



## San Luis Obispo, CA

### *Enhances Operations and System Resilience with Proactive Infiltration & Inflow Assessments*

The City of San Luis Obispo (SLO) manages an extensive network of sewer infrastructure spanning 148 miles of pipe that ranges from 6 to 36 inches, nine lift stations and a Water Resource Recovery Facility that handles 5 million gallons per day. SLO plays a vital role in maintaining public health and environmental quality, serving a diverse community of more than 47,500 residents, numerous businesses, the California Polytechnic State University, and the regional airport.

### The Challenge

SLO has faced challenges maintaining and operating the wastewater collection system. The challenges manifest in increased service disruptions caused by pipe deficiencies, root intrusion, fats, oils, and grease (FOG), and increased inflow and infiltration during storm events.

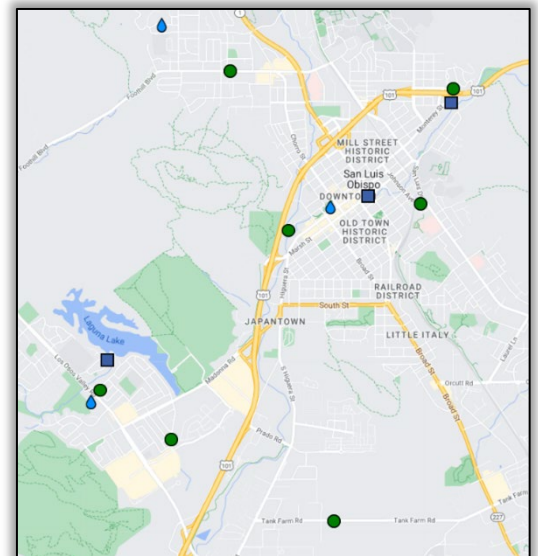
To address those issues, SLO sought improved visibility into its sewer collection system to proactively identify and assess potential problems before spills occur. Staff aimed to pinpoint areas requiring additional oversight to ensure uninterrupted wastewater flow. The primary objective was to enhance compliance with regulatory standards, which are crucial for safeguarding the city's residents and the environment while avoiding costly fines and penalties resulting from wastewater discharges.

### The Solution

The beginning of SLO's use of smart sewer technology started in 2016 when the city implemented SmartCover's remote-monitoring SmartLevel system for a pilot program to track I&I at six locations. In addition to I&I tracking, SLO was attracted to the technology's proven reliability during power outages and severe storms, alarms, and its integrated software that collects data onto a cloud-based/web-based platform for analysis.

### Highlights:

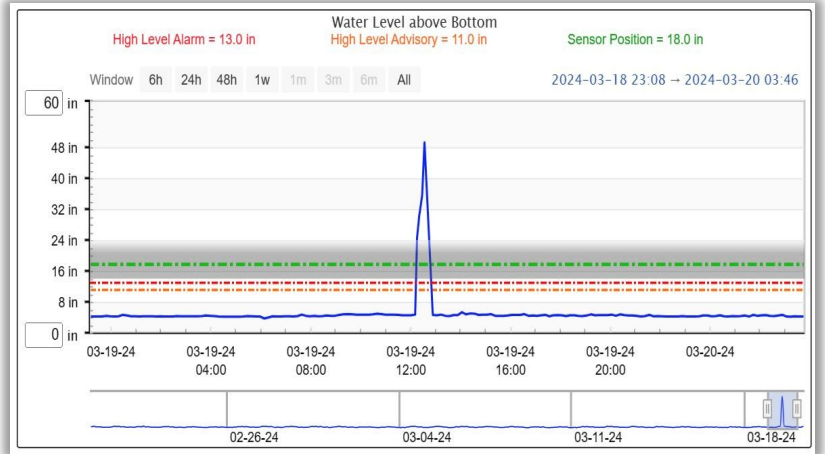
- **Real-time collection system monitoring improved asset management, operations and long-term planning.**
- **Proactively assessed infiltration and inflow (I&I) risks and improved emergency response times.**
- **Financial savings preserved capital for necessary infrastructure improvements.**
- **Improved regulatory compliance.**



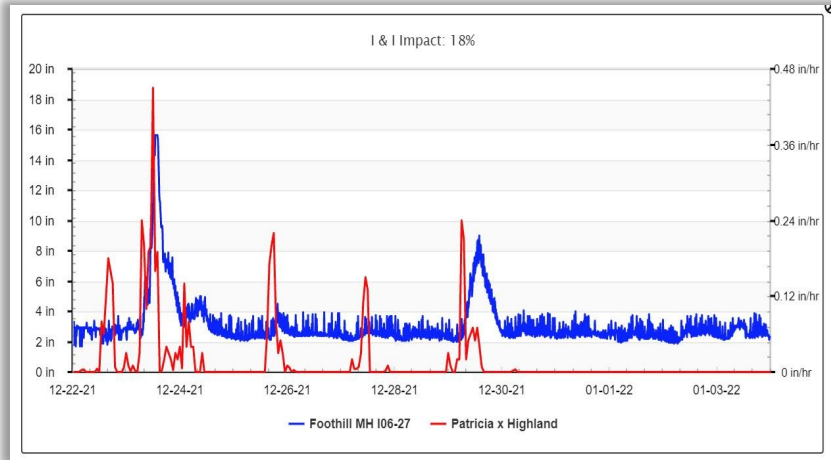
SmartCover units in San Luis Obispo

# The Results

SLO's use of SmartCover technology has increased to 103 applications—nine SmartLevel™ monitors, a SmartFLOE™, and three rain gauges—that integrate localized weather data from the National Oceanic and Atmospheric Administration (NOAA) to enable preparation for and rapid response to developing issues. The city frequently relocates the SmartCover devices to monitor I&I, mainline problem areas, easements and siphons, sewer bypass projects, and lift stations. All of SmartCover systems and software work together to analyze the data quickly and accurately, which helps SLO optimize operations for better maintenance scheduling, safety, and cost savings.



Sewer Spill Prevented



I&I Report from 2021 Large Rainfall Event

One example of how smart sewer technology has benefited SLO occurred during a four-month series of major storms from December 1, 2022, through April 30, 2023. During that time frame, San Luis Obispo diligently monitored its collection system and did not encounter a single storm-related spill despite facing the highest sewer flows witnessed in over a decade.

## Conclusion

Adopting smart sewer technology in San Luis Obispo has yielded significant benefits beyond preventing sanitary sewer overflows. It has enabled the city to achieve substantial cost savings by optimizing the allocation of resources, equipment, and staff. Through the implementation of this technology, SLO has conserved tens of thousands of dollars in resources and potential fines. The smart sewer technology's enhanced visibility and data-driven insights have empowered SLO to pinpoint and prioritize deficiencies in its collection system effectively.

The technology has facilitated the development and execution of short-term and long-term maintenance and capital improvement goals. Notably, the reduction in emergency spill response alone has resulted in financial savings, preserving capital for necessary infrastructure enhancements. Overall, smart sewer technology has bolstered operational efficiency and strengthened SLO's ability to uphold public health and environmental integrity and regulatory compliance.

**Disclaimer:**

*The opinions expressed by staff are not necessarily the views of the city of San Luis Obispo.*