

SmartClean Helps South Placer MUD Improve Sewer Cleaning Program to Target Problem Sites and Reduce Costs

Who: South Placer Municipal Utility District (SPMUD) in Rocklin, CA

Profile: Originally established in 1956 as the Rocklin-Loomis MUD and renamed South Placer MUD in 1988 as a result of expansion, SPMUD now provides sewer collection services for over 21,000 connections, serving a population of approximately 75,000. SPMUD's customer base has tripled over the last twenty-five years from 10,000 equivalent dwelling units (EDU) to over 31,000 EDU.



The Challenge: SPMUD was looking for a more cost-efficient method for maintaining at-risk sewer sites as an alternative to their existing High Frequency Cleaning (HFC) programs. HFC programs typically can be very expensive because all sites on the schedule are cleaned on a regular and frequent basis, whether there is an actual risk of spills or not.

Because this "blind cleaning" approach is not data driven, HFC may require many unnecessary cleaning cycles that consume significant amounts of staff time and truck rolls without clear metrics on actual risk mitigation. Frequent cleaning can also do damage to the sewer pipes over time and therefore reduces the life of installed capital infrastructure. SPMUD had a "hot-spot elimination" program that was focused primarily on repairing or reconstructing problem sites but the time and expense involved was high and often repairs were not a practical option.

Details: SPMUD had begun using SmartCover remote monitoring systems with an initial two units in 2014, so staff were already familiar with the technology. With introduction of the SmartClean approach in 2017, SPMUD decided to launch a six-month pilot project using five additional SmartCover units targeted at high-risk sites.

The selected sites had been on HFC cycles of 1, 2 or 3 months per site. By continuously monitoring these locations, operators know when to issue a work order for cleaning based on real-time data. Equally, they are assured that between cleanings, water levels are monitored and visible, with any unusual changes in water level indicating a potential problem.

Results: According to Eric Nielsen, SPMUD Engineer, "SmartClean gives us clear visibility on when to clean these pipelines, which historically have been troublesome, virtually eliminated blind cleaning, while avoiding any spills during the pilot project. This information has enabled us to significantly extend cleaning cycles, such as pushing 1-month and 2-month sites out to 12-month schedules." Further examination is underway to determine how far sites with 3-month cycles can be expanded. As shown above, the ROI on SmartClean shows full payback within 1-2 years, depending on the previous HFC frequency, and delivers ROI savings of up to \$25,000 per site over 7 years.

The bottom line from SPMUD's use of SmartClean is significant on-going savings, better visibility to avoid spills, lower environmental impact from eliminating truck-rolls and extending the predicted useful life of sewer pipes.

