

Nanton Regional Water Supply Information Brief

To: Town of Nanton Council

From: Adam Sullo, P.Eng. | Project Manager

Date: April 7, 2025

Purpose:

The purpose of this brief is to provide an update on the progress associated with the Regional Water Supply project. The goal of this project is to solve the long-term water supply needs for the Town of Nanton.

Background:

A project kick-off meeting was held in January of this year. After this meeting a Project Management Plan (PMP) and Project Risk Assessment were completed in early February.

The Project Management Plan outlined:

- Project background including project objectives
- A current scope of work
- The project schedule
- A quality management plan
- A list of internal and external contacts
- A communications plan

Scope of work and Schedule

The scope of work, as noted above, is focused at this time on project feasibility, prior to moving ahead with detailed design. This includes tasks such as confirmation of the water source with the Town of High River, and the water supply corridor. This will be outlined further below.

The current project schedule, which aligns with our current scope of work is as follows:

Task	Start Date	Completion Date
Project Kick-Off	January, 2025	January, 2025
High River System Review	February, 2025	May, 2025
Water Supply Corridor Analysis	May, 2025	August, 2025
Water Network Modelling Analysis	June, 2025	August, 2025
Water License Review	March, 2025	June, 2025
Intermunicipal Agreement Facilitation/Agreement Generation	May, 2025	October 1, 2025
Stakeholder Management	January, 2025	TBD
Design Consultant Procurement	January, 2026	March, 2026
Preliminary Design	April, 2026	July, 2026
Detailed Design	August, 2026	December, 2026
Construction Tendering	January, 2027	March, 2027
Construction	May, 2027	May, 2028

Project Risk Assessment

The first step in the process of preparing the risk assessment is the identification of project risks. These risks were developed and placed into several risk categories including:

- Operational
- Financial
- Health, Safety and Environment
- Strategic
- Technical
- External

Each risk is scored on two separate categories, from a scale of 1 to 5, scale of likelihood and impact. The scale of likelihood is an identification of the likelihood that the risk would come to fruition, a score of 1 being very unlikely and a score of 5 being very likely. The scale of impact is a measure of the impact on the project, with a score of 1 being negligible and a score of 5 being catastrophic. These

scores are multiplied by each other to give an overall risk score for each risk identified. A graphical representation is given of this below.

Risk Assessment Matrix

		SCALE OF IMPACT				
		NEGLECTIBLE (1)	LOW (2)	MODERATE (3)	SIGNIFICANT (4)	CATASTROPHIC (5)
SCALE OF LIKELIHOOD	VERY UNLIKELY (1)	VERY LOW	VERY LOW	LOW	LOW	MEDIUM
	NOT LIKELY (2)	VERY LOW	LOW	MEDIUM	MEDIUM	MEDIUM
	POSSIBLE (3)	LOW	MEDIUM	MEDIUM	MEDIUM	HIGH
	LIKELY (4)	LOW	MEDIUM	MEDIUM	HIGH	CRITICAL
	VERY LIKELY (5)	MEDIUM	MEDIUM	HIGH	CRITICAL	CRITICAL

The significant and critical risks within this project relate to a few key areas:

- **High River Water Supply:** High River has expressed concerns over the immediate viability and long-term sustainability of the aquifer that supplies their current water plant. In addition, understanding the current High River water plant capacity is important for both short- and long-term planning.
- **Water License Transfers:** Some of the existing water licenses that Nanton holds may be transferred north, while others may not. There are also parties interested in the existing water licenses that may not be transferred.
- **Project Costs:** The costs of this project could exceed the grant that Nanton has obtained. The primary concerns would be the availability of a utility corridor within existing rights-of-way to avoid land acquisition. In addition, costs after completion with regards to water loss will be critical for Town Operations.

These risks would all be catastrophic to the project and would require an entire change in direction. Several other moderate and low risks were identified but primarily related to management through design and construction of the waterline.

Our current scope outlined above are currently focused on addressing catastrophic risk, progress on these is outlined below

Current Progress:

High River Water Supply

Initial meetings were held with the Town of High River administration. As noted above, the Town of High River's main concern is around water supply and confirming the suitability of the aquifers in the area to support additional flow for the Town of Nanton, particularly focused on times of drought. In addition, the Town of High River would like to confirm the capacity of their existing water treatment plant to ensure that it can support the additional demand today. Resulting from these meetings we have the following tasks being undertaken:

- Gathering of water well data collection information from the Town of High River.
- Engaging with a hydrogeological consultant to review data collection and determine the ability to update the aquifer model to satisfy the questions by the Town of High River
- Developing a plan to stress test the High River water treatment plant to confirm its capacity and ability to support additional demand today.

We anticipate that these items will be concluded by June of this year.

Water License Transfers

Initial conversations were held with Alberta Environment to determine the possibility of transferring water licenses from Mosquito Creek to wells located within the Town of High River. The initial conversation was positive and there will be some administrative items that will need to be addressed as part of the application process.

There are fewer and fewer licenses that are available on the Highwood that could be transferred. If opportunities become available they may be on short notice due to this fact and may be difficult to act on quickly.

Project Costs

The preliminary report indicated an installation alignment of the waterline within the abandoned CP Rail right-of-way. The abandoned right-of-way has a varied group of owners, including CP Rail and other private owners. Acquisition of this property will increase project costs to a level above what is being provided with the grant.

Meetings have been held with both Foothills County and MD of Willow Creek. The primary purpose of these meetings was to discuss the installation of the waterline within existing rights-of-way. In both cases administration at both the MD and the County seemed supportive but, in both cases, this will

require approval by each of the Councils. As part of these submissions a conceptual level design will be required.

The intention is to proceed with the conceptual design after confirmation of the water supply from the Town of High River. This is being done to preserve resources on the project. The schedule to be in front of both Councils is anticipated to be before the end of the summer.

In addition to property acquisition, we have identified water loss to be a significant risk to cost upon completion of this project. Water loss within the Town of Nanton's water system, while significant, does not cost the Town much due to the previous investments in treatment infrastructure. Purchasing water from another source will quickly amplify these costs for lost water. The intention is to complete a rate study for presentation to the Town Council in early fall of this year to better understand these implications, along with what is being done to address these issues.

Province Updates

We recently met with Alberta Transportation and Alberta Environment to discuss the progress on the project. Alberta Environment will be performing a review of the hydrogeological scope of work for the Town of High River aquifer to provide additional guidance which may be helpful. We are committed to monthly updates in the upcoming months with the province.

Next Steps:

The plan is to continue to confirm major feasibility items, as noted above, to be alleviated by early to mid-summer this year. Once we have confidence in these areas the next steps will be to confirm agreement details with both the Town, the County and the MD, clearing risks with the installation corridor, identifying any regulatory or property risks in construction prior to preparing an RFP for engineering design.

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