

SMARTCOVER

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CLEANING COSTS GO DOWN WHILE AVOIDING SPILLS IN SOUTHERN CALIFORNIA

BACKGROUND

Located in Eastern San Diego County, the Padre Dam Municipal Water District provides potable water, wastewater collection and treatment, water recycling and recreational facilities.

Padre Dam serves the needs of the communities of Santee, Blossom Valley, Dehesa, Crest, Alpine, Harbison Canyon, Flinn Springs and a small portion of Lakeside and El Cajon.

THE CHALLENGE

As part of ongoing initiatives to improve the efficiency and effectiveness of wastewater system management, Padre Dam staff embarked on a program of real-time monitoring and data analysis using SmartCover and their SmartClean® program.

The objective was to both reduce the operating costs of periodic sewer cleaning and provide early detection of potential problems before resulting in sanitary sewer overflows (SSOs).

THE SOLUTION

One SmartCover remote field unit was installed in a sludge line manhole upstream from where low-lift pumps enter from an influent pump station, which then connects to a double barrel siphon. This unit monitored sewer levels during construction and will remain in the location to monitor the performance of the siphon that goes under the San Diego River. Another unit was dedicated to a remote manhole site that is not easily accessed for visual inspection.

THE RESULTS

A significant ROI was reflected in the ability to identify risk-prone locations that could be cleaned less often, such as extending 2-month and 6-month cleaning cycles to longer periods between cleanings.

Also, data analysis indicated that many of the previously designated "hot spot" sites could be reclassified for annual cleaning -- 121 high frequency cleaning sites were reduced to 77 -- allowing the reallocation of valuable human and equipment resources to other projects.

"SmartCover has given us a much more accurate data-driven understanding of how to optimize our cleaning processes, while also enabling focused monitoring of specific issues and potential problem areas."

- - Mike Anderson, Padre Dam Construction Lead

CONTINUOUS MONITORING ASSURES OVERFLOW PREVENTION

SUMMARY:

Padre Dam was able to lower operating costs and prevent SSOs by rotating SmartCover units among critical sites being cleaned more frequently than an annual basis. Data from these units helped the Padre Dam staff evaluate and adjust the schedules to improve efficiency and reduce costs. The SmartCover monitoring process has enabled Padre Dam staff to proactively observe sewer irregularities, identify blockages and avoid spills before they happen.

High frequency cleaning sites reduced from 121 to 77

