

CASE STUDY

Tuning Into a 99% Increase in Productivity for CCTV Inspection



The Situation

Aging Infrastructure, Growing Risk

America's wastewater infrastructure may be short of circling the drain—but not by much.

The majority of the country's 6 billion feet of sewage pipe is greater than 60 years-old, resulting in a host of defects and weaknesses. It's a 1.6 trillion dollar problem that puts communities at risk of environmental spills, collapsing sewer and storm pipes, contaminated drinking water, and more.



Due to a consistent lack in funding to overhaul this aging and fragile infrastructure, wastewater professionals are tasked with proactively managing and maintaining wastewater assets by reviewing CCTV footage and reporting their findings to decision-makers.

The challenge? Current methods require human operators to watch every second of a sewer inspection video, which is both costly and prone to error.

6 billion feet
of sewage pipes

60+ year-old
infrastructure

\$1.6 trillion
problem

The Problem

Wasting the Time of Wastewater Professionals

Currently CCTV condition assessment programs use robotic camera equipment to inspect pipe segments one at a time. However, effectiveness is limited by human errors of omission, variations in quality and completeness of the inspection reports, and subjective interpretations that both over and underestimate the severity of defects.

↓ **15% underestimation**
of severity of sewer defects

↑ **20% overestimation**
of severity of sewer defects

Moreover, reviewing CCTV footage is a costly drain on time and human resources, contributing to waste and inefficiency while teams are kept in the office instead of in the field.



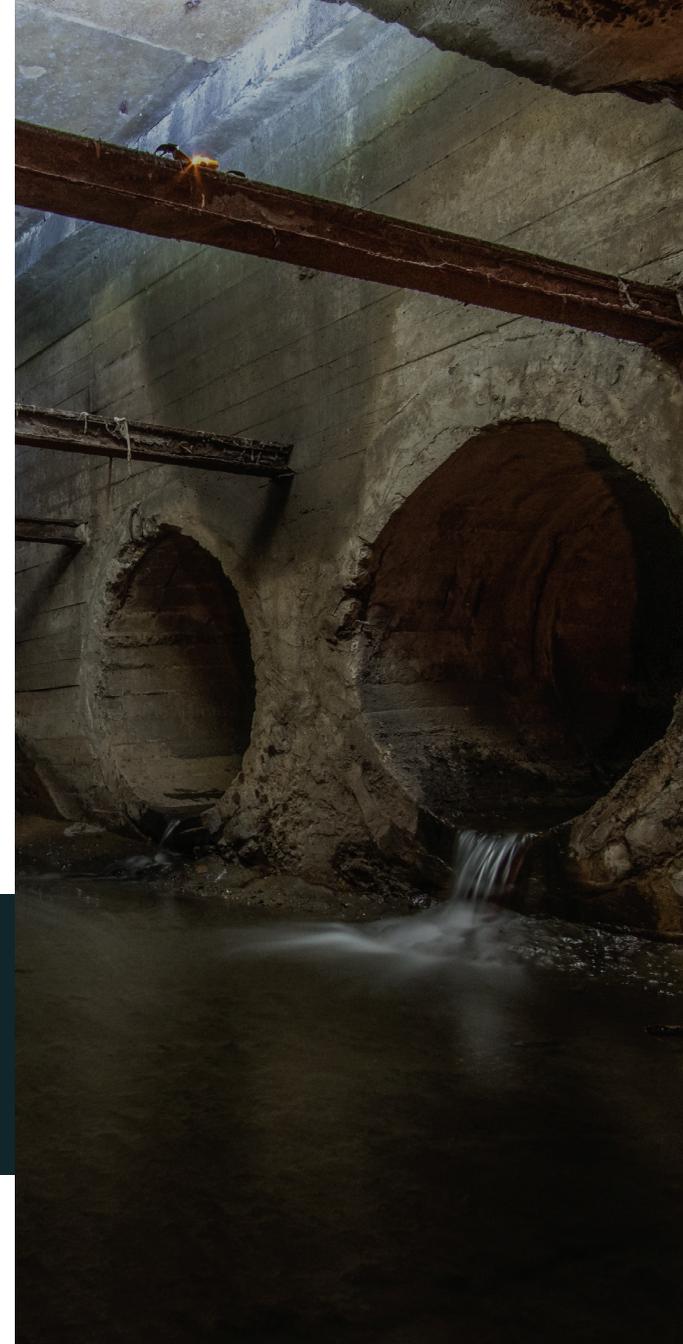
Crew paid to watch CCTV

x \$28/hour*

x 8 hours per day

= **money down the drain**

*average



The Solution

New vs. Old: A Head to Head Competition

SewerAI analyzed the data of two separate projects completed by a Sewer Services Company (SSC) in Northern California to compare AI-assisted methods with the traditional manual approach.

2019 Project

- Cleaning and inspection project
- 55,462.3 linear feet of 6"-15" Vitrified Clay (VCP) and concrete sanitary sewer pipe
- Pipeline access points in close proximity to public streets

2020 Project

- Cleaning and inspection project
- 102,270.22 linear feet of 6"-15" Vitrified Clay (VCP) and concrete sanitary sewer pipe
- 10 miles from 2019 project
- Similar access points/configuration to 2019 project

Because the 2020 project consisted of CCTV data that AutoCode inference models were already calibrated for, and because SewerAI's validation processes focused on datasets of identical pipe materials and diameters, it was considered to be a unique opportunity to compare the total linear feet inspected per day.

Study specifics:

Both SSC projects used:

- The same make and model for both camera equipment and chassis: CCTV pan & tilt camera mounted on a transporter with 2,000' single-conductor cable mounted in a 20' Grumman Olson step-van
- A studio and control station for the camera system
- Rack-mounted computer with the ability to input inspection data into an industry standard inspection reporting software

Exclusions from data set:

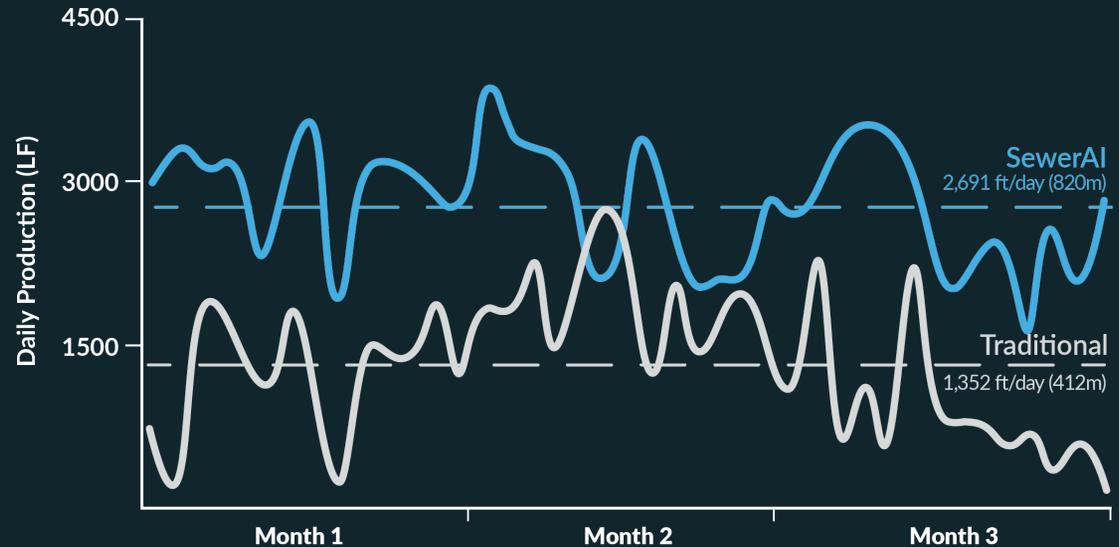
- One-off calls
- Half days
- Equipment breakdown
- Removal of obstructions in the pipe
- Difficulty accessing pipeline access points

The Results

Virtually 100% more efficiency for virtually unmatched productivity and savings.

The 2019 manual capture and assess workflow yielded an average daily production of 1,352.7 LF of CCTV inspections completed per crew per shift. The 2020 AI-assisted workflow by SewerAI yielded an average daily production of 2,691.3 LF of CCTV inspections completed per crew per shift.

The difference: a 98.95% daily production increase—and more time for teams to dedicate to valuable work in the field.



In addition, NASSCO-standard deliverables submitted were accepted by the asset owners and project stakeholders in both cases, and SewerAI's method did not require the SSC to incur any additional capital expenditure or the adoption of or training on new software by anyone in that organization.

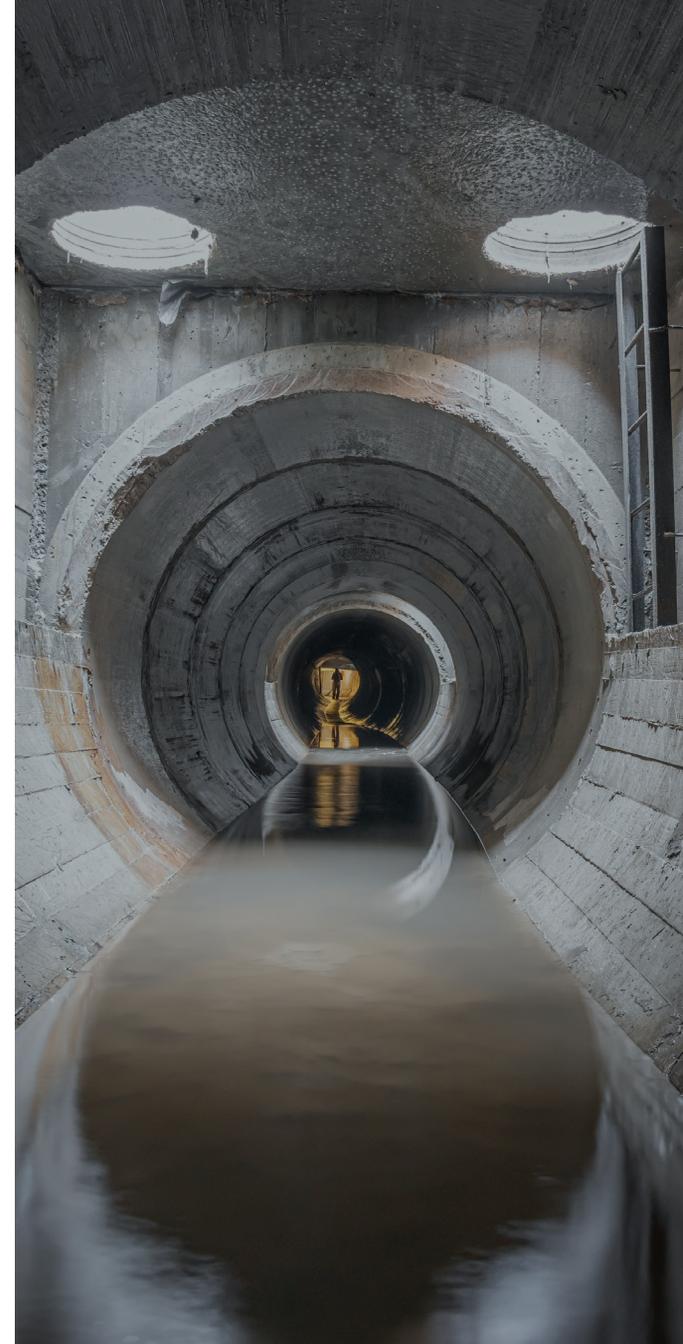
The Results

Doubling efficiency—not to mention delight.

SewerAI is revolutionizing the way that wastewater professionals work. By automating tedious, expensive, and error-prone tasks, SewerAI can help utilities, contractors, municipalities, and more achieve significant breakthrough in CCTV inspection productivity and significant reductions in their overall inspection costs.



SewerAI also meets NASSCO, PACP, and other industry standards and is already used around the country to serve more than 130 million people.



You've read the case study. Now become one.

Inspect more pipe for less money. Reach out to see how quickly and easily you can exponentially increase your productivity and lower your costs, while increasing the accuracy of your data.

[Book a Call](#)



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