California's Oldest Sanitary District is Leading the Way by Using the Newest Remote Monitoring Technologies

Who: Ross Valley, CA

Problem: Established on May 27, 1899 the 117-year-old Ross Valley Sanitary District is believed to be California's oldest district. The District operates and maintains approximately 200 miles of collection sewer lines and 19 pumping stations which collect, pump, and transport over five million gallons of wastewater per day to Central Marin Sanitation Agency for treatment. Approximately 95% of the District's collection system was installed prior to 1955 and the oldest pipe still in use was installed over a hundred years ago, in 1905. System capacity demands fluctuate from 5 MGD in dry weather to as high as 50-65 MGD in peak wet weather periods.

With such an aging infrastructure, unpredictable weather patterns, and limited budgets, the Ross Valley Sanitary District experienced escalating levels of SSOs and other major failures during the past decade, which also led to a series of regulatory actions and third-party settlement agreements. The situation came to head in 2013 with a Cease and Desist Order from the California Regional Water Quality Board (RWQCB) that sought to impose a broad-based acceleration of capital improvement projects within five years, with a potential cost to rate payers of over $100 million.

Details: In response, the District implemented a series of advanced asset management and sanitary system monitoring technologies to identify and mitigate key problem areas while simultaneously improving operations and long-term capital planning processes. These initiatives have demonstrated a track-record of transformational change in the district that has also resulted in an agreement with the RWQCB to amend the CDO in favor of supporting the new system changes and asset management programs.

A key element in the Ross Valley Sanitary District's success has been the use of SmartCover® real-time monitoring systems, SmartTrend® management software and SmartRain RD™ rain data integration. The District started with a pilot program of six SmartCover® systems and, based on the positive results, is adding another 20 systems in July 2016 and budgeting for an additional 20 per year.

Results: According to Stephen Miksis, Acting Operations and Maintenance Manager, "SmartCover has helped drive transformative changes through more effective targeting of our O&M resources. Instead of constantly chasing problems we are able to get out ahead of them through proactive I&I risk assessment and data-driven cleanout scheduling. Plus, our response time for real emergencies has improved dramatically through the real-time monitoring and alarm technology."
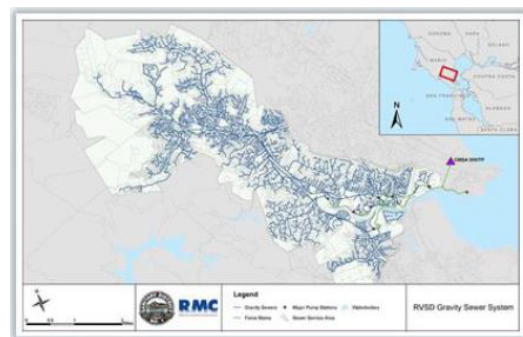
Mr. Miksis added, "The SmartRain RD™ capabilities have also be a life saver during this past winter's historic El Niño conditions. We are impacted by an extensive watershed beyond the District boundaries but the SmartRain integration enabled us to graph exactly where the changing rainfall patterns would impact us. Instead of deploying roving crews to watch for problems, we could dispatch them directly to the problems areas ahead of time."