

City of Fairfield
Waterman Water Treatment Plant
Fairfield, California

I. Respondent:

Scott Leland, Water Treatment Manager

II. Treatment Plant Characteristics:

- Water Treatment (conventional)
- >100,000 customers served
- 14 employees

III. Innovation:

A. Description

Carbon dioxide was added to the treatment process for the pH adjustment (reduction) of source water influent

B. Type of Innovations

- New treatment process
- Optimization of existing resources

C. Motivation for Innovations

Cost savings and process efficiency – about half of the primary coagulant (Alum) was required to depress pH into the effective range for coagulation.

D. Barriers/Challenges

- Recent major renovation made it awkward to ask for additional funding
- Rented CO₂ metering equipment was unreliable
- CO₂ back pressure affecting influent pumping capacity
- Project construction delayed by 60 days – poor communication

E. Effect on Staff Training

Hands on learning from rented system. Minimal additional training for new bulk tank, but big boost in Operator confidence in gaining new treatment tool

F. Lessons Learned

- Including staff and product supplier in project design created superior product
- Poor communication contributed to missing completion date

IV. DROUGHT RESPONSE

Customer education, posting signs, cutting irrigation to parks (leading by example), media awareness campaign (Facebook, Twitter, website, mailer with billing)