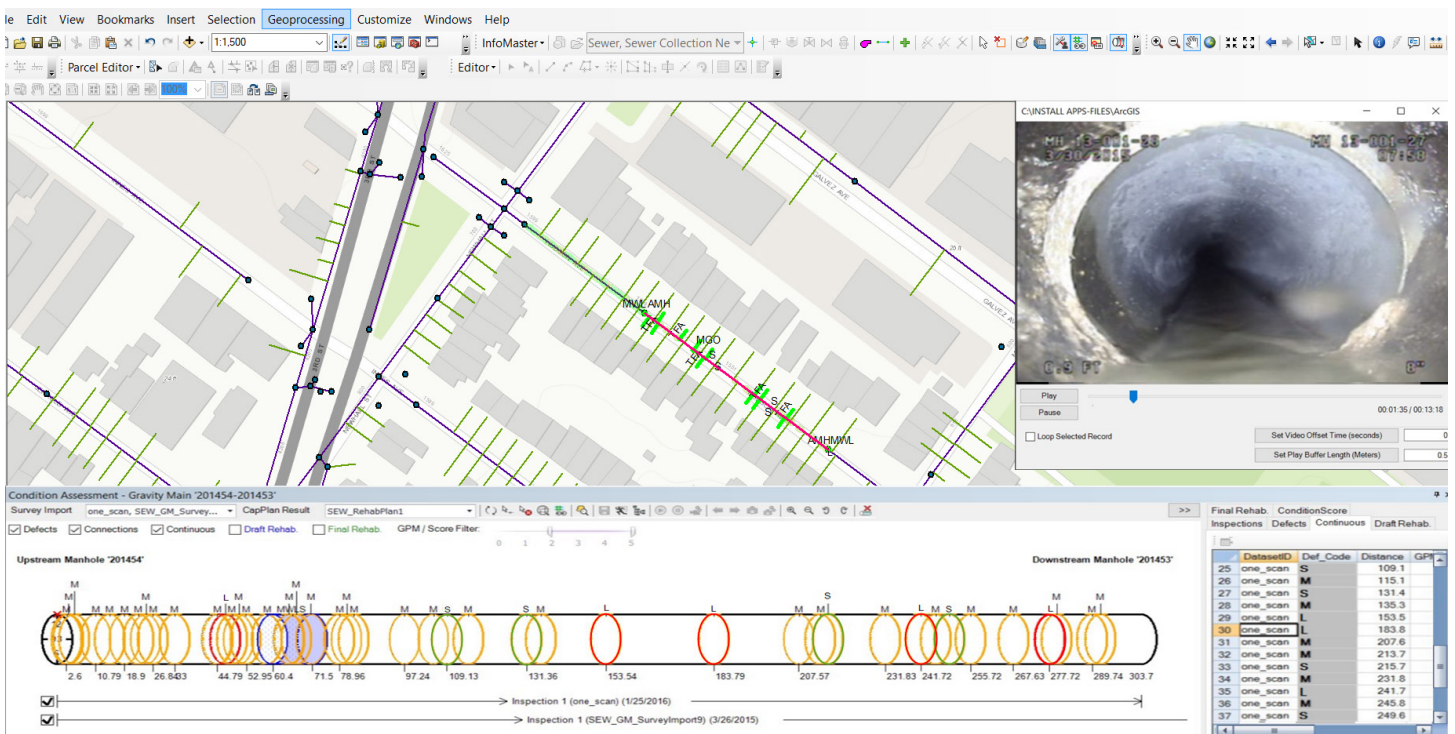


Critical Sewers® – InfoMaster® Integration

- Compare Electro Scan v. CCTV
- View & Filter Defects in GPM
- Import Electro Scans
- 1 to 5 Scoring System Based on GPM
- Defects are Geo-coded
- Powerful Decision-Making

Electro Scan’s advanced condition assessment technology does not rely on operator interpretation, third-party data analysis, or independent judgment. Key advantages include the ability to automatically provide specific defect locations, size, and estimated flows for each defect, and for each pipe – *in gallons per minute* – to correctly prioritize Critical Sewers.

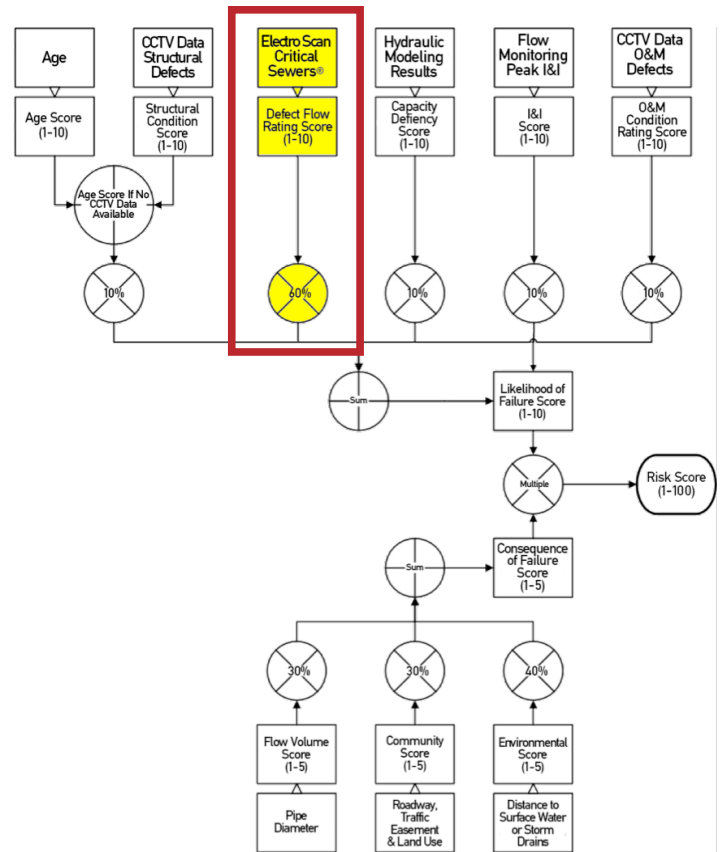


Once data is accessible by Innovyze® InfoMaster for Sewer, Electro Scan defect flows highlight the location and severity of each defect, including defective joints, cracks, and leaking service connections, that were missed by CCTV cameras or other inspection techniques. Electro Scan and Innovyze® users can also show pipe defects ranked by highest GPM, and gallons per day per inch diameter (GPD/IDM), as part of ESRI’s ArcGIS and Innovyze’s 1D and 2D modeling features and capabilities within Innovyze® InfoMaster for Sewer.

Risk Assessment Using Electro Scan for Better Decision Making

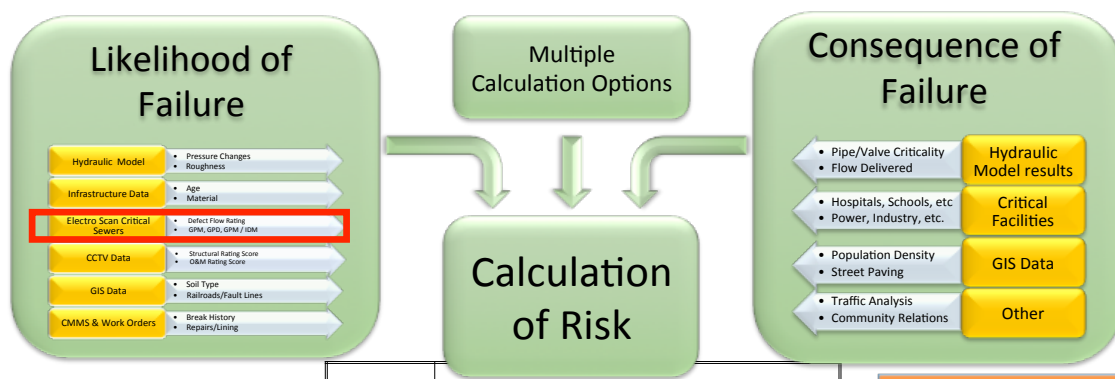
The days of relying on visual inspection to prioritize sewer rehabilitation are over. Engineers no longer have to risk fixing the wrong pipes or accepting poor rehabilitation, based on visual inspections that are only finding 1 in 10 defects found by Electro Scan.

Electro Scan defects may now be used as a key component in risk models to support recommended rehabilitation strategies. No data interpretation, no qualitative results, and no missed defects bring a new level of assurance to pipe-line inspection.



Municipal Licensing Requirements

- Current Critical Sewers® License and Data Management Package
- Current InfoMaster® License and Maintenance Subscription
- Critical Sewer Export Module and Maintenance Subscription – *Creates and Exports Access Database Files (.IMDB) to InfoMaster*



	LOF - Low	LOF - Medium Low	LOF - Medium	LOF - Medium High	LOF - High
Conseq - High	16 pipe, 1.36 mile	18 pipe, 1.24 mile	8 pipe, 0.42 mile	8 pipe, 0.37 mile	28 pipe, 2.71 mile
Conseq - Medium High	22 pipe, 1.60 mile	17 pipe, 1.07 mile	2 pipe, 0.11 mile	2 pipe, 0.05 mile	7 pipe, 0.55 mile
Conseq - Medium	23 pipe, 1.67 mile	9 pipe, 0.35 mile	1 pipe, 0.12 mile	0 pipe, 0.00 mile	8 pipe, 0.48 mile
Conseq - Medium Low	91 pipe, 0.36 mile	68 pipe, 4.96 mile	91 pipe, 5.29 mile	40 pipe, 3.12 mile	127 pipe, 8.43 mile
Conseq - Low	79 pipe, 3.04 mile	23 pipe, 1.96 mile	53 pipe, 3.20 mile	13 pipe, 0.85 mile	127 pipe, 6.51 mile

Risk Class	Capital Action
Extreme	High Priority in CIP / Yearly Operational Frequency
High	Standard Priority in CIP / Biannual Operational Frequency
Medium	Low Priority in CIP / 1 in 5 Years Operational Frequency
Low	1 in 10 Years Operational Frequency
Negligible	Wait for a problem to arise

POST-REHABILITATION CERTIFICATION													
		PRE-CIPP						POST-CIPP					
Mainline Segment		Number of Defects			Defect Flow			Number of Defects			Defect Flow		
From ID	To ID	Pipe Dia.	Small	Med	Large	Total	GPM	Small	Med	Large	Total	GPM	
AA004	AA003	CP	8	46	17	26	89	130.5	2	3	5	10	47.5
AA022	AA021	RCP	8	37	38	19	94	122.9	0	0	1	1	0.8
AA025	AA022	RCP	8	46	39	15	100	110.0	3	0	1	3	1.4
AA019	AA002	CP	8	29	17	12	58	77.6	0	1	0	1	0.9
B0273	AA004	RCP	8	39	24	11	74	71.6	0	1	1	1	12.2