COMMITTEE OF THE WHOLE Agenda
Thursday April 10, 2025 AT 7:00 PM
Council Chambers Stewiacke NS

Before we begin our meeting, we would like to acknowledge that Stewiacke is in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq people.

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1. Call to Order
2. Attendance
3. Approval of / Changes to Agenda
4. Disclosure of Interest on Agenda Items
5. Review of Minutes
6. Announcements / Proclamations
7. Presentations

1) Jeff Mercer, Executive Director and Chief Librarian - Colchester-East Hants Public Library

8. Written Petitions and Correspondence

   SPCA Re: Termination of Service Agreement

9. Business

2) CAO Report (with Stewiacke Fire Stewiacke Fire Department – Brendan VB) – Report was presented as information only.

   A) CAO REPORT
   B) MPAL REPORT
   C) Town of Stewiacke Water Infrastructure and Supply Update
   D) PAC Update Development – Councillor Osborne

COMMITTEE OF THE WHOLE Agenda
Thursday April 10, 2025 AT 7:00 PM
Council Chambers Stewiacke NS

10. By-laws and Policies
11. Citizen Comments
12. Mayor Report
13. Councillors Reports
14. In-Camera Session
    1) Legal advice eligible for client solicitor privilege
15. Notice of Motion and Reconsideration
16. Adjournment

COTW & COUNCIL Minutes
THURSDAY MARCH 20, 2025 AT 7:00 PM
Council Chambers Stewiacke NS

Before we begin our meeting, we would like to acknowledge that Stewiacke is in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq people.

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1. Call to Order 7: 00 pm

2. Attendance

Town Council	Position
Doug Glasser	Mayor, Town of Stewiacke
Rebecca Rogers-Laing	Deputy Mayor, Town of Stewiacke
David LeBlanc	Councillor, Town of Stewiacke
Suzanne Lutz	Councillor, Town of Stewiacke
Pam Osborne	Councillor, Town of Stewiacke
Marc Seguin	CAO, Town of Stewiacke
Helen Young	Manager, Finance
Erin Richard	Director, Community Development

3. Approval of / Changes to Agenda

Motion that we add number 2 pending litigation under 14.

Motion to Approve Agenda:	**Approved By:**
First	Councillor Osborne
Second	Deputy Mayor Rogers-Laing
Result	Carried

4. Disclosure of Interest on Agenda Items
None

5. Approval of Minutes

A) Are there any comments or concerns regarding the minutes from

February 13, 2025
February 27, 2025

Changes made as noted by Members of Council

6. Announcements / Proclamations

No announcements or proclamations were received.

7. Presentations

Lions Club –The Shubenacadie Lions Club donated $250 towards purchasing sand to enhance the play experience for After School, and Day Camp Children at the Stewiacke Community Centre. The Town of Stewiacke continues to encourage outdoor play focusing on natural elements and this purchase will support that vision.

8. Written Petitions and Correspondence
None

9. Business

9.1 Staff Reports:

1. CAO Report – No motion is required

2. Regional Accessibility Report

Motion : Council will receive the regional accessibility plan of 2025, and that Council adopt the regional accessibility plan of 2025 as presented.

Motion to Approve	**Approved By:**
First	Councillor Osborne
Second	Councillor LeBlanc
Result	Carried

3. STEP – Selecting member for executive committee

Motion That councillor Pam Osborne be appointed as the STEP executive Committee

Motion to Approve	**Approved By:**
First	Councillor Leblanc
Second	Councillor Lutz
Result	Carried

4. Micro Grant Applications

motion that Council approve, micro grant funding to rise and tides art, society, limitless angel society, canine tricksters and women's sports group.

Motion to Approve	**Approved By:**
First	Deputy Mayor Rogers-Laing
Second	Councillor Osborne
Result	Carried

5. Council Code of Conduct - Appointment of 3rd Party Investigator(s)

Motion that Council adopt the code of conduct, 3rd Party and Integrity Integrity Commissioner, report be received, and that Council adopt the current list of amends, qualified investigators for the municipal code of conduct, and that Council authorize the Cao to proceed to execute contracts, to retain an independent 3rd party integrity Commissioner from Amans current list of qualified investigators as necessary. When a complaint is received.

Motion to Approve	**Approved By:**
First	Councillor Osborne
Second	Deputy Mayor Rogers-Laing
Result	Carried

9.2 – Committee Reports

A) Planning Advisory Committee Report – Councillor Pam Osborne

Motion that Council give approval to the planning Advisory committee's recommendation to have staff draft regulations to the land use bylaw and municipal planning strategy, and to which address the water supply concerns in regards to future development in the town of Stewiacke

Motion to Approve	**Approved By:**
First	Councillor Osborne
Second	Deputy LeBlanc

Result	Carried

9.3 2025-2026 Budget

Helen Young, Manager of Finance provided comments on the DRFAT budget and the process.

Date to be set for special Council Meeting regarding Budget

Other Business:

10. By-laws and Policies

None

11. Citizen Comments

12. Mayor Report VERBAL

13. Councillors Reports

Councillors Reports Verbal

14. In-Camera Session

1) Contract Negotiations / Acquisition, sale, lease and security of Municipal Property

I WILL NOW MAKE A MOTION TO GO IN CAMERA at 7:36 PM

Motion to Approve	**Approved By:**
First	Councillor Osborne
Second	Councillor Lutz
Result	Carried

I WILL NOW MAKE A MOTION TO GO OUT OF CAMERA at 8:38PM

Motion to Approve	**Approved By:**
First	Councillor Osborne
Second	Councillor Lutz
Result	Carried

15. Notice of Motion and Reconsideration

THERE ARE NONE

16. Adjournment

Meeting adjourned at 8:39PM

Agenda Item #8

Nova Scotia

March 25, 2025

Town of Stewiacke
c/o Marc Seguin
Town Hall 295 George Street,
Stewiacke, NS B0N 2J0

Received: March 26, 2025

Reported to Council: March 26, 2025

Dear Mr. Seguin,

Re: Termination of Service Agreement

I am writing to inform you of an important change regarding the services currently provided by the Nova Scotia SPCA to your community. After careful review and consideration of the significant financial and resource challenges facing our organization, the Nova Scotia SPCA has made the difficult decision to discontinue both the bylaw enforcement and animal sheltering components of our services to Town of Stewiacke, effective June 27, 2025.

Bylaw Enforcement
The decision to discontinue bylaw enforcement services stems from the increasing need for additional supports for our enforcement officers to ensure their safety and well-being. The challenges of managing animal-related bylaw enforcement have placed considerable strain on our officers, and we recognize that to maintain a healthy, balanced work culture, additional resources and support systems are needed. Without these, the risks of burnout and compassion fatigue are too great to ignore. We believe that, in the long run, the decision to discontinue bylaw enforcement services is necessary to protect the mental and physical health of our staff.

Animal Sheltering
The decision to cease animal sheltering services has been incredibly difficult. Our SPCA Animal Shelters are facing an ongoing and significant strain on both shelter space and human resources, driven by the growing number of people needing to surrender their pets. Many families are struggling financially and are unable to provide adequate care for their animals, including necessities such as food and medical treatment. Given these challenges, we believe it is essential to focus our resources—both financial and human—on supporting families in keeping their pets, rather than continuing to allocate resources to animals brought in through bylaw enforcement. Unfortunately, the increasing demand has outpaced our ability to provide the level of care and attention that every animal deserves.

We are committed to honoring the three-month notice period, as outlined in our agreement, to provide your municipality ample time to seek alternative arrangements for bylaw enforcement and animal sheltering services.

We deeply appreciate the trust and partnership we have shared with your community. It has been an honor to work together to improve the lives of animals in the Town of Stewiacke. During this notice period, we remain available to provide any relevant information or support as you explore other service providers.

Please feel free to reach out to me directly at emurphy@spcans.ca if you have any questions or require further assistance.

Thank you for your understanding, and we wish your community all the best in continuing to meet the bylaw enforcement needs of its residents and animals.

Sincerely,

Elizabeth Murphy
Nova Scotia SPCA CEO

STEWIACKE
RIVERS OF OPPORTUNITY
HALF WAY BETWEEN THE EQUATOR & THE NORTH POLE

To: Town Council

From: Marc Seguin. CAO

Re: CAO Report

Date: April 10 ,2025

The following is a list of general updates from the office of the Chief Administrative Officer as of April 10, 2025.

This report is submitted as information only.

Public Works Report:

The schedule for the paving of Main St. is pending weather improvements. Staff are in contact with Will Care Paving which was awarded the contract last fall. Will Care Paving will be providing a date to Staff soon for the project.

SPCA:

On March 26, 2025 the SPCA sent the Town correspondence which has been included in tonight's Council package under "Correspondence". The Correspondence was immediately shared with Council.

The SPCA informed the Town that due to "significant financial and resource challenges" that the SPCA has made the difficult decision to discontinue both by-law enforcement and sheltering to the Town of Stewiacke as of June 27, 2025.

The SPCA has provided by law enforcement, shelter and kenneling services and animal care to the Town of Stewiacke.

STEWIACKE
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HALF WAY BETWEEN THE EQUATOR & THE NORTH POLE

Staff are working with the SPCA and Province to gather further information and will report back to Council.

Keeping of Horses, Chickens and Bees:

Staff has received questions recently pertaining to the keeping of chickens within the Town boundary.

Land Use By-law Amendments

"Section 8.3.5 Keeping of Horses, Chickens, and Bees
1. The keeping of horses and chickens is permitted subject to the following:

(a) Horses – Minimum lot area is 1 acre (.4 hectares) for the first animal plus .5 acres (.2 hectares) for each subsequent animal.

(b) Chickens – Minimum lot area is 1 acre (.4 hectares) and the maximum number of chickens is five.

(c) A combination of horses and chickens may be kept on the same lot to a maximum of one horse and five chickens and the minimum lot area is 2 acres (.8 hectares).

Community Development:

- Dismantling Hate & Anti Racim Strategy is well underway, completing in person discussions throughout the region.
- Summer Job Positing open from April 1- April 30th
- Easter Egg Hunt April 12th
- Summer Sport Programming registration opening April 7th
- Summer Day Camp Programming registration to open on April 14th
- Town Days Working Group Meeting scheduled for April 15th
- Voting Station for the Federal Election will be at the Community Centre April 18-21, and Election Day April 28

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RCMP UPDATES

The Community Town Hall meeting with the RCMP is scheduled for Wednesday, May 7th at 6:30 at the Town of Stewiacke Community Centre.

FIRE UPDATES:

The Stewiacke Volunteer Fire Department update will be provided by members of the fire department this evening.

Presentation by: Fire Chief Mark Crozier, Deputy Chief, Brandon Verboom and Deputy Chief, Scott Fisher

Marc Seguin

Marc Seguin
Chief Administrative Officer

STEWIACKE
RIVERS OF OPPORTUNITY
HALF WAY BETWEEN THE EQUATOR & THE NORTH POLE

To: COTW

From: Erin Richard

Re: Municipal Physical Activity Leader Strategy

Date: April 10th, 2025

RECOMMENDATION

That, the Municipal Physical Activity Leader Strategy be received; and

That Council approve the Municipal Physical Activity Leader Strategy, for the Town of Stewiacke, for the next five years (2025-2030) as presented.

That Council authorizes the CAO to sign the updated Memorandum of Understanding with the Province of Nova Scotia.

ORIGIN

The Town of Stewiacke is required to have an updated Municipal Physical Activity Leader Strategy to uphold their commitment to the Province of Nova Scotia through the Memorandum of Understanding signed by both partners every five years.

The Town of Stewiacke received funding through the Active Communities Fund in September to support this strategy renewal. Active Communities Fund supported this project with a financial commitment of $11,375.00. Research Power Inc's project cost is $14,375.00 to conduct this work.

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Background

The Town of Stewiacke has a Memorandum of Understanding (MOU) with the province of Nova Scotia for the Town to host a Municipal Physical Activity Leader (MPAL) position on Town Staff. The Town receives $25,000.00 annually from the province to fund this position. Within the MOU, there is a requirement that the MPAL for each town/municipality updates and follow strategic directions identified and adopted by the Council, for the betterment of the Town of Stewiacke. The MPAL Strategy renewal commences the new MOU (2025-2023).

DISCUSSION

- MPAL Working Group of six members met regularly during the renewal process.
- Research Power Inc. conducted 3 engagement sessions during the renewal of the Strategy.
- A citizen survey was conducted by the Province of Nova Scotia, to gather relevant information from Stewiacke residents.
- The strategic directions identified within the document will guide work completed by the MPAL/Community Development Department from 2025 until 2030.
    - Key changes:
        - New mission and vision statement
        - Incorporating accessibility throughout the document rather than its own strategic direction
        - Identifying EDIA (equity, diversity, inclusion and accessibility)
        - Referencing the Regional plans (Accessibility and Dismantling Hate ad Racism)

POLICIES/LEGISLATION

The Town is required through our MOU with the Province of Nova Scotia's Communities Culture Heritage and Tourism to complete and have the Council approve a Physical Activity Strategy every five (5) years to receive our MPAL funding.

The procurement for this work is governed by the Town of Stewiacke Procurement Policy #2000-05.

FINANCIAL

The strategy renewal work was awarded to Research Power Inc. in the amount of $14,375,00 including HST.

The Ministers letter attached to this report confirms funding in the amount of $11,375 towards this project. The remaining $3,000.00 will be taken from the Recreation Departments 2024-2025 operational budget, which was approved by Council.

Total project cost is $14,375.00.

CONSULTATIONS

Province of Nova Scotia, Communities Culture Heritage and Tourism
Marc Seguin, CAO, Town of Stewiacke
Helen Young, Manager of Finance, Town of Stewiacke

ATTACHMENTS

Appendix A- Municipal Physical Activity Strategy
Appendix B- MOU with Province of Nova Scotia
Appendix C- Active Communities Fund Approval

CONCLUSION

Staff recommend that the Municipal Physical Activity Leader Strategy be approved as presented.

Approved by:

Marc Seguin

Marc Seguin
Chief Administrative Officer

STEWIACKE
RIVERS OF OPPORTUNITY

HALF WAY BETWEEN THE EQUATOR & THE NORTH POLE

Town of Stewiacke

Active Living and Recreation Strategy (2025 to 2030)

March 2025

Table of Contents

Message from the Mayor, Town of Stewiacke

Despite the unexpected challenges that have arisen since the launch of our previous Physical Activity and Recreation Strategic Plan (2019 - 2024), particularly due to the Global Pandemic and its resulting restrictions, it has been truly uplifting to see our community advance with resilience and determination in pursuit of its goals. During my short tenure as your mayor, I have had the privilege of witnessing the commitment and teamwork of Stewiacke's Recreation and Physical Activity Coordinator, along with dedicated community members and key partner organizations who are passionate about promoting an active and healthy Stewiacke!

Our new plan, which will steer us for the next five years, aligns with the priorities established by provincial and federal governments, ensuring we leverage funding opportunities that will benefit people of all ages, both now and in the future.

Research shows that even minimal recreational activities can significantly improve not just physical health, but also mental, emotional, and social well-being, especially for those who experience loneliness and isolation. We aspire for this new active living and recreation strategy to create more opportunities for movement and foster social engagement among residents of all ages, thus enhancing the overall health of our community members.

On behalf of myself and the members of Council, I would like to express our heartfelt gratitude to everyone involved and congratulate you on a job well done.

Warm regards,

Doug Glasser

Mayor

Town of Stewiacke

Introduction

Why do we Need an Active Living and Recreation Strategy?

Active living means that people are regularly moving their bodies. This can include anything from daily activities like gardening, walking, or cleaning, to more organized or intense activities like playing sports, group exercise classes, cycling, or swimming. The Canadian guidelines for physical activity recommend that adults get at least 150 minutes (2.5 hours) of moderate- to vigorous-intensity activity per week, and that children and youth should get at least 60 minutes of activity per day.

There are many benefits of being active for individuals, including improving health and well-being. There are also benefits for the community and the province when people are active – active living and recreation can support tourism, strengthen the economy and help residents build social connections. An active community is a stronger and more resilient community.

We know that many people face barriers in meeting the recommended amount of activity. Barriers may include busy lives, sedentary work environments, communities designed around motor vehicles, and safety concerns. As a Town, we play an important role in supporting community-wide activity. We want to make sure we are supporting active living and recreation in our community, helping to address barriers and make it easier for people to be active. Our strategy aligns with work happening in other municipalities across Nova Scotia and at the provincial level (*Let's Get Moving Nova Scotia* is the provincial action plan for increasing physical activity in Nova Scotia).

About the Town

The Town of Stewiacke is located in southern Colchester County, Nova Scotia. The population of the Town in the 2021 census was approximately 1,500 people, with continued growth since then adding to that number and enhancing the Town's diversity. Stewiacke was incorporated as a Town in 1906, and has a history of supporting recreation, boasting an ice rink and track and field activities during the early 1900s. Today, Stewiacke provides a number of different recreation opportunities like baseball fields, a skate park, playgrounds, trails, group exercise classes, and sport programming for children. Please see the Stewiacke Parks and Recreation website for more information.

The 2021 census data from Statistics Canada illustrates the following characteristics for the Town:[1]

- Most Town residents (59%) are between ages 15 and 64, but people aged 55 and older represent 41% of residents. Over half of residents (54%) are women.
- Many households are a single person (33%) or couples without children (30%), while families with children (either two parent or single parent households) represent 30%.
- About 6% of residents are Indigenous (First Nations or Metis) and just over 1% are immigrants to Canada (all before 2010).
- The median after tax income was $33,200, much lower than both the provincial and national median income ($57,460 for Nova Scotia and $65,170 for Canada) in 2020.[2]
- Of the population aged 15 and older, 59% are in the labour force (either working or looking for work) and Stewiacke's unemployment rate was 7.1%.
- Almost half of working residents commute for work to a different county (e.g., from Colchester County to Halifax County) and another 26% commute to a different area outside of Stewiacke but in the same County (e.g., from Stewiacke to Truro). The vast majority (86%) commute in a private vehicle.

How did we Develop this Strategy?

The Town of Stewiacke has had a physical activity/recreation/active living strategy in place since 2012, when the first Recreation and Physical Activity Coordinator was hired through the Municipal Physical Activity Leadership (MPAL) program. The strategy is updated every five years. In 2024, the strategy development process included the following steps:

- A Working Group was formed to help support developing the strategy. The Working Group includes Town residents, Town staff, and provincial government staff.
- The previous strategy was reviewed to identify what was completed and what could be continued in the updated strategy.
- Other relevant strategies and document were reviewed (e.g., the Town's Accessibility Plan and Walkability Plan Report, the Let's Get Moving Nova Scotia

[1] Statistics Canada. 2023. (table). Census Profile. 2021 Census of Population. Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. Released November 15, 2023. https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E (accessed March 24, 2025).
[2] Statistics Canada. 2025. Annual Income Estimates for Census Families and Individuals (T1 Family File) (4105), table 11-10-0017-01.

Action Plan) to identify opportunities for alignment between this strategy and other work.
- A draft strategy was developed that was shared and refined with the Working Group and through consultations.
- Consultations with the public and key individuals from the community were completed in December 2024 to gather community input to help inform the strategy.
- A Community Survey for the Town of Stewiacke was conducted in early 2025 to gather more information about the activity and needs of those that live, work, and play in Stewiacke (see results in the next section).

The Strategy is organized into four strategic directions or key areas of work that highlight Stewiacke's priorities for active living and recreation. These are:

- Natural and built environments
- Social environments
- Partnerships and capacity-building
- Communication and outreach

Each area of work has:

- A goal: The desired result of the work in this area.
- Objectives: Strategies to achieve the goal.
- Actions: Activities to that will help make the objectives happen.

Physical Activity Community Survey

To help inform developing this strategy, a survey of physical activity was conducted in March 2025.[3] Sixty-one (61) respondents from the Town completed the survey. Because the sample size is small and based on a convenience sample (i.e., the survey was open to all and interested individuals completed the survey), it is important that these results be interpreted with caution. More respondents to the survey were in the 30-49 age segment, female, more educated, and with a higher median income compared to the actual population. Just under 10% of all respondents indicated there was a wheelchair user in the household, while this proportion was higher (16%) for less active respondents.

Key highlights from the survey findings are:

[3] Survey findings provided by Nova Insights, sponsored through the Nova Scotia Department of Communities, Culture and Heritage.

- Key facilitators to being active included: time to participate, better weather, information about where and when to participate, more resources (e.g., transportation, equipment, finances), self-motivation, and having someone to participate with.
- For places within a short distance (walk, wheel, cycle within 10-minutes), the less active group are most commonly active on trails, in indoor spaces, and on sidewalks/roadsides. Nearly half also say they're active in green spaces.
- More than two-fifths of all respondents say they perceive the trails to not be accessible for those with disabilities. Nearly as many say this about natural waterways and sidewalks/roadsides.
- A very large majority of the less active respondents believe bicycle lanes/sides of road do not keep them sufficiently safe from cars, and half explicitly say they do not feel safe riding a bike in the community. Three-quarters believe the sidewalks and roadsides are not sufficiently maintained for walking. More than half say they could use more simple movement if they had someone to go with them.
- The top three suggestions to increase movement in the community were improved sidewalks, improved walking trails, and keeping or improving the community garden.
- Less active respondents prefer non-competitive and drop-in opportunities, as well as the opportunity for social interaction and family-friendly options.

Diversity, Equity, Inclusion, and Accessibility

Diversity, equity, inclusion, and accessibility (DEIA) are important considerations in any Town strategy or plan.

- **Diversity** means different types or groups of people are represented or participate. It includes all the ways that people are different from one another such as race, ethnicity, gender identity, ability, sexual orientation, language, socioeconomic status and more.
- **Equity** means ensuring that every is treated fairly and has the same access to opportunities. It means recognizing that that not everyone starts from the same place and there may need to be adjustments to correct imbalances.
- **Inclusion** means ensuring that individual differences are valued, and people feel a sense of belonging, respect, and safety in their communities.
- **Accessibility** means that everything — from education and employment to the physical environment, to music, sports, entertainment and everyday information — is accessible and available to everyone, no matter their background, circumstances or abilities. Accessibility is a human right.

Consideration of DEIA helps to ensure that all are treated fairly and can fully participate. In recent years, Nova Scotia has implemented initiatives to help advance DEIA including the *Accessibility Act* (2017) and the *Dismantling Racism and Hate Act* (2022):

- The Nova Scotia *Accessibility Act* sets the goal of an accessible province by 2030. The Act references the United Nations Convention on the Rights of People with Disabilities (CRPD) and Canada's commitment "to take appropriate measures to achieve accessibility and to develop and monitor minimum accessibility standards". Access by Design (2030) is the government's plan to achieve this goal.
- The *Dismantling Racism and Hate Act* intends to identify and address systemic hate, inequity and racism. The Act focuses on underrepresented and underserved communities in Nova Scotia[4], including, but not limited to: Mi'kmaq and Persons of Indigenous Descent, African Nova Scotians and Persons of African Descent, 2SLGBTQIA+ communities, faith-based communities, newcomer communities, persons with disabilities, persons who are neurodivergent, seniors and in some contexts women.

Municipalities are key partners in making Nova Scotia communities more diverse, equitable, inclusive, and accessible. The Town is part of the Accessibility Action Plan for the Truro-Colchester area. The Town is also developing a plan to dismantle racism and hate, in accordance with the requirement under the *Dismantling Racism and Hate Act*. In the area of active living and recreation, Recreation Nova Scotia has both an Anti-Racism Charter in Recreation and resources to support inclusion and accessibility for people with disabilities.

It is important that the principles of DEIA are reflected in this Active Living and Recreation Strategy. Because the Town will have other plans focusing on accessibility and anti-racism, the decision was made not to include this as a specific strategic direction in this strategy. Instead, actions related to DEIA are included in each strategic direction and noted with a *. DEIA could also be incorporated into actions for example by prioritizing

[4] Underrepresented and underserved communities refers to those groups who experience discrimination and exclusion because of unequal power relationships across economic, political, social, and cultural dimensions. The term "underserved" implies that the community is not receiving/has not received an adequate level of support or attention from institutions, organizations, or government agencies. This lack of access can manifest in various areas, including health care, education, employment, housing, transportation, and social services. An underrepresented community refers to a group of people who are not adequately represented or have limited presence or visibility in certain domains or contexts, such as social, political, economic, educational, or cultural spheres. These communities typically experience marginalization, discrimination, or exclusion due to various factors, including race, ethnicity, gender, sexual orientation, disability, socioeconomic status, or other characteristics. Definition from the Office of Equity and Anti-racism, p. 4.

changes in low-income areas, racialized communities, and neighborhoods with historically limited recreation opportunities.

Monitoring and Evaluation

Monitoring and evaluation (M&E) are important parts of any strategy or action plan. M&E helps us to understand and report on our progress as we learn what works and where there are challenges. Regular M&E supports accountability and transparency, helps us learn and improve as the work progresses, and celebrate successes. It also helps us understand how the strategy is helping to improve the Town.

We commit to regularly monitoring and evaluating the work involved in this Active Living and Recreation Strategy. Each year we will report on the actions that have been completed and what is planned for the next year. This is also an opportunity to share this information with the Town and gather feedback about how to continue to improve and adapt the strategy.

Vision, Mission and Values

Vision

An active and inclusive community where people of all ages and abilities thrive.

Mission

To foster health and well-being by offering and supporting diverse and enjoyable active living and recreation opportunities for all who live, work and play in Stewiacke.

Values

- Recreation and active living are essential to personal health and well-being.
- Every citizen should have the opportunity to participate.
- We work collaboratively with our community partners to assess and to meet community needs.
- We pride ourselves on providing excellent service.
- Our work is evidence informed, building on what works elsewhere and in the community.
- We build on community assets to tailor our actions for Stewiacke.
- All movement is valuable, from small sessions to longer bouts of activity.

Strategic Directions

1. Strategic Direction: Natural and Built Environments

Goal: Stewiacke has a sustainable, connected, and safe network of trails, parks, active transportation routes, and recreation facilities.

Objectives and High-Level Actions

Objectives	High Level Actions
1.1 Develop and enhance built and natural environments to facilitate active living and recreation opportunities.	a) Enhance/Improve existing trails for all users with accessibility and climate change in mind.* b) Ensure that natural and built environments that support active living and recreation are included in the Town's accessibility plan (updated in 2025).* c) Assess current outdoor infrastructure to ensure outdoor spaces can be safely used and are appealing and accessible to all ages.* d) Conduct an accessibility audit of facilities and address identified barriers.*
1.2 Implement initiatives that support active transportation and climate change directives.	a) Align with and address opportunities for improvement in active transportation routes identified in the Town's walkability plan and Sustainable Growth, Development and Resiliency plan. b) Identify any other gaps in connectivity and accessibility for active transportation and explore strategies to address the gaps.* c) Promote the importance of active transportation and active transportation routes to the community to encourage their use.
1.3 Provide and support opportunities for unstructured activity for all ages.	a) Work with other departments/ organizations to identify and support opportunities to improve accessibility to outdoor spaces.*

Objectives	High Level Actions
	b) Promote and support the use of outdoor spaces for arts, culture and entertainment activities and through beautification. c) Implement activities and resources to support unstructured play for children and families in outdoor locations.

* This action supports DEIA.

2. Strategic Direction: Social Environments

Goal: Supportive social environments encourage people to move more.

Objectives and High-Level Actions

Objectives	High Level Actions
2.1 Develop resources and supports that promote active living and recreation in social environments.	a) Create resources/strategies to incorporate movement and recreation into social and recreational activities. b) Explore opportunities to support groups to be physically active together including family friendly-options where applicable. c) Expand sports programs for all ages.
2.2 Continue to identify and remove barriers to participate in active living and recreation and support inclusion.*	a) Implement and promote no and low cost programs, social events with an active/recreation focus, and subsidy programs for active living and recreation.* b) Develop and review policies to ensure they support inclusion and eliminate barriers.* c) Identify and engage with under-represented/under served[5] groups in the community to identify their needs and determine how best to encourage and support active living and recreation in these groups.*

* This action supports DEIA.

[5] See definition provided previously.

3. Strategic Direction: Partnerships and Capacity-Building

Goal: Strong relationships, knowledge and skill support Town residents and visitors to be active where they live, work and play.

Objectives and High-Level Actions

Objectives	High Level Actions
3.1 Build/enhance partnerships to expand opportunities for active living and recreation for all ages.	a) Strengthen current partnerships and build new ones with local, provincial and federal organizations to offer accessible and inclusive physical activity and recreation programs and services.* b) Explore working with healthcare providers and the Health Centre to encourage people to incorporate more movement into their daily lives. c) Develop relationships with the business community/ workplaces to support them in encouraging and providing opportunities for active living and recreation among their employees and in the community. d) Continue to collaborate with local schools to support increased movement and community access to schools for recreation.
3.2 Increase knowledge and skills of municipal staff and community members to support active living and recreation.	a) Implement strategies to strengthen leadership within the volunteer sport and recreation sector. b) Train staff and community members to complete accessibility assessments of natural and built environments.* c) Train staff and community to support different recreation activities, including activities outside of typical sports programs. d) Develop and implement training for staff to build awareness and understanding about inclusion and reducing barriers to participation.* e) Support youth training and mentorship in areas related to active living and recreation and explore cross-generational opportunities for training and learning together.

* This action supports DEIA.

4. Strategic Direction: Communication and Outreach

Goal: Citizens and visitors are well informed of opportunities for and benefits of active living in the Town.

Objectives and High-Level Actions

Objectives	High Level Actions
4.1 Promote the value and benefits of active living through communication and outreach activities.	a) Develop and implement a communication strategy to share messages about the benefits of active living through existing and/or new communication mechanisms. b) Identify and engage with groups/populations where awareness may be lower and develop and implement specific communication strategies to reach these groups.* c) Include messaging consistent with the provincial social marketing campaign that encourages people to include small sessions of movement in their daily routines, building on the provincial Make Your Move campaign.
4.2 Implement communication and outreach activities to promote opportunities for active living and recreation.	a) Develop and implement a communication strategy to promote opportunities for active living and recreation through existing and/or new communication mechanisms. b) Identify groups/populations that are not currently making use of active living and recreation opportunities and develop and implement specific communication strategies to reach these groups.* c) Update the Town website to ensure information about active living and recreation is accessible.* d) Update signage within the community directing people to active living and recreation opportunities (e.g., wayfinding, route information such as length and difficulty, responsibility for maintenance) and ensure signage meets accessibility requirements.

* This action supports DEIA.

Moving Forward

Moving forward, the Town of Stewiacke will continue to work with the many partners who contributed to developing this strategy to support implementation. A more detailed operational plan will be developed each year that identifies the timelines, accountability, and required resources to accomplish the actions and objectives in this strategy.

The key factors that will support successfully implementing the Active Living and Recreation Strategy include:

- **Leadership**: While municipal recreation staff have an important role to play in guiding the work, leadership from Town staff, Council, and community organizations is also essential. Council and partners need to champion the strategy's objectives and actions, and many of the actions reflect shared work that involves others in the Town. Shared responsibility to support implementation will help to ensure success. A Recreation Advisory Committee will be formed to support evaluation, planning, and implementation of the strategy, including supporting communication and continuing to engage community members.
- **Resources:** Sufficient human, financial and physical resources to support the strategy and its objectives and actions are essential. Resources to support implementing the strategy will be identified during operational planning and additional resources sought if required.
- **Accountability**: As noted in the opening sections of the strategy, monitoring and evaluation are essential. Specific indicators of success for each objective and action can be identified as part of the operational planning process. Regularly monitoring and evaluating strategy implementation and reporting this to the community will help to enhance accountability and transparency. Annual reports will be produced to track progress and share successes.
- **Communication:** Ongoing communication with partners and the community is critical as the strategy is implemented. Effective communication will help to build shared responsibility for the actions, support adapting the strategy if needed based on changing context as the work progresses, and help to celebrate and build on achievements.

Many people contributed to developing this strategy, and the input and guidance from community residents and business owners was invaluable. Ongoing support from the community is essential in achieving the strategy's vision and goals.

AGREEMENT made this 29th day of March, 2019

BETWEEN:

HER MAJESTY THE QUEEN in right of the Province of Nova Scotia, represented in this behalf by the Department of Communities, Culture and Heritage (hereinafter referred to as the "Department")

OF THE FIRST PART

- and -

TOWN OF STEWIACKE ("the Municipality")

OF THE SECOND PART

WHEREAS there are many health, social, economic and environmental benefits associated with increasing physical activity levels in the Municipality;

AND WHEREAS the government of Nova Scotia, in collaboration with youth, parents and all sectors, wants to address physical inactivity and sedentary time in the Province and avoid the associated social and economic burden.

AND WHEREAS Nova Scotia's Culture Action Plan strives towards strong, vibrant communities and local governments may encourage strong communities by including physical activity and movement opportunities through parks, trails, active transportation, indoor and outdoor facilities, programs, leadership development, special events, volunteer recognition, and partnerships;

AND WHEREAS the Department has a program known as the Municipal Physical Activity Leadership Program (MPAL);

AND WHEREAS the Department wishes to provide the Municipality with MPAL funding, which is intended to be used towards hiring qualified leadership to support the development and implementation of a comprehensive plan to encourage physical activity and breaks in sedentary time led by the Municipality.

THEREFORE in consideration of the covenants and agreements contained in this Agreement, the parties agree as follows:

1. MUNICIPALITY ROLES AND RESPONSIBILITIES

The Municipality is responsible for hiring an MPAL staff person (the "MPAL Staff") and development, implementation and monitoring of a comprehensive Municipality" wide plan to increase physical activity in the Municipality (the "Plan").

Specific responsibilities of the Municipality are to:

1.1. Identify a supervisor in the Municipality to provide leadership and management of the Plan.

1.2. Develop the job description and hiring process for the MPAL Staff in partnership with staff of the Department, and in accordance with the guiding principles set out in Schedule "B".

1.3. Hire and be the employer of the MPAL Staff.

1.4. Develop a written planning process, with assistance from the Department, which identifies key tasks such as managing the planning process, gathering information and best practices, Municipality consultation, communication with other Municipality staff and elected officials, involvement by Municipality partners and a time line that concludes with council approval of the Plan.

1.5. Submit the written planning process to the Communities, Sport and Recreation Regional Office of the Department within three (3) months of the date the MPAL Staff is hired.

1.6. Develop partnerships as needed, with adjacent municipal units, health, education, related organizations and local business.

1.7. Lead implementation and evaluation of the Plan, working with local partners and based on available resources.

1.8. Ensure the Plan follows the principles set out in Schedule "A", subject to any amendments to Schedule "A", and in particular addresses the priorities of the Department which may be updated by the Department from time to time (with six months' notice), but currently includes: the integration of less-structured physical movement in bouts throughout the day.

1.9. Design the Plan to contribute to the following outcomes:

A. Social supports for walking, for example community mobilization of volunteers to create social networks that support walking and leveraging campaigns to impact social norms regarding walking.

B. Physical environment supports for walking in the natural or manmade environment, for example stairwell enhancements or building or improving trails, sidewalks and crosswalks.
C. Social supports for other less structured movement, for example community mobilization of volunteers to create social networks that support movement that can easily be incorporated into daily life (e.g. cycling, active play) and leveraging campaigns to impact social norms.
D. Physical environment supports for other less structured movement, for example changes to the natural and manmade environment that support movement that can easily be incorporated into daily life (e.g. play boxes, community gardens, painted games and bike lanes).
E. Policies to support movement, for example, written policies to encourage movement through recreation access, walking meetings and active transportation.

1.10. Seek input and feedback from the Department on drafts of the Plan on a timely basis.

1.11. Prepare an annual report on progress towards outlined outcomes (see 1.9), including annual achievements and financial expenditures, to be submitted to the Department in accordance with clause 7.1.

1.12. Participate in provincially sponsored monitoring of the MPAL program in consultation with the Department.

1.13. Participate in provincially and regionally sponsored training and networking events.

1.14. Recognize the Department's contribution to the program in promotional coverage of the Plan.

1.15. Monitor and refresh the Plan after every five years.

2. DEPARTMENTAL ROLES AND RESPONSIBILITIES

The Department is responsible for assisting the Municipality with development, implementation and evaluation of the Plan.

Specific responsibilities of the Department are to:

2.1. Assist and support the municipality with the staffing process for the MPAL program, including but not limited to developing the job description and selection criteria and participating in the selection committee as required. The Department will review and approve the hiring process and job description before the position is posted.

2.2. The Department is not and shall not be deemed to be the employer of the MPAL staff.

2.3. Provide consultation, technical advice and support to elected and appointed officials on the Plan.

2.4. Provide orientation, training and resource materials on the MPAL program and new and emerging trends that effect physical activity and movement.

2.5. Coordinate opportunities for sharing between Municipality units on a regional and provincial basis.

2.6. Provide opportunity to apply for funding to support some elements of Plan development, implementation and local monitoring and evaluation.

2.7. Inform the Municipality about provincial government policies and programs that affect physical activity.

2.8. Provide a template for the annual reporting process, including progress on the Plan and a financial statement.

2.9. Coordinate monitoring for the MPAL program.

2.10. Provide funding in accordance with Section 4 of this Agreement.

3. TERM

3.1. The term of this Agreement will commence on April 1, 2019 and expire on March 31, 2024 or on such earlier date as the Agreement may be terminated pursuant to subsection 5.1 or 5.2.

3.2. The Agreement may be renewed with the mutual written consent of both Parties.

4. FUNDING

4.1. The Department will make available, subject to the terms of this Agreement; funding in the amount of $25,000.00 per fiscal year, to be pro-rated for terms that commence later than April 1st of a given year, such funding to be used towards the salary, benefits, professional development and travel ("Salary and Benefits") of the MPAL Staff to develop and implement the Plan for the MPAL Program.

4.2. The annual funding amount in Section 4.1 is to be paid as follows:

(a) In the first year of the agreement, 80% of the annual funding amount, pro-rated if applicable, on the start date of employment of the MPAL staff;

(b) 20% of the initial year funding amount by January 31st of the applicable fiscal year, provided that if the agreement is signed after January 31st, then the total pro-

rated amount for the initial year shall be paid on the start date of employment of the MPAL staff;

(c) Subject to 4.4, in subsequent years of the Agreement, 80% of the annual funding amount will be paid following the receipt and approval of the annual report, and the remaining 20 % by January 31st.

4.3. The Municipality agrees to make contribution of a minimum of $20,000 per fiscal year, toward the Salary and Benefits, professional development and travel of the MPAL Staff for the MPAL Program each year of the Agreement. The contribution will be pro-rated for terms that commence later than April 1st of a given year.

4.4. The payment of funds by the Department is contingent upon receipt of the Annual Report from the Municipality as set out in clause 7.2.

4.5. The Department's obligation to pay money to the Municipality under this Agreement is subject to an annual appropriation being available in the fiscal year of the province during which the payment becomes due.

4.6. The Municipality agrees that the annual funding amount shall be adjusted and pro-rated based on the actual cost of the Salary and Benefits of the MPAL Staff in a given year at the Department's discretion.

4.7. The Municipality agrees that if a surplus of funds remains at the end of the term of this Agreement, the funds will be dispersed in the manner agreed to by the Department.

5. TERMINATION

5.1. In the event that the Municipality fails to keep, observe or perform any of the other terms, conditions or covenants herein contained or allows such default to continue for ten (10) days after notice of such default has been given to the Municipality, the Department may terminate this Agreement by giving forty-five (45) days' notice in writing.

5.2. Notwithstanding subsection 5.1, either party may terminate this Agreement at any time by giving at least six (6) months' notice.

5.3. The Municipality, as employer of the MPAL Staff, is responsible for any amounts owing to the MPAL Staff on or after termination of this Agreement for any reason.

6. NOTICE

6.1. Throughout the Term of this Agreement, all notices and communications in connection with this Agreement are to be addressed to:

The Department	The Municipality
Elaine Shelton Manager, Physical Activity Communities, Culture and Heritage 3rd Floor 1741 Brunswick Street PO Box 456 Stn Central Halifax NS B3J 2R5	Grant Cooke Acting CAO PO Box 8 Stewiacke, NS BON 2JO

7. RECORDS

7.1. The Municipality agrees to maintain records and program documentation for the MPAL program satisfactory to the Department during the Term of and for a period of seven (7) years from the Termination of this Agreement. In order for the Department to monitor the quality of services performed, the Municipality agrees to permit the Department full access to all records, accounts and facilities related to the program and to meet with members of staff of the program at mutually agreeable times.

7.2. The Municipality shall provide the Department with a copy of an annual report related to the program, following the template provided by the Department, no later than May 31st of each year.

8. GENERAL

8.1. This Agreement may be amended by the parties by agreement in writing, with the exception that the Department may unilaterally amend the program plan outlined in Schedule "A" and the priority listed in clause 1.8. If the Department amends the plan principles or priorities it will provide six months' notice of the upcoming change and will work with the Municipality to develop an appropriate transition plan.

8.2. If anything is required to be done by the Department pursuant to this Agreement, it may be done by anyone duly authorized to act on the Department's behalf.

8.3. The Municipality shall not assign or subcontract this Agreement or any part thereof prior to obtaining the written consent of the Department, whose consent may be withheld for any reason.

8.4. The Municipality is acting as an independent contractor in the performance of this Agreement and shall not be deemed to be an employee, agent or in a joint venture with the province.

8.5. The Municipality acknowledges that the Department is subject to Nova Scotia's Freedom of Information and Protection of.Privacy Act and that this Agreement or portions of it are subject to disclosure in accordance with the provisions of that Act.

IN WITNESS WHEREOF the parties hereto have caused this AGREEMENT to be properly executed on the dates hereinafter set forth.

SIGNED, SEALED AND DELIVERED in the presence of

Witness

Witness

HER MAJESTY THE QUEEN in right of the Province of Nova Scotia as represented in this behalf by the Department of Communities, Culture and ~~Heritage~~

Per:

April 5, 2019
Date

TOWN OF STEWIACKE

Per: Dale Bogle, ~~CAO~~

2019-03-29
Date

Schedule "A"
PLAN PRINCIPLES

The following principles should guide the development of Municipality wide plans to increase physical activity and decrease sedentary behaviour. It is expected that each plan will show how each principle is addressed:

Priority Principles

1. **Focus on populations that are less active or sedentary:** Moving sedentary people from light or no activity to a point where they accumulate more activity is considered an important gain from a population perspective. Achieving the recommended movement guidelines is better but some activity is better than none. Small amounts of movement integrated throughout the day count. Groups for consideration include the less active population in general, the aging population (45 years+), adolescents, females in these specific age groups.

2. **Equity:** Eliminate disparities in access to physical activity opportunities and reduce social and health inequities that arise as a result of factors such as geography, ethnicity, gender, and socio-economic status by supporting groups with inequitable access to physical activity resources. Priority groups may vary depending on the Municipality.

Additional Principles

3. **Comprehensive and cross setting:** Use multiple strategies and multi-level interventions to address factors influencing movement behavior at the policy, individual, social and physical environment, levels. This includes physical activity in settings other than recreation such as active transportation, work or school and the home environment.

4. **Partnerships:** Invite relevant sectors of society to collaborate in promoting movement and creating an active Municipality. Potential partners include government and non-government organizations, health, Municipality services, justice, schools, Municipality groups, and business, at all levels. Successful Municipality wide approaches often include focus on key settings.

5. **Whole of Municipal Government:** Integrate physical activity and the creation of active communities into the existing planning and decision-making processes of all relevant operational areas in the local government. Use physical activity to meet Municipality objectives by linking physical activity plans to other municipal/band strategies and aligning physical activity plans with the priorities of other sectors.

6. **Sustainable:** Seek political, organizational, and financial commitment from active Municipality partners for long-term physical activity approaches.

7. **Municipality Involvement:** Involve local residents in creating active Communities and make it easy for people to participate in Municipality consultations, planning, and implementation activities.

8. **Evidence-Informed and Effective:** Use the best available evidence of what works to inform decisions in policy, planning, and practice.

9. **Tailored to the Municipality:** Adapt physical activity interventions to the local context and ensure that existing Municipality assets are used where appropriate.

10. **Whole Population Reach:** Design physical activity interventions and approaches to reach as many people as possible while recognizing that some groups need special attention. Use a life-course approach to address the needs of people in various phases of human development i.e. children, youth, families, adults, the aging population and elders.

11. **Capacity Building:** Build the commitment, skills, and knowledge of active Municipality leaders and partners at all levels through training in physical activity interventions.

SCHEDULE "B"

MPAL STAFF POSITION PRINCIPLES

1. The MPAL staff position (the "MPAL Staff") will work in cooperation with appropriate Municipality staff to use the Plan to identify actions expected by a range of staff or elected officials. For example, public works staff may need to salt sidewalks at a different time, or the CAO or Band manager may need to talk with the School Board Superintendent or Education Director about Municipality use of schools.

2. Cooperation with other Municipality departments and staff (such as recreation, planning, tourism, health, education etc.) is essential.

3. The MPAL Staff is not intended to replace or duplicate ordinary functions of the Municipality recreation department. Some latitude may be given to establish the basic functions of a recreation department where none currently exists, but the priority will remain physical activity outcomes.

4. The duties of the MPAL Staff should reflect the diversity of the Plan in terms of requiring multiple actions covering policy development, program development, public awareness and changes to the social and built environments.

5. The MPAL Staff can be expected to play a fair and equal role with Municipality-wide priorities from time to time.

6. The MPAL Staff is expected to participate in regional physical activity projects and teams.

NOVA SCOTIA

Communities, Culture, Tourism and Heritage
Office of the Minister

1741 Brunswick Street, PO Box 456, Halifax, Nova Scotia, Canada B3J 2R5
Telephone 902-424-4889 • Fax 902-424-4872 • novascotia.ca

File Number:
5030557

May 7, 2024

Randi-Lynne Buchi
Town of Stewiacke
PO Box 8
Stewiacke NS B0N 2J0

Dear Randi-Lynne Buchi:

I am pleased to offer the Town of Stewiacke a new agreement for the Municipal Physical Activity Leadership program which supports your community to employ a staff person to develop and implement a physical activity strategy. We will invest up to $25,000 annually for five years, as outlined in the program agreement and when conditions are met.

I have asked Elaine Shelton, Manager of Physical Activity, to provide you with an agreement.

I am excited to be able to continue to support your community's efforts to create environments that encourage movement.

Sincerely,

Allan MacMaster
Minister
Communities, Culture, Tourism and Heritage

cc: Courtney Nicholson-Patriquin, Regional Manager
Elaine Shelton, Manager of Physical Activity

NOVA SCOTIA
Communities, Culture, Tourism and Heritage
Office of the Minister

1741 Brunswick Street, PO Box 456, Halifax, Nova Scotia, Canada B3J 2R5
Telephone 902-424-4889 • Fax 902-424-4872 • novascotia.ca

File Number:
5031945

July 29, 2024

Erin Richard
Town of Stewiacke
PO Box 8
Stewiacke, NS B0N 2J0

Dear Erin Richard:

I am pleased to advise you that your application for funding under the Active Communities Fund program has been approved. The Department of Communities, Culture, Tourism and Heritage will invest $11,375 to renew their Physical Activity Strategy.

Investing in communities by increasing access to physical activity opportunities for Nova Scotians is a vital part of *Let's Get Moving Nova Scotia, an action plan for increasing physical activity in Nova Scotia.*

A Terms and Conditions document will be sent to you, once received, please sign and return it to denise.scott@novascotia.ca . If you have any inquiries pertaining to your project, please contact Courtney Nicholson-Patriquin, Fundy Regional Manager at (902) 717-5439 or by email at Courtney.Nicholson-Patriquin@novascotia.ca

Best wishes to your organization for continued success and thank you for your efforts to provide physical activity and movement opportunities that contribute to strong, vibrant communities.

Sincerely,

Allan MacMaster
Minister
Communities, Culture, Tourism and Heritage

c. Courtney Nicholson-Patriquin, Fundy Regional Manager

STEWIACKE
RIVERS OF OPPORTUNITY
HALF WAY BETWEEN THE EQUATOR & THE NORTH POLE

To: Town Council

From: Marc Seguin CAO

Re: CAO Report – Town Of Stewiacke Water Infrastructure and Supply Update

Date: August 15th, 2024

RECOMMENDATION

That, the Town Of Stewiacke Water Infrastructure and Supply Update report be received; and

That Council confirm receipt of the WSP Report - FINAL MEMO: Source Analysis – Proposed Groundwater Supply from PW21-01; and

That Council authorize the CAO to sign a change order with WSP Engineering to complete the Groundwater Withdrawal Application at cost of $13,970.00 (not including HST) on a time and materials basis, that this amount be included within the 2025-2026 budget.

ORIGIN/BACKGROUND

On August 15th, 2024, Council directed staff to take the next step in the Towns exploration of a new water source and a subsequent new water treatment facility.

Within that report Council authorized the CAO to engage WSP engineering to complete a source analysis for the Phase 4 of the Town's groundwater assessment to identify the potential origin of the groundwater supplying the new well PW21-01 as identified in the WPS Phase 4 Concept design Report Rev.2.

Background

At Councils direction WSP was commissioned to complete the following steps / tests and to report back. The scope included:

Step 1: Validate if well PW21-01 as identified in the WSP report can be the Towns next water source. In order for the Town to take the next step in the planning process for the Towns new water source, proper investigation and testing must be competed to validate that the water source is safe and sufficient in supply for the Towns current needs and future growth projections. If well PW21-01 as identified in the WSP report is to be the Towns future water source, we are required to complete the following analysis as outlined within this section.

WSP Canada Inc. (WSP) has submitted a Change Order (CO) to the Town of Stewiacke (Town) for consulting services to complete a source analysis for the Phase 4 of the Town's groundwater assessment to identify the potential origin of the groundwater supplying the new well PW21-01. At this stage, a location with ample water supply has been identified, and groundwater modelling results suggests that the source of the water reaching the new well needs to be better understood prior to completing the Groundwater Withdrawal Application to the Nova Scotia Environment and Climate Change (NSECC) and to complete the water treatment plant design. Phase 4 consists of groundwater withdrawal permit application and pre-design of the required municipal infrastructure to support the groundwater distribution system.

The Town of Stewiacke (Town) currently utilizes the St. Andrews River as a potable water supply. The range of available volumes and fluctuating turbidity in the river present persistent challenges in managing and delivering a reliable water supply. The Town would like to develop a groundwater supply to limit the reliance on the St. Andrews River as a surface water source.

Groundwater exploration and water well drilling within the Town limits has helped to identify the presence of a high yield aquifer unit consisting of gravel and fractured bedrock. In 2020 WSP installed a 6" test well to assess the production capacity of the aquifer unit and a 72-hour pumping test was conducted at a rate of 90 igpm (maximum pumping rate), resulting in a maximum drawdown of 0.13 m. In December 2021 a 10-inch diameter production well was drilled and tested in January 2022. The 2022 testing program produced a 10-day constant rate test at a well discharge of 450 igpm with a maximum observed drawdown of 1.13 m at the well head; a drawdown of 0.55 m at a distance of 1.9 km west of the new well; and a drawdown of 0.68 m at a distance of 2 km east from the new well.

The results of the pumping test are promising in terms of water availability, however, prior to completing the application for groundwater withdrawal, points of clarity need to be established regarding the source of groundwater that will supply the new well. Is the source from the presence of large quantities of groundwater stored within geological formations or due to the presence of a nearby surface water course with a hydraulic connection to the aquifer.

Technical items to be resolved for both types of sources include:

Storage in geological formations:
The aquifer provides a transmissive means by which water moves from the source to the well. Storage could be released from the pores of a sand and gravel layer, noted to be present in the vicinity of the well, or released from bedrock fractures. Hence, would the storage be eventually depleted? Would this type of source be impacted by droughts?

Hydraulic connection with a surface water body:
The presence and proximity of the surface water bodies (St Andrews River and other smaller ones) within the cone of depression for PW21-01 suggests there could be a source of surface water supplying the well, which could be subject to GUDI (Groundwater Under the Influence of surface water).

Effect of rainfall on the aquifer:
During the 10-day test, two rainfall events reduced drawdown, masking the stress on the aquifer from continuous pumping. There was a significant rise in the pumping well water level during the latter stages of pumping – was there recharge through the frozen ground of the early February test or did the rainfall recharge a surface water body which then raised the water level in the aquifer?

Effect of a confining layer above the aquifer:
Although impacted by rainfall, the drawdown values noted in the 10-day pumping test indicate a flat cone of depression, generally seen in confined aquifers. If the aquifer is confined, the presence of a confining layer (aquitard) above the high yield aquifer unit would protect the aquifer from significant surface infiltration.

The above questions are anticipated during the regulatory review of the Application for Groundwater Withdrawal – it is recommended that a more in-depth analysis of the pumping test results and groundwater modelling results be carried out to provide answers to the questions presented above. The source analysis will also assist in providing support for

quantifying the long term sustainable yield of the aquifer hosting PW21-01 and its future redundant well.

SCOPE OF WORK

The Scope of Work necessary to complete the source analysis included the following summary of task breakdown.

TASK 1 – BOUNDARY CONDITION EVALUATION
Specific portions of the pumping test drawdown versus time data will be analysed to identify boundary conditions surrounding the aquifer. Overall hydraulic conditions such as confined, unconfined or semi-confined conditions will be evaluated to assess the role of subsurface storage (bedrock fractures / pores within sand and gravel) during the operation of the new well. The effect of rainfall, observed during the 10-day pumping test, will be evaluated to determine if rainfall recharge during the test was via ground surface or surface water and/or via a boundary (such as a surface water body). The use of specialized computer software such as Aqtesolv or AquiferWin and custom Excel spreadsheets will be used to generate graphical and computational solutions.

TASK 2 – WELL EFFICIENCY
The theoretical and true drawdown values for well PW21-01 will be estimated to provide an overall well efficiency. This will be important for the design of the redundant well in this wellfield. For example, should the redundant well be constructed in same manner (perforated casing) or be fitted with a machine-wound continuous wire screen well? Well performance typically degrades with time although alleviated through maintenance programs. This information will assist in developing a long-term well operation and well maintenance program for PW21-01 and the redundant well.

TASK 3 – APPLICATION OF EXISTING GROUNDWATER MODEL
The existing groundwater model will be used to evaluate scenarios related to the origin of the groundwater source for well PW21-01. If applicable, new information from boundary conditions will be applied to the model to better understand forecasts of long term groundwater supply such and issues potentially related to GUDI or aquifer storage. Predictions of groundwater mixing will be generated to inform on the need for additional water treatment related to GUDI issues, if present.

TASK 4 – GUDI analysis (if applicable)
Should the findings of the source analysis suggest that the groundwater from the new well is subject to influence from a surface water source, then a GUDI analysis will be conducted. The analysis will be conducted via specialized computer software and via the groundwater model.

Part of the GUDI analysis includes field sampling of the proposed well. A specific laboratory analysis includes the Microscopic Particulate Analysis (MPA). It is recommended that sampling from a monitoring well near the potential source also be conducted. The GUDI analysis will provide an approximation of the travel time from the source to the new well, which will guide the length of time necessary to pump the well prior to sampling.

DELIVERABLES

The following deliverables were completed by WSP:

WSP completed the groundwater withdrawal application to NSECC. In doing so, the following activities were conducted:

Summary of relevant assessment and monitoring activities conducted by WSP between 2019-2022; speaking to the site conditions, geology, and hydrogeology.

Review and assessment of available historic water level data for the St. Andrew's River associated with the current surface water withdrawal permits. WSP will be reliant on the Town to provide a copy of the current surface water withdrawal approval and any available monitoring data.

Review of available water demand data for the Town. WSP will be reliant on the Town to provide all available surface water withdrawals, produced water volumes, and projected future water demands (generated by a third party).

Comments on the location of the source of groundwater supplying the new well PW21-01 and on the possibility that the source is GUDI.

Consultation with the regulator (NSECC Hydrogeologist) on application process and site details.

One final groundwater withdrawal application submitted to NSECC by WSP on behalf of the Town.

Step 2: Secure the land necessary to draw water and build infrastructure.

The Town drilled a well on property located at 378 St. Andes St. Preliminary indications imply that that the well can meet current and future Twon water needs, however future testing is needed to verify this. The required steps for verification are outlined in Step # 1 above. Town officials should enter discussion the property owners to discuss securing land. Securing or acquiring land, would be dependent on the successful testing and results as identified within Step # 1 above.

DISCUSSION

Step 1 is now almost complete. WSP was tasked with validating if well PW21-01 as identified in the WSP report could be the Towns next water source. The subsequent memo outlining the work outlined in step one is attached to this report entitled WSP Report - FINAL MEMO: Source Analysis – Proposed Groundwater Supply from PW21-01

According to Gil Violette, WSP Canada Inc. ***"It is the opinion of WSP that the water capacity and quality observed in the testing of groundwater supply PW21-01, meets the Town of Stewiackes future needs with the addition of appropriate water purification systems, and WSP recommends moving to the next step to apply to the Province of Nova Scotia to take water from the source".***

The final portion of Step 1 is to make the application to the Province of Nova Scotia. WSP has provided a scope of work to the Town for the permitting process.

Task A1 – Groundwater Withdrawal Application
Nova Scotia's Environment Act dictates that any water withdrawal activities exceeding 23,000 L/day for a duration exceeding 14 days required a water withdrawal permit from the province (NSECC). On behalf of the Town, WSP will complete this permit application. The application process will include a summary of background information, the generation of long-term monitoring and contingency plans, a numerical groundwater model, and well survey to meet the requirements listed in the Nova Scotia Environment "Guide to Groundwater Withdrawal Approvals".

WSP will compile a formal report to supplement the groundwater withdrawal application to NSECC. In doing so, the following activities will be conducted:

▪ Complete the report in line with Nova Scotia Environment Guide to Groundwater Withdrawal Approvals Document (October 2010). This includes a summary of relevant assessment and monitoring activities conducted by WSP between 2019-2022; speaking to the site conditions, geology, and hydrogeology.

▪ Consultation with the regulator (NSECC Hydrogeologist) on application process and site details.

DELIVERABLES
The following deliverables will be provided to the Town during and/or following the completion of this work scope:

▪ One draft groundwater withdrawal application for review and approval.

▪ One final groundwater withdrawal application submitted to NSECC by WSP on behalf of the Town.

BUDGET PROPOSAL

WSP proposes to compile the groundwater withdrawal application for **$13,970.00** (not including HST) on a time and materials basis.

Once the application is completed and submitted by WSP on the Towns behalf the Province will review and respond. Should the Province provide approval to take water from the source, the Town can then move on to Step 2.

Step 2: Secure the land necessary to draw water and build infrastructure.
The Town drilled a well on property located at 378 St. Andrews St. As one of the next steps, the Town will need to acquire some land to build the needed infrastructure. Although this step needs to be completed, Staff do need further information obtained during the detailed design phase of the water treatment plant in order to proceed. This includes the new water treatment plants building footprint, set back requirements, position (location) of a 2nd well etc.

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FINANCIAL

WSP proposes to compile the groundwater withdrawal application for **$13,970.00** (not including HST) on a time and materials basis. Staff recommend that this amount be included within the 2025-2026 budget.

Both detailed design of the water treatment plant facility and an investment to secure the land required for the infrastructure will require a financial investment from the Town that are not yet included within the Towns budget. Staff will report back to Council once further information is available.

POLICIES/LEGISLATION

The procurement pertaining to the work contained within this report is subject to Town of Stewiacke Purchasing and Tender Policy # 2000-05.

CONSULTATIONS

- Jeff Sibley, Superintendent of Public Works
- WSP Engineering

ATTACHMENTS

1) WSP Report - FINAL MEMO: Source Analysis – Proposed Groundwater Supply from PW21-01

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CONCLUSION

The Town is in need of a new water source and the related water infrastructure to treat and supply water for all residents and local businesses. Staff initiated the process long ago and have engaged experts from CBCL, WSP and the Department of Environment.

Staff recommends to Council that we proceed with the next step in this process and that Town proceed to contract WSP Engineering to complete the Groundwater Withdrawal Application at cost of $13,970.00 (not including HST) on a time and materials basis and that this amount be included within the 2025-2026 budget.

Marc Seguin

Marc Seguin
Chief Administrative Officer

MEMO

TO:	Marc Seguin, Chief Administrative Office Jeff Sibley, Superintendent, Public Works,
COMPANY:	Town of Stewiacke
FROM:	Gil Violette, WSP Canada Inc.
DATE:	14 February 2025
CC:	Molly Noseworthy, Simon Gautrey, Collin Fogerty, WSP Canada Inc.
PROJECT NO.:	CA0001941.4259.99-202
SUBJECT:	FINAL MEMO: Source Analysis – Proposed Groundwater Supply from PW21-01, Town of Stewiacke, NS

WSP Canada Inc. (WSP) is pleased to submit the results of a source analysis review conducted on existing pumping test data from PW21-01 and using the groundwater flow model previously constructed for this project. The PW21-01 well location appears to have ample water supply, however, the source of the water reaching the new well needs to be better understood, in terms of potential groundwater under the direct influence of surface water (GUDI) and in terms of the Town of Stewiacke's (Town) objective of limiting its reliance on the St Andrews River. Specific technical objectives for this review include aquifer characteristics and hydraulic connectivity assessment as described in Section 1. In addition, a GUDI analysis was completed to the extent it could be completed until the well is put into operation. Details are presented in Section 3.

This work is also necessary prior to completing the Groundwater Withdrawal Application to the Nova Scotia Environment and Climate Change (NSECC) and to assist with the water treatment plant design, should the source of water be GUDI. Presently, the project is at Phase 4, which consists of groundwater withdrawal permit application and pre-design of the required municipal infrastructure to support the groundwater distribution system. This memo should be read in conjunction with the June 2022 Groundwater Supply Investigation Phase 3 Report prepared by WSP[1].

1 BACKGROUND

The Town currently uses the St. Andrews River as a potable water supply, however, the range of available volumes and fluctuating turbidity in the river present persistent challenges in managing and delivering a reliable water supply. The Town would like to develop a groundwater supply to limit the reliance on the St. Andrews River as a surface water source.

[1] WSP.2022. Town of Stewiacke Groundwater Supply Investigation – Phase 3 Report. Report submitted to the Town of Stewiacke in June 2022. WSP Project Number 191-03686. 100 pp.

WSP Canada Inc.
1 Spectacle Lake Drive
Dartmouth, NS, B3B 1X7

T: +1 902-466-1668
wsp.com

Groundwater exploration and water well drilling within the Town limits has led to the identification of the presence of a high yield aquifer unit consisting of sand and gravel and fractured bedrock (sedimentary – siltstone/limestone with gypsum). In October 2020, WSP installed a 150 mm (6-inch) diameter test well (TW20-01) to assess the production capacity of the aquifer unit and a 72-hour pumping test was conducted at a rate of 589 m^3/day (90 Imperial gallons per minute (igpm)), resulting in a maximum drawdown of 0.13 metre (m). In December 2021, a 250 mm diameter (10-inch) production well was drilled and tested in January 2022. The 2022 testing program produced a 10-day constant rate test at a well discharge of 2440 m^3/day (448 USgpm) (gpm) with an observed drawdown of 1.02 m at the well head; a drawdown of 0.55 m (668 Hwy 2) at a distance of 1.9 km west of the new well; and a drawdown of 0.68 m 925 Stewiacke Road) at a distance of 2 km east from the new well. Figure 1-1 shows the location of the pumping and the monitoring wells.

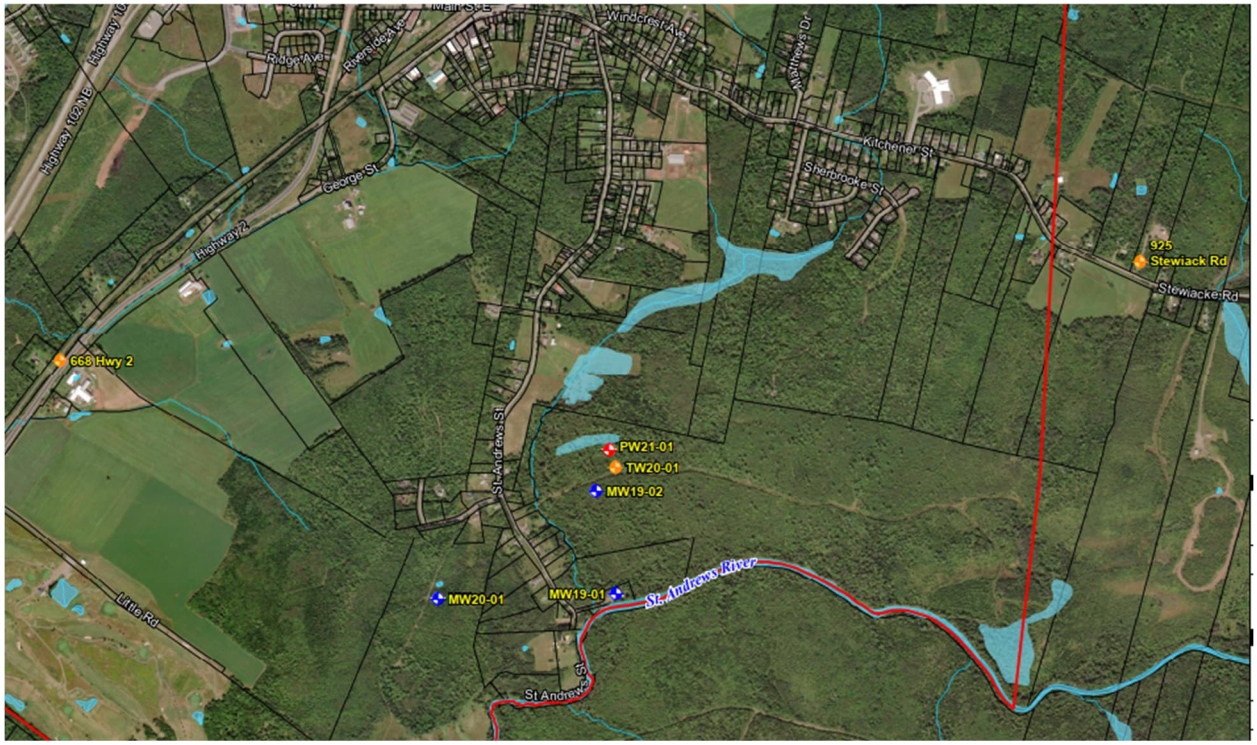


Figure 1-1 Location Plan of Proposed Production Well PW21-01, Town of Stewiacke, NS

The results of the pumping test are promising; however, a source analysis has been conducted to assist in providing clarity to the following technical aspects:

- Groundwater storage in sedimentary bedrock formations.
- Hydraulic connection between PW21-01 and a surface water body.
- Effect of rainfall on the aquifer.
- Effect of a confining layer above the aquifer.

2 SOURCE ANALYSIS AND FINDINGS

As described in our 12 July 2024 Change Order Scope of Work, the source analysis was primarily conducted by analyzing existing data and by applying the existing groundwater flow model to evaluate groundwater time of travel within the aquifer. From the review, the following general findings are of interest:

- The stratigraphy at the well location includes a sequence of thick clay-rich overburden material (till) overlying a 5m thick sand and gravel layer which overlies fractured bedrock.
- The fractured bedrock consists of limestone, which can be subjected to dissolution and erosion and hence, the limestone bedrock will be considered as "karstic".
- The well PW21-01 is situated on a local high at about elevation 45 m and is slightly over 500 m to the north of the St Andrews River.

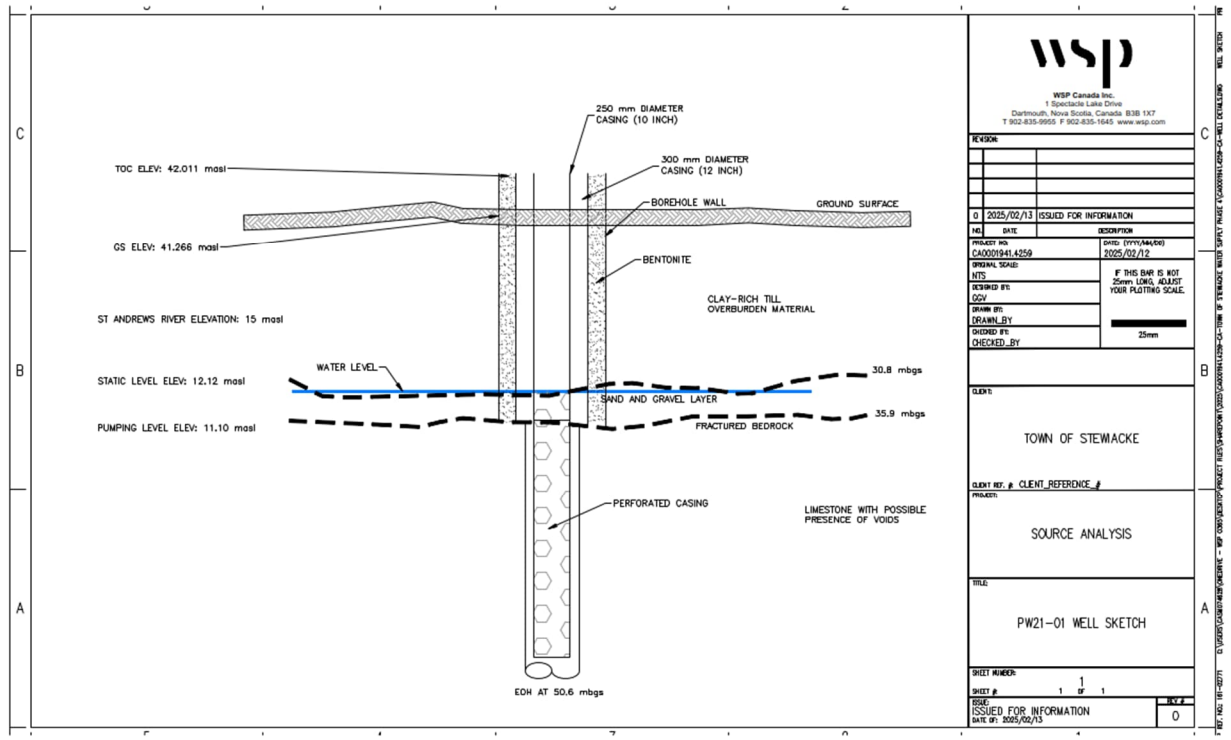


Figure 2-1 Schematic of the Well Construction for Pw21-01 and the Adjoining Geologic Formations

Figure 2-1 shows the well construction for PW21-01 along with important elevations and geologic formations adjacent to the well. The well has a total depth of 50.6 m below ground surface (mbgs) and has a 250 mm diameter (10-inch) pipe size casing for its entire depth, that has been perforated for the bottom 21 m. Perforations are 64 mm^2 (0.1 in^2) with 24 perforations per foot of casing. The 250 mm diameter (10-inch) casing was installed within a 350 mm (12-inch) solid casing and open bedrock hole. The space between the 10-inch and 12-inch casings was filled with bentonite. The top of casing elevation is 42.011 m elevation, while the ground surface is at 41.266 m elevation. The static groundwater elevation at the time of the 10-day pumping test was 12.12 m elevation. The pumping level was at 11.10 m elevation for most of the pumping test. The St. Andrews River elevation was at approximately 15 m

elevation. The sand and gravel layer were encountered at a depth of 30.8 mbgs and bedrock (sandstone, limestone with gypsum) was encountered at 35.9 mbgs.

- The well has a 300 mm diameter (12-inch) metal casing that extends into bedrock, preventing surface water and groundwater from within the till layer from entering the supply well, as shown in Figure 2-1. This construction meets the Nova Scotia Well Construction Regulations[2]. Also, the driller certified the well meets the Regulations in the submission of his well log (WSP 2022). Because of that construction, it is possible that groundwater within the sand and gravel layer at the well interface may be prevented from entering the well. However, it is likely that groundwater within the sand and gravel layer can also travel within the upper bedrock a distance away from the well, originating from a combined sand and gravel / fractured bedrock aquifer. Should any changes to the existing well construction be necessary, such as grouting the annular space between the two casings, the changes can be performed during the final stages of well infrastructure construction.
- The well intake construction is a series of perforations in a 250 mm (10-inch) diameter metal casing, extending from the water level (top of sand and gravel layer) to the bottom of hole – see Figure 2-1. Each perforation has an area of 0.1 in^2 and there are 24 perforations per foot of casing. A casing length of 70 ft was perforated for a total of 166 in^2 of area from the perforations.
- Review of the stratigraphy, local geology and curve fitting pumping test analysis suggests the sand and gravel / bedrock system behaves as a confined aquifer.
- The sand and gravel deposits are typically discontinuous[3] (Rivera 2014).
- The groundwater pathway to the well is likely via the sand and gravel and through the fractured bedrock, then into the well. Should there be locations where the sand and gravel are absent, then the groundwater travels through the fractured bedrock.
- Groundwater contours of groundwater levels indicate groundwater flow is toward the St Andrews River. See Figure 2-2 for groundwater elevations at four locations at the start of the pumping test and at MW19-01 where the water level represents the elevation obtained shortly after drilling in 2019. Figure 2-3 shows the well log for this monitoring well, located approximately 30 m north of the St Andrews River. The presence of the clay-rich till to a thickness of approximately 13 m adjacent to the river and a water level partially within the till layer, suggests that the potentiometric level at that location was approximately 9 m above the base of the till or the top of bedrock. Although taken at a time other than the 10-day pumping test, it is WSP's opinion that the water level in MW19-01 would not normally change significantly and would remain close to the level observed shortly after drilling.
- Based on the log for monitoring well MW19-01, there is a thickness of approximately 13 m of the clay-rich overburden (till). This well is approximately 30 m north of the St Andrews River. Based on the description of

[2] Well Construction Regulations made under Sections 66 and 110 of the Environmental Act, S.N.S, 1994-95, c.1 – O.I.C. 2007-483 (September 7, 2007), N.S. Reg. 382/2007.
[3] Rivera, Alphonso. 2014. Canada's Groundwater Resources. Compiled and Edited by Alphonso Rivera, Chief Hydrogeologist, Geological Survey of Canada. 2014. ISBN 978-1-55455-292-4 (HC).

the regional geology in Rivera 2014, it is expected that the clay-rich overburden till layer extends under the St Andrews River.

- The water quality results of seven samples taken from PW21-01 during the 10-day pumping test indicate a hard water with turbidity ranging between 5.7 and 12.4 NTUs, a dissolved sulphate between 800 and 1270 mg/L, a calculated TDS between 1410 and 1890 mg/L and iron and manganese concentrations just above the aesthetic guidelines. The range in concentration for selected chemical parameters is shown in Table 2-1.
- Water quality results from a sample from the St Andrews River taken in June of 2022 showed a turbidity of 5.8 NTU, a dissolved sulphate of 30 mg/L, a calculated TDS of 83 mg/L and iron and manganese concentrations below the aesthetic guidelines. The concentration of selected parameters is shown in Table 2-1.
- The proposed water treatment of the groundwater source (WSP 2024)[4] will include a two-stage process with the initial stage for the treatment of iron (Fe), manganese (Mn) and sulphates (SO_4) while the second stage will handle total dissolved solids (TDS), turbidity and hardness.

Building on these findings, WSP reviewed and analyzed the pumping test data and adjusted properties in the previously constructed groundwater flow model. These results are described in this section.

It should be noted that an unnamed stream (shown in Figure 1-1) to the west of PW21-01 flows southerly and discharges to the St Andrews River. On average, this stream is approximately 10 m lower in elevation that the ground surface at the PW21-01 wellhead. It is therefore unlikely that surface water from the stream would enter the wellhead. With the stream at least 250 away from the wellhead, it is also unlikely that surface water recharge to groundwater would travel to the well due to the presence of the thick clay rich overburden material. Figure 1-1 also shows the presence of a wet area just north of the PW21-01 wellhead. This area is 3 to 5 m lower in elevation that the wellhead and for similar reasons as just described, it is unlikely that surface water would reach the wellhead or be within the well capture zone, which is at the sand and gravel / bedrock level (depth of about 30 m).

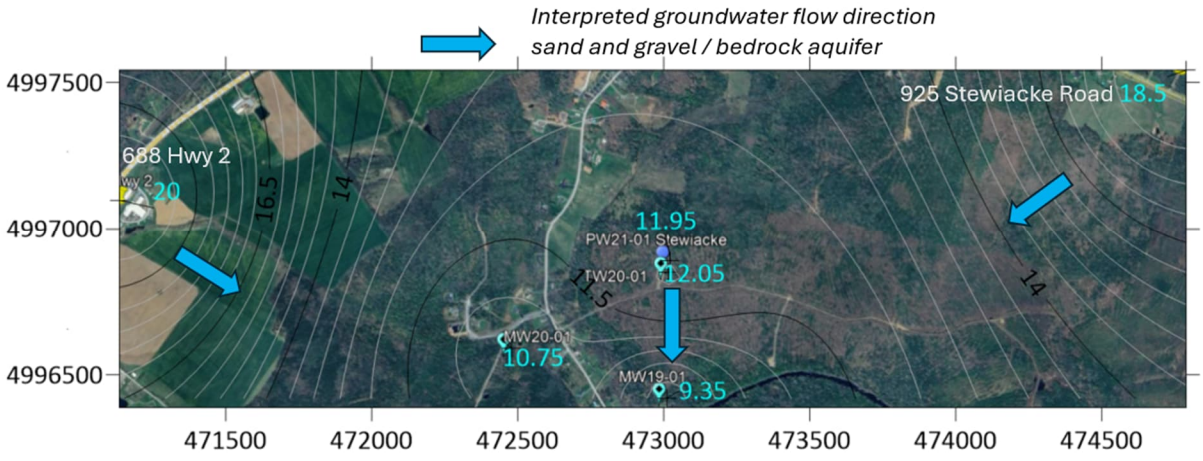


Figure 2-2 Groundwater Elevations (m) and Interpreted Groundwater Flow Direction in Sand and Gravel / Bedrock Aquifer

[4] WSP Canada Inc. 2024. Phase 4 Concept Design Report for the Town of Stewiacke Water Supply System. Confidential Report submitted to the Town of Stewiacke, 22 February 2024. 46 pp.

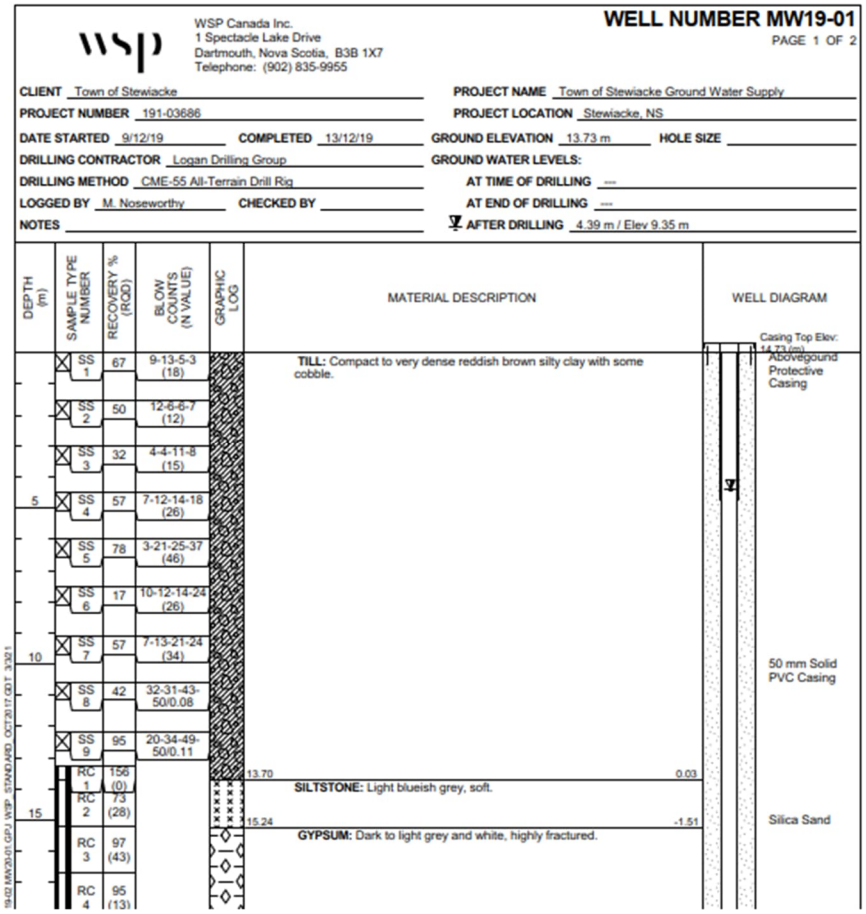


Figure 2-3 Well log for MW19-01, Located 30 m from the St Andrews River

Table 2-1 Select Water Quality Parameters from PW21-01 and St Andrews River

Parameter	Units	CDWQ[1]		Water Source	
				Groundwater Range during 10-day pumping test Feb-22	St Andrews River Value from sample taken Jun-22
General Chemistry					
pH		7 -	10.5 OG	*7.6 to 7.88*	7.59
Reactive Silica as SiO2	mg/L	-		7.1 to 9.9	3.6
Chloride	mg/L	250 AO		27 to 34	7.2
Sulphate	mg/L	500 AO		*800 to 1270*	30
Alkalinity	mg/L			113 to 115	30
True Color	TCU	15 AO		*<5.00 to 17.3*	*50*
Turbidity	NTU	1		5.7 to 12.4	5.8
Electrical Conductivity	µS/cm	-		2010 to 2070	150
Total Organic Carbon	mg/L	-		0.8 to 1.6	5.7
Dissolved Sodium	mg/L	200 AO		36.8 to 42.6	5.02
Dissolved Potassium	mg/L	-		0.1 to 1.7	0.48
Dissolved Calcium	mg/L	-		403 to 507	18.5
Dissolved Magnesium	mg/L	-		21.3 to 30.8	2.12
Calculated TDS	mg/L	500 AO		*1410 to 1890*	83
Hardness	mg/L	-		1120 to 1360	55
Anion Sum	me/L	-		19.9 to 29.5	1.36
Cation sum	me/L	-		24.1 to 29.1	1.34
Metals - Dissolved Metals for Groundwater and Total Metals for Surface Water					
Dissolved Iron	µg/L	300		59 to 1040	424
Dissolved Manganese	µg/L	120		66 to 85	80.7
Dissolved Zinc	µg/L	5000 AO		6.00 to 22.00	33.5
Bacteria					
E.coli (MPN)	CFU/100 mL	ND/100 mL		<1	
Total Coliforms (MPN)	CFU/100 mL	ND/100 mL		<1	

Notes:

[1] Health Canada Guidelines for Canadian Drinking Water Quality, September 2020.
shading denotes a guideline exceedance
italics denotes an exceedance in aesthic guidelines (AO) or operation guidelines (OG)

2.1 TASK 1 – BOUNDARY CONDITION EVALUATION

The use of specialized computer software (Aqtesolv and Aquifer Test and custom Excel spreadsheets) was made to generate graphical and computational solutions of estimates of aquifer properties such as transmissivity and storativity. Overall hydraulic conditions such as confined, unconfined or semi-confined conditions were evaluated to provide further insight on potential best-fit solutions. The effect of rainfall was evaluated to determine if rainfall recharge during the test was via ground surface run-off, or surface water and/or via a boundary (such as a surface water body). The following observations / findings were made during the review:

- Prior to the rainfall, the well drawdown was at a constant rate and did not stabilize (although a minimal drawdown of ~ 1 m) – see downward trend in purple dots in Figure 2-4.
- The heavy rainfall near the end of the 10-day test triggered an increase in the stage of the St Andrews River (see gray line in Figure 2-4). A short time later (perhaps a day), a pressure response can be seen in the pumping well PW21-01 (upward trend of purple dots), which suggests the well has a hydraulic connection with the nearby St Andrews River. It should be noted that the pressure response does not mean that river water entered the well that quickly but rather suggests that pressure within the confined aquifer propagated to the well in that time frame (see Figure 2-5).
- During the 10-day pumping test, the pumping rate for the well ranged between 2220 and 2769 m^3/day (407 and 507 gpm) with an average of 2440 m^3/day (448 gpm) and a standard deviation of 55 m^3/day (10 gpm) - see Figure 2-5.
- The re-analysis of the data, with focus on the period prior to the heavy rainfall, and using Theis and Cooper-Jacob solutions for confined aquifers, provides an interpreted transmissivity of the confined aquifer system ranging from 6.9 $x10^{-3}$ m^2/s to 7.8$x10^{-2}$ m^2/s. The storativity of the confined aquifer system ranges from 8.7$x10^{-3}$ to 1.3$x10^{-2}$. See drawdown versus time graph and interpretations in Figure 2-6.
- Assuming the aquifer is a combination of the sand and gravel layer and fractured bedrock with an overall thickness (also the saturated thickness of the pumped aquifer) of 20 m, then the hydraulic conductivity (K) is 3.9$x10^{-3}$ m/s.

The overburden material shown in Figure 2-1 and Figure 2-3 consists of a till material described as a "compact to very dense reddish brown silty clay with some cobble" in WSP 2022. At PW21-01, the till layer is 30.5 m thick. In the WSP 2021 report[5], the till layer is described from the examination of split spoon samples retrieved from MW19-01 and MW19-02, as a clay rich glacial till, between 25 and 40 m in thickness and blankets the general Stewiacke area as shown in Figure 2 in WSP 2021. The report also states that localized sand lenses can exist within the till. The till layer provides a protective layer, isolating the underlying confined aquifer from surficial man-made activities. In other words, this layer should provide a good barrier against downward vertical migration of surface contaminants generated from day-to-day activities occurring at ground surface.

[5] WSP. 2021. Town of Stewiacke Groundwater Supply Investigation. Draft Report submitted to the Town of Stewiacke on March 12, 2021. WSP project 191-03686. 115 pp.

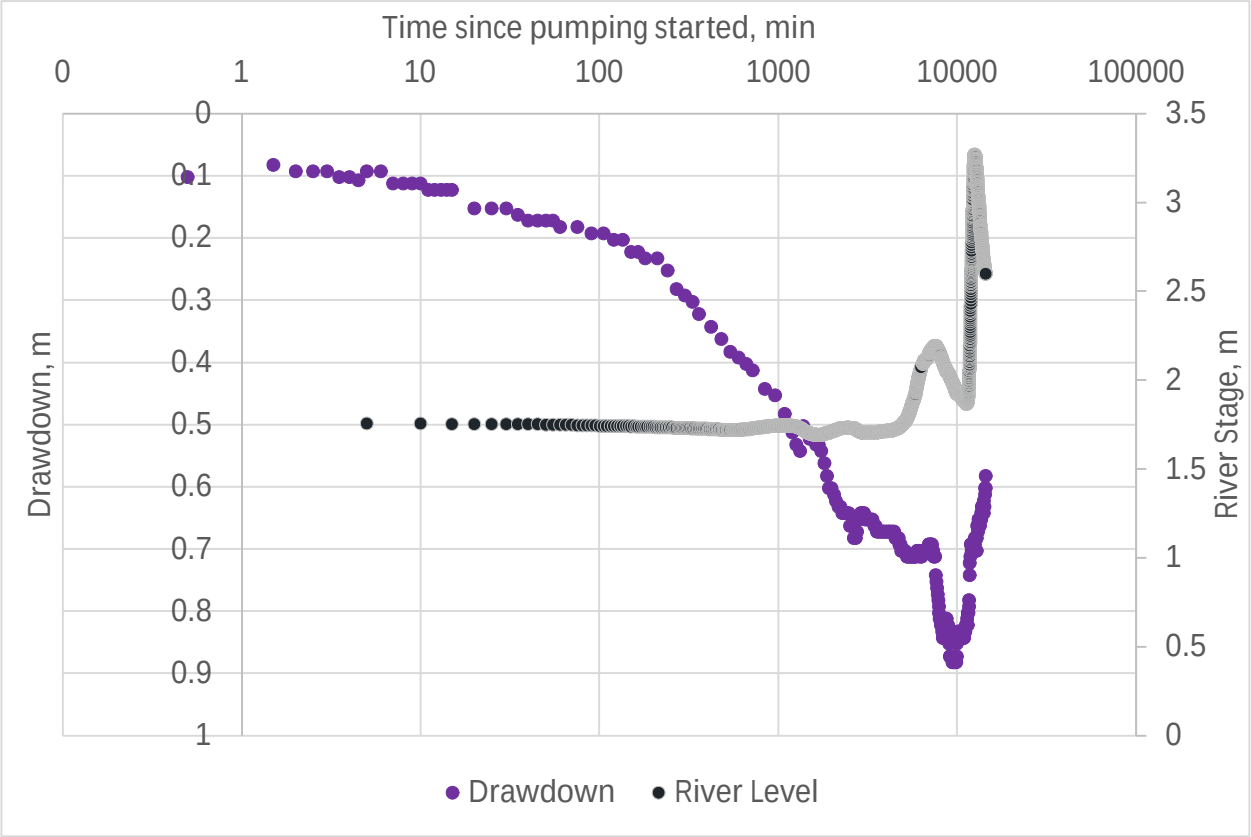


Figure 2-4 Drawdown at PW21-01 and St Andrews River Stage During 10-Day Pumping Test

Figure 2-4 shows drawdown at the pumping well and the river stage for the St Andrews River versus time for the duration of the 10-day pumping test (14400 minutes). The purple dots correspond to the drawdown at the well while the gray line corresponds to the river stage. The well is still pumping at the latter stages of the test, however, the rise in river stage creates a reversal in the trend of the drawdown within the pumping well, with a decreasing drawdown (rise of water level) at same time of the stage rise in the St Andrews River.

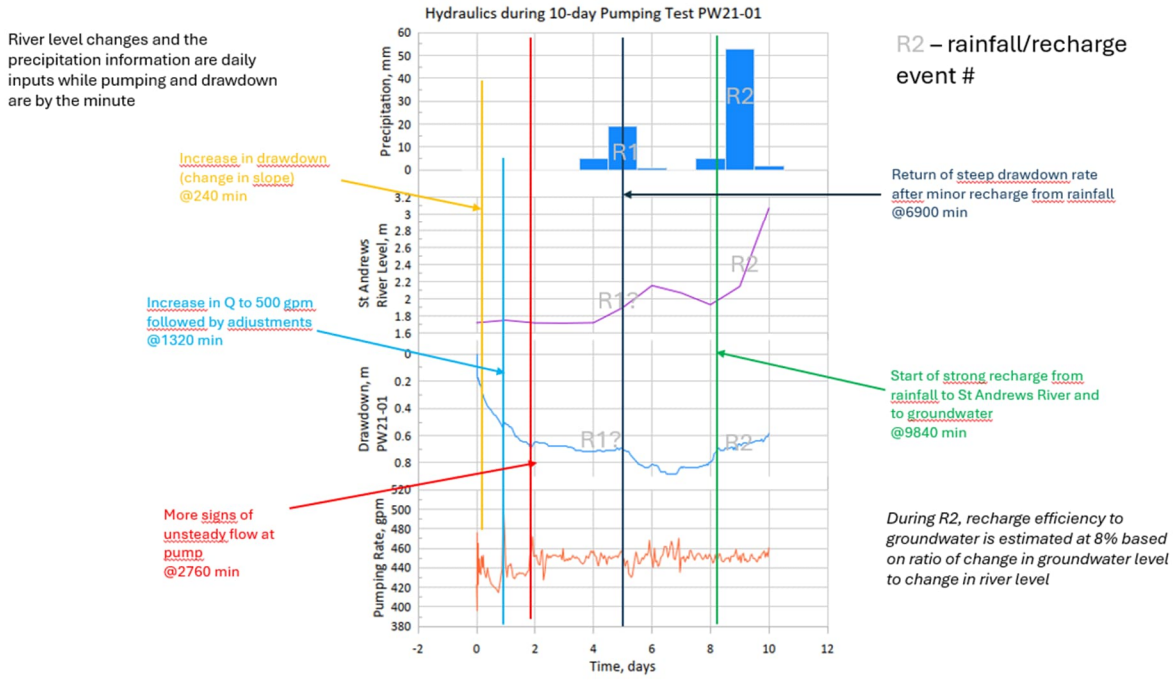
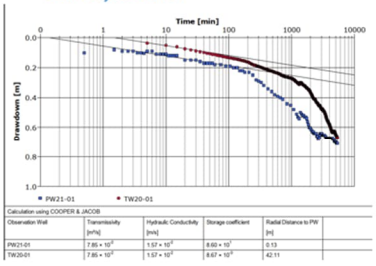


Figure 2-5 Hydraulic Events during the 10-Day Pumping Test on PW21-01

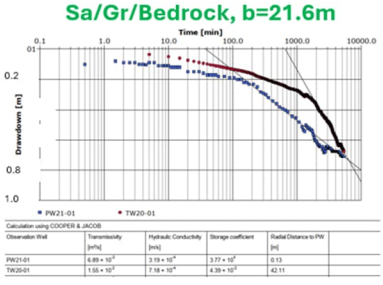
Figure 2-5 shows four hydraulic events occurring simultaneously during the 10-day pumping test. The value of each hydraulic parameter is plotted versus time. As can be seen, the pumping rate of PW21-01, the drawdown at the well, the stage of the St Andrews River (Station 01DG043) and precipitation were monitored within that same 10-day period. While the pumping rate is more or less constant at an average of 2440 m^3/day (448 gpm), the drawdown increases initially, appears to stabilize at about 4 days, then increases, then decreases at the end of the pumping. The top two charts show the river level increasing with the rainfall events. A time lag exists between the rainfall events and the river stage / pumping level – but is difficult to ascertain the exact length of time between rainfall starting and the corresponding change in stage or well water level.

Aquifer Parameter Estimates for 10-day Pumping Test Data, PW21-01

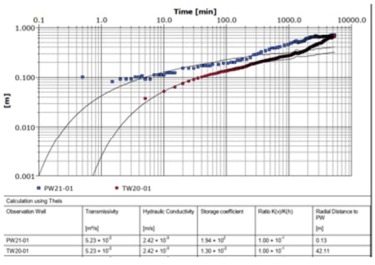
Cooper-Jacob confined – early data Sa/Gr, b=5 m



Cooper-Jacob confined – late data Sa/Gr/Bedrock, b=21.6m



Theis confined – best fit Sa/Gr/Bedrock, b=21.6m



Well	T (m^2/s)	K (m/s)	S		T (m^2/s)	K (m/s)	S		T (m^2/s)	K (m/s)	S
PW21-01	$7.8x10^{-2}$	$1.6x10^{-2}$			$6.9x10^{-3}$	$3.2x10^{-4}$			$5.2x10^{-2}$	$2.4x10^{-3}$	
TW20-01	$7.8x10^{-2}$	$1.6x10^{-2}$	$8.7x10^{-3}$		$1.6x10^{-2}$	$7.2x10^{-4}$	$4.4x10^{-2}$		$5.2x10^{-2}$	$2.4x10^{-3}$	$1.3x10^{-2}$

Figure 2-6 Drawdown versus Time for Pumping Well PW21-01 Data prior Tt Heavy Rainfall Data

The analysis of the pumping test for the data prior to the rainfall events correspond to approximately 4 days (96 hours) of pumping, which is sufficient time to allow for drawdown response to pumping at a well. The regular time frame for analysis of a municipal well is 72 hours. Fortunately, precipitation was not occurring in the first 96 hours of the pumping test, which provides a window of time for isolating solely the aquifer response to the stress of pumping from PW21-01. The aquifer analysis presented in WSP 2022 focused on the use of the double porosity method for bedrock aquifers. Noting that drill logs show the presence of a 5 m thick sand and gravel layer that is supported by regional mapping of the surficial geology (Rivera 2014) and minimal details for bedrock characterization of fractures provided in WSP 2021, the pumping data was analyzed for the combined porous media and upper bedrock fractures. It is assumed that the combined geologic layers behave as a porous media. Hence, the Theis and the Cooper-Jacob methods were applied to the data prior to rainfall. The re-analysis provides results of transmissivity similar to the double porosity method (6.3 $x10^{-3}$ m^2/s) but has the benefit to provide storage values for the aquifer. The Storativity values are within the range of confined aquifer[6]s .

[6] Freeze, Ralph A. and John A. Cherry. 1979. Groundwater. Prentice-Hall, Inc. Englewood Cliffs, New Jersey.

2.2 TASK 2 – WELL EFFICIENCY

The theoretical and true drawdown values for well PW21-01 was estimated to provide an overall well efficiency. This will be important for the design of a backup well in this wellfield. For example, should the backup well be constructed in same manner (perforated casing) or be fitted with a machine-wound continuous wire screen well? Well performance typically degrades with time although alleviated through maintenance programs. This information will assist in developing a long-term well operation and well maintenance program for PW21-01 and the backup well.

- The well intake construction is a series of perforations in a 250 mm diameter (10 inches) metal casing, extending from the water level (top of sand and gravel layer) to the bottom of hole (see figure below).
- A well efficiency check reveals a Walton's C factor of 0.014 min^2/m^5, which is in the range of a properly designed well (0.5 min^2/m^5), so the perforated casing appears to be properly designed.
- The diameter of the perforations within the casing were estimated to provide an open surface area for groundwater intake of 1,550 mm^2 (2.4 in^2) per foot of perforated casing. The open area for a 250 mm diameter (10-inch) diameter machine-wound well screen with a slot size 50 mils/inch would provide an open area of 69,670 mm^2 (108 in^2). A machine-wound well screen would provide approximately 45 times the intake area that the perforations on PW21-01 provides - however, the "properly designed" rating of this well indicates the existing design to be suitable for the operation of the well.
- It is understood that the intent of the perforated casing is to stabilize the borehole wall, to perform as a permanent stabilizing liner. Although the Atlantic Canada Water Supply Guidelines (ACWS)[7], mentions slotted casing for the purpose, the well efficiency analysis in this memo suggest that the well is "properly designed". From the analysis, it appears that the perforated casing does not interfere with the movement of groundwater from the geological formations into the well.
- The turbidity in PW21-01 ranged between 5.7 and 12.4 NTUs during the 10-day pumping test. This represents a range of turbidity that will require treatment (which is being considered in WSP 2024) and is likely related to the size of the perforations in the casing. To avoid treatment of turbidity, a different well construction could include the installation of a pipe-size machine-wound continuous wire screen surrounded by a sand and gravel pack.

2.3 TASK 3 – APPLICATION OF EXISTING GROUNDWATER MODEL

Based on the findings from the boundary conditions, it is now assumed that the sand and gravel / bedrock formations make up the aquifer and that the aquifer is under confined conditions. The raise in groundwater levels within the pumping well, as a result of a rainfall, suggests that the groundwater criteria "rapid recharge" should be examined for this well, e.g. the recharge from the St Andrews River and the Time of Travel (TOT) from the river to the well should be investigated. The groundwater flow model was used to further explore the assumption of confined aquifer to provide estimates for the groundwater time of travel to the well PW21-01. The scenario evaluated to explore the groundwater flow path between the St Andrews River and the well is for:

— The sand and gravel / bedrock formations (aquifer) act as primary pathway between the river and the well.

[7] Atlantic Canada Water & Wastewater Association. 2022. Atlantic Canada Water Supply Guidelines. Published May 2022 and revised April 13, 2023. 256 pp.

Revisions to the hydrogeological properties of the layers within the groundwater included increasing the hydraulic conductivity of the sand and gravel layer to $1x10^{-3}$ m/s, from a previous value of $3x10^{-4}$ m/s. As a result, the model is no longer calibrated and will require re-calibration in the future, once the well is put in operation and groundwater level observations can be collected over a period of time. However, it is considered that the results from the adjusted (non-calibrated) model are useful in forecasting the conditions near the well. The results of the groundwater flow modelling for purposes of GUDI analysis are presented in the following section. It should be noted that the groundwater flow modelling was performed for Equivalent Porous Media (EPM) conditions and should be evaluated for fractured rock conditions as well.

3 GUDI ANALYSIS

3.1 THE GUDI PROCESS IN NOVA SCOTIA

For determining water supply treatment requirements, a classification process has been put in place for municipalities in Nova Scotia. The classification is used to determine if groundwater is under the direct influence of surface water (GUDI) or is non-GUDI. All municipal water well sources in Nova Scotia must be initially assessed for their GUDI classification. The Nova Scotia GUDI assessment process is guided by the Nova Scotia Treatment Standards for Municipal Drinking Water Systems Appendix A of the reference[8] (Nova Scotia 2022) and consists of three steps:

- Step 1 is a screening step used to rapidly identify obvious non-GUDI water wells based on available information.
- Step 2 is used to determine if there is a hydraulic connection throughout the aquifer that could allow rapid recharge of the well by water directly influenced by surface water. Rapid recharge means recharge that occurs between the well and surface water with a time of travel (TOT) of 90 days or less. In addition, Step 2 includes a review of available hydrogeologic information and one year of water quality monitoring at the wellhead and a nearby surface water body.
- Step 3 is used to determine if there are surface water particulates or pathogens present in the well that indicate it has been influenced by surface water. This is done using the Microscopic Particulate Analysis (MPA). The travel time results from Step 2 are needed to determine when the MPA samples are to be collected.

The completion of the process results in a GUDI classification of low, medium or high or a non-GUDI classification.

3.2 RESULTS OF THE GUDI ANALSYSIS FOR PW21-01

3.2.1 STEP 1 SCREENING EVALUATION

The Step 1 screening evaluation indicates the following:

Sensitive Settings: The following considerations would rule out the well from this category:

- The well is constructed within a confined aquifer; and
- The well is approximately 450 m north of the St Andrews River, which is greater than the 60 m criteria.

[8] Nova Scotia. 2022. Nova Scotia Treatment Standards for Municipal Drinking Water Systems. Approved by Lora MacEachern, Deputy Minister. June 15 2022. 193 pp.

However, the limestone bedrock is karstic which therefore suggests the potential for a karst aquifer. As a result, the aquifer will be considered as being within a "sensitive setting".

Well Construction: The well has a solid outer protective casing that extends to 35.9 m below ground surface, exceeding the criteria of 12 m. The well has an inner casing that is perforated from 35.9 m to 50.6 m below ground surface. The area between the outer and inner casing is filled with bentonite and the annular seal is fully grouted. The well construction is certified by the driller as meeting the Nova Scotia Well Construction Regulation. The well also meets the ACWS well construction guidelines.

Water Quality: Three samples were taken during the 10-day pumping test and returned "absent" results for E.Coli and total coliform.

The results of the screening evaluation indicate the well is within a sensitive setting and should be further considered for GUDI. In addition, the rise in groundwater levels at the well and monitoring wells during the 10-day pumping test, as a result of precipitation suggests that the possibility of rapid recharge to the well which requires further assessment.

3.2.2 STEP 2 SCREENING EVALUATION

A Step 2 assessment was initiated, however, there are aspects of the Step 2 assessment that can only be carried out once the well is in operation, i.e. the one-year sampling requirement from the well. The portion of the assessment that was completed is the TOT portion and the results are presented below.

The previously calibrated groundwater flow model was adjusted to reflect higher transmissivities in the sand and gravel layer that would appear to hydraulically connect well PW21-01 and the St Andrews River. The preliminary simulation results indicate a response in the well from the precipitation event during the pumping test as can be seen in Figure 3-1. The figure shows a simulated increase in water level in the pumping well of about 1 m – this value is higher than the field observed increase of approximately 0.3 m. The higher response suggests a conservative response to the hydraulic connection between the well and the St Andrews River from the groundwater flow model. The model was subsequently used to assess the TOT between the river and the well.

The TOT results are helpful in determining the potential for the well to be GUDI as they were applied against the criteria provided in Appendix A of the reference Nova Scotia 2022: In the Step 2 of the GUDI analysis, the well is considered rapidly recharged if the TOT is less than 90 days.

The groundwater simulation shows that the TOT between the St Andrews River and PW21-01 operating at a discharge rate of 2440 m^3/day (448 gpm) is 520 days for EPM conditions. Therefore, based on this preliminary analysis, PW21-01 is not a GUDI well. Another simulation was carried out with PW21-01 pumping at a rate of 650 m^3/day (120 gpm), which is closer to the discharge rate the well will be initially operating at. At this pumping rate, there is no TOT as the influence of the well is not sufficient to initiate travel from the river to the well.

As stated in the assessment guidelines, the well should be sampled for a period of one year once the well is in operation. At that time, the water quality will be re-assessed as well as the TOT be re-evaluated with a re-calibrated model (and also consider fractured rock conditions). At that time, to be prudent, the Town of Stewiacke may select to carry out the MPA testing as a confirmation of the GUDI assessment.

Based on the screening evaluation and the preliminary results from the TOT evaluation, the well is considered non-GUDI, however, monitoring for a period of one year and re-assessment with a calibrated groundwater flow model is necessary to confirm this rating. It should also be noted that preliminary interpreted groundwater flow direction suggests groundwater flows towards the St Andrews River (i.e. groundwater recharges the river). Monitoring of water levels once the well is in operation will assist in providing supporting information on the direction of groundwater flow in the vicinity of PW21-01 and the St Andrews River.

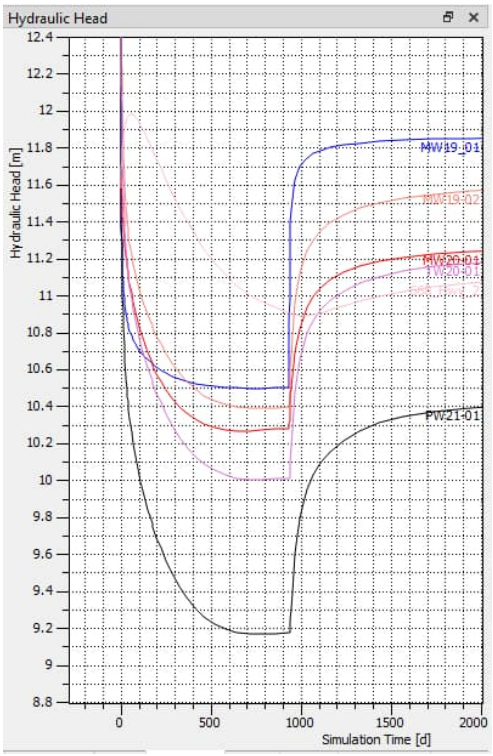


Figure 3-1 Preliminary Simulation Results from the Precipitation Event

4 CONCLUSIONS AND SUMMARY STATEMENT

Based on the information presented regarding the source analysis for groundwater supply at PW21-01, the following conclusions and summary statements have been developed by WSP.

1 The primary aquifer that supplies PW21-01 includes a thin sand and gravel layer, approximately 5 m in thickness, and the upper portion of limestone bedrock that is fractured and may be karstic.

2 PW21-01 was certified by well driller that is was constructed as per the Nova Scotia Well Construction Regulations.

3 The drawdown at the well, when pumped at a rate of 2440 m^3/day (448 gpm), was 1.02 m.

4 The re-analyzed properties of the aquifer show a transmissivity ranging from 6.9 $x10^{-3}$ m^2/s to 7.8$x10^{-2}$ m^2/s. The Storativity of the confined aquifer system ranges from 8.7$x10^{-3}$ to 1.3$x10^{-2}$.

5 The presence of a thick clay-rich till layer (~30 m) acts as a confining layer and will minimize downward vertical migration of surface contaminants.

6 A precipitation event late in the 10-day pumping test of PW21-01 increased the stage of the St Andrews River and consequently, caused a rise in the water level (decrease in drawdown) in the pumping well and monitoring wells constructed in the aquifer.

7 The noticeable decrease in drawdown from the precipitation event suggests well PW21-01 has a hydraulic connection with the St Andrews River.

8 The water quality of the well PW21-01 does not resemble the water quality from the St Andrews River.

9 A two-stage treatment process is proposed to treat the groundwater source for: 1) iron, manganese, sulphates; and 2) total dissolved solids, turbidity and hardness.

10 Application of the GUDI screening guidelines suggests that the presence of a karstic limestone provides a sensitive setting for the well PW21-01.

11 The hydraulic connection between well PW21-01 and the St Andrews River is not a rapid recharge as defined by the GUDI assessment guidelines. An estimated time of travel (TOT) of 520 days was generated by the revised groundwater flow model previously constructed for the project and with PW21-01 operating at a pumping rate of 2440 m^3/day (448 gpm). The estimated TOT is greater than the criteria of 90 days. Therefore, PW21-01 is not a GUDI well.

12 It is anticipated that upon start-up, well PW21-01 will operate at a much lower rate that the discharge rate used during the 10-day pumping test. Assuming a pumping rate of 120 gpm, then groundwater modelling simulations indicate river water does reach the well, hence has no TOT.

13 There are other portions of the GUDI assessment that can only be completed once the well is in operation e.g., sampling of groundwater over a period of one year.

14 The GUDI assessment indicates that the well PW21-01 is non-GUDI, however, confirmation will be required via monitoring and re-assessment.

15 The estimated TOTs provided herein should be re-evaluated with data acquired during the operation of the pumping well and from monitoring wells. Considerations should also be given for TOT within fractured rock.

5 RECOMMENDATIONS

Based on the findings presented in this memo, the following recommendations have been developed by WSP:

1 Submit an application to withdraw groundwater from PW21-01.

2 Make provisions for the implementation of a groundwater level and groundwater chemistry monitoring program, that meets the Step 2 requirements, as soon as the well is put into operation.

3 Re-evaluate the TOT for EPM and fractured rock scenarios and compare to the NS GUDI assessment criteria.

4 Carry out Microscopic Particulate Analysis (MPA) on the source (a minimum of 2 samples), once the system is in operation.

5 Construct a second well within the aquifer to provide backup/redundancy for PW21-01.

6 CLOSURE

This memo was prepared as documentation for the source analysis for PW21-01 for the Town of Stewiacke and is presented for the sole use of the Town of Stewiacke. The 10-day pumping test and pre-feasibility water treatment study have provided results that are promising for the development of a groundwater supply at PW21-01. It should be noted, however, that the period over which testing occurred remains a short snapshot in comparison to the proposed long-term operation of the system (decades). It is imperative that appropriate monitoring of water levels, discharge rates and water quality be implemented and maintained plus the results reviewed on a regular basis to determine the performance of the system and to allow necessary adjustments, as required. This memo was written by Gil Violette, M.Sc.E., P.Eng and reviewed by Simon Gautrey, P.Geo.

WSP Canada Inc.

Gil Violette, M.Sc.E., P.Eng.
Senior Principal Hydrogeologist

Simon Gautrey, M.Sc., P.Geo
Fellow Hydrogeologist

GV/SG/cjy

STEWIACKE
RIVERS OF OPPORTUNITY

STAFF REPORT

Planning & Development Services | Town of Stewiacke | 295 George Street, Stewiacke, NS | (902) 639-2231

PREPARED FOR
Planning Advisory Committee - April 1, 2025

PREPARED BY
Jacob Macpherson, Planner

DATE
March 28, 2025

SUBJECT
Measures to manage new demand on Stewiacke's public drinking water supply until capacity is improved or better understood. Includes proposed amendments to the Town of Stewiacke's Municipal Planning Strategy and Land Use By-law regulating new growth in and outside of the Town's serviced area plus a standalone bylaw outlining development charges for new residential development.

RECOMMENDATION

Staff recommend that the Planning Advisory Committee approve the following amendments set out in this report:

a. Amendments to the Municipal Planning Strategy and Land Use By-law that will regulate new development in Stewiacke to manage new demand on the Town's water treatment capacity and restrict subdivision in rural areas.
b. A new standalone by-law that implements development charges for new residential development that uses Stewiacke's public drinking water.

BACKGROUND

Water Conservation Measures

On February 12, 2025, Staff presented a report to the Planning Advisory Committee in response to ongoing concerns over the limited ability of the Town's centralized drinking water system to provide drinking water to residents in the face of rising drinking water demands from new development. The report outlined ways to manage growth through various limitations to development intended to minimize new demand on the Town's water system while slowing subdivision in presently rural areas to reserve land for future municipally serviced growth once capacity is improved. The Planning Advisory Committee followed staff's recommendation that Council instruct staff to produce the regulations. On February 13, 2025, the Committee of the Whole agreed that staff should proceed with drafting the regulations.

The preliminary draft regulations provided in this report:

- set development restrictions on the number of dwelling units per lot in a new serviced overlay area;
- limit the number of subdivisions per lot in a new rural overlay area;
- set a performance standard for water intensive uses such as a car wash;
- require connection to municipal drinking water where it is available; and
- establish a new development charge bylaw which applies to new serviced residential development.

MUNICIPAL PLANNING STRATEGY AMENDMENTS

TOPIC	PAGE/SECTION	RECOMMENDED AMENDMENT
1. Conservation Overlay Preamble	Page 9 Section 2.3.3 Water System	**Remove** the following text: "The completion of the new 450,000 gallon reservoir means the water system will have significant capacity to service future development." **Replace with** "In response to concerns over the ability of Stewiacke's existing water treatment system to support new growth in the Town, Council has established a Serviced Water Conservation Overlay with the intention of temporarily slowing the speed of residential development and restricting new commercial land uses that make intensive use of Town water until service capacity improves. To accompany the Serviced Water Conservation Overlay, Council has established a Rural Reserve Overlay. By restricting growth in areas that are to be serviced with public drinking water, it is probable that development pressure will be pushed to areas outside of the water coverage map through the use of on-site well, which Council wishes to mitigate through this overlay."
2. Reflect Current Development Trends and fix Typographical Error	Page 9 Section 2.3.3	**Remove** stricken text "Council also feels is it very important to conserve water as much as possible. ~~The Town has experienced a reduction in water usage recently and is hopeful that this trend will continue. Not only is the conservation of water a worthy sustainability goal but it will reduce the need for costly water infrastructure projects in the long tem.~~" **Replace With** Not only is the conservation of water a worthy sustainability goal but it will reduce the need for costly water infrastructure projects in the long term.
3. Establish Serviced Water Conservation Overlay	Page 9 Section 2.3.3 Water System	**Add a new policy after Policy ICSP 3:** "**Policy ICSP 4 -** It shall be a policy of Council to establish the Serviced Water Conservation Overlay on the Town's zoning map. This overlay is intended to apply to areas where public drinking water is being supplied or has the immediate potential to be supplied by public drinking water."
4. Establish Rural Reserve Overlay	Page 9 Section 2.3.3 Water System	**Add a new policy after the new Policy ICSP 4:** "**Policy ICSP 5 -** It shall be a policy of Council to establish the Rural Reserve Overlay on the Town's zoning map. This overlay is intended to apply to rural areas outside of the Serviced Water Conservation Overlay."
5. Reflect Current Development Trends	Page 15 Section 2.3.11 Strategic Growth	**Remove:** "The Town is well positioned to grow in the coming years. This growth should be directed so as to minimize the amount of public expenditures needed to accommodate development." **Replace With:** "Growth in the Town should be directed to minimize the public expenditure required to accommodate new development."

LAND USE BYLAW AMENDMENTS

TOPIC	PAGE/SECTION	RECOMMENDED AMENDMENT
1. Reflect Current Development Trends	Page 15 Section 3.1 Overall Development	**Remove** stricken text "Stewiacke has a water and wastewater system which services most of the Town's population. There is a significant amount of vacant land located adjacent to the systems ~~and considerable excess capacities in the systems~~. Development on this vacant land may occur on the existing public streets or a landowner may construct a new public street with services connecting to the public services."
2. New Definition, Water Intensive Use	Page 12 Definitions	**Add a Definition** Beneath 'Watercourse' **Water Intensive Use** means a use that incorporates water as part of a product, service or process and shall include: (a) Garden centres; (b) Commercial greenhouses; (c) Plant nurseries; (d) Golf courses; (e) Laundromats; (f) Water attractions; (g) Food or beverage processing plants; and (h) Any other use identified as water intensive by the Municipal engineer.
3. Require Connection to Central Services	Page 20 General Provisions for All Zones Section 5.5	**Add a Policy Beneath 5.4** **5.5 Connection to Central Services** New plumbed buildings shall be connected to the public drinking water system where such service is available. Where service availability is unclear, the Municipal Engineer shall decide based on site conditions and available system capacity.
4. Regulate Water Intensive Uses	Page 22 General Provisions for All Zones Section 5.21	**Add a Policy Beneath 5.20** **5.21 Water Intensive Uses** Where Water Intensive Uses are permitted in a zone, no development permit will be issued for any Water Intensive Use unless the development is not connected to the public drinking water system or the applicant provides an end use water consumption study, conducted by a qualified professional, indicating that the estimated peak water consumption of the development would not exceed 400 gallons per day.
5. Add Serviced Water Conservation Overlay	Page 47 Part 14 Overlays Section 14.1	**Add a New Part Beneath Part 13** **Part 14 Overlays** 14.1 Serviced Water Conservation Overlay In the Serviced Water Conservation Overlay, permitted uses shall include all uses permitted in the underlying zones with the following exceptions: a. Based on the lot delineations of Schedule C (Map of Water Conservation Overlays), a development permit shall not be issued if two or more dwelling units have already been approved on a given lot.
5. Add Rural Reserve Overlay	Page 47 Part 14 Overlays Section 14.2	**Add a New Section Beneath 14.1** **14.2 Rural Reserve Overlay** Within the Rural Reserve Overlay, the number of new lots that may be created from an area of land shall be restricted to three lots per calendar year.

DEVELOPMENT CHARGES BYLAW

The following regulations would form a separate bylaw to apply development charges to all new residential development that is to be serviced by public drinking water.

Development Charges Bylaw

1 **TITLE**

This bylaw shall be known as and may be cited as "The Development Charges Bylaw for the Town of Stewiacke".

2 **DEFINITIONS**

For the purposes of this Bylaw, the following words shall have the meanings hereby assigned to them:

- "Dwelling Unit" means a dwelling unit as defined in the Land Use Bylaw.
- "Water Serviced Lot" means a lot that has a Municipally approved water lateral.
- "Water Unserviced Lot" means a lot that is not a Water Serviced Lot.

2.1 **Development Subject to Charges**

Infrastructure charges shall be due and payable to the Municipality on a Water Unserviced Lot upon request to be serviced by public drinking water for residential purposes.

2.2 **Rates**

The fee for developments subject to charges under this bylaw shall be $3,000 per dwelling unit.

APPENDIX A - WATER CONSERVATION OVERLAYS