



## Invitation to Tender No. 19-010

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*Qualified Well Drilling Services*

*For*

*West Bay #3 Well Replacement*

*Closing Date:*

**Tenders must be received on or before 3:00 PM Pacific Time on February 20<sup>th</sup>, 2019**

*Closing location:*

**Regional District of Nanaimo  
Main Reception Desk  
Second Floor  
6300 Hammond Bay Road  
Nanaimo, BC V9T 6N2**

*Contact person:*

**Gerald St. Pierre, P.Eng., PMP  
Project Engineer, Water Services  
Phone 250-390-6751  
GStPierre@rdn.bc.ca**

**Contents**

- 1 Background ..... 1
- 2 Instructions to Bidders ..... 2
  - 2.1 Introduction ..... 2
  - 2.2 Non-Mandatory Site Meeting ..... 2
  - 2.3 Submission of Tenders ..... 2
  - 2.4 Contact and Requests for Information ..... 3
  - 2.5 Withdrawal..... 3
  - 2.6 Acceptance of Tenders..... 3
  - 2.7 Definition and Form of Contract ..... 4
  - 2.8 Liability Insurance and Worksafe BC..... 4
  - 2.9 Modification of Terms..... 4
  - 2.10 Ownership of Responses..... 4
  - 2.11 Confidentiality of Information ..... 4
  - 2.12 Tender Evaluation ..... 5
- 3 Schedules ..... 6
- 4 Attachments..... 7

## 1 Background

The existing West Bay #3 well has historically been one of the best suppliers of drinking water to the Nanoose Bay Peninsula Water Service Area (NBPWSA). In the past few years however, the well has experienced significant decreases in capacity that do not appear to be related to the aquifer it draws from. Multiple attempts at redevelopment have yielded short term capacity increases followed by marked decreases within just a few months. This past year (2018) the well has experienced its greatest decline and is now in need of replacement.

As such, the RDN is now inviting Tenders for the replacement of West Bay #3 Well.

## **2 Instructions to Bidders**

### **2.1 Introduction**

The Regional District of Nanaimo (RDN) invites Tenders from qualified Contractors for the replacement of West Bay #3 Well, as detailed herein and in accordance with the documents included and referenced within this Invitation to Tender (ITT).

The requested scope includes:

- Drilling and completion of a new well near our existing West Bay #3 well;
- Removing the pump and drop pipe from the existing well and installing them in the new well; and
- Step testing and pump testing of the new well.

The work must be completed by March 30<sup>th</sup>, 2019.

Specifications, prepared by GW Solutions, are attached as Appendix A.

The Work for this project will be completed using an RDN Contractor Services Agreement, attached as Appendix B. This ITT, any Addenda, and the Tenderer's completed Tender Forms will become part of the Contract Documents between the RDN and the Successful Tenderer.

### **2.2 Non-Mandatory Site Meeting**

A non-mandatory site meeting will be held on Wednesday, February 13<sup>th</sup>, 2019 at 10:00am at the project site located at 2471 Nanoose Road, Nanoose Bay, B.C.

### **2.3 Submission of Tenders**

This section describes the expectations for Tender submission and the basis for evaluation. Tender layout and content should be in general alignment with these expectations to facilitate comparative evaluation.

Before submitting Tenders, Tenderers must satisfy themselves about the nature and location of the work, local conditions, the professional services, equipment, technology and facilities needed for the execution of the work, and all other factors that might have a bearing on their Tender. Tenderers are fully responsible for obtaining all information required for the preparation of Tenders and the execution of the work.

Tenderers are solely responsible for their own expenses in preparing and submitting Tenders, and for any meeting, negotiations, or discussions with the RDN or its representatives and consultants, relating to or arising from this ITT. Tenderers agree that by participating in the ITT process, and/or submitting a Tender, they have no claim for compensation.

One (1) complete hard copy of each Tender must be received on or before 3:00 PM, Pacific Time, on February 20<sup>th</sup>, 2019 at the address on the front cover of this ITT.

Tenders received after the Closing Date will be returned unopened.

Tenders sent by facsimile (fax) or e-mail will not be accepted.

Tenders should be submitted on the attached Tender Forms and be authorized by a signing officer of the Tenderer's company.

Tenders are to be submitted in sealed envelopes clearly marked with:

1. Name and address of the Tenderer
2. West Bay #3 Well Replacement
3. Closing 3:00 PM, Pacific Time, February 20<sup>th</sup>, 2019

## **2.4 Contact and Requests for Information**

The contact person for the RDN is:

Gerald St. Pierre, P.Eng., PMP  
Project Engineer, Water Services  
Office Phone: 250-390-6751  
Email: [GStPierre@rdn.bc.ca](mailto:GStPierre@rdn.bc.ca)

Any requests for information (RFI) related to this ITT are to be directed, in writing at least five (5) calendar days prior to the Closing Date, to Gerald St. Pierre via e-mail at [GStPierre@rdn.bc.ca](mailto:GStPierre@rdn.bc.ca). RFI's and answers will be recorded and, where the information requested is not already clearly indicated, distributed via addendum posted to BC Bid at ([www.bcbid.gov.bc.ca](http://www.bcbid.gov.bc.ca)). It is the responsibility of the Tenderer to download and obtain any addenda posted prior to submitting their tender. Information obtained from any other source is not official and should not be relied upon.

## **2.5 Withdrawal**

Tenders may be withdrawn prior to the closing date and time upon emailed notice to Gerald St. Pierre. Withdrawn Tenders may be replaced by alternative Tenders providing the replacement Tender is received at the closing location prior to the closing date and time.

Tenders must remain valid for 60 calendar days following the ITT closing date and time noted. Tenders are irrevocable after the closing date and time.

## **2.6 Acceptance of Tenders**

This ITT is not an agreement to purchase goods or services. The RDN is not bound to enter into a Contract with any Tenderer. Tenders will be assessed in light of the Tender review criteria. The

RDN will be under no obligation to receive further information, whether written or oral, from any Tenderer. The offer of services will prevail whether accurate or not.

The acceptance of any Tender may be subject to available budget and approval by RDN Senior Management.

## **2.7 Definition and Form of Contract**

The receipt of an offer of services with a Tender will not constitute a contract. A contract will not be entered into until the RDN accepts a Tender and the RDN and the Tenderer enter into a full written Contract as a result of this ITT. Only after a contract is mutually agreed to and signed by both parties, will a Tenderer acquire any legal or equitable rights or privileges.

Any Contract with the selected Tenderer will be substantially similar to the terms and conditions of the RDN Contractor Services Agreement attached herein.

## **2.8 Liability Insurance and Worksafe BC**

The successful Tenderer is required to submit to the RDN a Certificate of Insurance, naming the RDN as additional insured, a Worksafe BC Notice of Project, and Worksafe BC Clearance Letter, prior to the RDN issuing a Notice to Proceed.

Insurance requirements will be as per Section 7 of the attached RDN Contractor Services Agreement.

The successful Tenderer will be assigned, and assume the responsibilities of, the Prime Contractor for the project.

## **2.9 Modification of Terms**

The RDN reserves the right to modify the terms of this ITT, in its sole discretion, at any time up to two (2) working days prior to the noted closing date. The RDN reserves the right to cancel this ITT at any time without entering into a Contract.

## **2.10 Ownership of Responses**

All documents, including Responses, submitted to the RDN become the property of the RDN. The RDN is bound by the provisions of the Freedom of Information and Protection of Privacy Act. All Tenderers submitting Tenders pursuant to this ITT are advised that such Tenders will be treated as public documents and the contents of the same disclosed upon written request if required to do so pursuant to the Act.

## **2.11 Confidentiality of Information**

Information pertaining to the RDN obtained by the Tenderer as a result of participation in this ITT is confidential and must not be disclosed without written authorization from the RDN.

## **2.12 Tender Evaluation**

The RDN reserves the right to reject any or all Tenders or to accept the Tender deemed most favorable in the interest of the District. The lowest priced or any Tender may not necessarily be accepted.

Tenders will be evaluated based on the information provided by the Tenderer in Schedules A through C that represents the best overall value to the RDN.

The decision as to what constitutes best overall value will be at the sole discretion of the RDN.

### **3 Schedules**

Schedule A – Tender Form

Schedule B – List of Previous Contracts

Schedule C – List of Subcontractors

Schedule D – Proposed Work Schedule



## Schedule A – Tender Form

(To be submitted with the Tender)

Item #	Description	Units	Estimated Quantity	Unit Price	Total
1	Mobilization and De-Mobilization	Lump Sum	-	-	
2*	Drilling and Casing of well with 10" diameter carbon steel casing	Feet	250		
3	Completion of Surface Seal	Lump Sum	-	-	
4	Supply and Installation of Stainless Steel Screen	Feet	45		
5	Removal of pump/motor and drop pipe from existing well and Installation in new well	Lump Sum	-	-	
6	Well Development	Hours	24		
7	Supply and Installation of secure well cap and well tag	Lump Sum	-	-	
8	Supply and Installation of Flow Meter and Sounding Tube	Lump Sum	-	-	
9	Removal of transducer from existing well and Installation in new well	Lump Sum	-	-	
9	Step Test	Hours	2		
10	Pump Test and Recovery	Hours	28		
11	Supply of discharge pipe/hose	Lump Sum	-	-	
12	Prepare and supply required measurements and documentation	Lump Sum	-	-	
<b>Total (not including GST)</b>					

Options for Item #2 Above

If one of the optional items provide below is chosen, it will replace Item #2 in the above form.

Optional Item #	Description	Units	Estimated Quantity	Unit Price	Total
2A	Drilling and Casing of well with 12" diameter carbon steel casing	Feet	250		
2B	Drilling and Casing of well with 10" diameter stainless steel casing	Feet	250		
2C	Drilling and Casing of well with 12" diameter stainless steel casing	Feet	250		

Drilling Method to be Used: \_\_\_\_\_

Development Pressure: \_\_\_\_\_ Discharge Rate: \_\_\_\_\_

Flowmeter to be Used: \_\_\_\_\_

**Substantial Performance:**

The Tenderer agrees to attain Substantial Performance of the Work by March 30<sup>th</sup>, 2019.

**Addenda:**

We acknowledge receipt of the following Addenda to the Tender documents:

Addendum No. \_\_\_\_ dated: \_\_\_\_\_ of: \_\_\_\_\_ pages

Addendum No. \_\_\_\_ dated: \_\_\_\_\_ of: \_\_\_\_\_ pages

Addendum No. \_\_\_\_ dated: \_\_\_\_\_ of: \_\_\_\_\_ pages

The undersigned Tenderer, having carefully read and examined the Instructions to Tenderers, Tender Forms and Attachments, has complied with the Instructions to Tenderers and hereby offers to perform all the work, and provide all the labour, material and equipment under the provisions therein set forth for Westbay #3 Well Replacement Tender.

**Signed and Authorized:**

Company Name: \_\_\_\_\_

Contact Name and Title (please print) \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ITT for West Bay #3 Well Replacement  
Regional District of Nanaimo

Phone: \_\_\_\_\_

Authorized Signature:

Fax: \_\_\_\_\_

\_\_\_\_\_

Email: \_\_\_\_\_

Date: \_\_\_\_\_

## Schedule B – List of Previous Contracts

(To be submitted with Tender)

The Tenderer has recently undertaken and completed the contracts described below and authorizes the RDN to inquire as to the Tenderer’s performance on these contracts.

Project	Description of Work	Owner/Contact	Date Completed	Value (\$)
		Owner / Contact _____  Phone _____ Email _____		
		Owner / Contact _____  Phone _____ Email _____		
		Owner / Contact _____  Phone _____ Email _____		
		Owner / Contact _____  Phone _____ Email _____		
		Owner / Contact _____  Phone _____ Email _____		
		Owner / Contact _____  Phone _____ Email _____		

Signed: \_\_\_\_\_





## **4 Attachments**

Appendix A – Specifications for Drilling and Completion of a 10-inch Production Well and Performing Pumping Tests, GW Solutions Inc., January 24, 2019.

Appendix B – RDN Contractor Services Agreement



# Specifications for Drilling and Completion of a 10 or 12 inch Production Well and Performing Pumping Tests



## 1. Specifications Regarding Drilling of a 10 or 12 inch Production Well

The construction of the production well intended to be used as a water supply well must respect the rules of the Water Sustainability Act and Groundwater Protection Regulation (GWPR).

Information	
<b>Location:</b>	2471 Nanoose Road, Nanoose Bay, BC V9P 9E6 (See attached map for approximate location)
<b>Expected Completion date:</b>	No later than March 15th
<b>Type of Well:</b>	Drinking water supply, within a well field
<b>Expected Formation Material:</b>	Overburden (sand/gravel). See well log of well to be replaced (WB#3) attached.
<b>Static Water Level:</b>	Approx. 40 m (130 ft)
<b>Water for drilling and development purposes:</b>	Drillers to bring their own water.

Drilling specifications	
<b>Type of Drilling Method:</b>	Open to suggestions – Provide cost per unit rate (\$/ft)
<b>Completion Depth:</b>	Approx. 76 m (250 ft).
<b>Production Casing:</b>	Diameter: <b>please provide cost for both 10” and 12”</b> ; Material: please provide cost for both carbon steel and stainless steel
<b>Surface Seal:</b>	Thickness: min 1-inch (2.54 cm); Length: min 5 m (17 ft)  Material: bentonite or concrete or mixture of them.
<b>Screen:</b>	Type and Material: depending on the drilling method and completion type. Could be telescopic or pipe size stainless steel  Expected slot size and length: will be custom made based on grain size analysis (laboratory). But likely between 40 and 100 slot size and to maximum length assembly of 15 m (45 ft) including blank slot size.
<b>Development Method:</b>	Airlifting, water jetting (with very short pumping tests completed after series of airlifting and jetting cycles to assess progress on development). Duration of short pumping test max 30 min. Include bailing between development stages  Please provide a hourly rate for development and describe equipment to be used (pressure and discharge rate).
<b>Wellhead Completion:</b>	Casing above ground (at least 2 foot) with secure well cap.

## 2. Specifications Regarding Step Test and 24-Hour Pumping Test of a 10-inch Production Well

Information and General Specifications	
<b>Location:</b>	2471 Nanoose Road, Nanoose Bay, BC V9P 9E6 (See attached map)
<b>Expected Completion date:</b>	By March 30th
<b>Type of Well:</b>	Drinking water supply, within a well field
<b>Expected Formation Material:</b>	Overburden (sand/gravel)
<b>Expected Static Water Level:</b>	Approx. 40 m (130 ft)
<b>Expected Available Water Column:</b>	20 to 25 m
<b>Estimated pump location:</b>	60 m (located above well screen).
<b>Equipment:</b>	<p>Pumping test contractor to remove the pump/motor and drop pipe from the existing well WB#3 and install it in the new well, including any modifications required.</p> <p>Pump information: Make: Grundfos; Model: SP45-2255400-15; Capacity: 114-295 USGPM.</p> <p>Motor information: Make: Franklin; Model: 2366276045; HP: 40; Power Supply: 575 V, 3 phase</p>

Information and General Specifications	
<b>Power source:</b>	Available on site.
<b>Sounder pipe:</b>	Install sounder pipe to a depth of 60 m (PVC diameter adequate to install ¾ inch logger and measuring tape, min 1¼ in)
<b>Discharge Location:</b>	In ditch approx. 45 m away from well. Coordinate installation with the RDN (they have an erosion control system)
<b>Flow Rate Measurements:</b>	Type of flowmeter open to suggestions. Flow rate must be confirmed by manual measurements.

Step test	
<b>Number of Steps and flow rates:</b>	4 steps (to be determined but likely 100 – 150 – 200 – 250 USgpm).
<b>Duration of Each Step:</b>	30 min
<b>Water Level Measurements:</b>	Manual, using water level meter.
<b>Water level Measurements Frequency:</b>	See table below
<b>Recovery Readings:</b>	Do not include

**Manual readings in production well will be scheduled as follows for each step:**

Proposed Time (Min) Since Starting of Test or Following a Change in Pumping Rate										
0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	6
7	8	9	10	12	14	16	20	25	30	

Constant rate pumping test	
<b>Duration of Pumping Test:</b>	24 hours
<b>Rate of Pumping Test:</b>	To be defined depending on step test results (likely between 150 and 200 USgpm)
<b>Water Level Measurements in the Production Well:</b>	manual using water level meter
<b>Water level Measurements Frequency:</b>	See table below
<b>Recovery Readings:</b>	The recovery of water level will be measured in the pumping well at the same interval as given in the table below for the start of the test. Water level measurements must be taken until at least 90% recovery has been achieved. Estimated time 4 hours

**Manual readings in the pumped well will be scheduled as follows:**

Proposed Time (Min) Since Starting of Test									
0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
6	7	8	9	10	12	14	16	20	25
30	35	40	45	50	60	90	120	150	180
210	240	270	300	360	<i>And hourly intervals till end of the test</i>				

Well should be disinfected (chlorinated) after drilling according to the GWPR. Volume of chlorine will be estimated according to the diameter, depth of well and static water level.



Figure 1. Approx. well location



The driller's log of the well is as follows:

0 - 12.2 m	( 0 - 40 ft)	cemented blue clay and boulders
12.2 - 36.6 m	( 40 - 120 ft)	dry brown sand
36.6 - 51.8 m	(120 - 170 ft)	wet brown sand
51.8 - 57.9 m	(170 - 190 ft)	silty fine grey sand, wet
57.9 - 65.5 m	(190 - 215 ft)	cemented sand and gravel
65.5 - 75.6 m	(215 - 248 ft)	water-bearing sand and gravel
75.6 - 76.8 m	(248 - 252 ft)	fine sand
76.8 - 80.8 m	(252 - 265 ft)	hard blue clay

The static water level at the time of the pumping test was 36.775 m (120.6 ft) below the top of the casing, cut off 0.83 m above ground. The sand between 12.2 m and 57.9 m is probably the Quadra Sand.

The well is completed with the following screen assembly consisting of 200 mm (8") nominal Johnsons' stainless steel well screen and 175 mm (7") diameter pipe:

At top at 64.3 m (211 ft)	type K packer
0.9 m (3 ft) of	175 mm (7") diameter riser pipe
1.5 m (5 ft) of	1.016 mm (0.040") slot screen
1.5 m (5 ft) of	0.889 mm (0.035") slot screen
3.0 m (10 ft) of	0.762 mm (0.030") slot screen
2.4 m (8 ft) of	175 mm (7") blank pipe
1.5 m (5 ft) of	0.381 mm (0.015") slot screen
at bottom at 75.6 m (248 ft)	bail bottom.

The well was developed by bailing and air surging.

**Figure 2. Well log of WB#3 (From Pacific Hydrology Consultants 1982)**





**REGIONAL DISTRICT OF NANAIMO**  
**CONTRACTOR SERVICES AGREEMENT**

THIS AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

BETWEEN:

REGIONAL DISTRICT OF NANAIMO  
6300 Hammond Bay Road  
Nanaimo, BC  
V9T 6N2

(hereinafter called the "Regional District")

AND:

(hereinafter called the "Contractor")

**NOW THIS AGREEMENT WITNESSETH:**

THAT in consideration of the terms, conditions and covenants hereinafter set forth, the Regional District and the Contractor covenant and agree each with the other as follows:

**1. Services**

The Regional District retains the Contractor to provide the Services described in Schedule "A" (the "Services") and the Contractor agrees to provide the Services in a diligent manner.

**2. Term**

The Contractor will provide the Services during the period (hereinafter called the "Term") commencing on \_\_\_\_\_, \_\_\_\_\_ and ending on \_\_\_\_\_, \_\_\_\_\_, unless sooner terminated as hereinafter provided.

**3. Payment**

The Regional District will pay to the Contractor as full payment for the Services; the amount set out in Schedule 'A' at the times and in the manner therein set out.

**4. Independent Contractor**

The Contractor will at all times be an independent contractor and not the servant, employee or agent of the Regional District.



**5. Assignment and Sub-contracting**

The Contractor will not, without the prior written consent of the Regional District, assign or subcontract this Agreement or any portion thereof.

**6. Indemnity**

The Contractor will indemnify and save harmless the Regional District from any and all losses, claims, damages, or expenses arising from or due to the negligence of the Contractor in performing the Services or the Contractor's breach of this Agreement.

**7. Insurance**

Prior to the commencement of the Services the Contractor shall provide a certificate of general commercial liability insurance in the amount of \$2,000,000 which shall provide coverage for property damage and third party personal injury and death. The certificate shall name the Regional District as an additional insured. The certificate of insurance shall contain a clause requiring notification of the Regional District 30 days in advance in the event that the insurance policy is cancelled.

**8. WCB Coverage**

The Contractor will provide to the Regional District, prior to the commencement of the Term, evidence satisfactory to the Regional District that the Contractor has paid and satisfied any and all assessments payable under the *Workers Compensation Act* or any regulation thereunder with respect to the Services to be provided under this Agreement.

Proprietors and partners in a partnership who operate an independent business without WorkSafe BC outlined above must be registered with WorkSafe BC and have Personal Optional Protection coverage.

**9. Prime Contractor**

The successful Contractor will be assigned, and assume the responsibilities of, the Prime Contractor for the project, in accordance with the *Workers Compensation Act*.

**10. Termination**

Notwithstanding any other provision of this Agreement:

- (a) If the Contractor fails to comply with any provision of this Agreement, then, and in addition to any other remedy or remedies available to the Regional District, the Regional District may, at its option, terminate this Agreement by giving written notice of termination to the Contractor.
- (b) Either Party may terminate this Agreement at any time upon giving the other Party thirty (30) days' notice of such termination.

If either such option is exercised by the Regional District, the Regional District will be under no further obligation to the Contractor except to pay the Contractor such amount as the Contractor may be entitled to receive, pursuant to Schedule 'B', for services properly performed and provided to the date notice is given



to the Contractor less any amounts necessary to compensate the Regional District for damages or costs incurred by the Regional District arising from the Contractor's default.

IN WITNESS WHEREOF the parties hereto have executed this Agreement as follows:

For the Regional District of Nanaimo:

---

Printed Name

---

Signature

For the Contractor:

---

Printed Name

---

Signature



**SCHEDULE "A"**

**SCOPE OF WORK**

The Contractor shall provide the Services as outlined below:

**SCHEDULE "B"**

**FEES & EXPENSES**

Payment by the Regional District to the Contractor will be upon receipt of monthly written invoices from the Contractor for completed services. (Invoices shall contain a written statement of account showing the calculation of all fees and expenses claimed.)