

**STAFF REPORT**

**TO:** Warden and Members of Shelburne Municipal Council

**FROM:** Warren MacLeod, Chief Administrative Officer,

**APPROVED BY:** Warren MacLeod, Chief Administrative Officer

**DATE:** June 24<sup>th</sup>, 2026

**SUBJECT:** **Water Projects**

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**PURPOSE**

To provide Council with information and recommendations regarding three water-related projects currently under consideration:

1. Oneka Desalination Project;
2. Shelburne Community Well Project; and
3. Bulk Fill Water Station Project.

**BACKGROUND**

Access to safe and reliable drinking water continues to be a concern for a number of residents throughout the Municipality of the District of Shelburne. Changing weather patterns, prolonged drought conditions, flooding events, and saltwater intrusion have increasingly impacted private wells throughout the region. Community members have continued to express concerns regarding access to safe drinking water, particularly during periods when private wells become contaminated or unusable. The Municipality has therefore explored a number of options intended to improve water security and provide access to potable water for residents in need.

Staff have reviewed three separate projects and provide the following analysis and recommendations for Council's consideration.

***1. Oneka Desalination Project***

The Municipality has received information regarding a proposal from Oneka Technologies to provide potable water through a desalination system. While the project may offer an alternative source of drinking water, staff have significant concerns regarding the financial risks associated with the proposal. The project would require the Municipality pay an initial capital contribution of \$95,000 and

to commit to minimum annual payments of ~\$255,000 regardless of actual water sales. This minimum payment is based on Oneka providing 26,335 M3 of water per annum at a price of \$9.68 / M3. Based on analysis of bulk water sales by the Municipality of West Hants, staff believe potential water sales could possibly be as much as 8,000 M3 (although this is purely a rough educated estimate), well short of the minimum payable amount of 26,335 M3.

At present, the Municipality does not have reliable information regarding:

- The number of residents who would utilize the service;
- The frequency with which residents would purchase water;
- The volume of water that would be sold annually; or
- Whether demand would be sufficient to offset the Municipality's financial obligations under the agreement.

Staff are concerned that revenues generated through the sale of water may fall well short of the minimum annual payment required by Oneka, resulting in a financial burden being borne by municipal taxpayers. Given the uncertainty surrounding demand and the potential exposure to ongoing operating costs, staff do not recommend proceeding with the project at this time.

Should Council wish to revisit the proposal in the future, staff recommend that further analysis be undertaken to better understand demand projections, anticipated revenues, and the overall financial sustainability of the project.

## ***2. Shelburne Community Well Project***

The Shelburne Community Well Project is a collaborative initiative involving SEED, Nova Scotia Community College (NSCC), the Municipality of the District of Shelburne, and other community partners. The project proposes the construction of a treated community well system at the NSCC Shelburne Campus to provide free potable drinking water to residents who require access to safe drinking water. The facility is intended to provide drinking water only and is not designed to serve as a bulk water fill station. Council has previously expressed support for the project through resolutions adopted on September 25, 2024.

The SEED project team has completed significant preliminary work, including well testing, feasibility assessments, design development, and funding research. The proposed facility would utilize an existing high-yield well located on the NSCC Shelburne Campus and include a small pumphouse and treatment system.

SEED is currently updating the project's capital cost estimates and identifying funding opportunities to support construction. Staff understand that the objective is to complete construction and begin operation next spring, subject to securing sufficient funding.

Staff have also worked with the Town of Shelburne on a proposed partnership arrangement. Under the proposed model:

- Ownership of the facility would transfer to the Municipality following completion of construction;
- The Municipality would assume responsibility for annual operating and maintenance costs;
- The Town of Shelburne would provide certified water operator services as an in-kind contribution, including operation of the treatment system, water quality monitoring, regulatory reporting, and sampling requirements.

It is anticipated that the facility would operate seasonally from April through December each year.

Staff believe the project provides a practical and affordable means of providing safe drinking water to residents experiencing well-water challenges while minimizing capital costs through the pursuit of external funding opportunities.

### ***3. Bulk Fill Water Station Project***

The Town of Shelburne has developed a proposal to construct a regional bulk fill water station that would allow residents and commercial users to access treated municipal water on a self-service basis as per the previous presentation to Council. The proposed facility would be located adjacent to the Shelburne Community Centre and would include an automated payment and metering system capable of operating year-round.

The project is intended to improve regional water security and provide a reliable source of bulk potable water during periods of drought or well failure. The proposal contemplates a partnership between the Town of Shelburne and the Municipality of the District of Shelburne.

Staff have reviewed information provided by Town staff outlining two potential funding scenarios. Depending on the grant funding secured, the Municipality's contribution would range from approximately \$20,000 to \$62,500. The project would leverage external funding wherever possible while providing a long-term water security asset for the region.

Staff support the project in principle and recommend participation subject to the funding arrangements outlined by the Town.

## **BUDGET IMPLICATIONS**

### ***Oneka Desalination Project***

The Oneka proposal would require the Municipality to enter into a long-term financial commitment involving minimum annual payments. Due to uncertainty regarding customer demand and water sales volumes, staff are unable to determine whether revenues generated through water sales would be sufficient to offset these obligations. Staff are therefore concerned that the Municipality could be required to subsidize ongoing operating costs through taxation.

### ***Shelburne Community Well Project***

The capital cost estimate for the Community Well Project is currently being updated by SEED. Previous project estimates indicated a total project value in excess of \$200,000, with funding anticipated from a combination of grants and partner contributions. The Municipality would have no obligations to contribute towards the capital costs of the community well.

The Municipality's primary financial responsibility is expected to be the ongoing operation of the facility following construction and transfer of ownership.

Staff have developed preliminary annual operating cost estimates of approximately \$25,800 which include:

- Electrical costs associated with operation of pumps, heating, treatment equipment, lighting, and seasonal operation of the facility;
- Water quality testing and laboratory analysis;
- Consumable treatment supplies, including filters, ultraviolet disinfection components, chlorination products, and other treatment materials;
- Routine maintenance and repairs;
- Seasonal opening and closing of the facility;
- Insurance and administrative costs;
- Emergency repairs and equipment replacement reserves.

A significant portion of operational expertise is anticipated to be provided by the Town of Shelburne as an in-kind contribution through the provision of a certified water operator. This arrangement will reduce operating costs to the Municipality while ensuring the facility is operated in accordance with provincial requirements.

Staff estimate annual operating costs to be in the range of \$25,800; however, because the Municipality has never owned or operated a facility of this nature, these estimates should be considered preliminary. Actual operating costs may vary depending on water demand, regulatory requirements, maintenance needs, and equipment performance.

Staff recommend that Council consider the first operating season as a pilot year from a budgeting perspective. Following the completion of the first full season of operation, staff will be in a much stronger position to report on actual operating costs and recommend future budget allocations.

### ***Bulk Fill Water Station Project***

The Town of Shelburne has identified funding scenarios that would require a municipal contribution ranging from approximately \$20,000 to \$62,500. The final municipal contribution will depend on the grant funding secured for the project.

Based on correspondence received from the Town, staff anticipate that ongoing operating costs associated with the facility would be the responsibility of the Town's water utility and would be offset through user fees and bulk water sales.

## **RECOMMENDATION**

Staff recommend that Council:

1. Receive this report for information;
2. Decline to proceed with the Oneka Desalination Project at this time;
3. Continue supporting the Shelburne Community Well Project and approve the proposed ownership and operating arrangement with the Town of Shelburne; and
4. Support participation in the Bulk Fill Water Station Project, with a municipal contribution of up to a maximum of \$62,500, subject to grant funding approvals and execution of any required partnership agreements.

### ***Motion No. 1 – Community Well Project***

Be it resolved that the Council of the Municipality of the District of Shelburne reaffirm its support for the Shelburne Community Well Project and approve, in principle, an agreement whereby ownership of the completed community well facility will be transferred to the Municipality upon completion of construction, with the Municipality assuming responsibility for annual operating costs and the Town of Shelburne providing certified water operator services, water quality monitoring, sampling, and regulatory reporting as an in-kind contribution.

### ***Motion No. 2 – Bulk Fill Water Station Project***

Be it resolved that the Council of the Municipality of the District of Shelburne support participation in the proposed Bulk Fill Water Station Project and approve a municipal contribution of up to a maximum of \$62,500 from the Operating Reserve and expensed through 00-21210-300, subject to the receipt of external funding, final project approvals by the Town of Shelburne, and the execution of any required partnership agreements.

## **APPENDICES & ATTACHMENTS**

Appendix A – SEED Community Well Project Presentation

Appendix B – Town of Shelburne Bulk Fill Water Station Proposal

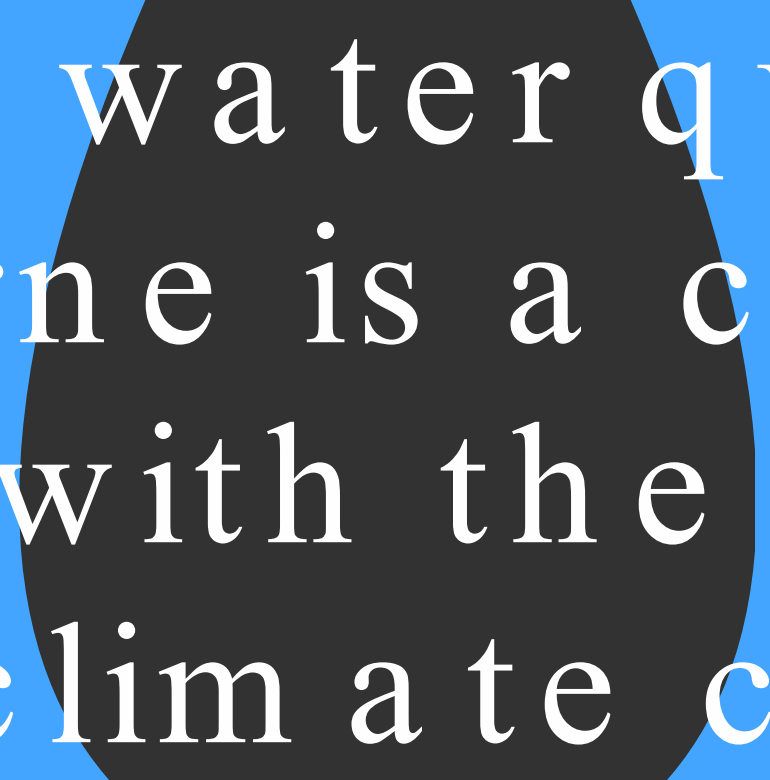
SEED X NSCC X MUNICIPALITY OF SHELBURNE

# SHELBURNE COMMUNITY WELL PROJECT

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providing potable water for the community of Shelburne





The well water quality in  
Shelburne is a concern,  
especially with the increasing  
risk of climate change.

# Climate change and well water.

providing clean, potable water for a community in need

drought, flooding, and seawater intrusion can affect everyone in the province

# 42%

dug wells are more prone to surface water contamination

Southwestern NS has a much higher percentage of people on dug wells, which are shallower than drilled ones and more sensitive to drought.


of Nova Scotians are on wells

100 year extreme weather events are happening every 10 years



There is a water crisis in the  
*Shelburne Community*

With droughts and heavy rainfall,  
many members of the community  
are susceptible to well water  
contamination

The background image shows a coastal scene with a well structure made of rocks and wood extending into the water. A small boat is tied to the well structure. The foreground is covered in yellow seaweed. The sky is blue with some clouds. In the distance, there are buildings and a harbor.




This well can  
provide plenty of  
clean drinking  
water for the  
community



Through the  
collaboration of  
NSCC, SEED, and the  
municipality of  
Shelburne we want  
to construct and  
maintain a water  
pumphouse for the  
community



# THE COMMUNITY WELL

-  Located at the NSCC Shelburne Campus
-  High yield
-  Exceptional quality, minimal treatment required

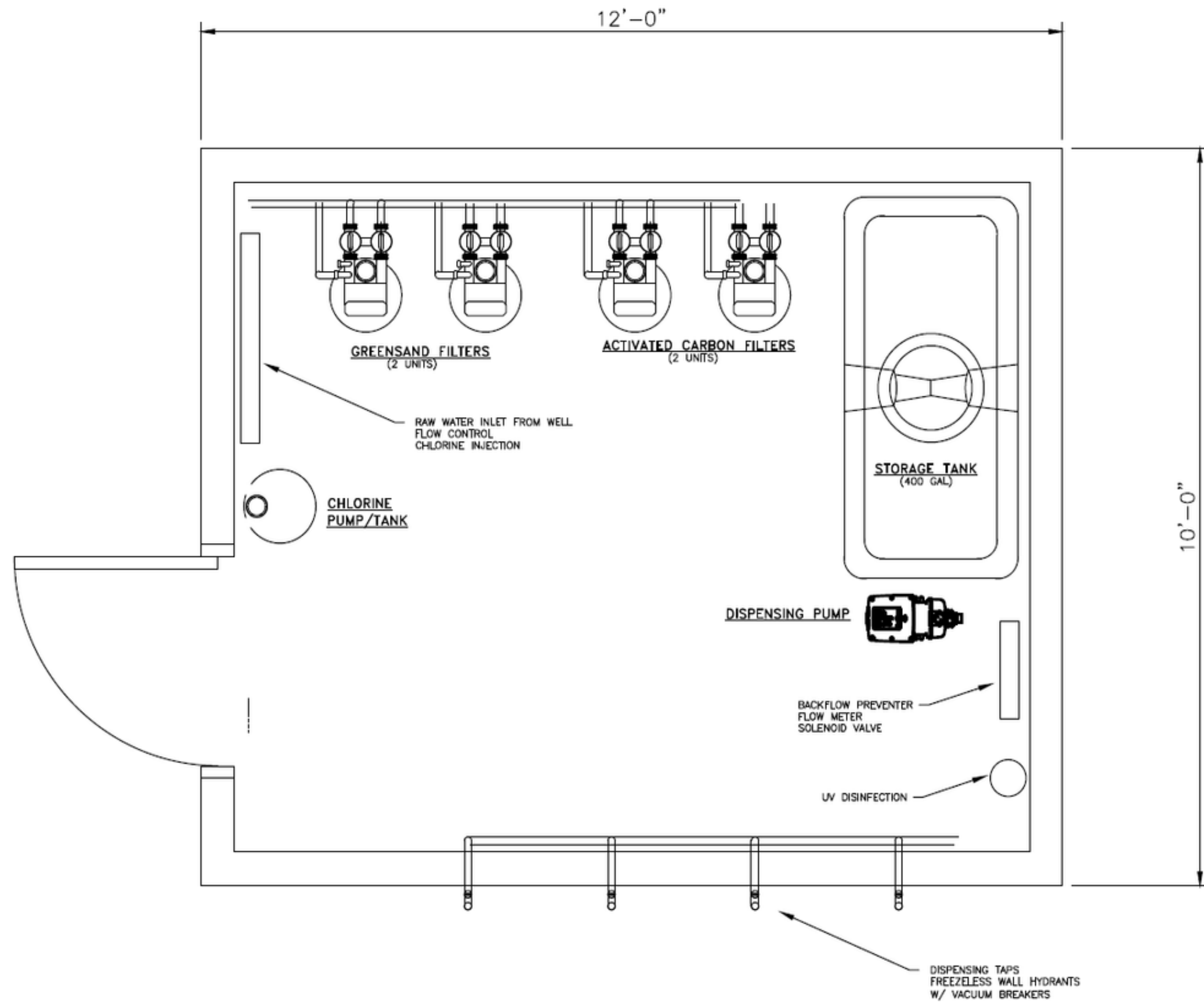


NSCC Shelburne Campus

# Well & Pump house

location

# p u m p h o u s e p l a n s



# By the numbers

\$ 10,000

Feasibility study- can we use the well located at the NSCC campus? How much will it cost to build the pumphouse and the water treatment equipment

\$ 17,000

Well pump test- is this existing well a good candidate for this project? Does it have a high yield for high demand? Is the water quality acceptable and treatable?

\$ 50,000

The water treatment equipment

\$ 35,000

The structure (pumphouse) to house the water treatment equipment

\$ 70,000

Trenching, site works, services, reinstatement, paving, driveway

\$ 17,000

10'x12' concrete slab

\$ 32,000

Contracting services and design

required funds

Total  
Spent

\$27,336.35

Total  
Required

\$234,000

# Funding Opportunities

Sustainable  
Community  
Challenge  
fund

Round 2 of funding will be released soon

Farm Credit  
Canada  
AgriSpirit  
Fund

Can apply water as an essential nutrient

Wellness  
Funds

Access to clean drinking water is a social  
determinant of health.  
Funding will be announced in March 2024



The project team has reached out to the province and the municipality for funding opportunities and begun research and applications for grants that have been recommended to us.

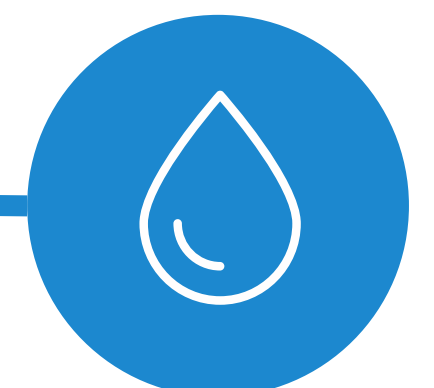
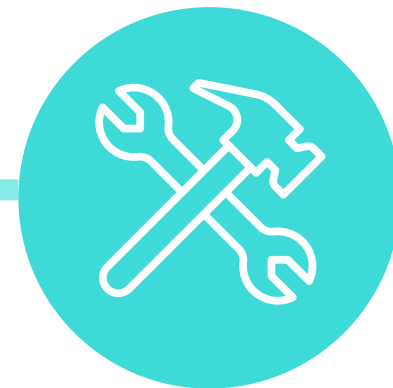
# PROJECT TIMELINE

Desired Completion of the Project

2023

SPRING 2024

FALL 2024



Feasibility study,  
well analysis,  
planning,  
design, and  
funding

Start  
construction

Start  
Operation

Thank you



# Proposed Bulk Fill Water Station



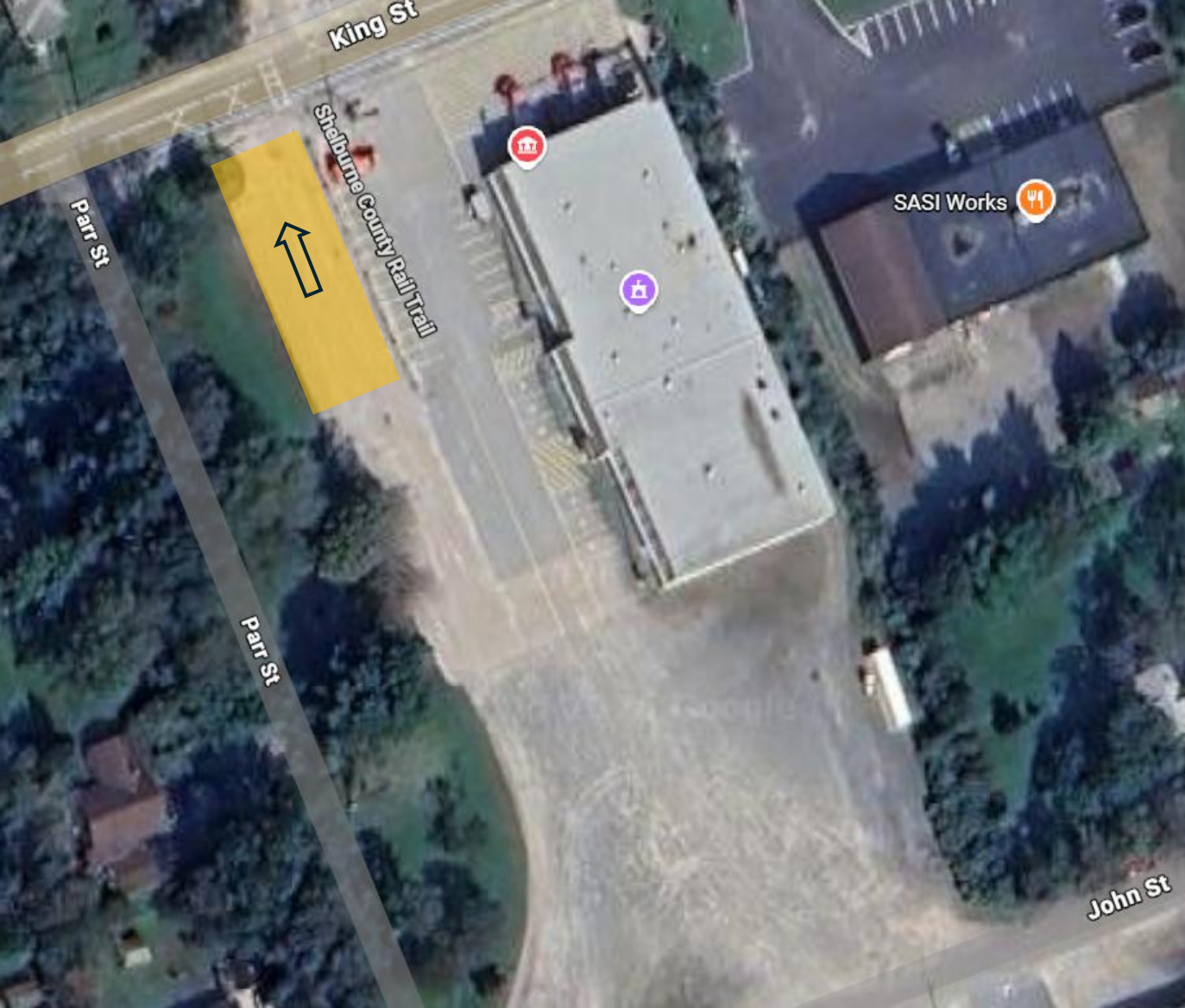
# YARMOUTH BULK FILL



# YARMOUTH BULK FILL SIZE



# POTENTIAL LOCATION



# BULK FILL STATION COST ESTIMATE

<b>Item</b>	<b>Amount</b>
Bulk fill station with overhead rack	\$87,000
Civil works (site prep, connections, reinstatement of paving/sidewalks landscape)	\$90,000
Contingency on civil work (20%)	\$18,000
First 2 years operations	\$4,800
<b>Total</b>	<b>\$199,800</b>

# BULK FILL STATION FUNDING

Source	Scenario 1	Scenario 2
Town of Shelburne	\$20,000	\$62,500
Municipality of the District of Shelburne*	\$20,000	\$62,500
Sustainable Communities Fund (Provincial)	\$159,800	-
TBD Grant/Future Surcharge	-	\$74,800
Total	\$199,800	\$199,800

Question?