Engagement Plan and Record

This appendix contains the Engagement Record and Engagement Plan. Included as part of the Engagement Record is a copy of the information letter sent to the Deh Gah Got’ine First Nation. Similar letters were also sent to the Fort Providence Metis Nation and the Hamlet of Fort Providence.
December 13, 2019
File: 144902820

Attention: Wilma Field, Executive Director
Deh Gah Gotie First Nation
P.O. Box 200
Fort Providence, NT X0E 0L0

VIA email: ed@dehgahgotie.ca

Dear Ms. Field,

Reference: Fort Providence Water Storage Reservoir, Proposed Geotechnical Investigation

The Hamlet of Fort Providence has hired Stantec Architecture Limited (Stantec) to provide engineering design to upgrade the community’s water treatment and supply system. A component of this upgrade will include the construction of a water storage reservoir. Two potential sites for the reservoir near the existing water treatment plant were identified in a feasibility study conducted for the Hamlet. To determine the best site and collect the necessary soils information to design the foundation for the reservoir, Stantec is proposing to complete a geotechnical drilling program at the two potential sites illustrated on the attached figure. Stantec will be applying for a land use permit to permit the drilling program to the Mackenzie Valley Land and Water Board (MVLWB).

The purpose of this letter is to provide recipients with information about proposed activities so that any questions or concerns that the parties may have can be addressed in advance of submitting a formal application to the MVLWB. Parties will also have an opportunity to submit comments on the proposed work program during the MVLWBs Preliminary Screening of the application.

The following presents information on the proposed geotechnical drilling program.

Proposed Environmental Investigations

Locations to be Investigated

The location of the sites to be investigated are illustrated on the figures attached.

Proposed Activities

Site investigation activities will include:

- Clearing of access trails to enable the drill rig to access drilling locations
- Drilling of 6 boreholes at each of the two sites, total of 12 boreholes
- Collection of soil samples from each of the boreholes for geotechnical analysis.
December 13, 2019
Wilma Field, Executive Director
Page 2 of 2

Reference: Fort Providence Water Storage Reservoir, Proposed Geotechnical Investigation

Access to each of the prospective sites will use existing roads and cleared trails as much as possible; however, it is expected that a total of approximately 4,000m² will need to be cleared to provide access to and within the sites to conduct the drilling. All clearing is proposed to be done by hand.

Drilling is proposed to be completed using a tracked mounted drill rig, either the Acker-MP5 track mounted auger drill rig pictured on the following page or a similar unit. Boreholes will be drilled to a maximum depth of 18 metres below grade surface (mbgs) and will be a maximum of 15 cm in diameter. The auger drill will not require the use of water. Soil samples will be collected from the borehole at regular intervals. Selected samples will be submitted for geotechnical analysis. Upon completion of the sample collection, boreholes will be backfilled with drill cuttings and graded to promote positive drainage.

Proposed Schedule

Pending receipt of the Land Use Permit, the clearing and drilling activity is expected to be conducted over a 9-day period in January, February, or March 2019.

Environmental Impacts and Mitigations

The drilling program is not expected to result in any significant environmental impacts. Wastes generated from the drilling program would be limited to cleared vegetation, drill cuttings (soil from boreholes), and domestic wastes (e.g. sample gloves, filters).

The drill cuttings will be used as backfill in the boreholes. Any remaining soil will be spread and levelled on the property. Domestic waste will be deposited within the municipal facilities.

Response

Should you have any questions or concerns, I respectfully request you contact the undersigned by close of business December 23, 2019.

Regards,

Stantec Architecture Ltd.

Steffen Karl P.Eng.
Associate, Materials Engineering
Phone: 867-920-2882
Steffen.Karl@stantec.com

c.c. Susan Christie, SAO, Hamlet of Fort Providence

Attachment: Figures, drill rig example
Rig type: Acker-MP5 track mounted auger drill rig.

Width: 8'6"

Length: 24'

Height: 10'

Mast Height: 25'

Weight approx. 28,000 lbs
Fort Providence Geotechnical Investigation – Engagement Plan

The proposed land use activity involves a 7-day drilling program within Hamlet boundaries to investigate soil properties at two sites being considered for a water storage reservoir to serve residents of Fort Providence. The following engagement plan is considered appropriate for the level and purpose of the land use activity.

Parties to be Engaged:

Hamlet of Fort Providence
Deh Gah Got’ine First Nation
Fort Providence Metis Nation

Purpose of Engagement:

The parties will be engaged to advise them when the land use activity will start, that it is a permitted operation and that they have the opportunity to raise concerns with the MVLWB. The parties will also be engaged to advise them that the land use activity has been completed.

When will the Parties be Engaged:

1. The parties will be notified of the start date of the activity and the land use permit number should they wish to gather more information about the project from the MVLWB public registry.
2. The Parties will also be notified when the land use activity has been completed.

Engagement Method:

Parties will be engaged through email communication.
## Fort Providence Land Use Permit Engagement Record

<table>
<thead>
<tr>
<th>Party</th>
<th>Contact Name</th>
<th>Date contacted</th>
<th>Contact Method</th>
<th>Nature of Contact</th>
<th>Concerns</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fort Providence Metis Nation</td>
<td>Reception</td>
<td>7-Mar-19</td>
<td>Telephone</td>
<td>Reception</td>
<td>Left Message</td>
<td></td>
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<tr>
<td></td>
<td>Pearl Leishman</td>
<td>8-Mar-19</td>
<td>Telephone</td>
<td>Return of message</td>
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<td><a href="mailto:fpmcpres@northwestel.net">fpmcpres@northwestel.net</a></td>
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<tr>
<td></td>
<td>Clifford McLeod</td>
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<td>14-Mar-19</td>
<td>Email</td>
<td>Email</td>
<td>Requested a community meeting to discuss land use activity</td>
<td>Community Meeting Scheduled for April 9, 2019</td>
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<td>Joachim Bonnetrouge</td>
<td>14-Mar-19</td>
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<td>Timing and proposed locations updated for Dec. 17, 2019 information letter</td>
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<td>Email</td>
<td>Response to information letter</td>
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<td>Relocation of reservoir site behind firebreak - update provided in Jan. 30, 2020 email</td>
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<td>PO Box 290</td>
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<td>SAO requested an information letter to share with Council</td>
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</table>
Water Treatment Plant
Water Supply Upgrades Project

PRESENTERS:
Kyle Humphreys, P.Eng., PMP – Senior Project Manager | Colliers Project Leaders
Matt Wood, P.Eng., CPESC – Senior Associate, Water Resources Lead | Stantec

October 9, 2018
AGENDA

- Project Overview
- Feasibility Study
- Constructability Analysis
- Options for Consideration
- Next Steps
PROJECT GOAL

Ensure year-round reliable water supply to the Community.
CURRENT ISSUES

- Aging treatment system
- Potential for ice damage to intake
- Potential for low river levels
- Potential for blocked wet-well access
- Fire flow requirements not met
KEY OBJECTIVES

- Increase life span of existing WTP (upgrade)
- Eliminate potential for ice damage
- Eliminate impact of low river levels
- Ensure year-round access to wet-well
- Meet fire flow requirements
MILESTONES

- Feasibility Study
- Constructability Analysis
- Select Preferred Option
- Detailed Design
- Construction
FEASIBILITY STUDY
The Existing Intake

Constructed in 1976 and comprised of:

- One concrete and CSP wet well containing two submersible pumps that discharge to a forcemain to the WTP
- The forcemain was replaced with insulated HDPE pipe in 1994
- Three 6” gravity ductile iron pipes running to the river
- In 2004, two inclined shaft intakes were constructed but failed the following year.
- The operators are now relying on the first intake structure that was constructed in 1976 to supply the water to the water treatment plant.
- Has been observed to have a withdrawal capacity of 200 l/min.
The Existing Intake - Issues

- Top gravity pipe damaged from ice impact.
- Serviceable life of wetwell and ductile iron pipe is questionable.
- Intake vault entrance is too low and has limited access during flood and ice break-up.
- Siltation and clogging from vegetation.
- Water level decreases during dry season to the point that recharge of the wet well and supply to the WTP is interrupted.
- Intake is understood to have run dry in November 1999.
- Withdrawal capacity is not enough to provide for fire emergency and maximum demand of the Hamlet.
- No fish exclusion (current DFO Requirement).
Water Supply and Infrastructure Options

- Groundwater Sourcing Desktop Study
- Intake Site Suitability Desktop Study
- Option A - Construct a new intake
- Option B – Retrofit/repair the existing intake
- Option C – All season raw water storage reservoir with portable intake
- Option D - Retrofit/repair the existing intake and supplemental supply raw water storage reservoir
Proposed Water Supply Options

Option A - Construct a New Intake

• Concrete wetwell with an HDPE line to the river using trenchless installation method (horizontal directional drill).
• Riprap spur in river low point to promote scour and self-cleaning and provide some protection from ice impact.
• Screen pod on the end of the pipe (diver install) or within the wetwell.
• Withdraw from a location below the 200-year low water level.

Risks:

• Success of HDD
• All intakes (new or old) have serviceability risks
• Constructability
Notes:
- Bothryometry based off Geodetic Survey of Canada Datum 1952 ADJ
- Current location of intake screen and pipe is based on a conceptual arrangement. A different arrangement may be required for other reasons.
- Conceptual arrangement is not for tender or construction.
- 50yr return period high and low water elevations are drawn according to Dillon Consulting Ltd.'s report "Design Concept Brief – Water Supply Improvements Fort Providence, Northwest Territories", October 2002.

Scale: 1:350

Conceptual Arrangement Intake Cross - Section

Stantec
Proposed Intake Options

Option B – Retrofit Existing Intake

- Retrofit the existing three intake pipes by inserting new HDPE pipes inside
- Construct a new concrete structure on top of the existing wetwell valve chamber
- Bank stabilization would be added to protect the chamber and can be designed to stabilize more of the bank

Risks:

- CSP in wetwell is of questionable integrity
- No additional withdrawal benefit at low water
- Reduced withdrawal capacity over existing
- No fish screening
- Does not meet Hamlet’s needs

Not Considered Further as Stand-Alone Solution
Proposed Intake Options

Option C – All Season Raw Water Reservoir

- Reservoir sized to 44,000 m³ to meet annual demand (180m x 240m)
- Removes turbidity (allows for membrane treatment at WTP)
- HDPE Lined
- Portable screened pump can fill it
- Can accommodate fire supply
- Existing intake does not need to be decommissioned

Risks:

- Taste
- Security/Safety
Proposed Intake Options

Option D – Winter Season Raw Water Reservoir

• Reservoir sized to 26,000 m³ to meet winter demand (130m x 204m)
• HDPE Lined
• Removes turbidity (allows for membrane treatment at WTP)
• Portable screened pump can fill it
• Can accommodate fire supply
• Existing intake does not need to be decommissioned

Risks:
• Taste
• Security/Safety
• Smaller Storage
INTAKE CONSTRUCTABILITY ANALYSIS
Intake Constructability Analysis

- Site Suitability
- Concept Advancement
- Constructability Review
- Risk Registry Exercise
- Updated Opinion of Probable Cost
Intake Site Suitability
Notes:
- Bathymetry based on Geodetic Survey of Canada Datum 1952 ADJ.
- Current location of intake screen and pipe is based on a conceptual arrangement. A different arrangement may be required for other reasons.
- Conceptual arrangement is not for tender or construction.
- 50yr return period high and low water elevations are drawn according to Dillon Consulting Ltd.'s report "Design Concept Brief - Water Supply Improvements Fort Providence, Northwest Territories", October 2002.
Notes:
- Bathymetry based off Geodetic Survey of Canada Datum 1992 ADL.
- Current location of intake screen and pipe is based on a conceptual arrangement. A different arrangement may be required for other reasons.
- Conceptual arrangement is not for tender or construction.
- Dry return period high and low water elevations are drawn according to Dillon Consulting Ltd.'s report "Design Concept Brief - Water Supply Improvements Fort Providence, Northwest Territories", October 2002.
Constructability

- HDD Installation for Intake Pipe
  - Cost of isolation
  - Will require barge support
  - Introduces Risk
- Caisson system for wetwell shaft
- Location of pipe screening
  - End of pipe screening would require diver.
  - Monitoring of riprap placement would require diver.
WTP Improvements
General Upgrades $1,147,500
Replacement of WaterBoy $1,509,300
Installation of a UF Membrane Plant $2,034,450*

Raw Water Supply Improvements
Option A $5,456,750**
Option B Not Considered Further
Option C $3,037,500
Option D $2,362,500

* requires Option C, or Option D with additional process treatment
* cost increased with concept advancement and constructability review
OPTIONS TO CONSIDER

- Do Nothing
- Complete WTP General Upgrades
- Option A - New River Intake
- Option C - New All Season Storage and Portable Pump
- Option D - Use Existing Intake with New Backup Storage
## DO NOTHING

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<th>CONS</th>
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<td>Zero capital cost</td>
<td>Increasing O&amp;M costs</td>
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<tr>
<td>No change to current operations</td>
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<td>o Long-term</td>
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## COMPLETE WTP UPGRADES - NOW

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<td>Do not need to build new</td>
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# COMPLETE WTP UPGRADES - LATER

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<td>Lower overall project budget</td>
<td>Increasing O&amp;M costs</td>
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<tr>
<td>Reduce O&amp;M costs long-term</td>
<td>No benefit from project synergy</td>
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<tr>
<td>Do not need to build new</td>
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### NEW RIVER INTAKE

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<tr>
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<tr>
<td>No additional land required</td>
<td>Most expensive option (by 2x)</td>
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<tr>
<td>“Permanent” direct access to river</td>
<td>Complex construction methods</td>
</tr>
<tr>
<td>“Reduces” risk of ice damage</td>
<td>In-water work required</td>
</tr>
<tr>
<td>“Reduces” risk of running dry</td>
<td>Does not eliminate risks of failure</td>
</tr>
<tr>
<td>Provides year-round wet-well access</td>
<td>Acquiring funding may be difficult</td>
</tr>
</tbody>
</table>

- No additional land required
- "Permanent" direct access to river
- "Reduces" risk of ice damage
- "Reduces" risk of running dry
- Provides year-round wet-well access

- Most expensive option (by 2x)
- Complex construction methods
- In-water work required
- Does not eliminate risks of failure
- Acquiring funding may be difficult
# EXISTING INTAKE w NEW BACKUP STORAGE

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<thead>
<tr>
<th>PROS</th>
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<tbody>
<tr>
<td>Lowest cost option</td>
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<tr>
<td>Seasonal direct access to river</td>
<td>Requires additional land</td>
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<tr>
<td>Eliminates all risks to water supply</td>
<td>Need to locate suitable reservoir site</td>
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<tr>
<td>Provides ample fire flow storage</td>
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<tr>
<td>Provides year-round wet-well access</td>
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## EXPLORE ALTERNATE OPTIONS

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<td>Might miss funding window</td>
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</table>
MAHSI CHO

QUESTIONS?
Water Treatment Plant
Water Supply Upgrades Project

PRESENTERS:
Kyle Humphreys, P.Eng., PMP – Senior Project Manager | Colliers Project Leaders
Arlen Foster, P.Eng. – Senior Associate, Civil Team Lead | Stantec

April 9, 2019
AGENDA

- Introduction to Project Team
- Goals & Objectives of Project / Meeting
- Review of Project History
- Options Considered
- Questions and Discussion
- Next Steps
PROJECT GOAL

Ensure year-round **reliable** water supply to the Community.
CURRENT ISSUES

- Aging treatment system
- Potential for ice damage to intake
- Potential for low river levels
- Potential for blocked wet-well access
- Fire flow requirements not met
KEY OBJECTIVES

- Increase life span of existing WTP (upgrade)
- Eliminate potential for ice damage
- Eliminate impact of low river levels
- Ensure year-round access to wet-well
- Meet fire flow requirements
PROJECT HISTORY
FEASIBILITY STUDY
&
INTAKE CONSTRUCTIBILITY
Intake Site Suitability
WTP Improvements
General Upgrades and New WaterBoy $1,509,300

Raw Water Supply Improvements

Option A $5,456,750
Option D $2,362,500
MILESTONES

- Feasibility Study
- Constructability Analysis
- Select Preferred Option
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- Construction
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</tr>
<tr>
<td>Provides ample fire flow storage</td>
<td></td>
</tr>
<tr>
<td>Provides year-round wet-well access</td>
<td></td>
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</tbody>
</table>
MAHSI CHO

QUESTIONS?
Hello Kyle and Susan,

Attached are the letters you requested. I have attached the letters to the Fort Providence Metis Nation and to the Deh Gah Gotie First Nation as completed letters but have also provided the Word files so those can be updated onto Hamlet letterhead and the Hamlet cover letters just copied over the Stantec ones. I have also provided the Draft letter for support in Word to be put on Hamlet letterhead. Let me know if you have any questions or require anything further.

Regards,

Steffen Karl, P.Eng.
Associate, Materials Engineer

Direct: 867 920-2882 x231
Mobile: 780 239-8710
Steffen.Karl@stantec.com

2nd Floor, 4910 53 Street, PO Box 1777
Yellowknife NT X1A 2P4

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Arlen Foster P. Eng.
Senior Associate, Civil Team Lead, Northern Canada

Direct: 867 920-2882 ext 249
Mobile: 867 446-0568
arlen.foster@stantec.com

Stantec
2nd Floor 4910 53 Street, PO Box 1777
Yellowknife NT X1A 2P4

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From: Humphreys, Kyle <Kyle.Humphreys@colliersprojectleaders.com>
Sent: Thursday, December 12, 2019 2:22 PM
To: Foster, Arlen <Arlen.Foster@stantec.com>
Cc: Susan Christie <sao@fortprovidence.ca>; McFadyen, Scott <Scott.McFadyen@colliersprojectleaders.com>
Subject: RE: FPWTP - Support Letters and Wet Well Memo

Hello Arlen,

Are you able to get those letters out to Susan by end of day today or first thing in the morning? She wants to get them to everybody early tomorrow before they are all off for the xmas break.

Please confirm.

Regards,

Kyle Humphreys P.Eng., PMP
Senior Project Manager – Team Lead

---

From: Foster, Arlen <Arlen.Foster@stantec.com>
Sent: December 10, 2019 12:43 PM
To: Humphreys, Kyle <Kyle.Humphreys@colliersprojectleaders.com>
Cc: Susan Christie <sao@fortprovidence.ca>
Subject: RE: FPWTP - Support Letters and Wet Well Memo
Hi Kyle, yes we will start on these letters and get them to you asap using the existing time and materials budget that has been granted.

I spoke to Paul yesterday and he is planning to have it to you for Thursday.

Regards,

Arlen Foster  
P. Eng.  
Senior Associate, Civil Team Lead, Northern Canada  

Direct: 867 920-2882 ext 249  
Mobile: 867 446-0568  
arlen.foster@stantec.com  

Stantec  
2nd Floor 4910 53 Street, PO Box 1777  
Yellowknife NT X1A 2P4  

Good morning Arlen,

I spoke with Susan regarding your latest email and here is what we’ve come up with for next steps to get letters of support for the drilling permit:

1. Stantec to draft a letter of support for the Geotechnical Investigation of the two proposed sites from the Hamlet with a space for the Mayor and a witness to sign.
2. Stantec to draft a letter from the Hamlet, signed by the Mayor, to the Metis Council asking for support for the Geotechnical Investigation of the two proposed sites with a space for the President and a witness to sign.
3. Stantec to draft a letter from the Hamlet, signed by the Mayor, to the First Nation Band asking for support for the Geotechnical Investigation of the two proposed sites with a space for the Chief and a witness to sign.
4. Susan will put all three letters on a Hamlet letterhead.
5. Once all are signed, she will return them to Stantec for inclusion with the drilling permit application.

Does that make sense to you? Let me know if you wish to discuss. I will be unavailable for most of the day.

Also, what is the current status of the wet well memo and when will it be submitted?
Regards,

Kyle Humphreys  P.Eng., PMP
Senior Project Manager – Team Lead
Hello Arlen and Steffen,

Attached are 2 of the 3 letters of support that we are expecting. The good news is that the band has reviewed your letter and have some questions they would like to speak with me about. I am hopeful we can get this resolved this week. Cheers.

 Regards,

Kyle Humphreys P.Eng., PMP
Senior Project Manager – Team Lead
December 16, 2019

Regulatory Officer
Mackenzie Valley Land and Water Board

Re: Fort Providence Water Reservoir, Land Use Permit Application for Geotechnical Investigation

The Hamlet of Fort Providence (Hamlet) retained Stantec Consulting Limited (Stantec) to provide engineering services for the upgrade of the community's water supply and storage system. The Hamlet has reviewed Stantec's proposed geotechnical program to investigate the suitability of two potential sites for a water storage reservoir.

The Hamlet supports Stantec's application and the issuance of a land use permit for the geotechnical investigation as soon as possible.

Sincerely,
HAMLET OF FORT PROVIDENCE

Danny Beaulieu
Mayor
December 17, 2019

Fort Providence Metis Council
P.O. Box 200
Fort Providence, NT
X0E 0L0

Attention: President Clifford McLeod

Re: Land Use Permit Application
Support for Proposed Water Storage Reservoir

As you are aware, the Hamlet of Fort Providence has hired Stantec Architecture Limited (Stantec) to provide engineering design to upgrade the community’s water treatment and supply system. A component of this upgrade will include the construction of a water storage reservoir that will hold up to 7 months of emergency water supply. The existing Water Treatment Plant intake pipes and wet well are at risk of ice damage and potential low water levels that could leave the community without immediate access to drinking water. In addition, the plant’s water storage for fire flow is insufficient to meet the Territory’s regulations. The construction of a new reservoir within the community limits will allow the community to access drinking water and provide sufficient fire flow capacity in the event of an emergency.

The next phase of the project is to complete a small drilling operation at each of the potential sites for the new reservoir to test the soil and determine which site is best for the consultation. Stantec has drafted a letter describing the drilling procedures required to support the site selection. Please review the attached letter.

As a community partner, we are requesting your support which is required in order to have Stantec complete the Land Use Permit application to drill.

We look forward to your support.

Mahsi,
HAMLET OF FORT PROVIDENCE

Danny Beaulieu
Mayor
Please sign below to show your Council's support for the site selection investigation.

Fort Providence Metis Council:

Name: Pearl Leishman
Title: Executive Director

Witness:

Name: Susan Christie
Title: Director
Arlen,

We just received the attached.

Regards,

Kyle Humphreys P.Eng., PMP
Senior Project Manager – Team Lead

---

Greg

Good day. Here you go Kyle. I'll call you shortly to discuss.

Greg

On Thu, Jan 9, 2020 at 2:48 PM Humphreys, Kyle <Kyle.Humphreys@colliersprojectleaders.com> wrote:

Hello Greg,

Any luck with the letter of support today?

Regards,

Kyle Humphreys P.Eng., PMP
Senior Project Manager – Team Lead
From: Ed Dehgahgotie <ed@dehgahgotie.ca>
Sent: January 8, 2020 5:35 PM
To: Humphreys, Kyle <Kyle.Humphreys@colliersprojectleaders.com>
Subject: Re: Contact for Dene Council

Sorry about that. As attached. Letter of support to come tomorrow.

Greg

On Wed, Jan 8, 2020 at 9:50 AM Humphreys, Kyle <Kyle.Humphreys@colliersprojectleaders.com> wrote:

Good morning Greg,

No I did not receive it. Are you able to resend?

Regards,

Kyle Humphreys P.Eng., PMP
Senior Project Manager – Team Lead

From: Ed Dehgahgotie <ed@dehgahgotie.ca>
Sent: January 8, 2020 11:49 AM
To: Humphreys, Kyle <Kyle.Humphreys@colliersprojectleaders.com>
Subject: Re: Contact for Dene Council

TY. So you are saying you did not get my email with the hand writtenen proposed site and letter of support for the drilling?

Please advise,

Greg
Hello Greg,

I just wanted to check in because I hadn’t heard back from you. Any update on the make up of the site plan to show your proposed reservoir location?

Regards,

Kyle Humphreys  P.Eng., PMP
Senior Project Manager – Team Lead

From: Humphreys, Kyle
Sent: December 18, 2019 7:52 PM
To: 'Ed Dehgahgotie' <ed@dehgahgotie.ca>
Subject: RE: Contact for Dene Council

You sure can. Please call 867-689-5183

Regards,

Kyle Humphreys  P.Eng., PMP
Senior Project Manager – Team Lead

From: Ed Dehgahgotie <ed@dehgahgotie.ca>
Sent: December 18, 2019 5:47 PM
To: Humphreys, Kyle <Kyle.Humphreys@colliersprojectleaders.com>
Subject: Re: Contact for Dene Council

TY. Can I call you tomorrow late morning.

TY,
On Tue, Dec 17, 2019 at 5:29 PM Humphreys, Kyle <Kyle.Humphreys@colliersprojectleaders.com> wrote:

Good evening Mr. Nyuli,

I can be available to answer any of your questions and would like to offer sometime tomorrow morning. This is a time sensitive item for the Hamlet, so the sooner we can speak, the better.

Is there a time you would like to reach out? My 867 number or email are the best places to reach me. Mahsi.

Regards,

Kyle Humphreys P.Eng., PMP
Senior Project Manager – Team Lead

From: Susan Christie <sao@fortprovidence.ca>
Sent: December 17, 2019 6:20 PM
To: Humphreys, Kyle <Kyle.Humphreys@colliersprojectleaders.com>
Cc: ed@dehgahgotie.ca
Subject: RE: Contact for Dene Council

Hi Kyle,

I am putting you in contact with Greg Nyuli, the ED for the Dene Council, who is cc’d on this email.

Greg advised that their Council had some questions when considering the Hamlet request for support for the geotech permit application. I am hoping some of their questions, etc. can be addressed with your assistance.

Greg: please see Kyle’s contact information below.

Mahsi,
Susan
Hamlet of fort Providence

Kyle Humphreys P.Eng., PMP
Senior Project Manager – Team Lead

COLLIERS PROJECT LEADERS
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230 – 2237 2nd Avenue, Whitehorse, Yukon, Y1A 0K7
Whitehorse: 867.698.5183 | Ottawa: 613.617.0936
kyle.humphreys@colliersprojectleaders.com

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December 17, 2019

Deh Gah Go’tie Dene Council
P.O. Box 200
Fort Providence, NT
X0E 0L0

Attention: Chief Joachim Bonnetrouge

Re: Land Use Permit Application
Support for Proposed Water Storage Reservoir

As you are aware, the Hamlet of Fort Providence has hired Stantec Architecture Limited (Stantec) to provide engineering design to upgrade the community’s water treatment and supply system. A component of this upgrade will include the construction of a water storage reservoir that will hold up to 7 months of emergency water supply. The existing Water Treatment Plant intake pipes and wet well are at risk of ice damage and potential low water levels that could leave the community without immediate access to drinking water. In addition, the plant’s water storage for fire flow is insufficient to meet the Territory’s regulations. The construction of a new reservoir within the community limits will allow the community to access drinking water and provide sufficient fire flow capacity in the event of an emergency.

The next phase of the project is to complete a small drilling operation at each of the potential sites for the new reservoir to test the soil and determine which site is best for the consultation. Stantec has drafted a letter describing the drilling procedures required to support the site selection. Please review the attached letter.

As a community partner, we are requesting your support which is required in order to have Stantec complete the Land Use Permit application to drill.

We look forward to your support.

Mahsi,
HAMLET OF FORT PROVIDENCE

[Signature]
Danny Beaulieu
Mayor

96.
Please sign below to show your Council's support for the site selection investigation.

As per DG6DC amended map.

Deh Gah Go'tie Dene Council: \hspace{2cm} Witness:

Name: Joachim Bonnetrouge \hspace{2cm} Name: Greg Nyuli
Title: Chief \hspace{2cm} Title: A/Ex. Dir.

DG6DC also would like a meeting on potential plan and their concerns.

Also, any site prep on DG6DC lands must have their approval.
- fire guard.
- coast guard.
- Kurtis beside Jason.
Thank you Scott.

Hello Kyle and Susan,
As discussed today, please find the updated location drawing attached showing the Option #1 location moved back behind the firebreak but away from the wet, low lying area. Can you please reach out to all three parties involved again to confirm that this revised location is acceptable to everyone. Please let me know if you have any questions.

Regards,

**Steffen Karl, P.Eng.**
Associate, Materials Engineer

Direct: 867 920-2982 x231
Mobile: 780 239-8710
Steffen.Karl@stantec.com

2nd Floor, 4910 53 Street, PO Box 1777
Yellowknife NT X1A 2P4

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Good Afternoon Susan, Arlen, Steffen and Kyle,

Thank you for taking the time on short notice for a phone call regarding the Fort Providence Water Treatment Project and Wet Well Repair. This email summarizes our discussion today.

**Drilling Permit Application**
Stantec will revise the *Reservoir Location Options* drawing to reflect the proposed change to Location #1 submitted by the Dene council with their signed letter of support. Stantec will then proceed to submit the application for the drilling permit tomorrow, January 23, 2020 with the letters of support that have been received. An updated drawing and revised letters of support will be issued to the Hamlet Council, Metis Council and Dene Council for the proposed change to Location #1 in anticipation of potential follow-up from the Mackenzie Valley Land and Water Board on the drilling location, but delivery of these letters will not delay submission of the permit application tomorrow.
**Wet Well Ice Cap Repair**

The wet well has been covered by and may be encased in ice (photo attached). When the ice moves/melts it may exert pressure on the exposed valve stems and manhole cover, and shear them off. If either of these events were to occur, it is unknown if access to the wet well will be obstructed or damage to the valves will occur and impact raw water supply to the water treatment plant. If supply is disrupted it can be mitigated by pumping raw water from the river into the wet well or directly into the water treatment plant.

As repair of the ice cap may not be feasible before break-up, a plan should be prepared for the alternative raw water supply. The wet well should be monitored on a daily basis during break-up to inspect for damages or potential damages to determine if the alternative raw water supply is required.

**Design Phase**

Stantec thinks that the design of the Water Treatment Plant can be taken to 66% construction documents and that the New Reservoir can be taken to schematic design by March 31, 2020. It is unknown if CWWF funding will be available for this project after March 31, 2020. Therefore Stantec will require approval from the Hamlet to proceed to work on the Consecutive Deliverables of the Engineering Service Agreement, and any work undertaken after March 31, 2020 will require approval from the Hamlet. It is recommended that the Engineering Services Agreement signed by Stantec and dated March 11, 2019, be signed by the Hamlet. The Stantec Signed document is attached to this email.

We recommend a design kick-off meeting be held with all parties after the agreement is signed to realign everyone on this project’s direction.

Regards,

Scott McFadyen P.Eng.
Senior Project Manager
COLLIERS PROJECT LEADERS
Mobile 867.445.4464
203 – 349 Old Airport Road | Yellowknife NT X1A 3X6 | Canada
colliersprojectleaders.com
Good Morning Steffen and Arlen,

Please see below confirmation of support of the amendment to Reservoir Location Option 1 from Deh Gah Go’tie Dene Council.

Regards,

Scott McFadyen P.Eng.
Senior Project Manager
COLLIERS PROJECT LEADERS
Mobile 867.445.4464

Hi Scott,

Here is confirmation from the Deh Gah Go’tie Dene Council office regarding the amended plan.

Let me know if you need any other info.

I will also follow up with the Metis office and try to have their response before the end of the day.

Thanks,

Susan
Hamlet of Fort Providence

TY. Yes, this is the amended plan the DGGFN supported at their December 17, 2019 regular
Hi Greg,

Please confirm support from your office/Council for drilling operation at revised location (as shown on attached site map).

Mahsi,

Susan
Hamlet of Fort Providence

---

From: McFadyen, Scott <Scott.McFadyen@colliersprojectleaders.com>
Sent: Thursday, January 30, 2020 1:19 PM
To: Susan Christie <sao@fortprovidence.ca>
Cc: Humphreys, Kyle <Kyle.Humphreys@colliersprojectleaders.com>
Subject: Fort Providence WTP - Land Use Permit Application Support

Hello Susan,

Our design consultant has incorporated an amendment to Reservoir Location Option 1 in the attached Site Plan. Deh Gah Gotie Dene Council requested that Proposed Location 1 be placed West of the Fire Break in their Letter of Support for the Land Use Permit application for drilling. The application submitted to the Mackenzie Valley Land and Water Board incorporated this amendment.

Our consultant has requested confirmations of support from the Incorporated Hamlet of Fort Providence, Deh Gah Gotie First Nation and Fort Providence Metis Nation for the drilling operation at revised Location Option 1 and original Location Option 2 shown on the attached Site Plan. Confirmation by email will be sufficient.

Thank You,

Scott McFadyen P.Eng.
Senior Project Manager
COLLIERS PROJECT LEADERS
Mobile 867.445.4464
203 – 349 Old Airport Road | Yellowknife NT X1A 3X6 | Canada
Good Morning Steffen,

The Fort Providence Metis Council has confirmed support for the amendment to Reservoir Location Option #1 as per below email.

Regards,

Scott McFadyen P.Eng.
Senior Project Manager
COLLIERS PROJECT LEADERS
Mobile 867.445.4464

Hi Scott,

Here is a brief email from Metis Council advising they are okay with the revised site plan.

Have a great weekend.

Susan
Hamlet of Fort Providence

Received Clifford’s response that the Metis Council is okay with the alterations of the site. Is an email okay.
Or a letter is required.

Pearl Leishman
Executive Director
Hi Pearl,

Please confirm that the Metis are in support of the revised site plan for the Hamlet’s Land Use Permit.

It would be great if you could get back to us today.

Thanks,

Susan
Hamlet of Fort Providence

Hello Susan,

Our design consultant has incorporated an amendment to Reservoir Location Option 1 in the attached Site Plan. Deh Gah Gotie Dene Council requested that Proposed Location 1 be placed West of the Fire Break in their Letter of Support for the Land Use Permit application for drilling. The application submitted to the Mackenzie Valley Land and Water Board incorporated this amendment.

Our consultant has requested confirmations of support from the Incorporated Hamlet of Fort Providence, Deh Gah Gotie First Nation and Fort Providence Metis Nation for the drilling operation at revised Location Option 1 and original Location Option 2 shown on the attached Site Plan. Confirmation by email will be sufficient.

Thank You,

Scott McFadyen  P.Eng.
Senior Project Manager
COLLIERS PROJECT LEADERS
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