SMARTCOVER

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DATA-DRIVEN SEWER CLEANING PROTECTS TOP TOURIST TOWNS

BACKGROUND

Established in 1932 in Orange County, California, the South Coast Water District (SCWD) serves the cities of Dana Point, South Laguna Beach, and parts of San Clemente and San Juan Capistrano.

SCWD facilities include 147 miles of water lines, 136 miles of sewer lines, 13 sewer pumping stations, 7 water pumping stations and 15 reservoirs.

SCWD serves 35,000 residents, 1,000 businesses, and 2 million tourists per year.

THE CHALLENGE

To proactively avoid risk of sewer spills, SCWD used a preset cleaning schedule that cycled through sites considered to be "at risk."

However, using a fixed cleaning schedule meant that a significant number of field visits to clean blockages were not necessary.

SCWD management wanted to find a better way to target their cleaning crews on sites that were actually at risk of imminent spillage. Taking a data-driven preemptive approach not only could save costs, it would also extend the life of sewer pipes by avoid over cleaning. Fewer trips to the field translated to keeping field staff safer during the COVID-19 pandemic.

THE SOLUTION

After evaluating alternatives, SCWD decided to conduct a pilot with the SmartCover SmartClean program for remote sewer monitoring and maintenance optimization; only cleaning pipes when and where the data showed it was necessary.

"SmartCover's data-driven monitoring systems enable us to target cleaning when and where it's needed, and save money when it's not."

- - Efrem Rodriguez, Collections System Supervisor, SCWD

THE RESULTS

The initial 6 month pilot involved SmartCover monitoring at 6 sites considered high risk and on a quarterly cleaning schedule.

During the pilot, SmartCover data showed zero cleanings were needed. SCWD was able to push these sites out to bi-annual cleanings -- confident that the SmartCover system would alert them to any emergent problems between scheduled field visits.

SCWD saved approximately $5,000 in maintenance costs and $10,000 in traffic control costs in the first six months.*

SCWD expanded the program to ten additional sites by relocating five units and buying five more SmartCovers.

Using data-based targeted maintenance, they were able to halt cleaning at 5 of the at risk sites over an 8-month period. Cleaning crews were dispatched only when SmartCover identified build up from fats, oils and grease (FOG) in the pipes. During this time, SCWD avoided 4 spills and eliminated unnecessary vac truck cleanings.

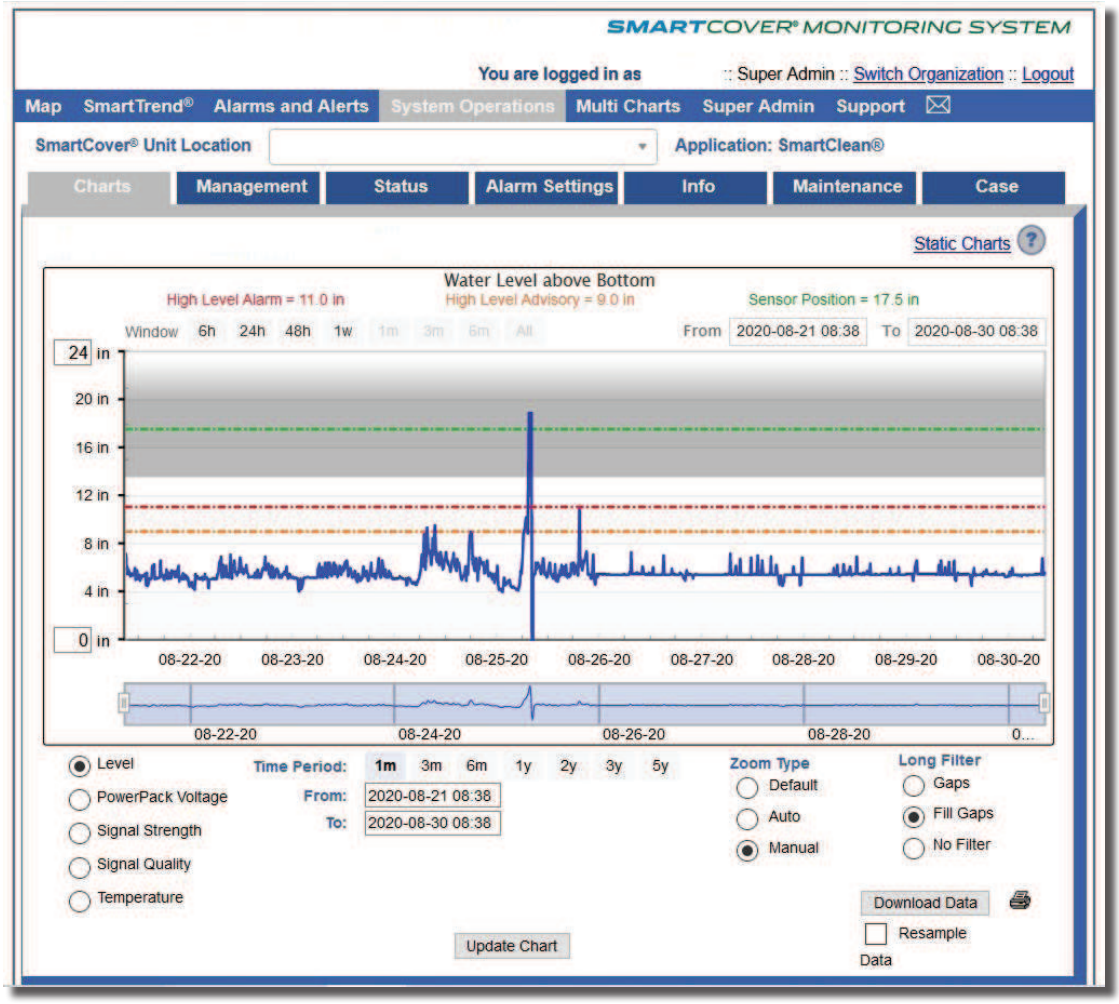
*Based on savings of $3.82 per linear feet of pipe

IDENTIFYING I&I BUILD-UP ENABLES TARGETED CLEANING & SAVES COSTS

SUMMARY:

By using SmartCover for remote monitoring of targeted sites and data-driven analysis of the sewer conditions, SCWD has been able to significantly improve their utilization of field staff and resources. Avoiding unnecessary cleaning trips yields both immediate savings and long-term cost-avoidance by reducing wear and tear on pipes.

A bonus benefit of the SmartClean program is the added ability to identify when and where a FOG blockage is exacerbated by inflow & infiltration (I&I) at specific locations. Being able to target cleaning and maintenance is helping SCWD avoid potential sewer spills, better serve and protect their community, as well as extend the life of the sewer infrastructure assets. This preventative cleaning program is saving money and preventing regulatory sanctions that typically result from unexpected sewer spill events.



Changes in flow patterns can quickly identify emerging I&I issues to prevent spills

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