

**Stafford Water Treatment Plant
North Marin Water District
3015 Novato Blvd.
Novato, CA**

I. Presenter: Marco Jenison, Water Treatment Operator

Respondent: Robert Clark, Operations/Maintenance Superintendent

II. Treatment Plant Characteristics:

- Water
- 61,000 customers served
- 50 employees

III. Innovation:

A. Description

Chlorine dioxide delivery system modifications

B. Type of Innovations

- Increased use of Information Technology
- Modification of workflow processes or classifications
- New approach to documentation, technical training, staff development, or knowledge management
- Optimization of existing resources

C. Motivation for Innovation

Oxidation efficiency, chemical cost reduction, operational efficiency, safety, better control, and monitoring of process

D. Barriers/Challenges

Chemistry of oxidation chemicals and lake water relocation and storage of bulk chemicals and delivery systems control modifications; redesign of ClO₂ delivery system; reliable water pressure for generator

E. Benefits

- Improved chemical use efficiency
- Extended filter run times
- Higher organic removal
- Chemical mixing quality ClO₂
- Better control of dose

F. Effect on Staff Training

- More training on ClO₂
- Missing system
- Removal of high hazard chemical (sulfuric acid)

G. Lessons Learned

- Relocation of ClO₂ allows a better mixing control with higher quality ClO₂
- Use of CI with ClO₂ helped reduce chlorate (DBP) limitations of ClO₂

IV. Information Sharing:

- Willing to host on-site tour
- Willing to visit another regional water/wastewater facility to provide presentation on innovation
- Willing for a staff member from another utility to conduct a follow-up visit to learn more about innovation
- Interested in on-line forum to discuss water/recycling/wastewater treatment issues