

SmartCover® Enables Padre Dam Municipal Water District to Improve Cleaning Cycle Efficiency and Avoid Spills

Who: Padre Dam Municipal Water District, CA

Profile: Padre Dam provides potable water, wastewater collection and treatment, water recycling and recreational facilities to the communities of Santee, Blossom Valley, Dehesa, Crest, Alpine, Harbison Canyon, Flinn Springs and a small portion of Lakeside and El Cajon.

Problem: 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 systems and SmartClean processes. The objective was to both reduce the operating costs of periodic sewer cleaning and to provide early identification of emergent potential problem areas before they can result in Sanitary Sewer Overflow (SSOs).

Details: The initial approach deployed two SmartCover units for rotating among “hot-spots” that were being cleaned on a more frequent than annual basis. Data from these units helped the Padre Dam staff evaluate and adjust the schedules to improve efficiency and reduce costs.

Results: One of the major ROI areas was the ability to identify hot-spot 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 hot-spot sites could be reclassified for annual cleaning, thereby saving the costs and staff time required for more frequent cleaning.

Based on the remote monitoring and data analysis, the total of 121 sites previously designated as hot-spot cleaning locations has been reduced to 77 sites.

The SmartCover monitoring process has also enabled Padre Dam staff to proactively identify and avoid potential problems and avoid spills before they happened, as shown in the screenshot at right.

One 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 is monitoring flow 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.

According to Mike Anderson, Padre Dam Construction Equipment Operator & Lead, “The use of SmartCover systems 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.”

