Asset Management Committee
Report to BACWA Board

Committee Meeting on: 11/03/2022
Executive Board Meeting Date: 11/18/2022
Committee Chairs: Rebecca Overacre (EBMUD) and Khae Bohan (CCCSD)

Committee Request for Board Action: None

31 attendees representing 11 member agencies

San José-Santa Clara Regional Wastewater Facility Yard Piping Project

Lani Good, Derek Wurst, Clinton McAdams, and Jesse Wallin from Black & Veatch described several phases of the ongoing Yard Piping Improvements Project at the San José – Santa Clara Regional Wastewater Facility. The project began with a condition assessment planning phase, followed by field investigations, rehabilitation planning, and rehabilitation design. Construction is being handled through traditional design-build-bid. The presentation and ensuing discussion noted the following:

- Pipeline condition assessment at a treatment plant is substantially different and more complex than traditional outside-the-fence pipeline inspections. The focus is on short-length, large-diameter, high-criticality piping.
- Project scheduling was highly constrained by the seasonality of facility flows, since many shutdowns can only happen in dry weather. Treatment plant design engineers should incorporate redundancy, isolation valves, and access points into their facility designs to plan for future inspections and shutdowns.
- Overall, pipes that carry untreated sewage or high solids were in the worst condition. Pipelines downstream of secondary treatment were typically in good condition.
- Pipeline crown corrosion had occurred in some areas with air pockets.
- The project team used a variety of pipe inspection methods, including a Remote Operated Vehicle (ROV) that can enter a pipe even while it's still in service. They also used an unmanned aerial vehicle (i.e., a drone) that can fly through the pipeline, providing imagery similar to traditional CCTV but with more flexibility about the travel path. The project team found it valuable to use stepwise, multiple inspections for each pipeline. In-person physical inspections are highly valuable, but in some cases this was prevented by safety concerns (i.e., no double isolation).
- For pipelines that required rehabilitation, the team selected an approach by balancing four considerations: hydraulic impacts, service life, constructability, and cost. The constructability assessment was the most complex, because the team had to consider shutdown sequencing and access. In most cases, the team selected a trenchless rehabilitation method such as cured-in-place pipe, concrete repair, carbon fiber reinforced polymer, or protective coatings.

Next Meeting: February 2023, Topic TBD