

Central States Water Environment Association
2012 Operations Seminar Agenda

Tuesday, September 11, 2012

Fox River Water Reclamation District
Administration Building
IL-31 & Dana Drive
1957 N. LaFox Street
South Elgin, IL 60177

Operations Camp: Topics Covered

- **CMOM**
 - Added to NPDES permits
 - FRWRD does not require CMOM because they don't own their own sanitary system
 - To determine sewer sizes, capacity, etc. in the service area
 - Establishes a long-term control plan
 - FOG as subset of CMOM originally
 - For grease in lift stations – it's best to exercise the water levels
 - Requires annual updates on SSO procedures, inventory, inspection plan (~20% of the system per year)
 - Violation notices may start to come with fines
- **Nutrient Limits**
 - Total Phosphorus limit in the Fox River basin was set at 1 mg/L until the 1970s, when it was determined that it wasn't having the intended impact. The phosphorus limit was removed for WWTPs south of the dam.
 - March 2012 FRWRD started bio-P. They've ranged from 0.3 mg/L to about 0.8 mg/L since.
 - Crystal Lake WWTP #3 uses alum and achieves an effluent TP of about 0.1 mg/L.
 - Upcoming limits are TBD – 1 mg/L technology-based limit may not be enough to achieve water quality improvements
 - Blowers need to be able to turn down for adequate BNR
 - TMDL limits can include changes for other point sources, wetlands, dam removal, and in some cases soda taxes have been proposed.
 - Wetlands must be upstream of the WWTP discharge.
 - Impoundments, habitats, and ripples have a negative impact on watershed
 - TMDLs effectively take a longer time for coming into compliance.
 - IAWA recommends a lower limit for WWTPs with filters (proposed).
 - We're in "regulatory paralysis" – expanding capacity requires design for nutrient removal to limits that are not set by permit.
 - Capacity increases trigger new limits.
 - Commissioning a BNR plant takes time. FRWRD took about 8 weeks to get their phosphorus removal system up and running.
 - Funding with grants can supplement BNR for blower / BNR projects.
- **Fecal Indicators**
 - Currently we're regulated based on a geometric mean.
 - Regulations may change to consider to total coliform or *e. coli*

- A certified lab is probably not going to be required for this.
- **Blending**
 - Defined as “bypassing any unit process”
 - Example: primary treatment and disinfection of excess flow
 - Would require a “No Feasible Alternatives” analysis every five year
 - Distinguishes blending and CSOs based on whether on the plant site, before treatment
 - Excess flow is sampled before recombining
 - This regulation comes back from the CMOM plans.
- **Odor Control**
 - Crystal Lake and Wheaton use OMI Eco-Sorb odor control, which is expensive.
 - Others use masking agents, activated carbon (does not remove mercaptans), ozone, and hydrogen peroxide (Fox Metro). Each is different in terms of efficacy.
- **Safety**
 - **MSDS** - The MSDS system will be changing from the US system to the European system, essentially changing to icons for the forms.
 - The suppliers will supply the new MSDS forms. WWTPs must maintain them available to employees and contractors.
 - **NFPA** was discussed briefly
- **Other: Disinfection**
 - Most facilities have converted from chlorine gas to bleach systems or UV.
 - Replacement parts can be expensive.
 - Some facilities use chlorine tablets for excess flow.

Attendees also toured the new FRWRD Administration Building’s geothermal / effluent reuse system.

Operations Challenge Test: Operators vs. Engineers

2012 Winners: Engineers

2011 Winners: Operators

Facility Tour of the Fox River Water Reclamation District West WWTP