

SmartCover® Enables Camp Pendleton Marine Base to Monitor Lift Stations and Remote Water and Wastewater Assets

Who: Camp Pendleton Marine Base, CA

Profile: Marine Corps Base Camp Pendleton is the major West Coast base of the United States Marine Corps, located on the Southern California coast, in San Diego County, and bordered by Oceanside to the south, Cleveland National Forest, Orange and Riverside counties to the north, and Fallbrook to the east.

Camp Pendleton maintains over 237 miles of conveyance infrastructure (including gravity mains, force mains, and laterals) ranging from four inches in diameter to 36 inches in diameter, 62 sewage lift stations, and 3,140 sewer manholes. The water system includes 24 wells, 375 miles of water mainlines, and 23 reservoirs.

Problem: Camp Pendleton's 125,547 acres host a self-sustaining water supply, sewage treatment plants, telephone and electrical systems. With a daytime population of more than 70,000, Camp Pendleton must maintain its self-sustaining capabilities. As one of the largest military facilities in the United States, Camp Pendleton presents special challenges in terms of managing remote sewer lines, manholes, and lift stations to identify emerging issues before they can become problems such as sanitary sewer spills (SSOs). Monitoring of water levels in water tanks is also a key objective to manage potable water supplies.

Details: SmartCover Systems give Camp Pendleton staff the ability to remotely monitor wet well and collection system levels to be proactive in managing water and wastewater assets, as well as responding to prevent possible spills from occurring. Currently, Camp Pendleton has 103 SmartCover units installed at 62 wastewater lift stations, 28 sanitary sewer manholes and 19 potable water reservoirs.

Results: Camp Pendleton staff can now monitor real-time conditions across all wastewater lift stations, remote manholes and reservoirs, which has enabled them to prevent multiple spills at lift stations due to power, mechanical and electronic failures and to improve overall system management efficiency.

As is the case with most large military bases across the United States, Camp Pendleton needs to efficiently manage water and sewer infrastructure across a very large area, while juggling security concerns, difficult-to-access locations, and sensitive environmental concerns. SmartCover is also unique in the use of military-grade communications via the Iridium satellite network to assure unparalleled uptime, especially in remote locations and during storms that can knock out conventional cell phone networks.

In these situations, SmartCover real-time remote monitoring acts as a "force multiplier" for water and wastewater professionals to enable them to respond rapidly while also identifying trends that can help improve management efficiency and avoid latent issues from becoming emergency problems.

