

TOTAL SERVICES FOR

SSO Reduction



SSES

capacity improvements
rehabilitation design
construction engineering
funding sources

rjngroup

Excellence through Ownership



I/I Reduction Programs Eliminate SSOs

- RJN has developed methodologies with proven results to identify and eliminate I/I defects
- In the past, many I/I reduction programs were unsuccessful. Agencies and municipalities attempted to correct sanitary sewer overflows and I/I-related problems with maintenance repairs and renewal-replacement programs. These activities did not systematically address I/I defects and associated flows.

The Essentials for Reducing SSOs

An I/I reduction program that successfully eliminates SSOs must include a comprehensive program using proven techniques. RJN has developed and applied these techniques to collection systems throughout the United States. Essential tasks include:

- Detecting I/I sources (public and private sector)
- Quantifying I/I for a selected design storm event
- Balancing I/I defects with measured flows
- Hydraulic modeling to determine collection system capacity
- Determining a cost-effective balance between I/I defect elimination and system capacity improvements
- Understanding sewer rehabilitation design and construction techniques that effectively reduce I/I
- Inspecting and testing rehabilitation construction



RJN's Capabilities to Find I/I Sources

The key to a successful I/I reduction program is accurately determining the amount of infiltration and inflow entering the collection system and identifying the sources. RJN's proven techniques include:

- Continuous depth/velocity flow monitoring
- Manhole/visual pipe inspection
- Intensive dual blower smoke testing
- Internal/external building inspection
- Dyed water flooding
- Enhanced internal TV inspection

Special Techniques

RJN can offer innovative techniques, building upon our project experience. These include:

- Radar-derived rainfall data
- Enhanced I/I flow balancing procedures
- GPS surveying for manhole (X,Y,Z) coordinates
- Scorable field forms for complex inspections
- Field computers/Palm Pilots for simple inspections
- Internet access to project data/status
- Real-time (SCADA) access to system status/overflow activation



Rehabilitation Design Construction Engineering

Pipe material and life expectancy of rehabilitation methods are considered in the evaluation, analysis, and design of your collection system.

- RJN has extensive experience in collection system rehabilitation design and construction engineering, having designed more than 1,500,000 linear feet of improvements and inspected more than \$160 million of collection system rehabilitation work
- RJN has designed and performed inspection for large diameter interceptors to convey peak flows and eliminate system overflows
- Our expert personnel have designed repairs for manholes, laterals, mains, and interceptors. We provide design and construction engineering for trenchless technology such as slip lining, CIPP, bursting or crushing, micro-tunneling, directional drilling, and FIF lining.

RJN's Proven Performance Record

- RJN has eliminated SSOs and basement backups throughout the country demonstrating compliance with state and federal regulations
- In cities where RJN's comprehensive approach was used, the predicted I/I flow reduction was met or exceeded
- Using our proven methods, RJN will provide the best solution for your sewer system. Let us pull the plug on your SSO problems.