

# Boudreau Presents Capacity Studies Report

*(Due to the length and massive detail on the water and sewer systems they will be published over the next few months. This first segment deals with situations in Brookfield)*

On June 13th Colchester Council received the capacity study review from Director Public Works, Michele Boudreau. The purpose is to provide Council with information on the findings of the Capacity Studies for Brookfield Sewer System, Tatamagouche Sewer System, Tatamagouche Water System, Debert Water System, Bible Hill/Valley Sewer System and the Central Colchester Wastewater Treatment Facility/Trunk Line. Staff will utilize the findings to make recommendations to Council

at Capital Budget time.

**SUMMARY / BACKGROUND:** In June of 2023, staff issued a request for engineering proposals for an assessment of remaining capacity within the following systems: 1. Valley Bible Hill Sewer System; 2. Central Colchester Wastewater Treatment Facility and Trunk Line; 3. Debert Water System; 4. Brookfield Sewer System; 5. Tatamagouche Sewer System; 6. Tatamagouche Water Utility; 7. Truro Heights Sewer System; 8. Salmon River Sewer System; 9. Debert Sewer System and 10. Hilden Sewer System.

The scope of work included identifying where capacity issues exist, and for the specific developments below, the consultants were to provide

cost estimates for any required upgrades: 1. Bible Hill - Five Corners Development (Bates Property); 2. Debert - Hudson Street Housing Development and Mi'kmaq Debert Cultural Centre 3. Salmon River School Development and 4. Truro Heights Development, Kent Road.

Council's Budget for the work at the time was \$200K and the selected consultant's price for covering all areas above was \$366K. As such, Council decided to award the work for items 1 to 6 only, at a total cost of \$263K. Of the total project expenses, \$39.7K was funded by the Village of Bible Hill for work in their area, and the Province provided \$85K in funding under the PCAP program.

The findings of the assessment are included below, by community.

**Note** In all communities, the volume of rainwater and groundwater entering the sewer system was found to be a major issue. We refer to this problem as Inflow and Infiltration or I/I. This topic is addressed as a separate section of this report but applies to all sewer systems.

Also note that all capacity assessments included 3 months of sewage flow monitoring programs (October to December 2023), as well as hydrant flow testing, and computer modeling of the various systems. This data was important for defining existing conditions and future system capacities.

**Brookfield Sewage Collection and Treatment System:** The Brookfield Sewer System was originally installed in 1971, and the current sewage plant was built in 2003. • This system includes 136 manholes, 12.1 km sewer, one pumping station and one sewage treatment plant. The system services approximately 500 residents.

**Piping and Pumping Stations:** Key findings included evidence of heavy I/I within the system, especially at the plant inlet and along the trunk line near Little River. 45% of the system is old concrete pipe which requires repair or replacement in order to stop groundwater from entering the system. The high groundwater table in Brookfield is an issue.

**Figure 1** in the report shows remaining capacity within the sewage collection system - note that PWWF means peak wet weather flows and PDWF means peak dry weather flows. As evidenced by the numbers, removing rainwater and groundwater from the system will create capacity.

For the most part, the piping system has a good level of remaining capacity. Pumping station 10 as well as the section of pipe on Carter Road have the most limiting capacities at 352 and 195 people respectively.

**Sewage Treatment Plant:** Based on flow metering data, it's estimated that up to 400 cubic metres per day enters

the sewer system from groundwater only. This is approximately half of the treatment plant capacity. Also during wet weather events such as rain and snowmelt, flows to the plants can increase by 5 times, which is above the recommended threshold for sewer systems.

Plant limits for treated sewage discharge were recently reduced by Nova Scotia Environment, meaning that treatment requirements have become more stringent. Regardless of new development, an extra treatment step needs to be added to the plant to achieve these new limits. A receiving water study is already underway to establish plant upgrade requirements.

There is remaining capacity at the plant for approximately 380 people, but the lift station feeding the plant can only accommodate an extra 128 people. The pumps at this station can be swapped out to pump more flow into the plant.

**Going Forward:** Recommended steps going forward include the following: Plan for future upgrades to Pumping Station 10 by swapping out the pumps - required once population increases by 350 people; Plan for future upgrades to the pumps feeding the treatment plant by swapping out the pumps - required once population increases by 128 people; Budget for replacement of aging concrete pipe over the next 5-10 years. Capital budget for fiscal 25/26 already includes funds for work on Highway 2; Budget for a design firm to create drawings and estimates for upgrading the plant to meet new treatment limits - likely the addition of a sand filter to the process. Upgrades will be required in the next 1-3 years; and Continue to focus efforts on I/I reduction.



## Climate Capacity Application Approved

By Paul Smith

*(The following is the first of several parts presented elsewhere, in this issue, of an overview of activities in the Community Development Department since January 2024, which was presented to Council committee by Paul Smith, Director of Community Development on May 16. This section includes Smith's analysis of Sustainable Colchester.)*

### SUSTAINABLE COLCHESTER

#### Carbon-Free Colchester Implementation EV Charging Stations:

The charging stations at the Tatamagouche library and Debert have been recently activated and available for use. The station at the Courthouse is complete and awaiting final inspection by Nova Scotia Power. This will be the last of 11 charging stations installed across Colchester.

#### Solar PV on Municipal & Community Buildings:

The solar panels at the Tatamagouche Library have been generating clean energy since installation finished in January (see photo). The ground-mounted solar farm at the Central Colchester Wastewater Treatment Plant in Lower Truro will be installed this summer and Fall. The project will benefit from \$1.4 million in funding from the joint federal/provincial Investing in Canada Infrastructure Program (ICIP).

#### Carbon-Free Colchester Implementation Committee:

The Carbon-Free Colchester Implementation Committee recently held its third meeting on April 15, 2024. The Committee is enthusiastic and has an abundance of ideas for advancing Colchester's climate action goals.

#### Community Climate Capacity Program:

Colchester's application to the Community Climate Capacity (CCC) program was successful, and staff have begun working with our assigned Climate Lead from the Clean Foundation. The individual will spend 30 hours per month supporting Colchester's climate action initiatives over the next three years. They will work with Public Works and Recreation on climate adaptation initiatives and lend capacity to staff to implement the Community Energy and Emissions Plan. The CCC program is free of charge to participating communities.

#### Solar Colchester / Cozy Colchester:

Staff have ramped up program marketing this Winter and Spring, including: RECC advertisements (large poster in entryway, sponsored swims and skates, sponsoring firefighting event); County newsletter articles; Truro Home & Outdoor Show booth; Distributing pamphlets to contractors to recruit participants; County-wide mailouts (coming soon) and Booth at EV test drive event on May 16

**Paul Smith is Director of Colchester Community Development Department**

## The Shoreline Journal Tid-Bits

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ready 50 per cent covered by the Province in exchange for three years of service - the Province will cover the other half of tuition for one additional year of service; investment of \$1.35 million.

There are currently 14 emergency medical responders and 692 primary care paramedics working in Nova Scotia.

### Skilled Trades Pilot Offers New Learning Pathway

Starting this fall, Grade 12 students who meet graduation requirements at the end of the first semester will be able to enter two skilled trades programs at Nova Scotia Community College (NSCC) sooner.

The Province is launching a pilot program that will see 34 eligible students begin at NSCC in February. The pilot includes NSCC's pre-apprenticeship plumbing program at the Sydney campus and the pre-apprenticeship electrical construction and industrial program at the Truro campus.

The program will include nine months of training, allowing students to graduate in November 2025 and enter the workforce faster.

Students in the program will have a two-week break in June to celebrate their high school graduation.

### Regulations to Address Systemic Hate, Inequity, Racism

Municipalities and villages will be the first public bodies required to develop plans to address systemic hate, inequity and racism under ground-breaking provincial legislation.

Following the recent approval of regulations under the Dismantling Racism and Hate Act, the Province is partnering with the Association of Municipal Administrators of Nova Scotia to help municipalities and villages develop equity and anti-racism plans.

With provincial funding of \$1.18 million, the association will provide dedicated resources and supports over the next four years to assist municipalities and villages in developing and implementing their equity and anti-racism plans.

Municipalities and villages are also required to update their accessibility plans by April 1, 2025, under the Accessibility Act. They have the option to create one combined plan or to create two separate but interconnected plans.

### Temporary Suspension of Cape Breton Moose Hunt

The Province is suspending the licensed Cape Breton moose hunt for three years because of a significant drop in the population. The Mi'kmaq are also putting a moratorium on their rights-based moose harvest until population numbers are sustainable.

The Department and the Mi'kmaq work closely together to manage the Cape Breton moose population. They periodically conduct aerial surveys over the Cape Breton Highlands to study the moose population. The 2024 survey showed a significant drop in the estimated population, from about 1,500 to about 835

### More Support for Nova Scotians Escaping Gender-Based Violence


People fleeing gender-based violence can now access support for housing with funding available through the Canada Housing Benefit. This new support, jointly funded by the Province and Government of Canada, provides eligible individuals and families with financial assistance for housing for up to two years.

In the first year, the benefit provides a flat rate based on family composition and the number of bedrooms required. This recognizes that individuals exiting violence may be experiencing financial abuse or face barriers to accessing other types of benefits because of complex family situations. The rates are: \$900/month for one-bedroom accommodations; \$1,100/month for two bedrooms and \$1,400/month for three or more bedrooms.

Eligibility and amounts will be reassessed in the second year based on household income and average market rents. People applying for the benefit must have a referral from a recognized transition house or other agency. Applications are now available at transition houses, Alice House, Nisa Homes, the Mi'kmaq Native Friendship Centre, Adsum House and the Avalon Sexual Assault Centre.



# Tom TAGGART



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