

# **REQUEST FOR QUOTATION**

**Central Coast Regional District** 

Hagensborg Community Water System
Test Well Drilling



# **TABLE OF CONTENTS**

1.0	PRO	JECT OVERVIEW	1
2.0	SCO	PE OF WORK	1
	2.1	Supervision	1
	2.2	SITE ACCESS	1
	2.3	SUBSURFACE CONDITIONS	1
	2.4	WELL CONSTRUCTION	2
	2.5	WELL DEVELOPMENT	2
3.0	PRO	PONENT QUALIFICATIONS	2
4.0	SCH	EDULE	2
5.0	CON	ITRACTUAL REQUIREMENTS	3
6.0	SUB	MISSION REQUIREMENTS	3
	6.1	SUBMISSION OF QUOTATION	(
	6.2	QUOTATION FORM	(
	6.3	SUBMISSION EVALUATION	•

# **APPENDICES**

Appendix A Location and Site Plan
Appendix B Reference Well Logs
Appendix C Quotation Form



# 1.0 PROJECT OVERVIEW

The Central Coast Regional District (CCRD) is proceeding with the design and construction of upgrades to the Hagensborg Community Water System. The proposed water servicing concept includes development of a new groundwater source to supply the system. Two 200 mm (8") diameter groundwater production wells are envisioned for the new water supply.

The location of the Hagensborg community and proposed groundwater well site is depicted in the figure provided in **Appendix A**.

The CCRD has issued this Request for Quotation (RFQ) to solicit quotations from qualified proponents to complete the test well drilling portion of this project.

### 2.0 SCOPE OF WORK

The scope of work covered in this RFQ generally includes:

- Supply and installation of surface and well casings;
- Creation of bentonite surface seals;
- Supply and installation of well screens; and
- Development of both test wells.

Further details are provided below.

# 2.1 Supervision

Kala Geosciences Ltd. (Kala) has been retained to provide hydrogeological input and supervision for the test well drilling program. Kala will be the CCRD's authorized representative for this work.

#### 2.2 Site Access

Two potential test well sites have been selected. Both sites have been cleared and graded with a footprint of 20 m x 20 m (65' x 65') available for the test well drilling operation. The sites are accessible via Snootli Creek Road at Highway #20.

## 2.3 Subsurface Conditions

The subsurface conditions in the area generally consist of sand and gravel with numerous cobbles and boulders.

Most successful drinking water wells in this part of the Bella Coola Valley are understood to be less than 30 m (100') deep, based on local knowledge. Where drilling has advanced beyond this depth, encountering elevated iron and similar parameters is reportedly common.



Logs for two existing wells drilled on the subject site are included in Appendix B for reference.

#### 2.4 Well Construction

Each of the two (2) proposed test wells is envisioned to include:

- Supply and installation of a 300 mm (12") diameter surface casing to a depth of 6 m (20');
- Supply and installation of a 200 mm (8") diameter well casing to a depth of approximately 35 m (110') or less;
- Installation of a grouted bentonite surface seal between the surface and well casings;
- Supply and installation of a 200 mm (8") diameter, 1.5 m (5') long, screen unit (slot size to be determined).

After placement of the surface seal, the surface casing shall be retracted. The well casing shall extend 0.9 m (3') above ground. A vermin proof well cap shall be supplied and installed to secure the well upon completion.

Kala will provide a range of screen slot sizes the proponent should bring to site. The final screen selection will be completed by Kala on site based on drilling observations including direction regarding the length of screen to be exposed and the depth at which the screen is to be placed.

# 2.5 Well Development

Kala will supply the submersible pump required for development of the wells. Proponents should allow for eight (8) hours of crew time per well to assist with development.

Following development, Kala will conduct the pump / drawdown testing to determine the well yield, specific capacity, and similar. For context, the desired flow rate for each well is in the order of 6.3 L/s (100 GPM).

### 3.0 PROPONENT QUALIFICATIONS

As per the British Columbia Groundwater Protection Regulation, proponents shall be a Certified Water Well Driller to be considered for this work.

## 4.0 SCHEDULE

The test well drilling is desired to be completed by March 31, 2023 if possible.

This time line is driven by a need to advance the overall water system improvement project, but also targets a typical window for favourable weather / road conditions. A portion of Highway #20 in the vicinity of Tweedsmuir Provincial Park consists of a two-lane gravel road, including "The Hill". Operators of larger vehicles (such as drill rigs) report a preference to travel this route when the road is frozen as opposed to during the spring thaw when potholes and similar prove problematic.



Although the CCRD prefers this work to be completed by March 31, 2023 proponents may propose a schedule that extends beyond this date of availability requires such, and access or other considerations are suitable.

# 5.0 CONTRACTUAL REQUIREMENTS

The CCRD will issue a purchase order to the successful proponent for the value of the quotation price plus GST.

Proponents are expected to carry commercial general liability insurance as well as automotive, equipment, or other appropriate insurance coverage for the proposed scope of work.

The successful proponent will be the Prime Contractor for the work, and as such, will be expected to have applicable WorkSafeBC coverage in place.

A Bid Bond, Performance Bond, or Labour and Material Payment Bond are not required for this RFQ.

Payment will be based on the actual measured quantities for each component of work at the quoted unit prices.

# 6.0 SUBMISSION REQUIREMENTS

#### 6.1 Submission of Quotation

Quotations shall be submitted electronically, in PDF format, via email to:

Central Coast Regional District c/o Urban Systems Ltd. Attention: Jacob Scissons, P.Eng. jscissons@urbansystems.ca

Proponents must respond to this RFQ by February 1, 2023.

Any inquiries regarding this RFQ should be directed in writing to the above.

#### 6.2 Quotation Form

Quotations shall be submitted on the Quotation Form provided in **Appendix C**.

#### 6.3 Submission Evaluation

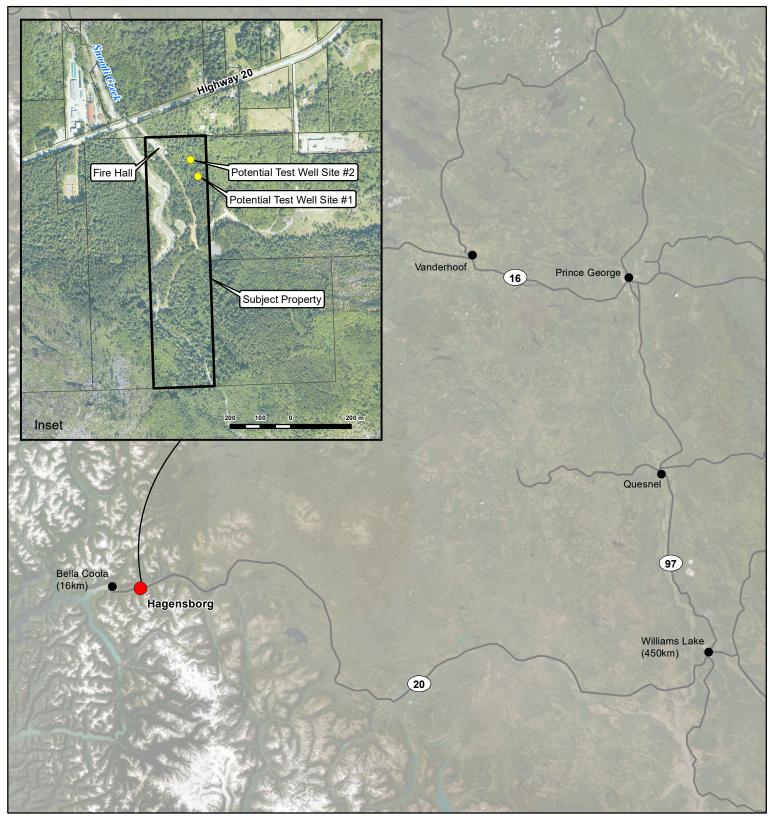
The CCRD will evaluate proponent quotations based on the best value for money. Consideration will also be given to the proponent based on experience and availability of resources.

The CCRD reserves the right to award all, portions, or none of the work to any proponent.



# APPENDIX A

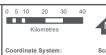
**LOCATION AND SITE PLAN** 





Hagensborg Community Water System Test Well Drilling Location / Site Plan

The accuracy & completeness of information shown on this drawing is not guaranteed. It will be the responsibility of the user of the information shown on this drawing to locate & establish the precise location of all existing information whether shown or not.



NAD 1983 UTM Zone 9N

Scale: 1:2,000,000

Revision: A

Inset Orthophoto - TerraRemote 2020 Aerial Imagery - ESRI BaseMaps Parcel data - NRCAN

Project #: 3383.0014.01 Author: JC Checked: JS Status:

**URBAN** SYSTEMS FIGURE 1



# **APPENDIX B**

**REFERENCE WELL LOGS** 

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PLEASE NOTE: The information recorded in this well report describes the works and hydrogeologic conditions at the time of construction, alteration or closure, as the case may be. Well yield, well performance and water quality are not guaranteed as they are influenced by a number of factors, including natural variability, human activities and condition of the works, which may change over time.



X	Well Construction Report
	Well Closure Report

**Well Alteration Report** 

Stamp company name/address/phone/fax/email here, if desired.

Ministry Well ID Plate Number:	38307				
Ministry Well Tag Number:	107899				
Existing Well Tag Number:	Existing Well Tag Number:				
Confirmation/alternative specs. attached					
Original well construction report attached					

Red lett	ering in	dicates m	inimum ma	indatory informa	tion				See rev	erse	for notes & definitions of ab	breviations.
Owner N	lame:	Hagensk	oorg Water	works District								
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Casing	details	•			\A/-II		Screen det	alis				
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0	58	8		Steel	322	No	58	63	7		Screen	100
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Liner: [							Screen openi	ng: X	Continuous	slot	Slotted Perforated P	ipe
Diameter		in			ess:	in	Screen bottor	m: <b>X</b>	Bail	Plug	Plate Other (specify):	
From: _	ft bgl	To:	_ ft bgl P	erforated: From:	ft bgl To: _	ft bgl	•				ft Thickness:	in
X Air lift Othe Notes: Well y	r (specify)  ield es  ing X A	Surging  timated  ir lifting	l by:	Pumping Total  Other (specify): Duration: 5	duration:		Total depth d Final stick up SWL: Artesian flow: Type of well of	rilled: _ :3 :	2 7 ft (btoc) USgpmelded plate	0 ft 4 in n, or art	Finished well depth:	ft bgl ).00 USgpm ft
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DECLAR has been	ATION: W	/ell constru	ction, well alte	eration or well closur renments in the Wat				13/07/0	6		Completed: 2013/07/06	
Signature	of Driller	Responsibl	le									
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#### General

- 1. Requirements for well construction and well closure reports are found in Part 5 of the Water Act and the Ground Water Protection Regulation. Part 5 of the act and regulation are available at: http://www.env.gov.bc.ca/wsd/plan\_protect\_sustain/groundwater/index.html.
- 2. The current Ministry standard datum for mapping and geodetic use is the North American Datum of 1983 (NAD 83). To determine GPS coordinates using a Global Positioning System (GPS), set the datum to NAD 83.
- 3. For latitude and longitude coordinates, provide coordinates either in degree, minutes and seconds (e.g., 50° 2¿ 21.037¿) or decimal degrees (e.g., 50.039175°).
- 4. For the method of determining ground elevation, enter: GPS, differential GPS, level, altimeter, 1:50,000 map, 1:20,000 map, 1:10,000 map or 1:5,000 map.
- 5. The classes and sub-classes of wells are shown below:

Sub-class (if applicable) Water supply ......Domestic; Non-domestic Monitoring .....Temporary; Permanent Recharge or injection

Dewatering or drainage ......Temporary; Permanent

Remediation ......Temporary; Permanent Geotechnical ......Borehole; Test pit; Special type of hole; Closed loop geothermal

6. Well reports submitted to the Deputy Comptroller, or retained by the person responsible, as required under the Water Act and the Ground Water Protection Regulation, shall be considered part of the Provincial Government records and is subject to the Freedom of Information and Protection of Privacy Act.

#### How to Fill Out the Lithologic Description Table

- 7. Each row in the lithologic description table represents either a depth interval or depth in the well.
- 8. A row could represent a depth interval (e.g., from 0 feet to 12 feet), such as for a geologic stratum or a specific depth (e.g., 120 feet), such as for a depth location of a water-bearing fracture.
- 9. For a depth interval, enter the relative hardness of the material in the column ; Relative Hardness," if applicable: Very Hard (VH), Hard (H), Dense (D), Stiff (ST), Medium (M), Loose (L), Soft (S), Very Soft (VS).
- 10. For a depth interval, enter the letter for the overall colour of the geologic material in the column "Colour," if applicable: White (W), Grey (Gy), Blue (Bl), Green (G), Yellow (Y), Brown (Br), Red (R), Tan (T), Black (Bk).

  11. For each depth interval, enter the description of the geologic materials encountered during drilling in the column "Material Description.¿
- Material descriptions should be chosen from the following recommended list of materials:

Surficial materials (approximate range of particle size) boulders (greater than 10 inches) cobbles (21/2 inches to 10 inches) gravel (80 slot to 21/2 inches) coarse sand (25 slot to 80 slot) medium sand (10 slot to 25 slot) fine sand (2 slot to 10 slot) silt (less than 2 slot) clay (much less than 2 slot) till (variable particle size)

organics (e.g., top soil, wood, peat)

**Bedrock materials** conglomerate sandstone shale siltstone limestone crystalline granite basalt volcanic

12. In describing the material, list the material in order from greatest to least and indicate what materials occur in trace (less than 5%) amounts. The word "and" means both materials occur in approximately equal amounts (e.g., "gravel and coarse sand, trace silt").

13. Under the column "Water-bearing Estimated Flow (USgpm)," use "D" for "dry," "W" for "wet," or enter the estimated flow in USgpm.

bedrock

- 14. If a water-bearing fracture is encountered, the depth of the fracture should be recorded in a row and the estimated flow of water in the fracture can be entered in the column "Water-bearing Estimated Flow (USgpm)."

# How to Fill Out the Closure Description Table and the Well Closure Information Section

- 15. Each row in the closure description table represents either a depth interval (e.g., from 0 feet to 12 feet) or depth (e.g., 120 feet) in the well.

  16. For a depth interval, enter the type of backfill or sealant material(s) in the column "Material Description."

  17. Indicate in "Details of closure" whether casing(s) or screen(s) were pulled or left in place. If casing(s) were left in place, indicate whether it was perforated or ripped.

#### Screen Details

18. "Type" includes riser pipe, K-packer, screen, screen blank, or tail pipe.

#### Well Driller

19. Fill in the name of the driller who constructed the well.

# **Registration Number of Driller Responsible**

20. Fill in the registration number on the Qualified Well Driller identification card. If the work was completed by a driller who is not registered as a Qualified Well Driller, the Qualified Well Driller who is directly supervising the work should fill in their registration number on their Qualified Well Driller identification card. The Qualified Well Driller signs the form.

# **Definitions of Abbreviations**

PID ......Parcel Identifier USgpm ...US gallons per minute asl ......above sea level ft .....feet UTM ......Universal Transverse Rg. .....Range bgl ......below ground level hrs .....hours btoc .....below top of casing in .....inches Sec. .....Section Mercator Grid NAD 83 ...North American Dia .....Diameter SWL .....static water level D.L. .....District Lot Datum (1983) Twp. .....Township

updated: Feb. 7, 2006



# APPENDIX C

**QUOTATION FORM** 

# 1. Proponent Contact Information

The following proponent information is	requested:
Company Name:	
Address:	
BC Certificate Number:	
Primary Project Contact:	
Name:	
Office Number:	
Cell Number:	
Email:	
2. Relevant Experience	
2. Relevant Experience Proponents are asked to highlight expe	erience on projects of a similar nature.
Proponents are asked to highlight expe	erience on projects of a similar nature.
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Proponents are asked to highlight experience  Project #1:  Location of Work:  Year:	
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Proponents are asked to highlight experience  Project #1:  Location of Work:  Year:	
Project #1:  Location of Work:  Year:  Nature and Scale of Work:	
Project #1:  Location of Work:  Year:  Nature and Scale of Work:  Reference Contact Name:	

Project #2:			
Location of Wor	k:		
Yea	ır:		
Nature and Scale of Wor	k:		
Reference Contact Name	e:		
Telephon	e:		
Ema	il:		
3. Schedule			
Identify the following milestone date:	s:		
RFQ Closing		February 1, 2023	
Identification of Preferr	ed Proponent	February 6, 2023	
<ul> <li>CCRD Board Approval Successful Proponent</li> </ul>	/ Contract Award to	February 9, 2023	
Mobilization to Hagens	borg		
Well Drilling			
Well Development			
Project Completion			
Provide any additional comr	nents regarding anticir	pated schedule.	
,	3 3 1		

# 4. Quotation Price

Populate the table below with quoted unit prices for the proposed work as well as the extended amount based on quantity x unit price. The Quotation Price shall be considered the sum of all quoted unit prices x estimated quantities. Units are provided in US customary / imperial units for convenience.

Item	Description	Units	Quantity	Unit Price	Amount	
1	Mobilization and demobilization.	L.S.	1			
2	Supply and install 12" drive shoe.	ea.	2			
3	Supply and install 12" surface casing.	feet	40			
4	Supply and install 8" drive shoe.	ea.	2			
5	Supply and install 8" well casing.	feet	220			
6	Bentonite surface seal.	ea.	2			
7	Supply and install 8" diameter, 5' long well screen (two screens per well).	ea.	4			
8	Supply and install screen fittings including bail bottom, 2' riser pipe, and K-packer.	ea.	2			
9	Supply and install vermin proof well cap.	ea.	2			
10	Well development.	Crew hr.	16			
11	Living out allowance.	Crew day	7			
Total (excluding GST): \$						

Please provide hourly crew standby rate: \$\frac{\frac{1}{2}}{\frac{1}{2}}} / \frac{1}{2} \text{ and attach unit rate sheet for other potential as and when services required.}

### 5. Quotation Endorsement

The quotation shall be endorsed by an authorize	d signatory of the proponent below.
\$	
QUOTATION PRICE (excl. GST)	
NAME OF PROPONENT	AUTHORIZED SIGNATORY FOR PROPONEN