Beating the Clock

he Metropolitan Water District (MWD) of Southern California, which serves 18 million customers, suspected trouble spots in a World War II-era coal tarlined water line. This 40,000-ft primary feeder line to four densely populated areas could only be shut down for four days for inspection. Jim Aanderud of Innerline Eng. believed this could be accomplished with several trained crews working multiple shifts. He tapped Downstream Services, a local CCTV contractor, to assist and serve as emergency backup.

After the line was shut down and dewatered, crews began around-the-clock inspections, in overlapping shifts up to 20 hours long. Because entry points were up to 3,500 ft apart and camera cable was limited to 2,000 ft, inspections were conducted from both upstream and downstream to cover each section completely. Entry points were at most 17 in. wide, requiring crews to remove camera transporter wheels and reassemble inside the manhole, for which they practiced on a mock-up at Innerline's facility.

Innerline and Downstream used a Steerable Storm Drain Tractor with a pan-and-tilt Omni Eye III Zoom camera from R.S. Technical Services Inc. Inspections were recorded digitally using PipeLogix Inc. pipe survey reporting software. Operators took individual still images of each defect or anomaly; footage, images and data were compiled for later review.

MWD was able to confirm that no areas needed immediate attention, and had a snapshot of the entire line's true condition, upon which it could make the right maintenance decisions.



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