

Water Sources

Known water sources and preliminary rankings

The feasibility study is evaluating several water sources for a future intake. The options below are being reviewed based on several factors. This table is our current understanding, and through community participation we hope to learn more about these options.



Meets our criteria



We don't know /
not enough information



Does not meet
our criteria

Evaluation criteria	A Delta Lakes and Channels (PURPLE on the map)	B Northeast of Fort Chipewyan (ORANGE on the map)	C Lake Athabasca Current Intake (YELLOW on the map)	D Lake Athabasca (Deeper Water) (TEAL on the map)	E Groundwater (RED BOXES on the map)
Volume	Many lakes and channels. Long-term availability uncertain. May not meet municipal demand.	? Water bodies may not provide sufficient volume. Limited data available.	X Sufficient water supply. Stable over the long term.	Sufficient and reliable water supply.	X Existing well data suggests insufficient supply.
Stability & Reliability	X Shallow water with high sediment. Ice build-up can impact intake.	? Rocky lake bottoms provide stability. Ice build-up may impact intake. Spring run-off may affect sediment and quality.	? Sediment levels vary near shoreline. Influenced by Delta conditions.	Less affected by sediment. Less impacted by water level fluctuations. Deep water avoids ice impacts.	Not affected by ice. Generally stable source.
Quality	? Lower risk during river flow reversals. Water quality not fully tested. Potential industrial contamination. Possible taste and odour issues.	? Fed by rainfall and snowmelt. Water quality not yet tested.	Higher sediment levels are possible due to proximity risk from the Delta. Potential risk of contamination from treated waste water (reverse flow). Potential risk of contamination from industrial operations.	Lower sediment and contaminant concentrations. Reduced risk from wastewater (reverse flows).	? Higher metal content expected. Risk of influence from surface water. Requires further testing.
Cost & Constructability	X Pipeline through bedrock required. New pump station needed. Some locations within National Park boundary.	X Pipeline through bedrock required. New pump station needed.	Existing pump-house may be reused. Existing piping may be partially reused.	Pipeline installation technically challenging. May avoid bedrock blasting. Existing infrastructure may be reused.	? Requires drilling and testing. No guarantee of sufficient quantity/quality. Potential treatment upgrades required.

Regional Municipality of Wood Buffalo

Fort Chipewyan Lake Intake Relocation Feasibility Study

Join the community conversation on the Fort Chipewyan Water Intake Relocation Project

A feasibility study is underway to evaluate alternative water sources for the municipal water treatment plant in Fort Chipewyan. Community members are invited to join the conversation, share their knowledge and experiences, and provide feedback on the options being considered.

Community feedback is an important part of this project and will help guide final recommendations to reflect local knowledge and community priorities, now and into the future.

To learn more about the project and complete the survey online, visit rmwb.ca/FCWaterIntake. Please provide your feedback using any of the options below.

Community Open House

April 15, starting at 5:30 p.m.,
Mamawi Hall

Join the conversation: learn about the project, ask questions, and share your thoughts with the project team.

Drop-in Session

Drop in to the Fort Chipewyan Municipal Contact Office on April 16 any time between 10 a.m. and 4 p.m. for coffee and treats to discuss the project and share your ideas.

Take the Survey

Complete the survey online or in person at the Fort Chipewyan Municipal Contact Office by April 30. The survey can also be completed at the in-person events.

Project Introduction

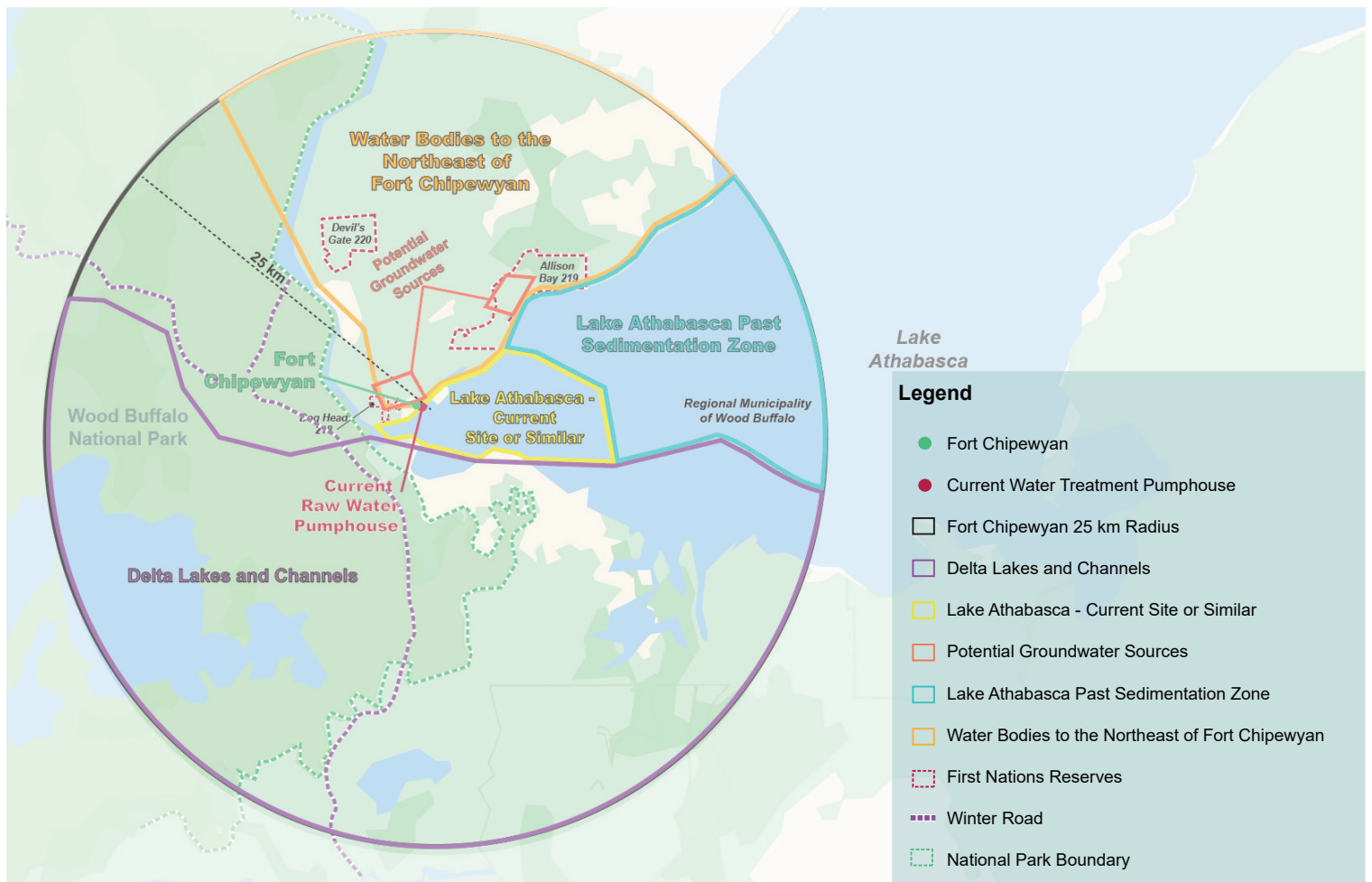
The Regional Municipality of Wood Buffalo is evaluating options for a new or improved water intake for Fort Chipewyan.

This work is part of a multi-year feasibility study focused on long-term water quality, reliability, and community needs.

Community and Indigenous knowledge, alongside technical studies, will help guide decision-making.



Water Sources for RMWB



Project Overview

The Municipality is evaluating water-supply options for the Fort Chipewyan water treatment plant as part of a multi-year project. Your feedback will inform which water sources move forward to detailed testing and planning.

Phase 1: Community conversations and early studies. This phase will involve identifying and evaluating alternative water sources. This includes:

- Public engagement with the Nations and community members.
- Studying today's intake and new options.
- Collecting water samples and testing.
- Identifying early environmental and construction considerations for each source of water.
- Community update on findings and the water source selected for detailed review in Phase 2.

Phase 2: Confirm options with detailed testing and planning. This phase will involve a more detailed technical review and investigation of the source selected in Phase 1. This includes:

- Sampling the selected water source across seasons for up to one year to understand variations in quality.
- Identification of more in-depth environmental and construction considerations.
- Community update on findings.
- Presentation of findings and recommendations to Municipal Council.

Concerns we have heard

Through past community discussions and feedback, several concerns about the current water source have been raised, including:

- Potential pollutants from upstream industrial operations.
- Contamination around Big Dock.
- Water quality concerns during periods when the Slave River reverses flow due to ice dams, which can direct treated wastewater from sewage lagoons toward Lake Athabasca.
- Long-term sustainability of the current water source as water levels fluctuate in the Delta and wind is known to create backflow into Lake Athabasca.
- Sediment build-up in shallow water.
- Increased potential for algae in shallow waters.

What is needed for a freshwater intake

For a municipal water intake to work long term, several conditions need to be met:

1. Sufficient water volume: The water treatment plant requires about 1,200 cubic meters of water per day, or 264,000 imperial gallons per day.

2. Stable and reliable source: The intake location must provide water consistently year-round and not be heavily affected by:

- Changing water levels, both from seasonal changes and long-term climate change
- Sediment movement or build up
- Weather and seasonal changes like ice build-up, shallow water, and algae growth

3. Good water quality: The water source must be suitable for treatment and meet Canadian Drinking Water Quality Guidelines after treatment.

4. Construction and cost considerations: In addition to water supply and quality, practical considerations also matter when evaluating locations for the water intake, including:

- The cost of bringing water from the intake to the water treatment plant
- Upgrades or changes required at the plant
- Long term maintenance costs for the water intake system