. INFORMATION-SHARING

Would be willing to visit another regional water/wastewater facility to provide a presentation on our process/innovation.

Would be willing to visit another regional water/wastewater facility to provide a presentation on this innovation.

Would be willing for a staff member from another water/wastewater utility to conduct a follow-up visit to your utility to learn more about your innovation.

- Contact Pete Dalla-Betta –email: pdallabetta@cityofsanmateo.org