

ENVIRONMENTAL DESIGN
PARTNERSHIP, LLP

PROPOSAL FOR PROFESSIONAL CONSULTING SERVICES

DATE: May 14, 2013

CLIENT: City of Saratoga Springs
Office of the City Engineer
474 Broadway
Saratoga Springs, NY 12866

CONSULTANT: The Environmental Design Partnership, LLP.
900 Route 146
Clifton Park, New York 12065

**PROJECT: Bog Meadow Well Field Detailed Design
Bog Meadow Pump Station Rehabilitation**

Dear Mr. Wales:

Pursuant to your request, we have prepared the following proposal for professional services related to detailed design of the Bog Meadow well field and rehabilitation of the existing Bog Meadow surface water pump station. The scope of services has been defined based on our discussions regarding the work, our previous Report of Findings for the Bog Meadow Backup Water Supply dated April 16, 2013, discussions with the New York State Department of Health, and our previous experience with the design and permitting of similar projects.

Scope of Services:

Bog Meadow Well Field

- **Pitless adapter design** – Prepare recommendations, design, and specifications of a pitless adaptor for the production wells.
- **Submersible Well Pump Design** - We understand that Hanson VanVleet (HVV) will provide the maximum safe yield pumping rate for each well pumping independently and for simultaneous pumping of all wells in the well field. We will develop operating points for each of these conditions (assuming direct connection to the existing distribution system) and provide submersible pump recommendations based on these operating points. Variable frequency drive units will be used to provide flexibility within the control systems to operate the well field at these variable conditions.



Bog Meadow Pump Station and Well Field

- **Building Electrical Service** - Review existing electrical service size for adequacy in supplying power to new submersible well pumps. If an electrical service upgrade is necessary the additional design work will be addressed under a separate proposal.
- **Header System Design** - Prepare detailed plans of the proposed header system between production wells, the proposed chlorination system, and connection to the existing distribution system.
- **Chlorination System Design** – Prepare detailed design and plans of the proposed chlorination system including injection pump, day and bulk storage, chlorine residual monitoring, and chlorine contact time through the use of a nested pipe network on the Bog Meadow site.
- **Connection to Existing Distribution System** – Prepare a detailed plan and profile of the proposed connection to the existing distribution system on Ingersoll Road adjacent to the Bog Meadow facility.
- **Control and Telemetry System**
 - Provide recommendations and design for integrating the Bog Meadow Pump Station with existing system
 - We will coordinate with the City's alarm system contractor (Mahoney Alarms, Inc.) to interface the proposed control systems with the City's existing alarm system.
 - Provide an instrumentation and control diagram as part of final design plans.
- **Prepare Construction Plans, Details and Specifications**
- **Construction Budget Estimate** – Upon completion of design we will establish an engineer's budget estimate for construction. The budget estimate will be updated at design review milestones.

Bog Meadow Pump Station Rehabilitation

- **Review the impoundment, intake, wet well, and suction piping** - we will review the overall system hydraulics at the pump station and provide recommendations for any suggested improvements. The detailed design of any such improvements would be addressed within a separate proposal.
- **REVIEW EXISTING BUILDING FOR IMPROVEMENT**
- **Pump Replacement** – Review existing and desired hydraulic operating points and provide recommendations for replacement of the two existing pumps. Available information suggests one pump was designed to operate at 1,400 gpm and the second pump at 1,750 gpm. We assume the replacement pumps will be designed with variable frequency drive units providing benefits in terms of energy efficiency and flexibility in the operating point. We will provide detailed electrical and mechanic drawings of the improvements necessary within the pump station to accommodate the new pumps.
- **Control and Telemetry System**
 - Provide recommendations and design for integrating the Bog Meadow Pump Station with existing systems



Bog Meadow Pump Station and Well Field

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Contractor Selection and Construction Phase Services

- **Contractor Selection** - Prepare and assist in the distribution of construction bidding documents and participate in a pre-bid meeting as necessary. Assist the City in the evaluation of construction bids as necessary. Provide the City with assistance in electronic distribution of bid documents. Prepare 20 compact disks and/or online distribution of construction documents. Prepare 5 hard copy sets of bid documents.
- **Construction Admin** – We will provide construction administration on an hourly rate basis at \$75 per hour for an engineering technician and \$135 per hour for a professional engineer. For the purposes of this proposal we have assumed 40 hours for an engineering technician and 20 hours for a professional engineer for a total of \$5,700.
- **Construction Inspection** – We will provide construction inspection services as requested at an hourly rate of \$75 per hour. For the purposes of this proposal we have assumed 80 hours of construction inspection for a total of \$6,000.

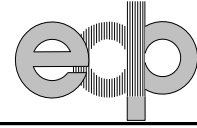
Permitting

- Prepare New York State Department of Environmental Conservation (NYSDEC) Water Supply Application, NYSDEC / Army Corps of Engineers Joint Application for Permit and SEQRA Short Form. We will respond to review comments and revise design drawings as necessary.
- Prepare New York State Department of Health Application for Approval of Plans for Public Water Supply Improvement (DOH-348). We will respond to review comments and revise design drawings as necessary.

Funding / Financing Assistance

- We will prepare an application to have the project listed on the 2014 New York State Environmental Facilities Corporation (EFC) Clean Water State Revolving Fund (CWSRF) Intended Use Plan (IUP).
- We will research and provide recommendations for application to other potential funding sources that may be available such as the New York State Energy Research and Development Authority (NYSERDA).

The Scope of Services outlined above does not include survey related services; it is assumed that the City of Saratoga Springs will provide available mapping and supplemental survey



Bog Meadow Pump Station and Well Field

information as needed. Upon your request, our office will review available mapping and provide an additional proposal for survey related services as necessary.

We assume that the existing Bog Meadow Pump Station building will be used for control systems and chlorination equipment and have not included design services related to construction of a new control building or major modification of the existing building. The overall condition and available space within the existing building will be reviewed and recommendations for improvements, if any, will be provided. The detailed design of any such improvements or additions will be addressed within a separate proposal.

We assume that the electrical service to the existing building is large enough to accommodate the additional well pumps associated with the proposed well field. Should a new electrical service be required, detailed design and approval will be addressed under a separate proposal.

We assume the project will be bid under one bid package; should separate bid packages be required we will address the additional work under a separate proposal.

We will submit 60% and 95% design drawings and meet with the City Engineer to review.

A review of the New York State Office of Parks, Recreation, and Historic Preservation on-line database indicates that the site is not located in an archeologically sensitive area or adjacent to a State or Nationally registered historic site. This proposal does not include work related to any further Cultural Resources review.

A review of the New York State Department of Environmental Conservation (NYSDEC) on-line database suggests that there may be State wetlands located on or adjacent to the site. The NYSDEC database also identifies this area as a potential resource for rare plants and/or animals. This proposal includes a cursory review of the site to identify the presence of State or Federal wetlands in a location on the site that may be impacted by the proposed work. It is assumed that there will be no ACOE or NYSDEC wetland permits required; if it is determined that additional wetland work or permitting is necessary, these items of work will be addressed in a separate proposal. At your direction we will send a letter to the NYS Natural Heritage program requesting additional information on the potential impact to rare plants or animals. We have not included any detailed studies of rare plants or animals within the scope of this proposal.

The lump sum fee to complete the scope of work outlined above is \$75,000. We anticipate the ability to complete this work within 2 to 3 months depending on the availability of production well yield information required to complete the design.

Billing statements will be mailed on a monthly basis for work completed during the previous calendar month. Payment is requested within thirty (30) days of the billing date. A finance fee of 1.5 percent per month will be assessed on any balance not paid within thirty (30) days. Any disputed billings must be brought to the attention of the Environmental Design Partnership, LLP,



Bog Meadow Pump Station and Well Field

in writing, within fourteen (14) days of billing, otherwise it will be assumed that the billing statement is accurate and acceptable.

Please do not hesitate to contact our office if you have any questions or would like to further discuss our proposal. Thank you for your consideration and we look forward to working with you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Travis J. Mitchell', is written over the word 'Sincerely,'.

Travis J. Mitchell, P.E.
Partner

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