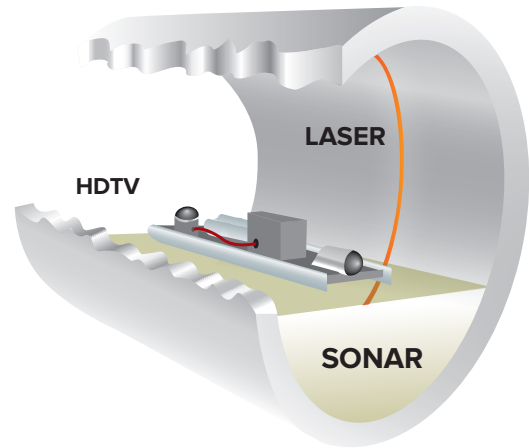


Multi-Sensor Inspection (MSI)

Comprehensive Sensor Data for Wastewater Management

Multi-Sensor Inspection (MSI) for sewer pipes offers a comprehensive solution for accurately assessing sewer conditions, detecting defects, and providing condition grading to prioritize maintenance and repairs. Utilizing high-resolution CCTV, laser profiling, and sonar data, our service ensures efficient, cost-effective inspections with reduced disruption. Advanced analytics and automated reporting deliver actionable insights and regulatory-compliant documentation. Our robust and reliable equipment covers difficult-to-reach areas, ensuring complete pipe coverage.

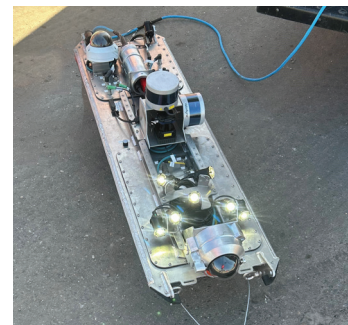


Duke's MSI:

Dukes's MSI is a comprehensive approach that combines CCTV, Sonar, Radar, and Lidar/Laser inspection techniques to provide a detailed condition assessment report. This method offers extensive data, including visual pipe assessment, debris levels, ovality, H₂S corrosion, and 3D pipe images, and allows inspection in high flows without bypass.

Why Choose MSI?

- **Insightful Data Collection:** MSI captures extensive, synchronized sensor data, offering a detailed perspective on your system's condition and delivering crucial degradation metrics for effective rehabilitation planning.
- **Safer Method:** Autonomous robotic technology removes the requirement for human entry, enhancing safety. Extended deployment periods minimize the need for manhole access and decrease community disturbances.
- **Cost Effective:** Our tools function in any flow condition, eliminating the need for bypass pumping. Reduced deployment times decrease traffic control costs and other additional expenses.



Accessing Comprehensive MSI Data

Structural Defects and Damage:

Obtain precise measurements for wall loss, ovality, deflection, and other degradation types. This data is crucial for rehabilitation planning and comparing future inspections.

Sediment and Debris Quantification:

Analyze capacity loss due to sediment and debris buildup and determine accurate cleaning costs based on debris volume.

Remaining Useful Life (RUL) Assessment:

Use digital twins and as-built drawings to evaluate every bend and curve of your assets. Accurate dimensions and modeling assist in determining replacement and rehabilitation costs and the RUL of your infrastructure.

