



## REQUEST FOR DECISION

**TO:** Mayor and Council

**FROM:** Reiley McKerracher, Director of Municipal Services

**SUBJECT:** Town of Nanton - Regional Water Study

<b>Date:</b>	October 5, 2023
<b>Meeting Date:</b>	October 23, 2023

**RECOMMENDATION:** **WHEREAS** the Town of Nanton has completed a regional water study which indicates a pipeline from High River to Nanton for treated water may be feasible,

**AND WHEREAS** the Town of Nanton has requested formal support from the Town of High River to be able to pursue Water for Life funding for the regional potable water connection between the two municipalities.

**BE IT RESOLVED THAT** Council give conditional support to the Town of Nanton's regional potable water initiative. The conditions are as follows:

1. Proving the Town of High River's aquifer has the necessary capacity under drought conditions to service the Town of Nanton,
2. That an understanding be found with regards to a future rate structure,
3. That the Town of High River water treatment plant be stress tested to ensure adequate filter capacity,
4. That no Town of High River water license will be used to service Nanton, or any other outside user,
5. That Nanton must provide their own water license to be applied to Town of High River Headworks, and
6. All work shall be completed at no cost to the Town of High River, excluding staff time.

<p><b>CHIEF ADMINISTRATIVE OFFICER'S COMMENTS:</b> Administration supports the proposed recommendation.</p>
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### IMPLICATIONS OF RECOMMENDATION

**GENERAL:**

The Town of Nanton has significant issues with regards to its water supply. In trying to address the supply challenges (both quality and quantity), Nanton has looked at a regional pipeline to the Town of High River.

**ORGANIZATIONAL:**

There is minimal administrative impacts for proceeding with the initiative at this time. Most work will be led by Nanton as they receive funding.

**FINANCIAL:**

While Nanton's initiative would not have an immediate capital cost to the Town of High River, it may accelerate improvements needed. The rates changed to Nanton would need to take this into account.

**POLICY:**

This is a regional initiative that supports the Calgary Metropolitan Regional Board's vision.

Previously the Town of High River passed the following resolution with respect to future water agreements:

Council Resolution 198/2012 Carried April 23rd, 2012

Council resolves that any future water policy or agreement placed before it conforms to the following conditions and restrictions before approval:

1. That the first priority of present and future use of water resources is for the needs of the residents and ICI establishments within the boundaries of the Municipality of High River subject to the extent of the water supply and licensed allocation to withdraw.
2. That policies be adopted to enhance and extend the water supply by promoting best management practices of water use through innovation, conservation, efficiency and productivity in accordance with the Provincial "Water for Life" strategy as amended over time.
3. That any external exports of water to outside users be subject to the following conditions:  
That any allocation be predicated upon the availability of water supply after the first priority (1. Above) is taken out;  
That if any allocation results in capital expenditures for utility system upgrades, those costs be borne by the proponents;  
That any allocation be supported fully by water license(s) that pertain to the Highwood River;  
That a set term agreement be signed by the proponents incorporating the above conditions and any others that may pertain to each specific situation.

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**Strategic Plan**

**IMPLEMENTATION:**

Administration will inform the Town of Nanton of Council's decision. No further action is required from the Town of High River at this time.

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**BACKGROUND:**

The Town of Nanton has completed a study to evaluate the viability of a regional water system between Nanton and High River. See Attachment 1 for the complete study.

The issue of long-term water security has been of concern to the Town of Nanton for several years. The Town of Nanton explored a regional potable water connection from High River to Nanton to address its water security concerns.

The study looked at the following and concluded:

1. The capacity for the Town of High River's water treatment plant was evaluated. The facility requires some upgrades, such as distribution pump upgrades. However, sufficient filter capacity existed for serving both municipalities until 2042. The reports suggest stress testing of High River's water treatment plant take place to confirm the filter capacity.

2. Hydrogeological review that indicated High River's well field could support the additional draw of Nanton.
3. Upon review of the cost (\$14,951,000) and funding (regional grants), the project is feasible.

Following the issuance of the final draft of the report on August 1st, 2023 and subsequently on August 14th, 2023, the following resolution was carried by the Council of Nanton:

**RESOLUTION #207 - 23/08/14 - Czop**

Moved that Council adopt a formal approach of pursuing a treated water supply via pipeline from the Town of High River within the next 4-8 years to replace the Mosquito Creek and Spring Line raw water supplies, subject to periodic review. CARRIED.

With the passing of the above resolution, the Town of Nanton has now asked for formal support from the Town of High River (Attachment 2).

While drafting the report, the Town of Nanton consulted with High River Administration. Through this process, MPE Engineering, on behalf of the Town of Nanton, examined the capacity of High River's water treatment plant, distribution network (and impacts a connection on fire flows) and aquifer. Upgrades to High River systems will require additional wells, a new high lift pump and a filter backwash upgrade. These upgrades are included in the cost.

There was considerable discussion regarding the Town of High River's aquifer. To give this context, we must first review existing licensing applied to the Town of High River's headworks and the Sustainable Water study completed in 2013 (Worley Parsons provided a Supplemental Update in 2015; see Attachment #3) regarding High River's aquifer.

The licenses that are assigned through the Town of High River headworks are as follows:

<b>Licensee</b>	<b>License</b>	<b>Annual Licensed Diversion (m3)</b>
High River	00045674	2,522,273
High River	00045675	990,910
High River	00045676	1,110,910
Cargill	00242986	1,110,134
Cargill	00028480	1,180,442
Foothills County (Cayley)	00294438	86,344
Foothills County	00017846	119,648
Foothills County (Springbank)	00017172	2,467
Nexen Inc.	00030425	69,075
Foothills County	DAUT0012242	25,533
Foothills County	DAUT0012272	70,310
Foothills County	DAUT0012266	25,534
	<b>Total</b>	<b>7,313,580</b>

The table above does not allow for other licenses in the aquifer, such as Corbett (36,000 m3), Highwood Distillers (55,000 m3), or Highwood Golf and Country Club (123,348 m3), which pull from the aquifer but not through our headworks.

The County's agreement (2022) for water with the Town permits an annual quantity of 370,044 m3 per year (excluding Cayley and Cargill). As such, they still have the ability to transfer up to an additional 126,552 m3 in licensing to the Town of High River's headworks.

Worley Parsons concludes from the aquifer model that our simulated annual production is 9,380,000 m3 annually. During drought conditions, this capacity drops to **6,310,000 m3** annually. Assuming all licenses were fully utilized and the County transferred the additional 126,552 m3, this would require water conservation measures that achieved a 15% reduction in consumption annually.

The difference between the total licensed quantity versus the aquifer's drought capacity is assumed to be made up by water conservation measures. The Town of High River's aquifer is fully licensed based on its drought capacity.

MPE Engineering's sub-consultant, Waterline Resources, reviewed the Town of High River's sustainable water study and suggested that should the model used in the study be refined, there may be more water than stated. They pointed to some likely conservative assumptions and the need for further pump testing. Furthermore, Nanton's water currently comes from Woman's Coulee, which comes from the Highwood River. Since Woman's Coulee and High Rivers aquifer are fed from Highwood River, this amounts to transferring a diversion point, not a new allocation being applied to the aquifer. The aquifer model does include the Woman's Coulee diversion. Waterline Resources were confident that should an updated hydrogeological investigation be undertaken and the High River aquifer model refined, it would show the water required by Nanton would be available.

High River Administration recommends that proceeding with the Nanton project is feasible, contingent on first updating the High River aquifer model. The Town of Nanton wishes to pursue Water for Life grant funding for the project. Beyond staff time, there should be no direct cost to the Town.

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**Report / Document:**

Attached:

Available:

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**KEY ISSUE(S)/CONCEPT(S):**

Does the Town of High River have sufficient raw water to supply the Town of Nanton, and if so, should the Town of High River provide potable water to the Town of Nanton.

**DESIRED OUTCOMES:**

That Council conditionally support the Town of Nanton's request to pursue Water for Life funding for the regional potable water connection between the two municipalities.

**COUNCIL'S OPTIONS:**

1. Council could choose to support the proposed recommendation.
2. Council could choose to not support the proposed recommendation and defeat the motion.
3. Council could choose to refer the proposed recommendation to a Committee of the Whole meeting for further discussion.

**RECOMMENDED:**

That Council provide conditional support to Nanton's regional water initiative.

**COMMUNICATIONS:**

Following Council's decision, a letter will be written to the Town of Nanton indicating if we support the initiative, and if we do, what the Town of High River conditions are.

Reviewed by:

- David Crain, Manager of Financial Services
- Reiley McKerracher, Director of Municipal Services
- Sheron Ward, Legislative & Advisory Services Advisor
- Jody Hipkin, Manager of Legislative and Advisory Services
- Chris Prosser, Chief Administrative Officer

Status:

- Approved - 12 Oct 2023
- Approved - 12 Oct 2023
- Approved - 12 Oct 2023
- Approved - 13 Oct 2023
- Approved - 17 Oct 2023