

Condition Assessment Services for Gravity Pipelines

What kind of shape is your infrastructure in?

**VORTEX SERVICES
OFFERS THE INDUSTRY'S
MOST ADVANCED
CONDITION ASSESSMENT
SERVICES TO IDENTIFY
YOUR REPAIR AND
REHABILITATION NEEDS.**

Critical to addressing pipe defects before they get out of hand is to understand exactly what is going on inside your infrastructure. Let us help you assess the health of your pipe and manhole systems.

**SHOW US YOUR WORST. WE WILL
BRING OUR BEST.**

Vortex Services not only offers standard condition assessment services, we also offer a Multi-Sensor Pipeline Condition Assessment Platform to fully inspect your pipelines and manholes.

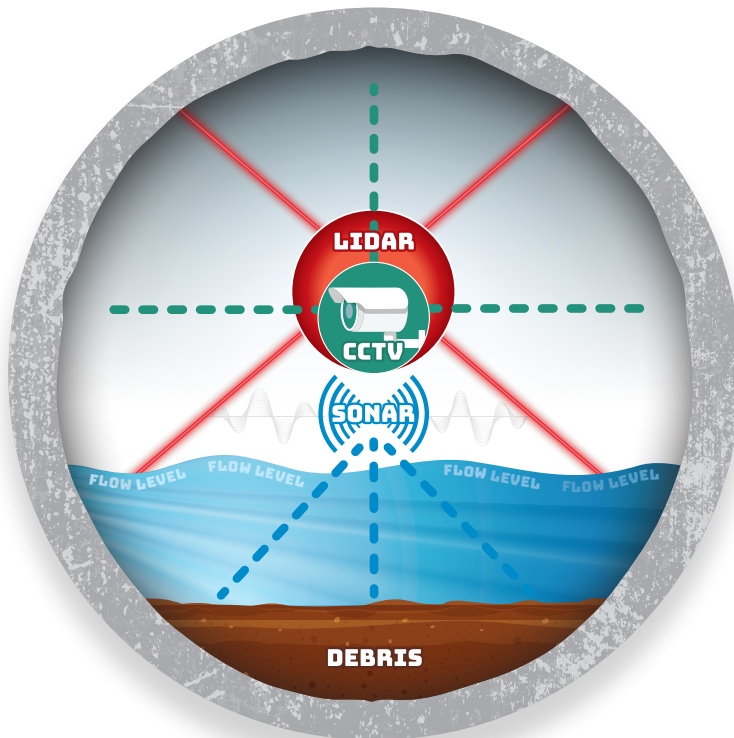


EXPERIENCED DATA COLLECTION



COMPREHENSIVE
MANHOLE ANALYSIS

Multi Sensor Insepction (MSI)



LIDAR

Lidar (Light Detection and Ranging) measures the actual pipe diameter above the water line. Can be performed in both 2D and 3D.

CCTV

Traditional CCTV is used to "see" inside the pipe and identify defects.

SONAR

We use Sonar technology to measure and quantify the amount of sediment debris below the water flow line.

WHAT IS MULTI-SENSOR INSPECTION (MSI)

A combination of technologies to deliver a comprehensive condition and hydraulic assessment of your large diameter pipelines.

- CCTV - To see and document defects
- Lidar - To measure profile and actual pipe conditions above the flow level
- Sonar - To measure and quantify debris levels below the flow level, in live flow condition.
- Best for pipes 36" and greater
- Tractor, skid or float systems used based on pipe flow conditions.

MULTI-SENSOR CONDITION ASSESSMENT SERVICES

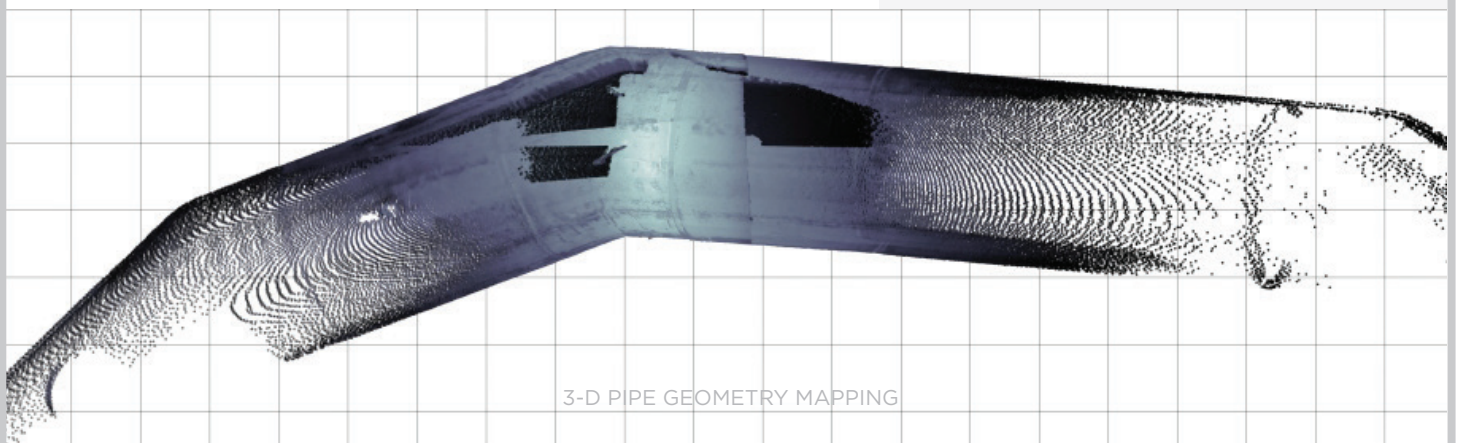
This is where we bring out our advanced camera and inspection services to conduct the most comprehensive condition assessment services in the industry. This way you are able to make replacement or rehabilitation decisions based on actual, live data and not on assumptions.

How we capture information:

- Visual inspection using a high resolution HD CCTV
- Sonar Technology - Digital/Analog
- Lidar Profile - 2D or 3D

STANDARD INSPECTION SERVICES

We will evaluate the general condition of your infrastructure and provide enough information to determine if a more comprehensive inspection is needed. These services include both industry approved Level 1 and Level 2 inspections and range from the most basic visual inspection to running a camera system through your infrastructure to locate structural or other types of defects.



3-D PIPE GEOMETRY MAPPING