Town of Litchfield

Public Works Department

Request for Qualifications

The Town of Litchfield Water Pollution Control Authority, LWPCA, invites qualified engineering firms to submit proposals to provide professional services to evaluate, manage, and improve the performance, reliability, and regulatory compliance of its sanitary sewer collection system.
This project will include a comprehensive Sanitary Sewer Evaluation Study (SSES), hydraulic capacity modeling, development of a Capacity, Management, Operations, and Maintenance (CMOM) Program, conceptual and preliminary design of system improvements, and optional final design and construction administration services.
All work shall comply with applicable federal and State of Connecticut regulatory requirements, including Connecticut Department of Energy and Environmental Protection (CT DEEP) policies and Clean Water Fund (CWF) program requirements.
We are also requesting on-call engineering services for projects, equipment, and or other items related to the wastewater treatment facility, located at 29 Stoddard Road, in Bantam Connecticut, and our pump station located on Knife Shop Road in Northfield.

Please submit one original, signed by the responder or an authorized representative, and seven copies of the written qualifications as well as one electronic version in PDF format, which must be received by the Litchfield WPCA, prior to 3:00 p.m. on Wednesday January 13, 2027. Written qualifications should not exceed 30 pages in length.

Statement of Qualifications, SOQ, shall be sealed and mailed or hand delivered to the following address;

Town of Litchfield Town Hall
Attn. Terrence Donoghue
74 West Street
Litchfield, Connecticut 06759
wpca@townoflitchfieldct.gov

All proposals should be clearly marked on the outside of the envelope: "Litchfield WPCA Sanitary Sewer Evaluation Study & On-Call Engineering Services." The WPCA may consider proposals that do not address the items listed in this section as non-responsive, and may also waive any irregularities at its sole discretion or decide to reject all proposals.

The detailed RFQ information for submitters, specifications and other contract documents may be picked up daily between Monday and Friday between 7:00 AM to 3:30 PM at the Litchfield

Sewer Department, located at 29 Stoddard Road in Bantam, CT 06750 or sent by email. All questions must be submitted by email before January 6, 2027.

TOWN OF LITCHFIELD

Terrence Donoghue
Superintendent WWCF

Published: Republican-American

REQUEST FOR PROPOSALS (RFP)

Professional Engineering Services

Sanitary Sewer Evaluation Study (SSES), Capacity Modeling, CMOM Program Development, and Collection System Improvements

Litchfield Water Pollution Control Authority (LWPCA)

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1. Introduction

The Litchfield Water Pollution Control Authority (LWPCA) invites qualified engineering firms to submit proposals to provide professional services to evaluate, manage, and improve the performance, reliability, and regulatory compliance of its sanitary sewer collection system.

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2. Project Objectives

The objectives of this project are to:

- Assess the structural condition and hydraulic performance of the sanitary sewer collection system
- Identify and quantify sources of infiltration and inflow (I/I)
- Reduce the risk of sanitary sewer overflows (SSOs)
- Establish sustainable CMOM practices and asset management procedures
- Provide tools to evaluate system capacity and impacts of future development
- Develop prioritized, costeffective rehabilitation and capacity improvements
- Support eligibility for State and Federal Clean Water Fund financing

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3. Scope of Services

Task 1 — Project Management and Coordination

- Conduct kickoff meeting and stakeholder coordination
- Develop project work plan and schedule
- Provide monthly progress meetings and reporting
- Coordinate with municipal departments and regulatory agencies
- Provide public communication support as needed

Deliverables:

- Project Work Plan
- Detailed Schedule
- Monthly Progress Reports

Task 2 — Mapping, GIS, and Document Management

- Using LWPCA's GIS (Diamond Maps Application) and record drawings, prepare a Master Sewer Map identifying drainage basins and system flow schematics for the Study Area (GIS files provided as Appendix A).
- Review and evaluate LWPCA records, including prior repairs, maintenance history, and sewage backup complaints using the Authority's document management system.
- Locate manholes and sewer appurtenances using GPS equipment with RTZ technology to achieve subinch positional accuracy.
- Update GIS mapping and asset inventories based on field verification.
- Prepare a Technical Records and GIS Standards Manual for adoption by LWPCA.
- Map all sewer lateral connections

Deliverables:

- Master Sewer Map
- Updated GIS Database
- Records Review Memorandum
- GIS and Records Standards Manual

Task 3 — Easement Documentation

- Identify sewer infrastructure located outside public rightsofway
- Determine existence of legal easements for each offROW sewer segment
- Identify gaps where easements are absent

- Prepare easement mapping exhibits and legal descriptions
- Provide documentation packages for LWPCA property owner coordination

Note: LWPCA staff will conduct owner outreach, obtain signatures, and file land records.

Deliverables:

- Easement Inventory Map
- Easement Gap Assessment Memorandum
- Easement Exhibit Packages

Task 4 — Phase I SSES: System Characterization and Flow Monitoring

4.1 Data Collection and Review

- Review record drawings, GIS data, asset inventories, prior inspection reports
- Review pump station and force main records
- Compile rainfall, flow monitoring, and maintenance data

4.2 Flow Metering Plan

- Develop a metering plan based on drainage basins identified in the Master Sewer Map
- Install temporary flow meters at strategic subsystem locations
- Install rainfall gauges and correlate rainfall events
- Install groundwater measuring points and correlate rain events

4.3 Flow Monitoring and Analysis

- Monitor flows during representative seasonal conditions
- Evaluate dry weather flow and peak wet weather flow
- Identify subsystems exhibiting excessive infiltration/inflow
- Prioritize major drainage basins for Phase II investigation and/or rehabilitation
- Monitor groundwater levels compared to dry weather and wet weather flows

Deliverables:

- Flow Metering Plan
- Groundwater Monitoring Plan
- Flow Monitoring Technical Memorandum
- Subsystem Flow Analysis
- Basin Prioritization Matrix

Task 5 — Sewer Inspection and Condition Assessment

5.1 Closed Circuit Television (CCTV) Inspection

- Perform comprehensive CCTV inspection of sanitary sewers within the Study Area
- Review prior CCTV inspections conducted by LWPCA (Appendix B)
- Existing CCTV data shall not be assumed sufficient for I/I assessment
- CCTV services shall be performed by nonLWPCA personnel
- Perform heavy cleaning where necessary to enable inspection

Access Limitations:

- Some sewers outside public rightsofway may be inaccessible
- LWPCA access program may not be complete during Study

5.2 Manhole Inspection

- Structural condition assessment
- Inflow source identification
- Frame and cover condition evaluation

Deliverables:

- CCTV Inspection Plan
- CCTV Condition Database
- Defect Coding Summary
- Condition Assessment Report

Task 6 — Phase II SSES: RDI/I Investigation

Based on Phase I findings, conduct targeted investigations in areas exhibiting excessive inflow or rainfalldependent infiltration and inflow (RDI/I):

- Aboveground surveys
- Smoke testing
- Dye water testing
- Flow isolation studies
- Building and lateral inspections (as authorized)

Deliverables:

- RDI/I Investigation Plan
- Field Logs and Mapping

Task 7 — I/I Evaluation and Reporting

7.1 Phase I Summary Report

- Summarize subsystem flows
- Recommend Phase II investigations
- Provide costeffective action plan for I/I source identification
- Provide project schedule and revised Phase II cost estimate
- Identify additional required investigations
- Include traffic control, outreach, and permitting requirements

7.2 Phase II Report

- Provide Draft and Final reports summarizing findings
- Recommend corrective measures to remove or manage excessive flows
- Quantify infiltration and inflow removal volumes
- Provide planninglevel cost estimates
- Provide costeffective alternatives analysis

7.3 Funding Compliance

Reports shall include costeffectiveness analysis consistent with:

- Connecticut DEEP Clean Water Fund requirements
- Federal EPA wastewater infrastructure funding guidelines

Deliverables:

- Draft and Final Phase I Report
- Draft and Final Phase II Report
- I/I Removal Quantification Summary
- CostEffectiveness Analysis

Task 8 — Sewer Collection System Capacity Model

Develop a planninglevel hydraulic capacity model to evaluate existing performance and future growth impacts.

8.1 Model Development

- Construct simplified hydraulic network model
- Represent gravity sewers, force mains, pump stations, and storage structures
- Delineate drainage basins and assign loading

8.2 Model Inputs

Hydrologic Inputs:

- Average Dry Weather Flow
- Peak Wet Weather Flow
- Peaking factors
- RDII parameters
- Groundwater infiltration

System Inputs:

- Pipe size, slope, length, material
- Manhole rim and invert elevations
- Pump station curves and controls
- Force main characteristics

Planning Inputs:

- Population and land use
- Zoningbased flow generation
- Buildout projections
- Industrial and commercial flows

8.3 Applications

- Capacity assessment
- Hydraulic bottleneck identification
- Surcharge and overflow risk
- Development flow evaluations
- Remaining capacity allocation
- Growth scenario modeling
- Capital planning support

Deliverables:

- Calibrated Hydraulic Model
- Model Technical Memorandum
- Capacity Assessment Mapping
- Development Review Modeling Tool

Task 9 — CMOM Program Development

Develop a comprehensive Capacity, Management, Operations, and Maintenance Program aligned with EPA CMOM guidance and CT DEEP expectations.

9.1 Program Framework

- Regulatory alignment

- Roles and responsibilities
- Organizational structure

9.2 Asset Management

- Asset inventory standards
- Criticality ranking
- Preventive maintenance planning
- Lifecycle cost planning

9.3 Operations and Maintenance Procedures

- Standard Operating Procedures
- Inspection schedules
- Cleaning protocols
- Pump station O&M procedures
- Emergency response procedures
- Easement Management procedures

9.4 Overflow Response and Reporting

- SSO response protocols
- Reporting workflows
- Documentation standards

9.5 Training and Implementation

- Staff workshops
- Program rollout plan
- Performance metrics and KPIs

Deliverables:

- CMOM Program Manual
- SOP Library
- Maintenance Templates
- Training Materials

Task 10 — Conceptual and Preliminary Design of Improvements

Based on SSES and modeling results:

10.1 Rehabilitation Planning

- Pipe lining and rehabilitation
- Point repairs and joint sealing

- Manhole rehabilitation
- Lateral rehabilitation
- Inflow removal measures

10.2 Capacity Improvements

- Pipe upsizing
- Relief sewers
- Storage facilities
- Pump station upgrades
- Flow equalization

10.3 Planning and Prioritization

- Opinion of probable construction costs
- Phasing plans
- Benefitcost prioritization
- Capital Improvement Plan development

Deliverables:

- Conceptual Design Report
- Preliminary Design Drawings
- Capital Improvement Plan

Task 11 — Final Design and Bid Support (Optional)

- Detailed design
- Contract documents and technical specifications
- Permit support
- Engineer's cost estimate
- Bid phase services

Deliverables:

- Final Construction Documents
- Technical Specifications
- Engineer's Estimate

Task 12 — Construction Administration and Management (Optional)

- Shop drawing review
- Contractor coordination

- Site visits and inspections
- Progress meetings
- Change order review
- Payment application review
- Record drawings
- Outreach Support
- Project closeout documentation

Deliverables:

- Construction Observation Reports
- Change Order Documentation
- Record Drawings
- Project Closeout Report

Task 13 — Peer Review of Facility Assessment and Treatment Plant Needs

The Consultant shall perform an independent technical peer review of the wastewater treatment facility assessment prepared by Woodard & Curran and evaluate the recommended approach to address treatment plant needs in consideration of findings from the SSES and collection system capacity modeling.

13.1 Document Review

- Review the Woodard & Curran facility assessment, technical memoranda, and supporting data
- Evaluate condition assessments, capacity analyses, and recommended improvements
- Review regulatory drivers, design criteria, and planning assumptions

13.2 Integration with Collection System Findings

- Assess consistency between projected influent flows and loadings and SSES/modeling results
- Evaluate impacts of I/I reduction on plant capacity and process performance
- Reconcile flow projections under existing, buildout, and rehabilitation scenarios

13.3 Alternatives and Implementation Strategy

- Evaluate recommended facility upgrades for technical soundness and cost-effectiveness
- Identify potential alternatives or phasing strategies aligned with collection system improvements
- Assess resilience, redundancy, and operational considerations

- Provide opinion of probable costs and implementation sequencing considerations
- Deliverables:
- Peer Review Technical Memorandum
- Flow and Loading Reconciliation Summary
- Alternatives and Phasing Recommendations

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4. Regulatory and Funding Compliance

All work products shall comply with applicable:

- CT DEEP wastewater planning and permitting requirements
- Clean Water Fund eligibility criteria
- EPA CMOM guidance • Municipal procurement requirements

Consultant shall support documentation necessary for State and Federal infrastructure funding applications.

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5. Proposal Requirements

Proposals shall include:

- Firm qualifications and experience
- Project understanding and approach
- Detailed scope and methodology
- Project schedule
- Staffing plan and resumes
- Relevant project experience
- Fee proposal

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6. Deliverables Summary

- Work Plan and Schedule
- GIS and Asset Database
- Flow Monitoring and SSES Reports
- Hydraulic Capacity Model
- CMOM Program Manual
- Conceptual and Preliminary Designs
- Capital Improvement Plan
- Final Design Documents (if authorized)
- Construction Administration Documentation (if authorized)