

# WASTEWATER POTABLE WATER STORMWATER Consulting Engineers

## SERVICE OFFERINGS

### EVALUATION SERVICES

- Inventory and Mapping
- Flow and Rainfall Monitoring
- Condition Field Investigations
- Condition Assessment Programs
- Infiltration/Inflow (I/I) Analysis
- Hydraulic Modeling
- CSO/SSO Removal Programs

### PLANNING SERVICES

- CMOM Compliance
- Master Planning

### DESIGN SERVICES

- Pipeline Rehabilitation and Design
- Lift Station Design
- Storage Solutions
- Private Inflow Removal
- Permitting
- Loan and Grant Assistance

### ASSET MANAGEMENT SERVICES

- GIS Management and Integration
- Risk-Based Planning
- Capital Planning Programs

### CONSTRUCTION SERVICES

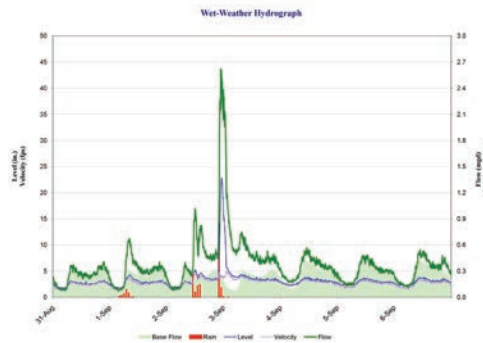
- Bidding Assistance
- Construction Phase Engineering
- Resident Engineering
- Design-Build



## EXPERIENCE-BASED SOLUTIONS

- 46 years of industry experience
- 2,135 **evaluation** and **design** programs
- 1,113 **flow monitoring** and **hydraulic analysis** programs
- 287,500,000 linear feet of **pipeline evaluated**
- 9,430,000 linear feet of **pipeline designed**
- 500 projects involving **trenchless construction solutions**
- \$395,000,000 in **constructed improvements**





## GPS SURVEY AND ASSET INVENTORY

Capturing GPS coordinates/asset attribute data for GIS-based “mapping” and asset inventory solutions.

## FLOW AND RAINFALL MONITORING

Capturing representative flow performance data to benchmark system behavior for normal usage as well as dry- and wet-weather conditions.

- **RJN** installs, maintains, and validates and manages flow and rainfall data using web-accessible data platforms.

## CONDITION INSPECTIONS

Condition inspection data is recorded using digital, GPS-enabled data collectors and can be easily integrated with GIS and CMMS tools.

### MANHOLE INSPECTIONS

Locating defects in manhole structures, pipes, and connections (i.e., deterioration, cracking, and other general structural failures).

- **RJN** captures, analyzes, and manages condition data using industry-accepted NASSCO standards.
- **RJN** safely conducts topside, zoom camera, 360° manhole scanning, and full descent inspections.

### SMOKE TESTING

Identifying locations where clean water (groundwater/rainfall) can enter a collection system through structural pipe defects (i.e., cracks, pipe failures) and defective or illegal connections (i.e., cleanouts, downspouts, building laterals).

- **RJN** captures and records public and private sector defects.

## DYE TESTING

Traces where and quantifies how much clean water (groundwater/rainfall) can enter a collection system through structural and connection defects using fluorescent dye.

- **RJN** uses dye testing to effectively trace the flow of clean water as it is entering the collection system when used in conjunction with video pipe inspections.

## PRESSURE PIPE ASSESSMENTS

Utilizing emerging acoustic, broadband electro-magnetic, and multi-sensor inspection technologies to assess wall thickness, corrosion, and general pipe deficiencies.

- **RJN** evaluates conditions and assesses remaining useful life of critical system assets.

## VIDEO PIPE INSPECTIONS ANALYSIS

Categorizing and analyzing recorded pipe inspection video captured through traditional CCTV or multi-sensor inspection tools to evaluate defects’ severity.

- **RJN** categorizes findings using NASSCO PACP standards.

## PRIVATE SOURCE INSPECTIONS

Identifying removable private source connections sending clean water into the system (downspouts, sump pumps, foundation drains, diverter valves).

- **RJN** conducts NASSCO compliant reviews.
- **RJN** Rapid Inspection tool captures internal video.

## LIFT/PUMP STATION ASSESSMENTS

Evaluating pump capacity, pump station calibrations, flow levels, and performance during peak flows and wet-weather conditions.

- **RJN** conducts structural condition assessments, runtime assessments and drawdown tests.



## PIPELINE REHABILITATION AND DESIGN

Planning/designing repairs, rehabilitation, and replacement of manholes, interceptors, force mains, and storage solutions to improve capacity, upsize pipes, re-route flows, and expand service areas.

- **RJN** performs preliminary design tasks, prepares plans and specifications, secures environmental and construction permitting, estimates costs, and assists with bidding.

## TRENCHLESS CONSTRUCTION ALTERNATIVES

- **RJN** engineers provide expertise with a variety of trenchless alternatives including pipe bursting, CIPP, micro tunneling, jack and bore, directional drilling, etc.

## LIFT AND PUMP STATIONS

Evaluating and designing repairs, rehabilitation, and replacement of lift/pump stations.

- **RJN** conducts performance evaluations, pump capacity evaluations and calibrations, basis of design reporting, start-up assistance, and O&M training.

## HYDRAULIC MODELING

Assessing system capacity/connectivity and validating rehabilitation measures by simulating stormwater levels, inflow/infiltration contributions, and future usage needs.

- **RJN** utilizes current industry modeling tools to support inflow/infiltration evaluations, effectiveness of rehabilitation efforts, Master Planning, and Capital Improvement Planning.

## REGULATORY ASSISTANCE

Assisting clients with developing/conducting programs to comply with federal and state regulatory agencies.

## CONSTRUCTION PHASE ENGINEERING

### BIDDING ASSISTANCE

Supporting project bidding process including bid document preparation, bid advertising, bid opening, and contractor selection recommendations.

### CONSTRUCTION PHASE ENGINEERING SERVICES

Inspecting and monitoring construction activities to ensure contractors are building what was designed.

- **RJN** offers construction inspection, full/part-time on-site resident engineering services, and preparation of as-builts and record drawings.

### DESIGN-BUILD PROJECT DELIVERY

Expediting construction with designer/contractor teaming, promoting communication and limiting risks during construction, including “Find It, Fix It” rehabilitation programs.

### POST-REHABILITATION ASSESSMENT SERVICES

Assessing effectiveness of constructed improvements using flow monitoring tools, performing hydraulic modeling, and implementing asset management programs and tools.

## ADDITIONAL SERVICES

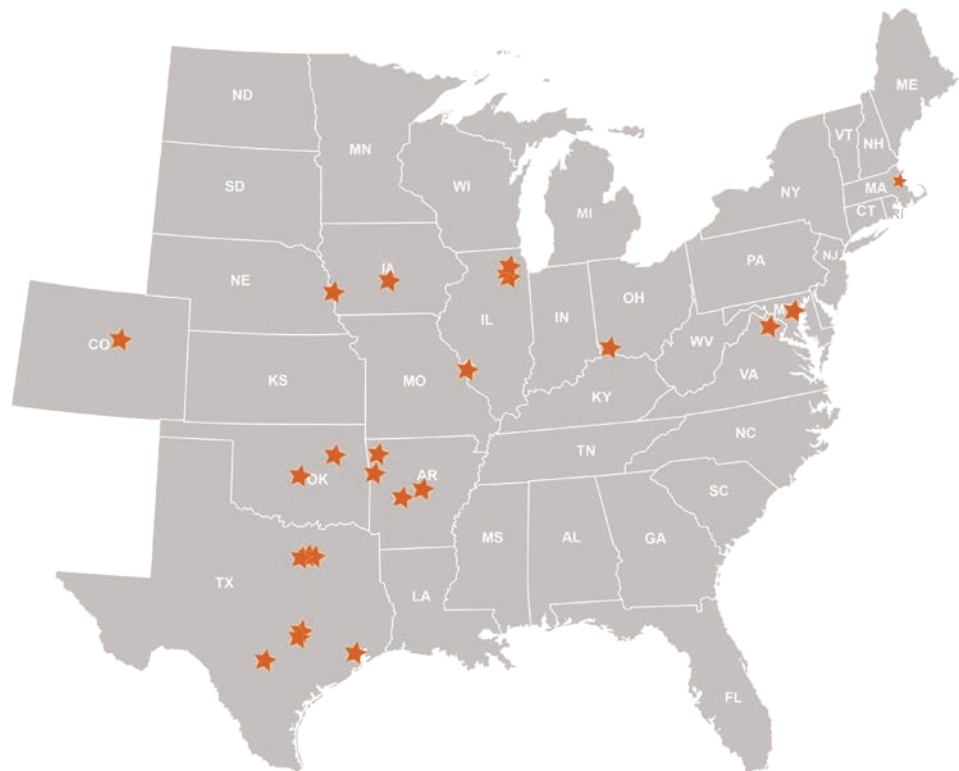
- WATER DISTRIBUTION AND STORAGE SOLUTIONS
- STORMWATER MANAGEMENT SOLUTIONS
- GIS AND ASSET MANAGEMENT SOLUTIONS

**INDUSTRY  
RECOGNITION**



**LOCATIONS**

RJN serves municipalities and utilities through offices located across the country.



**CONTACT US**

Baltimore, Maryland (410) 242-3838  
 Cincinnati, Ohio (513) 767-8291  
 Dallas, Texas (972) 437-4300  
 Denver, Colorado (806) 543-4202  
 Des Moines, Iowa (515) 723-1435  
 Fayetteville, Arkansas (479) 319-2088  
 Fort Worth, Texas (817) 451-3500  
 Houston, Texas (832) 930-7876

Joliet, Illinois (815) 680-6493  
 Little Rock, Arkansas (501) 224-2248  
 Omaha, Nebraska (402) 677-8169  
 San Antonio, Texas (210) 651-1661  
 St. Louis, Missouri (314) 588-9764  
 Tulsa, Oklahoma (918) 627-9737  
 Vienna, Virginia (703) 281-5637



CORPORATE  
 200 West Front Street  
 Wheaton, Illinois 60187  
 (630) 682-4700  
 (800) 227-7838

[linkedin.com/company/rjn-group](https://www.linkedin.com/company/rjn-group)