

Town of Mansfield, CT
July, 2010
Request for Qualifications (RFQ)
Water Source Study, Permitting and Design for the
Four Corners Area in the Town of Mansfield

The Town of Mansfield seeks to engage an engineering and hydrologic team to provide consulting services for the study, testing and permitting of a potable water source/system to supply potable water to its 500 acre Four-Corners commercial and residential area in Northern Mansfield. Hydrological and engineering services will most likely include investigating the four identified alternatives for such a water source, assisting the Town in choosing the best of these alternatives for further study and testing, and the actual implementation of testing and permitting through the various State of Connecticut requirements for the use of this water source. In addition to the development of the data and information needed to apply for the required permits, the consultant will prepare plans and specifications for the water supply system once the permits are obtained (not including actual distribution piping to the area, which is being designed by the Town's Engineering Office). Construction estimates; the review of the plans and specifications by state regulators, Town staff, the Town's oversight committee and the public; the development of construction documents; the preparation of bid documents and assistance during bidding; and construction administration may all be within the consultant's scope of services. The four water sources to be studied include: 1) Ground water resources in the Cedar Swamp area adjacent to the Four Corners area, 2) Ground water resources along the Willimantic River downstream of the current University of CT well field, 3) Surface water piped into Mansfield through the Town of Tolland from the Shenipsit Reservoir (owned and operated by the CT Water Company) and 4) surface water from the Windham Water Works system in southern Mansfield pumped up to the northwest portion of Mansfield. The preliminary estimate of the area's current water demand, as developed in the Town and University's 2007 water and wastewater master plan, is 58.700 gpd.

Funding for this study and design has been approved by the Town at a June 28, 2010 Town meeting. A *preliminary* draft scope of services is attached. (See Attachment A.) The four corners project and service area is described on the Town's web page at <http://www.mansfieldct.gov/content/5168/5391/default.aspx>

The Contract for hydrologic and engineering services resulting from this RFQ will be subject to the availability of funds as noted above. In the event that funding is decreased, the Town reserves the right to terminate the Contract or modify it accordingly.

The firm will be evaluated and selected based on its (1) proposed scope of services, (2) qualifications and experience of personnel to be assigned to the project team, (3) ability to provide the services within the project schedule time constraints, (4) the project team's composition and experience on similar projects, (5) the firm's quality and performance of past services of this type, (6) the firm's hourly fees and expense schedule and (7) the firm's references. Firms responding to this request should be of adequate size and sufficiently staffed to perform the assignment described.

The selected firm(s) agrees to comply with all applicable federal, state and local laws, rules and regulations, all as amended, in the performance of its contract with the Town. The selected firm(s) acknowledges and agrees that the contract by and between the Town and the selected firm(s) shall include contract provisions required by Federal law and/or by Connecticut General Statutes. Such contract shall be construed under, governed by and enforced in accordance with Connecticut law without regard to conflict of law principles.

The selected firm must meet all Town, State and Federal affirmative action and equal employment opportunity practices. The design contract and all construction contracts shall be subject to and shall contain all of the Town's required contract clauses.

A selection committee of at least five officials will be assembled to review the responses to this RFQ, and rank the firms according to the above criteria. A number of the top-ranked firms may be interviewed. This committee will then develop a "short list" of the top three to five firms, which in its judgment are deemed to be the most qualified to perform the required professional services. These "short listed" firms will be asked to submit a fee proposal for complete services based on a final draft scope of services. Proposals will be judged by the professional competence of the firm, the technical merits of the proposal, the ability of the firm to perform the required services within the time and budgetary limits of the contract and the fee for which the services are to be rendered.

A final selection will be made and all firms will be so notified. The Town shall select the highest rated qualified proposal subject to negotiation of fair and reasonable compensation.

If the Town is unable to negotiate a satisfactory final scope of services and fee with the first-ranked firm within 30 days, negotiations shall be terminated with that firm and undertaken with the remaining firms in the order in which they were ranked by the selection committee until an agreement is reached. The Town will select for award the highest ranked responsible, responsive, qualified respondent, which does not render this procurement financially infeasible and is judged to be most advantageous to the Town based on consideration of the evaluation. The selected firm will be requested to prepare and submit to the Town an EJCDC or AIA contract for its services along with any required contract certifications and affidavits as well as certificates of insurance.

Six copies of a letter of interest, together with general information on the firm and proposed subconsultants, the firm's brochure, current Federal GSA Form 330, resumes of key personnel, Affirmative Action Plan and Employee Profile, contact information for not less than three professional references, experience of the firm on similar projects and a proposed scope of services should be submitted to Lon Hultgren, Director of Public Works, Town of Mansfield, 4 South Eagleville Road, Storrs/Mansfield, CT 06268. Proposed sub-consultants should be clearly identified. The relationship to any "parent" firm or subsidiary firm with any of the parties concerned must be clearly identified.

The Town of Mansfield reserves the right to waive any informality, to accept or reject, in whole or in part any and all letters of interest (or subsequent proposals), or take whatever other action may be deemed to be in the best interest of the Town.

Personnel in responsible charge of the project will be required to possess and maintain valid Engineering licenses/certifications issued by the state of Connecticut. All letters of interest must be received by the Department of Public Works office no later than 12:00 noon EDT on Friday August 6, 2010. Responses received after this date will not be considered.

Lon R. Hultgren
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Town of Mansfield, CT 06268
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Town of Mansfield, CT
Water Supply Study, Permitting and Design

Attachment A – Draft Scope of Services

(July, 2010)

Public sewer and water systems in the Four Corners area have been planned for by the Town of Mansfield. The area to be served by this system includes approximately 500 acres along Route 195 and Route 44 lying east of the UConn Depot Campus and northwest of the Storrs Campus. This area has been studied and flows estimated in the Town of Mansfield's Water Supply Plan prepared by Milone and MacBroom in 2002 and the "University of Connecticut Water and Wastewater Master Plan" prepared for the Town and the University by Milone and MacBroom in 2008. The water system is slated to have flows initially of about at 59,000 gpd increasing to 170,000 gpd over a twenty year planning period. The Town is presently working on the design plans for the pipes in this water distribution system.

The construction of both the water and sewer systems is expected to be funded by property assessments, Town bonding and grants the Town has not yet been awarded.

In the abovereferenced Town/UConn water and wastewater studies and in the last year of study by the Town's staff and the Advisory Committee appointed by the Town Council to help facilitate this effort, four water supply options for this area have been identified.

These include: 1) Ground water resources in the Cedar Swamp area adjacent to the Four

Corners area, 2) Ground water resources along the Willimantic River downstream of the current University of CT well field, 3) Surface water piped into Mansfield through the Town of Tolland from the Shenipsit Reservoir (owned and operated by the CT Water Company) and 4) surface water from the Windham Water Works system in southern Mansfield pumped up to the northwest portion of Mansfield.

The Town needs expert assistance to determine which of the above alternatives shows the most promise for supplying the Four Corners area with water, and then the hydrologic and environmental engineering study of the most promising alternative up to and including permitting through applicable CT regulatory agencies. Following this study and permitting process, the Town will need engineering services to put the water source into production so that it serves the distribution pipelines the Town will have designed for this area. These engineering design services will likely include the design of well-houses, pumps, regulators, power systems, standby power systems, control/SCADA systems, any required treatment systems, access roads as well as the refinement of domestic and fire flow demands for the system and the preparation of property maps and easements that will be associated with the well system itself (the Town is procuring easements for the distribution lines). The selected firm will also conduct a review of the Town's distribution system design and make recommendations to the Town for improvements.

This work will also include review by the Town's project oversight team, the CT Department of Environmental Protection and the CT Department of Public Health, the

public, the Town and Health District staff, and any and all modifications made as a result of these reviews.

Working with the:

1. Town staff,
2. Town's Four Corners Sewer & Water Design Review Committee,
3. Mansfield Planning and Zoning Commission,
4. Mansfield Inland Wetlands Agency,
5. Eastern Highlands Health District and others,

the selected firm will conduct a preliminary analysis of the water supply alternatives and then a three-phased study and engineering design for the permitting of the selected alternative. Expertise in water supply permitting and water system design and construction methods, practices and procedures will be required. Considerable contact and coordination with the Town, State regulators and reviewing boards during the preparation of study reports and the subsequent contract documents is anticipated. The Town will use the contract documents to obtain bids to construct the wells, equipment and other improvements necessary for a functioning water supply system. Technical assistance from the selected firm is also contemplated during the bidding and construction phases of the project.

Deliverables will include a study and methodology to select the most promising water supply source (preliminary phase), a detailed study of all available data and information to further evaluate the selected water supply alternative (phase 1), test borings and

hydrological analyses of the selected water supply alternative including as appropriate test borings to confirm aquifer locations and extent (phase 2), full-scale testing of test and production wells to determine aquifer safe yields and demonstrate that permitting criteria are met (phase 3) and the design of permanent wells and facilities complete with plans and specifications to construct the permitted water supply facilities (design phase).

Design and permitting should take place during 2010, 2011 and if necessary 2012. A consulting firm or team should be selected during the summer of 2010.

Draft task list for scope of services (for RFQ purposes only):

A. Kick-off meetings

- a. Meet with staff, the project's design review committee, and others to obtain latest study information, concept information, sustainability guidelines, design element targets, projected water demands, etc.

B. Preliminary Evaluation Phase

- a. Provide an analysis, most likely in matrix format, of the four water supply alternatives identified for the Four Corners area showing the advantages, disadvantages, likely costs, projected time frames and permitting requirements for each. Circulate this study/report as a draft.
- b. Meet with the project review team to review/revise the preliminary evaluation phase report – assist in selecting a preferred water supply alternative for further study, analysis and permitting.

- c. Act as liaison to state or local regulatory agencies that will have jurisdiction over the eventual water supply – make preliminary arrangements for further study and identify and supply any information needs relative to these agencies.
- d. Revise preliminary phase study and present it to the Town’s advisory committee.

C. Phase 1 Water Supply Study (selected alternative)

- a. Review and compile existing maps, publications, geologic reports, advisory committee files
- b. Review parcel mapping and land ownership
- c. Review groundwater classifications
- d. Conduct database search of existing and potential pollution sources
- e. Compile report of recommendations for further investigation
- f. Review report with project review team, advisory committee, town staff and regulatory agencies as appropriate
- g. Refine domestic and fire flow system demand estimates
- h. Develop probable project costs
- i. Compile and report on permitting requirements

D. Phase 2 study and analysis – selected alternative

- a. Delineate wetlands (that have not already been delineated in the distribution system design work conducted by the Town)
- b. Delineate floodplains
- c. Conduct test borings and install 2-inch and 6-inch observation wells

- d. Conduct testing of observation wells
- e. Sample groundwater and test in potentially impaired areas
- f. Compile data in Phase 2 study and make recommendations for further study and permitting
- g. Present Phase 2 results to Town advisory committee; Town staff and regulatory agencies as appropriate.

E. Phase 3 Study – Aquifer Testing, Design and Permitting

- a. Design and installation of additional observation well network
- b. Design and installation of temporary pumping wells
- c. Further wetlands delineation as appropriate
- d. Design and prepare for aquifer pumping tests
- e. Conduct aquifer pumping tests and preliminary safe yield pumping tests
- f. Conduct water quality testing in conjunction with pumping tests
- g. Revise existing floodplain modeling and select location and type of compensation
- h. Design of production wells and transmission piping
- i. Design of any needed treatment and storage facilities; develop alternatives to meet pressure and fire flow requirements (for example – interconnecting to the University’s water system).
- j. Compile all information for and apply for DPH and DEP permits and required approvals
- k. Apply for DEP Flood Management Certification as appropriate

F. Design Phase – Engineering Design of the Water Supply Facilities

- a. Prepare plans and specifications and construction cost estimate for wellfield construction, as well as the construction of related facilities, site work, power (electrical and stand-by), storage, connections to other systems, monitoring and control systems, access roads and buildings
- b. Review permits, plans, cost estimates and specifications with Town staff, Town advisory committees, regulatory agencies, grant funding agencies, etc.
- c. Conduct sustainability review for the wellfield and its building/mechanical elements (energy efficiency, recycled content materials, etc.).
- d. Make revisions to the design plans and specifications based on the cost estimate, budget and recommendations from the design review team, including, where applicable the establishment of bid alternates for some design elements.

G. Preparation of property acquisition documents

- a. Prepare one easement or taking map describing the property upon which the wellfield and adjacent facilities will sit (for the Town's use in obtaining the ability to build on, control, and access this property).
- b. Perform a preliminary hazardous material screening for the project area as needed.
- c. Perform additional environmental analysis as required.

- d. Preparation of final complete design drawings and specifications for the project for review by the project design review team. Modifications of drawings and specifications as appropriate after design review.
- e. Preparation of a sediment and erosion control plan for the construction area showing erosion control details together with a construction narrative.
- f. Submission of final design drawings and specifications to State Agencies, the Town's Planning and Building Departments, the Town's Fire Marshall and the University of CT's Facilities Office (as appropriate) for review and permitting; make modifications to plans and specifications to meet regulatory requirements.
- g. Preparation of final bid documents (plans, specifications, final cost and any specialized construction testing and oversight procedures).

H. Bidding services

- a. Provide the appropriate number of bid document sets to the Town for potential bidders as well as electronic documents for the Town's use.
- b. Assist Town during advertising period; respond to technical and design questions; attend pre-bid conference and bid opening.
- c. Tabulate and review bids received, investigate bidder qualifications and references; make recommendations for bid acceptance and bid alternates.

I. Construction services

- a. Assist the Town in all technical matters relating to the construction of the project.

- b. Assist in implementing the specialized construction testing and oversight procedures, making sure required tests are done in a timely manner, quality is insured and testing and inspection reports are received and appropriately logged.
- c. Attend construction progress meetings; advise the Town on all construction matters; assist in the coordination of the construction.
- d. Prepare project progress reports for use by the Town to inform any grant funding agencies of the project's status.
- e. Review change orders and the resulting cost changes; make recommendations to the Town regarding all change orders.
- f. Prepare as-built drawings after construction of the project, provide two copies of the drawings and all building specifications to the Town.