



# **DISTRICT OF HUDSON'S HOPE**

## **REQUEST FOR PROPOSALS**

**Professional Engineering Services**

**(Options, Design and Resident Inspection)**

### **New Water Treatment System**

**November 2009**



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The District of Hudson’s Hope currently draws water from the Peace River with that source supplemented by springs. Water from the springs is used exclusively if the Peace River water is excessively turbid. The water is chlorinated at the high lift pump station located adjacent to the river intake. The chlorinated water is pumped into the distribution system and storage reservoirs simultaneously.

Stanley Consulting Group 1997 – “During Freshet periods, or periods of release from the W.A.C. Bennett Dam (Williston Lake), turbidity levels are reportedly to be unacceptably high for potable water. Water in the Peace River is also susceptible to Giardia cysts in addition to the high turbidity levels during various times of the year. During these periods of high turbidity, raw water is collected from springs which emerge near the high lift pumping facility to augment the Peace River supply. Water from the springs is very hard with significant manganese content and frequent complaints from customers are received when the spring sources are used’.

The District holds the following Water Licenses:

27976 Peace River	517,000 l/day
32512 Kylie Springs	260,000 l/day
32511 Federal Spring	260,000 l/day
32510 Vital Spring	260,000 l/day

The Stanley Consulting Group determined that in July and August, when the heaviest sprinkling will normally be taking place, water demands increased in the range of 712,000 l/day to 777,000 l/day. They determined that a water source for the District should be capable of supplying and treating 906,000 l/day to allow for some growth.

The Hudson’s Hope water system includes the following:

- a low lift pump in perforated CMP pipe in the Peace River, pumping to an open bottom CMP wet well (this pump may not have been serviced for 10+ years)
- collection sumps and piping from 2 springs to the CMP wet well
- high-lift pumps and chlorination facility in small buildings at the wet well location pumping to the distribution system (There is no functioning back-up power supply to the high lift pumps)
- a network of water distribution piping with hydrants, valves, etc.
- two underground storage reservoirs near 100<sup>th</sup> Avenue, (260,000 and 1.3 million litre capacity) for fire flow and balancing storage.
- A booster pumping station at the reservoir site servicing two subdivisions at higher elevation. (The generator for back-up power at this location is being considered for an upgrade).

The water supply source alternatives which have been investigated to a degree included:

- the Peace River (as currently in use)
  - the licensed springs
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- drilled deep wells
  - Williston Lake
  - other local lakes.

For various reasons, either related to cost or for difficulty in treating, all alternatives other than the Peace River were discounted during the earlier reviews.

In 2003 Urban Systems was engaged to expand on the *Water Supply, Pumping and Treatment Study* completed by Stanley Consulting Group. Urban Systems established the water consumption for 1997 to 2001 to be 466,000 l/day and also determined the capacity of the system to provide and treat water at 906,000 l/day. Urban Systems, in consultation with the District, identified three treatment options that should be subjected to pilot study. They included diatomaceous earth filtration, slow sand filtration and membrane filtration. The study by USL recommended that the Peace River be confirmed as the primary source of water for the District.

Pilot testing of DE was completed in 2003 and for UF membrane in 2007. After their 2007 pilot Urban Systems made the recommendations that a full scale UF membrane plant should meet the GCDWQ requirements, the NHA guidelines and that a new intake should be built.

The District applied for and received funding under the British Columbia Water Improvement Program. The project cost was identified at \$1,176,000 and the grant was originally to expire in March 2010. Since that time a two year extension has been requested and the District is seeking additional funding sources.

At this time the District is seeking engineering services for the design, construction and commissioning of a water treatment plant with a capacity of 1 million litres per day. Treatment options that currently have the support of District staff include UF membrane filtration, slow sand filtration and pressure sand filtration. Those supply options that have staff support include Williston Lake, Dinosaur Lake and the Peace River. The options require the construction of a new intake system, supply pumps and in the case of the lakes, a new transmission main. It is anticipated that the existing pilot studies will suffice and that any future pilots or studies should be minor in nature.

The Engineering Services to be provided include:

1. A review of all relevant documents and information pertaining to source selection and treatment options;
  2. Consultation with all regulatory bodies that would have jurisdiction over this project Ministries of Health and Environment, BC Hydro, etc. The successful proponent will ensure that the District meets all of the requirements of the regulatory bodies and will provide any support or information required to meet these regulations, including any amendments to the District's water licenses.
  3. The successful proponent will be responsible for all tasks required to prepare, for the District, a recommendation as to source and treatment process including capital and operating costs.
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4. The consultants' presence may be required at public forums (District Council meetings, public meetings, etc.) to support the water source and treatment recommendations.
  5. Design of all aspects of the project including mechanical, structural, architectural, electrical, process and other.
  6. Preparation of the plans, specifications and tender documents and issuing the tender;
  7. Review and evaluation of the tenders received including recommendation of award;
  8. Construction supervision and inspection to include:
    - a. Inspection services and construction observation;
    - b. Construction management;
    - c. Start-up assistance;
    - d. Operation and maintenance manual preparation;
    - e. Payment, change order, and other financial administration;
    - f. Quality control and assurance;
    - g. Development of stamped as-built and record drawings.
  9. Coordinating survey to allow any required land acquisition and rights-of-way to be registered.

There is a twenty page limit for the proposals, resumes and other basic information is to be provided separately and is not part of the twenty page limit. Consultants are encouraged to provide a clear and responsive scope of work and project approach to address all issues noted in this RFP.

Contents of the submission may include, but are not limited to, the following items:

1. The proponent should clearly state the project team's understanding of the project requirements and desired outcomes and discuss any unique ideas or concerns relating to the project.
2. The consultants' proposed scope of work should include tasks and sub-tasks that will have to be undertaken to complete the project.
3. A description of the project team, the role each team member will play and any other project relevant information about the project team members. Describe why your firm or team is best qualified to perform the project.
4. A description of relevant experience with other municipalities.
5. A proposed project timeline for the tasks including milestones for the project.
6. A list of references for a minimum of three municipalities the firm has worked with.
7. An engineering fee that reflects tasks to be undertaken.

For the purposes of this Request for Proposals, the estimated total cost for the project, including engineering and contingency will be \$3,000,000. Site visits may be coordinated through Mike Carter, Director of Engineering Services at (250)783-9901.

Using a combination of the information provided in the proposal and the additional information received from the proponents, the reviewers will make a final choice and recommend to the District Council to award the engineering contract to the most qualified consultant relative to this project.

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The proposals will be reviewed based on the criteria detailed in the table below.

SELECTION CRITERIA SUMMARY	
Selection Criteria	Weighting
1. Project Team	25
2. Project Team's Understanding and Approach to the Project	25
3. Water Treatment Plant Design Experience	30
4. References	20
<b>TOTAL</b>	<b>100</b>

The first component of the proposal will be worth 40% of the total mark available. The second component, fees, will be worth 60% of the total score.

For Example:

A firm scores 80 of 100 on component one, because the first component is weighted at 40%, total score for this component would be  $80 \times 40\% = 32$ .

For the fees score the calculation would be (lowest proposed fee/proponent's fee) x 60. The firm submitting the lowest fee proposal would score 60.

All general and technical questions and inquiries regarding this request for proposals should be directed to:

John Locher, A.Sc.T.  
CEO, Ethix Consulting Inc.  
Ph: (250)787-9283  
Mobile: (250)264-8161  
[jlocher@ethixconsulting.ca](mailto:jlocher@ethixconsulting.ca)

The District will enter into a standard agreement with the successful proponent and a copy of that agreement is available upon request.

The submissions will be evaluated according to the criteria laid out above and individual line items will be treated in strict confidence.

The District reserves the right to determine the qualitative aspects of all proposals relative to the evaluation criteria. Each rating is confidential, pursuant to provisions found in the Freedom of Information Act, and only the total rating for each proposal shall be released.

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The proposals are to be received by the undersigned no later than 3:00 pm Tuesday November 18, 2009.  
Electronic submissions will be accepted.

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