Town Council Meeting

March 23, 2021

6:30 p.m.

Virtual and

Council Chambers, Town Hall

359 Main Street

Agenda

Call to Order

1. **Approval of Agenda**

2. **Approval of Minutes**
   a. Town Council Meeting, February 16, 2021
   b. Town Council In-Camera minutes, January 26, 2021
   c. Town Council In-Camera minutes, February 16, 2021

3. **Comments from the Mayor**
   a. Poetry Readings from:
      - Xavier Cox – Grade 8
      - Ava Kelly – Grade 8
      - Sadie Parks – Grade 6
      - Abby Bouter – Grade 6

4. **Public Input / Question Period**

   PLEASE NOTE:
   - Public Participation is limited to 30 minutes
   - Each Person is limited to 3 minutes and may return to speak once, for 1 minute, if time permits within the total 30-minute period
   - Questions or comments are to be directed to the Chair

- Comments and questions that relate to personnel, current or potential litigation issues, or planning issues for which a public hearing has already occurred, but no decision has been made by Council, will not be answered.

5. New Business

a. Info Report: Regional Recreation Facility Feasibility Study

b. Info Report: Acadia Pool Financial Request

6. Motions/Recommendations from Committee of the Whole, March 9, 2021

a. RFD 011-2021: 2021-2022 Operations Plan/Budget
b. RFD 012-2021: Debt Guarantees - VWRM
c. RFD 013-2021: COVID Safe Reopening Grant
d. RFD 014-2021: Spring Debenture Pre-Approval
e. RFD 015-2021: Flood Risk Final Report
f. RFD 016-2021: DA Discharges – Whispering Creek and Pompano Estates
g. RFD 017-2021: 2021 Town of Wolfville Acadia Scholar-Bursary Amendments

7. Correspondence

a. Martin Walton – Firefighters Benevolent Fund
b. Andrea SW- Response to Saltwire 5G article
c. Andrea SW- 5G Moratorium Follow Up
d. Andrea SW- Screening of the Need to Grow
e. Andrea SW – 5G and Health Canada
f. Andrea SW- FW 5G Moratorium Follow Up
g. Barbara Blanchard – RE 5G Moratorium Follow Up
h. Dani Nadeau – Support Delivering Community Power
i. David Daniels – Devour Capital Request

j. David Daniels – Devour! Studies Grant Request
k. David Daniels – Town Strategic Plan
l. DST- Dogs Running Free
m. Irmgard Lipp – 5G Moratorium
n. Kevin Gildart – New Tourism Welcome Centre
o. Laurie St Amour – WCC Annual General Meeting
p. Rosemary Feener – Wed. March 10th 2nd PS to Email about Congestion 4 way stop
q. Rosemary Feener- Wed. March 10th – Live Zoom Comments
r. Shasta Grant – International Women's Day Campaign Features
s. Thomas Clahane- RE 5G Moratorium Follow Up

8. Adjournment to In-Camera under the Municipal Government Act Section 22(2)(c):

a. Committee Appointments

9. Adjournment of In-Camera and Regular Meeting

SUMMARY

Regional Recreation Facility Feasibility Study

The Town of Wolfville will be potentially partnering with the Municipality of the County of Kings and the Towns of Berwick and Kentville, pending approvals from their respective Councils, on a Regional Recreation Facility Feasibility Study – with a specific focus on adding a publicly accessible Aquatic Centre to the region.

This study is positioned to be a two-phase project with the first phase providing Councils with details on the facility and how it could operate, all with a general idea of costing. It will be at Council's direction as to whether the second phase would proceed, which would refine costing and prepare a tender ready document. Phase 2 costing would be included in the 2022-23 budget process.

The Town of Wolfville anticipated this possible collaboration and had budgeted for their participation in Phase 1 as part of the 2021-22 budget process. As outlined in the requirements of the study; preliminary costing, ownership models, and capital requirements will all be addressed for Council's consideration as part of Phase 1. As noted in this Information Report, Section 3 – Discussion, The Municipality of the County of Kings will serve as the tendering agent, and contracting party with the successful proponent. The County will also be seeking grant funding to support the cost of the study.

A Regional Recreation Facility was identified as a Council priority for the 2021-24 Council term.

1) CAO COMMENTS

The CAO supports moving forward with participation in this study. The amount included in the 2021-22 Operating Budget will allow for participation in Phase 1.

The RFP will be issued once all Councils have considered this matter and determined their participation. This is coming to Council as an Information Report as this has already been identified by Council as a priority and dollars were included in the 2021-22 Operating Budget to allow for the Town's participation.

2) REFERENCES AND ATTACHMENTS

No attachments.

3) DISCUSSION

In 2019, the Towns of Berwick, Kentville, and Wolfville and the Municipality of the County of Kings partnered to complete a Regional Recreational Needs Assessment (RRNA). Although the RRNA showed that many recreational facility needs are being met, it did not consider the public access to these facilities. As the main example, there are pool facilities at Acadia University, the NS Youth Centre in Waterville, and at the Canadian Forces Base 14-Wing; however, there are limitations to public access. This issue was further exposed during the COVID-19 pandemic when all facilities had specific restrictions in place.

In addition to the pandemic, Acadia University has been discussing the long-term viability of their pool, and the need to either cease operations, or heavily invest in rejuvenating the current facility. With this information it will be crucial that any discussion around a Regional Facility will contemplate a pool/aquatics facility that has very good public access.

Kings County is one of the largest geographic regions in the Province that does not currently have a publicly owned Recreational Facility, such as can be found in Bridgewater, Truro, Pictou, CBRM, and HRM. The four Municipal Councils in Kings County, or most of the Councillors, have all heard from residents (or organized groups of residents) that there is a need to address the lack of specific facilities.

To address the need, or perceived need, it is proposed that the Municipality of the County of Kings, in partnership with one to all three Towns of Kings County, commission a Regional Recreation Facility Feasibility Study. The intent of the study would be to identify and confirm regional facility needs, investigate the potential for improvement of quality of life for residents, and the ability of a Regional Facility to serve as an economic demand generator.

The study would be completed in two separate and distinct phases. Phase 1 would consist of the following:

- Community Consultation and Interviews
- Potential Facility Content Requirements and Recommendations
- Cost Benefit Analysis and an Economic Impact Assessment
- Preliminary Physical Siting
- Capital Cost Estimates
- Operating Cost Estimates

- Ownership and Deliver Models
- Public Presentations of Draft Concept(s)

Phase 1 would finalize with the completion of a Regional Recreation Facility Pre-Design Report, which would be presented to all participating Councils. The Councils would then decide whether or not to proceed to Phase 2, which would refine the information from Phase 1, and prepare all information for tendering the construction of a Regional Facility.

The Municipality of the County of Kings would serve as the tendering agent, and contracting party with the successful proponent. Once all four Municipal Units have decided as to their participation, and funding approval, Federal and Provincial funding will be investigated to potentially reduce the cost of Phase 1.

It is proposed that a Steering Committee would be formed that would be comprised of an elected representative from each participating Council, the CAOs, and one staff member appointed by each of the CAOs.

4) FINANCIAL IMPLICATIONS

Dollars have been allocated and approved in the 2021-22 Budget to support Wolfville's participation in the Phase 1 study. Budget dollars for the Phase 2 component would rest in the 2022-23 Budget and be approved by Council as required.

Cost sharing between municipalities will be based on the REMO Funding Formula, with each unit paying a base amount of $8,250, with the difference based on a 50/50 split of population and uniform assessment.

5) REFERENCES TO COUNCIL STRATEGIC PLAN AND TOWN REPORTS

As noted in Council's Priority Initiatives for their 2021-24 term:

Number 1. Multi-purpose regional complex to include at minimum an aquatic facility. May also include other recreation and cultural indoor facilities.

A Regional Recreation Feasibility Study would be the first step in addressing this priority.

Council Strategic Principles:

1. **Affordability**
2. **Transparency**
3. **Community Capacity Building**
4. **Discipline to Stay the Course**
5. **United Front**
6. **Environmental Sustainability**

SUMMARY

Acadia Pool Financial Request

The Town of Wolfville, along with other municipalities in Kings County, have been approached by Acadia University to provide support to 1) keep the pool open for community use during the non-academic term of May 1st – August 31st and 2) to provide support to help alleviate the anticipated deficit of operating the pool during the academic term of September 1st, 2021 – April 30th, 2022.

This Information Report has been prepared to get general feedback from Council on both proposals in advance of an RFD in April 2021.

1) CAO COMMENTS

This information report is being provided for discussion purposes and will inform a future RFD in April 2021.

From staff's perspective, there are a number of benefits should the proposals be funded by municipal partners:

- This will provide support to a strategic partner of the Town and allow an important recreation service to the community to continue.
- This will provide increased opportunities for lane and open swims during a period when COVID-19 has limited opportunities for participation in scheduled swim times. This will also allow for improved community access during the academic term.
- This will allow continuity of access to a pool facility while the Regional Recreational Facility Feasibility Study is completed, and next steps are determined.
- This will leverage, as appropriate, the Safe Start Up COVID Relief funds that have been made available to the Town of Wolfville, lessening the direct burden on the Town and the Wolfville taxpayer.
- This is an opportunity for the Town to partner (should all Councils approve these proposals) with our surrounding communities on an initiative that will provide benefit to all our collective residents.

There are also some concerns to consider:

- The number of Wolfville pool users, particularly in the summer months, may not warrant the magnitude of financial investment in the pool facility.
- All of the municipal partners may not approve the funding as proposed, which may mean that Wolfville would have to contribute additional money towards the request should there be a desire to move forward regardless.
- While the Safe Restart COVID Relief Fund may be used for part of this request, in particular for the summer proposal, it is unclear as to whether or not it would apply to the winter ask. As this is an unbudgeted expense, the Town would have to cover the difference, likely from reserves.
- This will likely become an annual request and the Town would have to budget for its annual contributions as part of the annual budgeting process, as COVID Relief money would not be available or applicable.

2) REFERENCES

- Acadia University Athletic Complex Business Plan
- 2021-02-24 Acadia Pool Financial Information provided by Chris Callbeck
- 2021-02-25 Acadia Pool Financial Proposals provided by Chris Callbeck

3) DISCUSSION

Over the past year, COVID-19 has had an impact on Acadia University, and of great interest to the broader community, on the Acadia Athletics Complex. Due to both public health regulations and the financial impact COVID-19 has had on Acadia operations, the Athletics Complex, and its various amenities, have not been available to the general public as it typically has been in previous years. Since the fall, the Athletics Complex has staggered its re-opening to students, faculty/staff and community memberships for its various amenities, with limited access for these groups to the pool for lane and open swim times resuming on February 8, 2021.

May 1, 2021 – August 31, 2021

At this current time, Acadia has communicated with its municipal stakeholders that they intend to remove the water from the pool by mid-April until the students return in September. The cost savings Acadia will achieve by closing the pool and removing the water will be approximately $65,000 over this period. These cost savings are strictly direct costs of not having the water in the pool to heat, treat and maintain. Any programming cost savings are not included in this amount.

Acadia has offered to keep the water in the pool, and to allow its municipal stakeholders control over programming until the students return for the summer, if a contribution of $65,000 is provided to Acadia to cover the amount that would have been saved by taking the water out of the pool and closing it down for those four months. Pool staff would remain employees of Acadia, but the programming and scheduling would be directed by the municipal stakeholders. Any programming revenue collected during this period would offset programming costs incurred. More details are provided in the Financial Implications Section of this RFD.

September 1, 2021 – April 30, 2022

Acadia has requested that municipalities help support the cost of operating the pool for the 2021-22 academic year.

It has been suggested that the net cost, including all sources of pool programming revenue, for the academic school year for 2021-22 is approximately $160,000. Acadia has suggested several cost-sharing formulas with municipalities for this time period which range from usage, to a monthly fee based on summer costs, to various other cost-sharing options. The most economical option provided to the Town is that the same amount of $65k used for May – August 2021 would be used for the September – April time period, with the University resuming responsibility for pool programming.

Pool Usage by Community and Type

The Sierra Report provided a breakdown in terms of pool usage, by type, on an annual basis. In 2018-19, 60% of the pool schedule was reserved for community activities (such as open and lane swims), 16% for

the Wolfville Tritons, and 25% for Acadia University/Varsity Swim Program (note – a rounding error has this at slighting more than 100% allocation).

Additionally, as part of the Sierra Report, information was provided based on the geographic residence of community membership pass holders. Based on the most current year available (2017-18), Wolfville was 51%, County of Kings was 28% and Kentville was 13% of all community memberships. The remainder of memberships were from other municipalities (West Hants, Halifax, South Shore). The main limitation of this metric is that is does not account for any "drop in" or "pay-as-you-go" swimmers that would typically partake in open and lane swims. It also does not give any consideration to participants in camp and swim lesson programming. It does, however, give a general basis for which cost-sharing between municipalities for these proposals can be based on.

Key Considerations

There are many considerations for the Town of Wolfville, and its municipal partners, to consider with this request:

- Currently, due to public health regulations, there are limits to the number of swimmers at any given time. Council has received some feedback that the current booking system may not allow for fair access to the facility. The number of times available for public lane and open swims, along with how swimmers can reserve a spot, will have to be examined and enhanced.
- Currently swimming spots are only for students, faculty/staff and community membership pass holders. Should the municipalities provide financial support to keep community pool access in the coming months, access for the general public should be made available. Given the current COVID-19 public health restrictions, balancing general public "drop in" and the existing user groups, will need to be managed in a equitable manner.
- It is likely that for the May 1st – August 31st proposal, that the Town of Wolfville and Municipality of the County of Kings are the only two potential municipal partners. The Town of Kentville may participate in the September 1st – April 30th proposal, but as they operate their own pool facility in the summer months, the assumption has been made that they will not participate in the summer proposal.
- Any metrics to be used for cost-sharing purposes will be imperfect based on the limited usage data by geographic location that is available.
- For both the summer and academic year requests, there is a potential for utilizing the Safe Restart COVID Relief Funds that have been made available to the Town of Wolfville (please refer to the financial implications section). It should be cautioned that given the financial challenges facing Acadia both as a result of COVID-19 and other factors, that there is a strong possibility that this request will become an annual one. Should the Town wish to support any future requests, it will have to be given consideration as part of our annual operating budgeting process and will more than likely impact the tax rate.

- Council is considering participation with our surrounding municipalities to undertake a Regional Recreation Facility Feasibility Study. Even if the outcome of this study is to develop a regional facility, including a pool, we are still years away from that coming to fruition.
- Other options for pool access (or alternatives) for eastern Kings County using existing facilities are very limited, however have not yet been explored to date.

Summer Programming Considerations

There are several key summer programming assumptions associated with this request should it be approved:

- We would anticipate maintaining the existing Pool Coordinator for the duration of the four-month period. Currently this coordinator works 17.5 hours per week and does hiring, scheduling, etc and is paid $16/hour.
- We are assuming operating the pool at 50 available hours per week (compared to 32 hours currently) to improve offerings to the community for lane and open swims. 14 of these hours would be dedicated to the Tritons, who rent their time.
- We are assuming all hours require two lifeguards. In some situations, only one guard may be required and in others we may require more then two. Lifeguards make minimum wage.
- We would be implementing hour-long lane swims (currently at 45 min).
- We would continue to offer Aquafit (approximately six times per week).
- Day Camps may require dedicated pool time and this will be accommodated within the 50 hours if required.
- Swimming lessons will not be provided in the summer months, although private lessons may be offered as per past years.
- We have been told that approximately $13,000 will be incurred for cleaning and COVID-related protocols
- Limited drop-in swimming revenue, as well as a portion of new community passholder amounts will minimally help to offset costs incurred (along with revenue from Tritons rentals).

Winter Programming Considerations

Municipalities have been asked for $65,000 to help offset costs related to the pool operation for the academic school year. Acadia would assume all responsibility for the programming, and no revenue would offset this investment. It has been communicated that additional community times would be made available in exchange for this support. The details of this will be worked out in the coming months.

4) FINANCIAL IMPLICATIONS

This request is currently not in the draft 2021-22 Operating Budget. It has also been confirmed that the annual $35,000 that is provided to Acadia in support of the Athletics Complex is in addition to the funding amounts being requested.

Acadia has provided the Town with financial information pertaining to the pool operation. On an annual basis, the pool operates at a loss of approximately $201,000 as per the following budget:

REVENUES

Pool Pass	11,500
Aquafit	5.500
Public Swim	15.500
Wolfville Tritons	44,500
Swim Lessons	40,000
	$117,000

EXPENSES

Direct Costs	
Administration and Lifeguards	93,000
Equipment and Supplies	6,000
	$99,000
Indirect Costs	
Electricity	45,000
Heat/Steam	11,000
Physical Plant Labour and Materials	155,000
Water	8,000
	$219,000
Total Expenses	**$318,000**

The contributions proposed in both the summer and academic year proposals would assist Acadia in reducing their expected deficit, through both direct financial contributions and in the municipalities assuming responsibility for summer month programming.

To assist Council in the decision related to the two proposals, a draft budget of potential summer operating expenses has been developed. As previously mentioned, the municipalities would be responsible for all operational costs from May 1st – August 31st in addition to the $65,000 requested.

Funding formulas have been developed loosely based on the geographical location of facility membership holders. While CAO's have had preliminary discussions, it is unclear at this stage 1) what each CAO will ultimately recommend to their respective Council and 2) if Councils are interested in participating in these proposals. The funding formulas would clearly have to change if either the County or Kentville opted not to participate in one or both of the proposals.

The draft proposed budget is summarized as:

Summer Revenue				
Tritons	$14,833			
New Facility Passes	$1,000			
Drop in Revenue	$1,000			
Aquafit	$1,833			
	$18,666			
Summer Expenses		**Cost Sharing**		
Summer Contribution	$65,000	Wolfville	55%	$48,412
Cleaning	$13,000	County of Kings	45%	$39,610
Summer Coordinator	$4,480			$88,022
Lifeguarding	$21,600			
Benefits	$2,608			
	$106,688			
Profit/Deficit	$88,022			

As previously noted, the contribution for the academic, or winter, season is limited to $65,000, with Acadia providing all operational requirements. The municipalities would have an opportunity to improve the offerings for the community during this time frame in exchange for this investment. The details of the proposed academic term investment are as follows:

Winter Revenue	$0	**Cost Sharing**		
Winter Expenses	$65,000	Wolfville	55%	$35,750
		County of Kings	30%	$19,500
Profit/Deficit	$65,000	Kentville	15%	$9,750
				$65,000

In total, under the above budget assumptions, the Town of Wolfville would be responsible for contributing $84,162 to support both proposals. It is anticipated that the Safe Start Up COVID Relief Funds will be used to offset some of the proposed contributions, particularly towards the summer proposal. Circumstances would have to be reviewed in the fall to see if the proposal for the 2021-22 academic term meets the criteria to be used for this purpose. Otherwise, the Town will have to likely use its own reserves to fund this request.

5) REFERENCES TO COUNCIL STRATEGIC PLAN AND TOWN REPORTS

Reference the appropriate strategic directions from the 2021-2025 Strategic Plan:

- Economic Prosperity
- Social Equity – this proposal will provide enhanced access to all residents, including facility membership holders and the general public, to the Acadia pool.
- Climate Action
- Community Wellness – this proposal supports a recreational amenity within the Town and ensures that it remains open for community use.

Reference, if applicable, how the RFD links to a Council Priority Initiative:

- Multi-purpose regional complex (with an aquatics facility) – this proposal allows for continued access to a pool facility, for the next year, while further work and next steps are developed for a regional recreational facility.
- Revitalization and maintenance of road, sidewalk, crosswalk infrastructure and traffic management
- Economic sector growth and support for businesses (retention and attraction)
- Climate management related initiatives (reduce carbon emissions, support local transportation, food security, environmental protection)

6) COMMUNICATION REQUIREMENTS

Due to the time limitations of this request, consultation with the public has not occurred. Regardless of the decision of Council, it is suggested that during the upcoming year, and as the results of the Regional

Recreation Facility Feasibility Study are known, that community consultation be undertaken on what future contributions may look like and how this is best funded.

7) FUTURE COUNCIL INVOLVEMENT

An RFD will come to Council in April at the COW Meeting. Given the time sensitivity of the request, a Special Council Meeting will be held after COW to formalize the decision of Council so that Acadia and the other municipal partners can be informed.

6) COMMUNICATION REQUIREMENTS

Public engagement as part of the feasibility study. Method and strategy to be defined by successful vendor.

Regular updates to Council.

7) FUTURE COUNCIL INVOLVEMENT

Council will be directly and indirectly involved as the process moves forward.

REQUEST FOR DECISION 011-2021
Title: 2021/22 Operations & Budget
Date: 2021-03-09
Department: Office of CAO & Finance

SUMMARY

2021/22 Operations Plan and Budget

Annually the Town is required to approve a *balanced* budget for the upcoming fiscal year. The Town of Wolfville has a well-established practice of budget approval by the regular March Council Meeting. This has allowed the organization to start each new fiscal year with direction and spending authority in place before the operational year begins on April 1st. From a financial perspective, this is a best practice that the organization should continue to adhere to.

The process itself occurs year-round, with Council and staff interacting with the public in various formats. As occurs every four years, the 2021/22 budget process benefits from municipal elections and the feedback that candidates hear from the public while on the campaign trail. The formal process, in accordance with Standard Operating Procedure, started with Council at the November Committee of the Whole (COW) meeting. At that point in time

- an early draft of the 10-Year Capital Investment Plan (CIP) was reviewed/discussed,
- preliminary assumptions were set by COW for staff to build into the first draft of the operating budget, e.g. initial position on tax rates, tax increases and impact of Cost of Living Adjustments (COLA)

This year's process included the usual budget review at a Special COW meeting in January followed by another review at the regular February COW meeting. Council also decided to have an extra COW meeting in February to provide more time to review the draft Operations Plan and consider final revisions to the draft budget(s). The span of November to March COW has provided time for members of Council to review, discuss, debate and provide direction to staff for changes. A key consideration this year has been the impact of the COVID pandemic, from both a public perspective as well as the Town organization itself.

The final draft before COW on March 9th is the result of hours of discussion with members of Council and represents the plan for 2021/22 along with budget projections for 2022/23, 2023/24, & 2024/25.

The draft Operations Plan for 2020-2024 has also been included. This document provides text details of budget initiatives and projects for the upcoming 4 years. The two documents work together as a complete budget package. As discussed at the Special COW meeting on February 26th this document is still in draft form, with final updates occurring between the March COW and Council meetings.

DRAFT MOTION:

That Council approve the 2021/22 Town Operations Plan and related Operating Budget, Ten Year Capital Investment Plan, and the Water Utility Three Year Operating and Capital Budget, including the following details:

- Town Operating Budget with revenue & expenditures in the amount of $11,261,900;
    - Residential Tax Rate of $1.475 per hundred dollars of assessment applied to taxable residential and resource assessments;
    - Commercial Tax Rate of $3.585 per hundred dollars of assessment applied to taxable commercial assessments;
    - Taxes to be billed by way of Interim Tax Bill (issued in April, due May 31, 2021) and Final Tax Bill (issued in August, due the September 30, 2021);
    - Interest on overdue amounts to be charged at a rate of 1.00% per month;

- Town Capital Budget with Year 1 totaling $4,641,500, including capital reserve funding of $1,582,417, operating reserve funding of $292,500, long term debt funding of $1,124,750, Federal Gas Tax grant funding of $810,000, ACOA grant funding of $343,333, Provincial grant funding of $43,000, and other/external grant/contribution funding of $5,000, and $400,500 from the Town's Water Utility for its share of street infrastructure projects.

- Water Utility Operating Budget with revenues of $1,133,300, operating expenditures of $981,700, and non-operating expenditures of $176,300.

- Water Utility Capital Budget totaling $865,500, including Depreciation Reserve Funding of $385,500, Capital from Revenue Funding of $70,000, Long Term Debt of $230,000, and Accumulated Surplus funding of $180,000.

- Fire Protection Area Rate (pursuant to Section 80 of the Municipal Government Act) of $0.056 per hundred dollars of assessment

- Business Development Area rate (pursuant to Section 56 of the Municipal Government Act) of $0.28 per hundred dollars of commercial assessment

- Sewer fees
    - Sewer usage rate of $4.41 per 1,000 gallons of water used by customer;
    - Flat Rate fee of $85.30 per quarter;
    - Minimum quarterly charge for any metered customer $22.00;
    - Sewer connection fee of $3,500, if only sewer hook up
    - Sewer connection fee of $1,000 if hook up combined with water

- Low Income Property Tax Exemption
    - Income threshold to qualify a maximum of $30,000;
    - Maximum exemption of $750.

- Grants to Organizations under General Government/Community Development (*not part of Community Partnership Policy*)
    - Acadia Scholar Bursaries $11,000
    - Wolfville Historical Society $5,000
    - Acadia University
        - MOU main grant allotment $35,000
        - MOU Events hosting contribution $10,000
    - One-time contributions to 3rd Party Capital Projects (per application of Town Policy)
        - Community Oven (pending MOU) $24,400

1) CAO COMMENTS

The CAO supports the recommendations of staff. As noted in this RFD, the Operations Plan will be finalized prior to Council in March.

2) LEGISLATIVE AUTHORITY

- Municipal Government Act (MGA) Section 65 – Adoption of Budget

3) STAFF RECOMMENDATION

Staff recommend approval of the 2021/24 Operations Plan & Budget V4.

4) REFERENCES AND ATTACHMENTS

- Draft 2021/22 Budget Documents V4 (attached)
- Draft 2021/22 Operations Plan (attached)
- Committee of the Whole Agenda Packages – Nov 2/20, Jan 14/21, Feb 2/21 and Feb 26/21

5) DISCUSSION

Each year, the budget process has recurring themes as well as new discussion/hurdles. The preceding five month process has been no different. This year has been unique in dealing with the impact of a global pandemic on both the Town organization and the Wolfville community. Council has once again had hours of discussion debate on high level budget goals and specific budget direction. Draft V4 of the budget results from the original goals set by Council in November, as well as direction provided staff as the process worked its way to the balanced budget document presented with this RFD. Key areas of direction included:

- *Keeping residential tax increase within a reasonable cost of living adjustment (COLA)*. The Town annually uses the average change in the NS Consumer Price Index (CPI) for the preceding calendar year. For the 2021/22 budget this equates to a *COLA of 0.3%*.
    - *The COLA value is extremely low which limited a natural increase in the base tax revenue from the preceding year. At the same time members of Council have been cognizant of the COVID impact on the community and have remained firm on avoiding an addition to the tax rate.*
- Another change in assumption for annual increase to *capital budget funding*. In order to meet funding requirements of projects identified in the Ten Year Capital Investment Plan (CIP), an *annual increase 6% needed starting in Year 2 of the Operations Plan*.
- Recognition of refinement of capital dollars needed for flood mitigation efforts in the coming years. The Flood Risk Mitigation Study has numerous recommendations that will inform next year's 2022/23 budget process.

Within the financial constraints of the budget process, priorities heading into the 2021/22 fiscal year include:

- Redesign of Council Strategic Plan and corresponding redesign of the annual Operations Plan to align with Council's key areas of focus.
- Added resources included in key areas of Town operation.
    - 2021/22 budget provides for two Building Inspectors (up from one), addressing need to work thru Fire Inspections in the community and to manage new construction file inspections. This also forms part of a succession plan process with the Town returning to one building inspector in the next couple of years. The budget contemplates using Operating Reserves to fund on position so as not to impact tax rates for a temporary process.
    - New Manager position in Public Works Department, with main focus to support the annual Capital Budget projects. No immediate impact on taxes as the intent is to reduce a portion of the cost of external consultants to administer civil engineering contracts. It may be possible to reduce the overall cost of selected civil engineering projects through the use of inhouse resources. For example, in the fiscal year 2019/20, the total cost of civil engineering consultants on capital projects was just over $321,000.
    - Special Projects Coordinator in the Office of the CAO (replacing Administrative Assistant position moved to Planning & Development Department) will become support to numerous Town projects/initiatives.
    - The original two-year term position of Climate Change Mitigation Coordinator has been extended 6 months to ensure original mandate of work can be completed, i.e. development of a Climate Action Plan under the funding of an Federation of Canadian Municipalities (FCM) grant. That two-year grant expires in 2020/21, however use of COVID Safe Reopening funds will enable to the work to be completed, as key elements could not be completed in the current year due to the impact of COVID on the process being followed.
    - Continued resources in Public Works to address pavement conditions throughout the Town street system. Combined with major street infrastructure replacement projects (e.g. Highland Avenue in next two years), the Town continues to improve the overall condition of Town streets.

Not included in the final budget document is grant funds for the Devour organization. This does not mean the Town is not supporting the request from Devour for $100,000. This particular decision has been moved from the budget process to its own process to allow more time for Staff to bring back more details for Council to help arrive at the optimal decision affordable by the Town while still showing solid support to Devour. This process will carry into the new fiscal year.

Also not included is any allowance to provide financial contribution to the Acadia Pool. Any decision on this issue will come later once more details are known and a report is brought to Council.

At the end of any budget process, it is always important that Council feels they have achieved an equitable balance of the services desired with the inherent limitations of property tax burden to the community.

The final document will be an Operations Plan & Budget, providing Council and the community textual information on goals for the upcoming year (2021/22), as well as intended projects/initiatives for the following three years. Also included is a 4 year Budget Projection Summary. Years 2-4 of this summary are not meant to be balanced, but rather show the result that is likely *based on assumptions* built into the future years. Typically, one of the assumptions is to show no use of Operating Reserves for year's 2-4. The closer the projected results in year 2-4 are to break-even, the more likely future Councils may have an opportunity to make strategic decisions involving taxes and services.

It's important to review changes between each version of the budget. The key changes are in the Town's Operating budget, with a couple of changes in the Town's CIP and Water Utility Capital budget. The changes in the Town Operating numbers can be summarized as follows:

Net Surplus (Deficit) V3		(9,100)
Revenue Changes		
Grants	9,000	
		9,000
EXPENSES		
Seasonal/Term wages	16,700	
Employee Benefits - seasonal/term	1,700	
Insurance	(12,000)	
Vehicle Insurance	(7,000)	
Operatonal Material & Supplies	5,000	
Contarced Services	(5,000)	
Grants To Organizations	102,600	
Partner Contributions - AVRL	(2,300)	
Partner Contributions - Regional Housing	3,000	
		102,700
Capital Program & Reserves		
Transfer from Operating Reserves		(102,600)
Net Surplus (Deficit) V4		**$ -**

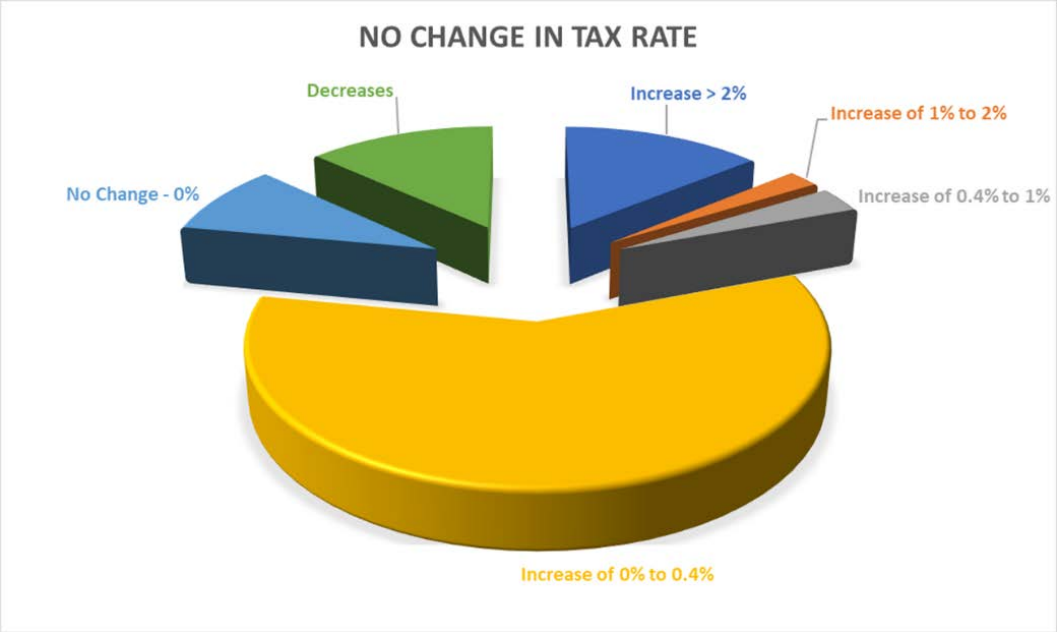
The changes above include:

- Additional grant revenues based on confirmations received on Friday, Feb 26th. To be split equally between Parks and Festival & Events for summer staff.
- Reduction in seasonal wages & benefits for the Welcome Centre (formerly called Visitor Information Centre)
- Increased budget estimate for both general insurance and vehicle insurance.
- Change in estimate for Operational Materials & Supplies in the Sewer Collection Dept yielding a small savings of $5,000.
- Change in estimate of Contracted Service for Planning Dept, additional $5,000 allocated to Department resources.
- Reduction in Grants to Organizations in the General Government Division. Relates to:
    - Remove of $100,000 allowance for grant to Devour. NOTE: This request has been moved from the budget process to come back to Council at a later date. After a number of discussions starting with January Committee of the Whole Special Budget meeting, it is clear the magnitude of this request requires more information to be brought back to Council before a decision can be made.
    - Small reduction in the budgeted amount of the grant for the Community Oven. Budget V4 had a value of $27,000, and the grant request was amended to $24,400.
- Adjustment to the Annapolis Valley Regional Library contribution of $2,300. New funding formula now shows an increase in annual funding requirement.
- Adjustment to Regional Housing Authority to lower budget allowance by $3,000.
- Reduction in budgeted use of Operating Reserves reflecting deferral of Devour grant and adjustment of Community Oven Grant.

The Operations Plan *provides many details on what staff expects to complete over the next year*, as well as goals for the succeeding three years.

Other budget highlights and points to consider include:

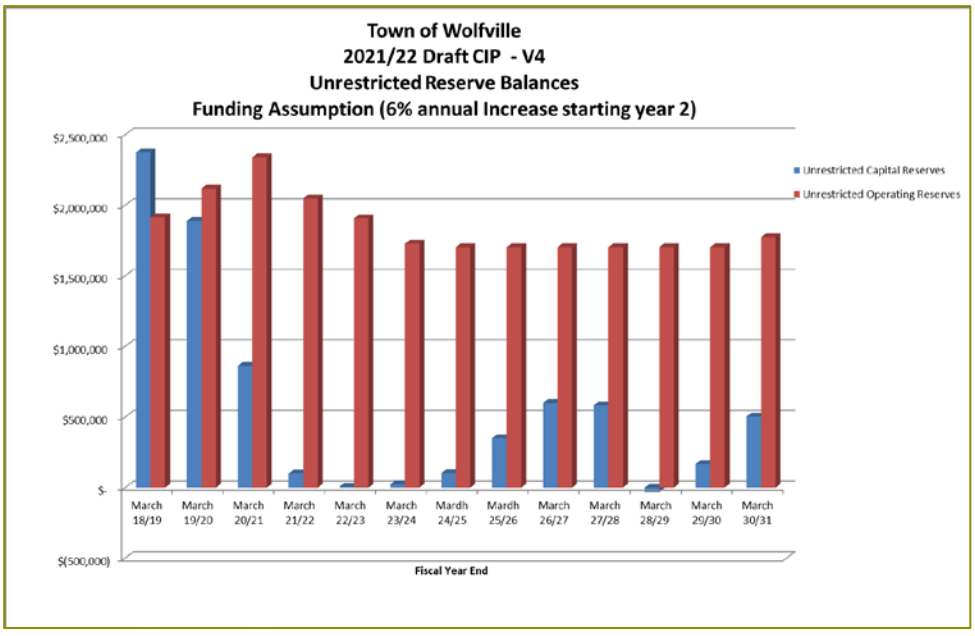
- **No change in commercial or residential tax rates**. Approximately 81% (1292 of the 1602 total accounts) of residential accounts will see an increase of no more than 0.4%. The average CPI (or COLA) change for 2020 was 0.3%.
    - 210 of these accounts see decreased taxes related to drop in assessment value.



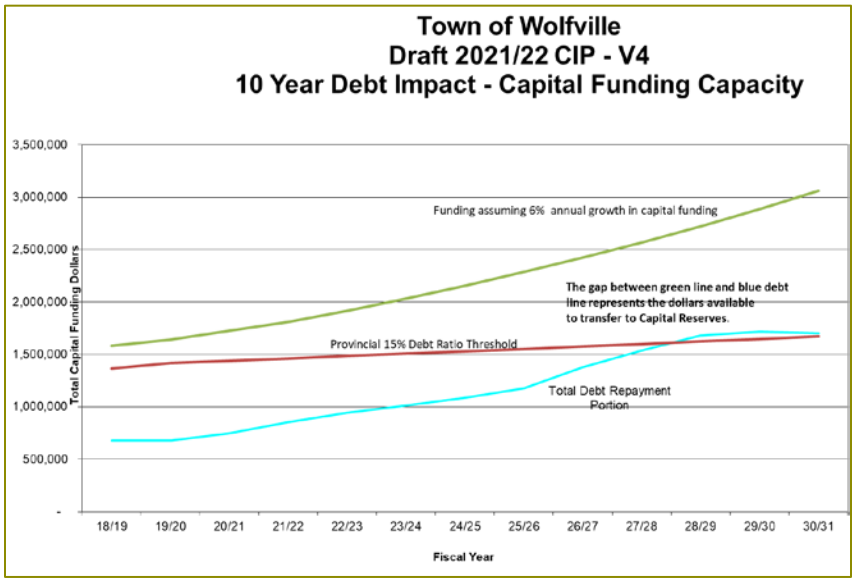
- Economic development efforts continue with
    - Continuation of WBDC funding at $100,000 by way of an area rate levy. The levy remains unchanged at $0.28/'00 of assessment.
    - $10,000 grant available to Acadia University by way of MOU related to hosting major regional/national event(s).
    - Both Dept of Recreation and Planning Dept provided dollar resources to support Economic Development initiatives.
- Sewer rate increase of 17% required to cover operational costs as well as increasing capital contributions for debt repayments. A key impact relates to lower revenues caused by the COVID pandemic shutdowns. Approximately 4% of the overall increase relates to the drop in revenues.
- Major Street Infrastructure projects include Highland Avenue over the next 2 years.
- The Town continues to rely on Operating Reserves to balance its annual budget. Staff have previously identified this as a risk if continued over the long term, if reserves are depleted below best practice benchmarks. The current draft budget (V4) will leave the reserves within 98% of the provincial benchmark.

Operating Reserves, March 31/20		2,163,200	
ADD: 20/21 Forecast Surplus *draft estimate, will change*		527,600	
Already Committed - 20/21 or previous			
Landmark - pending actual development	50,000		
Acadia Turf	60,000		
Chrysalis House	20,000	(130,000)	
Op Reserve, Estimated March 31/21		2,560,800	
Already Committed - next 10 years			
Town's '21/22 Operating Budget V4	234,600		
Town's draft CIP - 10 year capital	637,500	(872,100)	
Op Reserve, not yet committed to future projects		$ 1,688,700	98% of FCI benchmark
Minimum need to keep FCI 20% benchmark		$ 1,722,800	

- As noted in last year's RFD 010-2020 (March 2020 COW*) the use of operating reserves to fund grants to outside organizations has continued. Though possible now, this ability will not always be possible which may limit future Councils in issuing similar grants.*
- *Annual increase to capital funding is 5% for fiscal 2021/22, and then 6% per year for the balance of the ten year CIP*. If this goal is not met, notwithstanding any new grants obtained, then the funding shortfall for the 10 Year CIP will grow significantly.



- In addition, the current funding of the CIP will push the Town's debt ratio above 10% within four years (resulting in a moderate risk rating within the provincial Financial Condition Indicators), and 15% by year 8 (high risk).



Water Utility Budgets

The Water Utility operating and capital budget figures are included in the draft budget document. Of note for fiscal 2021/22:

- There is no rate increase in this budget. The last Rate Study approved by the NS Utility and Review Board (NSUARB) provided for rate increase up to and including fiscal 2020/21. No changes can be made to rates until another submission to the NSUARB.
- Additional dollars are budgeted under Power & Pumping Dept to cover cost of decommissioning of old wells over the next couple of years.
- **Overall the Water Operating Fund is budgeted to have a deficit of $24,700. This combined with projected deficits for the following three years indicates the need for a Rate Study.**
- The COVID pandemic had a negative impact on the Water Utility revenues with significant drops by typical large consumption customers. Lower revenue estimates reflect this trend to continue in 2021/22.
- The Utilities capital budget for 2021/22 includes two small projects. One continues the installation of RF meters which allows more efficient meter reading for billing purposes. The second item is a generator for the utility use with well pumps.

- As noted a year ago, the Water Utility's transmission line requires replacement. The first section of the line was replaced during the Westwood Street Capital Project in summer 2019. The Water's Capital Budget now includes a four year phasing to allow remainder of the line to be replaced. This has a significant impact on the Utilities budget requiring use of Accumulated Surplus Funds, Long Term Debt, and depletion of the Capital Reserves.

Municipal Fees Policy 140-015

- Clause 5.3 of the Policy notes that the document will be reviewed annually.
- Management has not had a chance to review the Policy in detail and therefore no recommendation is being brought forward to this meeting. A separate RFD will be brought forward in early 2021/22 with recommendations on fees. This may include amended fee structures noted in the Town's Accessibility Plan.

6) FINANCIAL IMPLICATIONS

This year's budget process had a number of important considerations to work through in order to achieve a balanced budget. The COVID pandemic was one of these, and it is expected this issue will continue to impact the Town over at least the next year.

Although the budget has been balanced, and the CIP funded for next ten years, this has been achieved with potential risks in future years. As noted over the last few years, continued reliance on Operating Reserves to balance the annual Town operating budget is not sustainable. The CIP requires full use of Capital Reserves within the term of this Council, with a small recovery in the last six years of the ten year CIP. The Water Utility as noted during this year's budget process will require depletion of it's capital reserves and a significant portion of Accumulated Surplus.

Council can expect to see a few Financial Condition Indicators move into the yellow in the next year or two and potentially red.

Council and Staff will need to work towards lowering the above noted risks during the next couple of years to ensure the Town does not overextend itself financially.

7) REFERENCES TO COUNCIL STRATEGIC PLAN AND TOWN REPORTS

Ultimately the annual Operations Plan and Budget represents all aspects of Council's Strategic Plan to the extent of balancing Strategic Goals that do not always move in the same direction. The proposed plan is this year's best effort at striking the right balance involving all goals under current circumstances.

To see direct linkages to the Strategic Plan refer to the Operations Plan details.

8) COMMUNICATION REQUIREMENTS

Nothing provided at this time

9) ALTERNATIVES

Not approve current draft budget, with direction to staff of what changes might be desired.

- This is not recommended. Best practice is to have an approved budget prior to start of the fiscal year. Delays do not typically result in easier decisions, they simply get delayed. **No one budget can satisfy all service levels desired and/or public request for services and still meet the goal of minimizing tax increases**.
- As with past years, to the extent that actual results in 2021/22 start to vary significantly from budget, staff will work with Council to manage any major negative variances.

Wolfville Operations Plan

2021-2025

April 1, 2021

A cultivated experience for the mind, body, and soil

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LETTER FROM CHIEF ADMINISTRATIVE OFFICER

This year marks the first Operational Plan and Budget under the Council that was elected in October 2020. Over the past few months, Council has reflected on feedback that was given during the election campaign, have reviewed the former Council Strategic Plan 2016-2020, and have considered the community priorities as identified in the newly-adopted Municipal Planning Strategy. As a result of these reflections, Council has drafted a new strategic plan to guide the priorities of Council and Staff over the next four-year term. This Operational Plan ensures that progress will be made in the strategic areas that Council have identified.

The Operational Plan is intended to provide a four-year snapshot of projects and initiatives that will be undertaken by the Town, in addition to the many core services and day-to-day operations. Year 1 activities are typically more definitive and detailed, while Years 2-4 initiatives are less defined in many cases and may be awaiting further study and information to fully populate. However, all efforts have been made to provide as much detail as possible for those years beyond 2021-22 so that Council, staff and the public have an understanding of work that is likely to be undertaken and where efforts will be focused.

This Operational Plan is also a living document. With a new format and new strategic directions this year, more time is required to adequately assess key performance metrics and how success will be measured. As such, it will continue to be refined throughout the year as required and as more information is known and developed. Future amendments will be shared with Council, staff and the public as they are updated.
I am very excited to get the many projects and initiatives identified for 2021-22 underway. We have established an aggressive plan that tackles a variety of priority areas that will hopefully move the needle on a variety of fronts.

Erin Beaudin

COUNCIL'S STRATEGIC PLAN

In February 2021, Council adopted a new Strategic Plan to guide where the Town will prioritize efforts over the next four-year term and how future Council decisions will be made. A copy of the Strategic Plan is attached as Appendix 1. Key highlights of the plan include:

VISION

A vibrant, progressive town at the centre of a thriving and sustainable region, where residents, visitors, businesses and university thrive and grow.

The vision identifies four equally important elements – residents, visitors, businesses, and the university. All operate in harmony and provide mutual support and benefit. None is expendable, none more important than the other. All must be healthy and stable for this vision to be achieved. The vision statement acknowledges that the Town exists within a sustainable region that supports the Town's health which in turn is necessary to the region's wellbeing.

MISSION

To provide leadership and collaborative governance for the responsive and responsible allocation of public resources for the greater good of Wolfville.

This mission outlines the purpose of this Council – to provide leadership for the Town's decisions, to do so in collaboration with the important segments of the community – residents, businesses, the University, and the greater region. Those decisions will be made understanding our role is the responsive and responsible management and expenditure of public funds entrusted to the town for the good of the town.

PRINCIPLES

Key principles guide Council's work. There are five principles that were identified in the Strategic Plan:

1. **Sustainability:** Decisions will be made with a view to long-term viability of the Town and its sectors.
2. **Transparency:** Decisions will be made openly and in public.
3. **Accountability:** Council is responsible for decisions and their impact. Decisions are a function of the whole of Council.
4. **Well-Communicated:** Council decisions and the processes leading to decisions will be well communicated using the media and mediums available to ensure the decision processes are shared.
5. **Evidence-Based:** Decisions will be based on factual evidence, the importance an issue is to the community, and other realities of our community life.

STRATEGIC DIRECTIONS

The Strategic Directions found in the new Municipal Planning Strategy – Economic Prosperity, Social Equity and Climate Action, along with an additional priority of Community Wellness, have been adopted by Council as primary or strategic focuses for the Town's services. Decisions will be made with consideration to these broad goals.

PRIORITY INITIATIVES

Council's Priority Initiatives are initiatives that a majority of Council members heard in the community as priorities. It is hoped that at the end of this Council term Council members can look at the achievements of the term and see clear evidence of achievement on each of these priorities. They will hold a special place in the operations and resource allocation of the Town.

Council's Priority Initiatives for 2021-2024 are:

1. Priority Area 1 (PA1) - Multi-purpose regional complex to include at minimum an aquatic facility. May also include other recreation and cultural indoor facilities.
2. Priority Area 2 (PA2) - Clear plan to address, in a timely manner, the revitalization and maintenance of road, sidewalk, crosswalk infrastructure and traffic management including addressing the issue of the 4-way stop.
3. Priority Area 3 (PA3) - Economic sector growth and support for commercial, business and entrepreneurial opportunities including retention and attraction of new economic opportunities.
4. Priority Area 4 (PA4) - Climate management related initiatives to reduce carbon emissions, support local transportation, local food security and environmental protection.

While the priority initiatives figure significantly in the Town's annual Operations Plan, they are not the only things that the Town will achieve. Ongoing work of service departments is a major component of each annual budget. These, and other projects for which need and/or opportunity arises during the term of Council, will be incorporated as appropriate and as possible in each annual Operations Plan and Budget.

WHERE TAX DOLLARS GO –

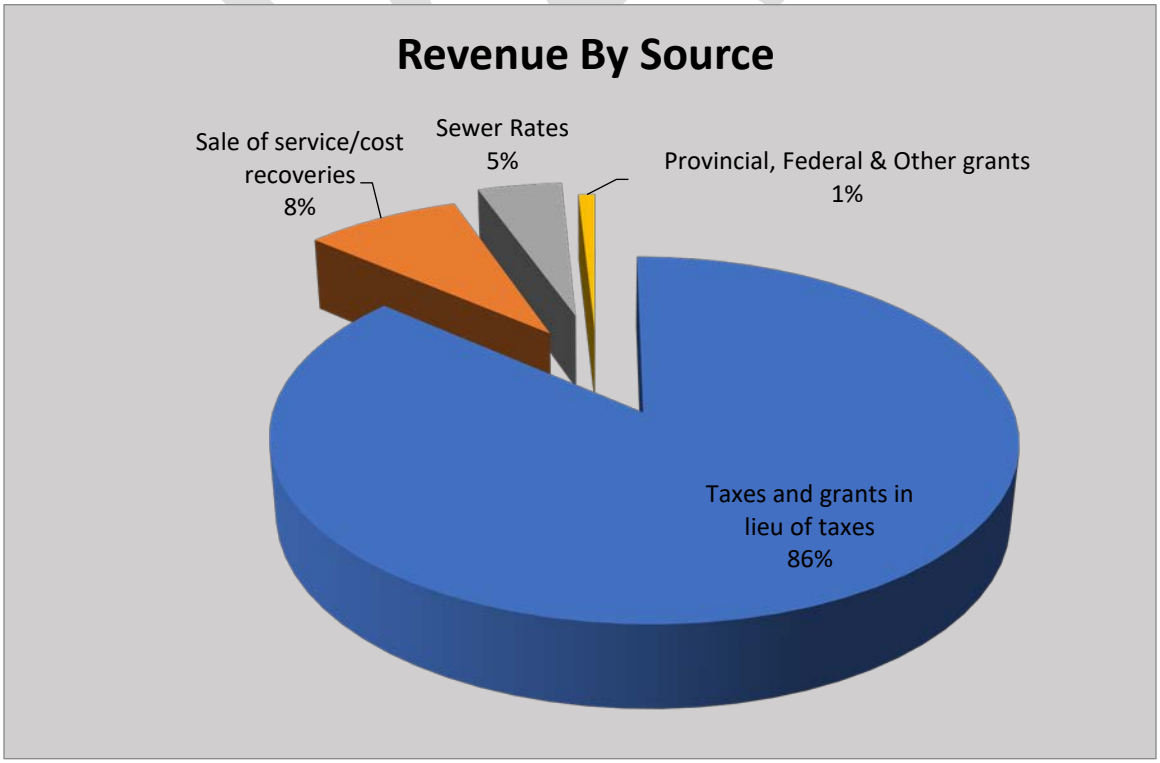
KEY CHANGES FROM 2020/21 to 2021/22

The 2021/22 Town Operating Budget reflects both Council's goal to minimize any increase in property taxes, while at the same time ensuring the community continues to see a high level of municipal services within the Town, including progress on Strategic Goals. Key Elements/highlights of this year's budget include:

- There was no change to the residential property tax rate, nor the commercial property tax rate.
    - Residential Tax Rate = $1.475 per hundred dollars of assessment
        - Residential tax revenues account for 69% of total tax revenues (1602 accounts)
        - The Provincial Capped Assessment Program (CAP) for 2021 was set at 0.3% and 60% of residential properties qualified.
        - Just under 81% of all residential accounts will see an increase of less than 0.4%, with the average increase at 0.27% (average dollar increase = $10)
        - 143 accounts see no change in residential taxes and 210 will have decreases

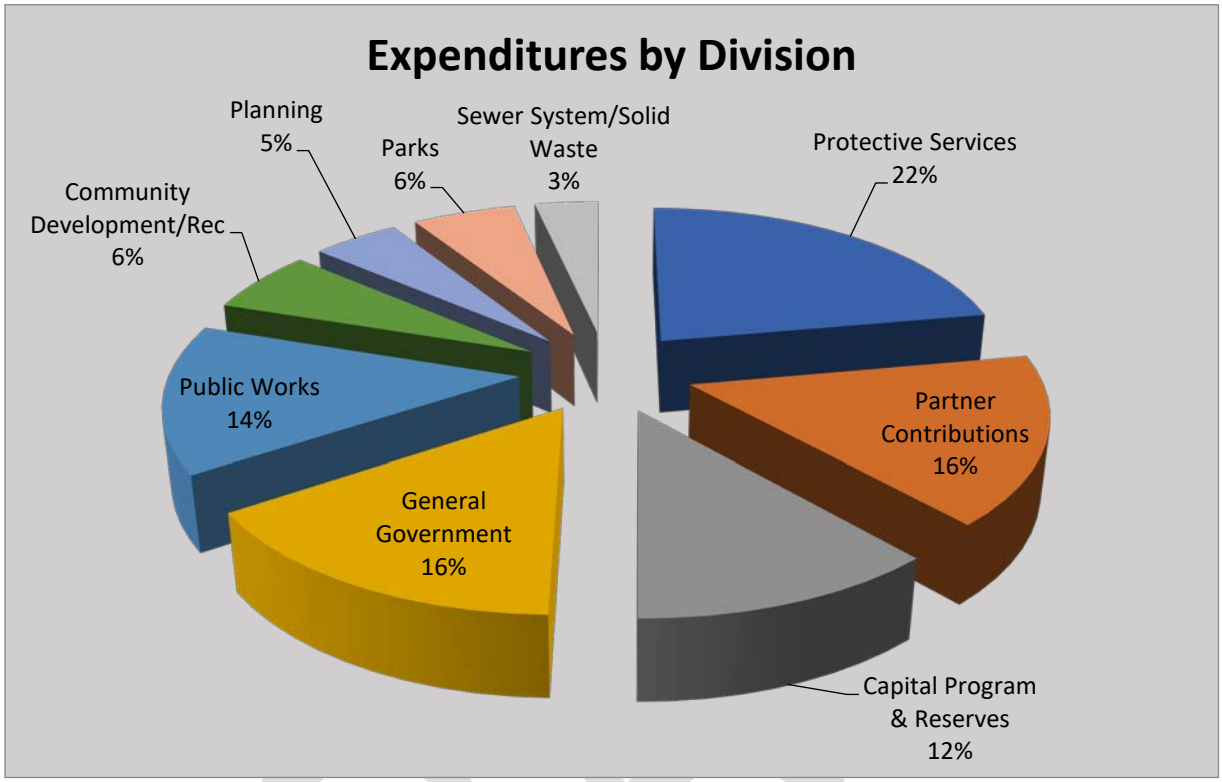
    - Commercial Tax Rate = $3.585 per hundred dollars of assessment (107 accounts)
        - Overall commercial tax revenue increased by only $100
        - 18 of 107 accounts have increases
        - 22 accounts have no change
        - 67 accounts will decreased commercial taxes

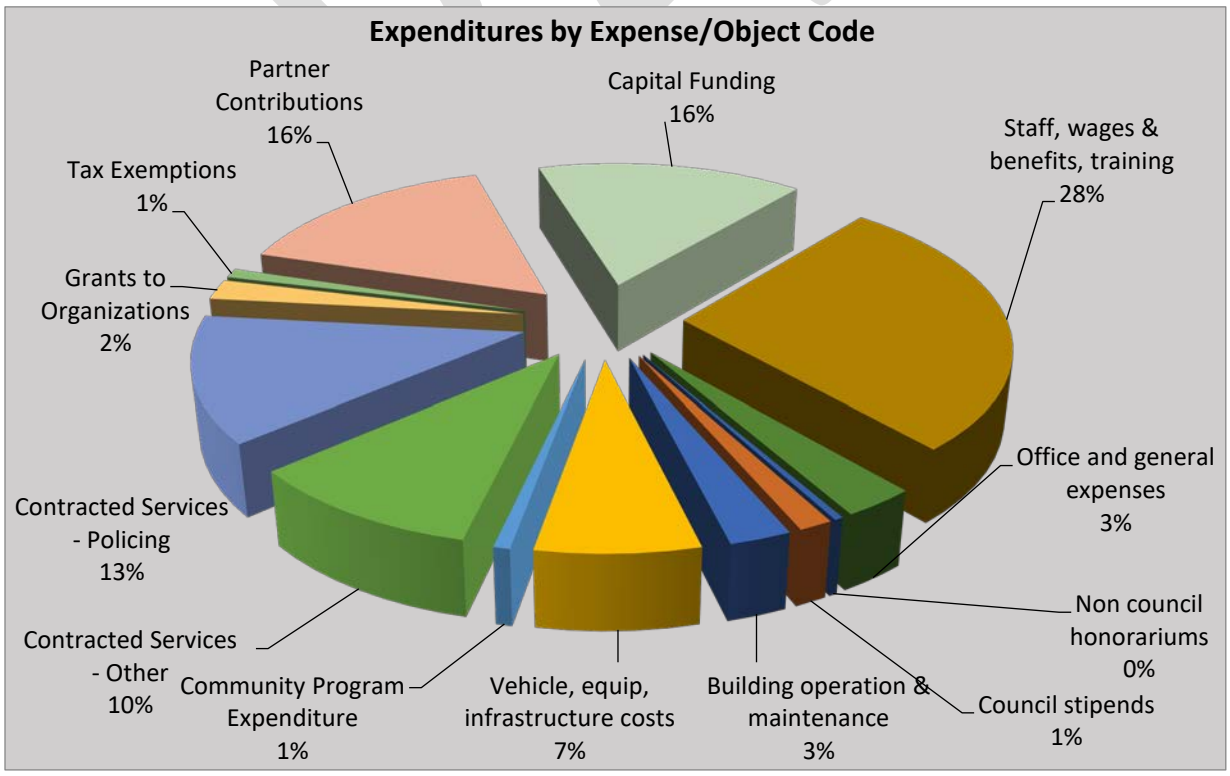
    - Commercial – Business Development Area Rate
        - Re-set to $0.28 per hundred dollars of assessment



Expenditures

The Town's overall operating expenses increased by only $17,900, with an additional $86,500 required to increase the budget allocation to the capital program.

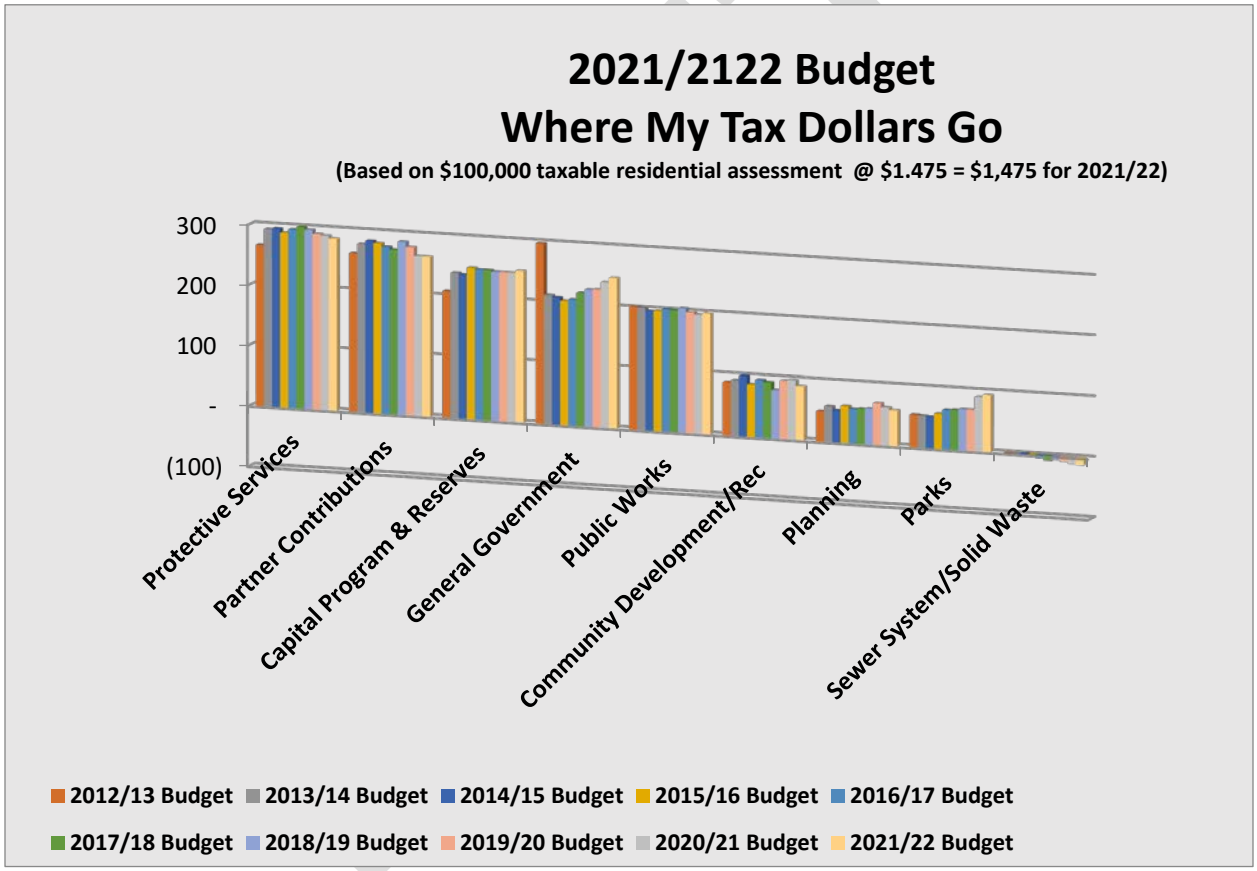




Expenditures (continued)

Another way to view the Town budget, is to look at what the ***net cost*** of each division/department is for the budget year. Ultimately the amount of property tax revenue required is determined by the cost to run each department and deducting non-tax revenues allocated to each of those service areas. This approach provides the basis for illustrating how your tax dollars are spent, i.e. Where My Tax Dollars Go!

The graph below shows a ten-year view of how tax revenues are utilized annually. As illustrated, how the dollars are used changes over time. For example after a significant drop in costs back in 2013/14 (reduction in staff levels), the General Government Division is starting to require a larger portion of annual tax revenues in more recent years. This reflects reallocating GIS resources from the Planning Dept. to the Corporate Services Dept, as well as increased costs for Grants to Organizations and insurance premiums. Note the Sewer operation appears to have no cost, however this simply reflects that the cost of the sewer operation is recovered through quarterly sewer billings, not property taxes.



RESOURCING THE OPERATIONS PLAN – MUNICIPAL DEPARTMENTS AND COMMITTEES

The following section provides an outline of the structure of the Town of Wolfville, at the departmental and committee level. These resources, along with strategic partnerships, will enable the successful implementation of this Operational Plan.

Within each Department, there are key day-to-day deliverables and functions that are at the core mandate of the Town. These are listed in each section and are key to the Town's daily operations.

These deliverables can take up a great deal of internal capacity, which limits the Town's abilities to take on additional priorities and initiatives. It is important to recognize that while this Operations Plan has endeavoured to address the priorities of Council and maintain the day-to-day service level requirements of the municipal operation, that the day-to-day activities must not get sacrificed while implementing the various other initiatives and projects outlines in the Plan.

Chief Administrative Officer

Erin Beaudin, CAO

The Chief Administrative Officer is the senior appointed official of the municipality providing organizational leadership to municipal staff and is the sole employee of Council. This position is responsible to Council for administration and coordination of the delivery of services to the municipality's residents and businesses in a manner that will ensure the effective utilization of the human, financial and physical resources of the municipality.

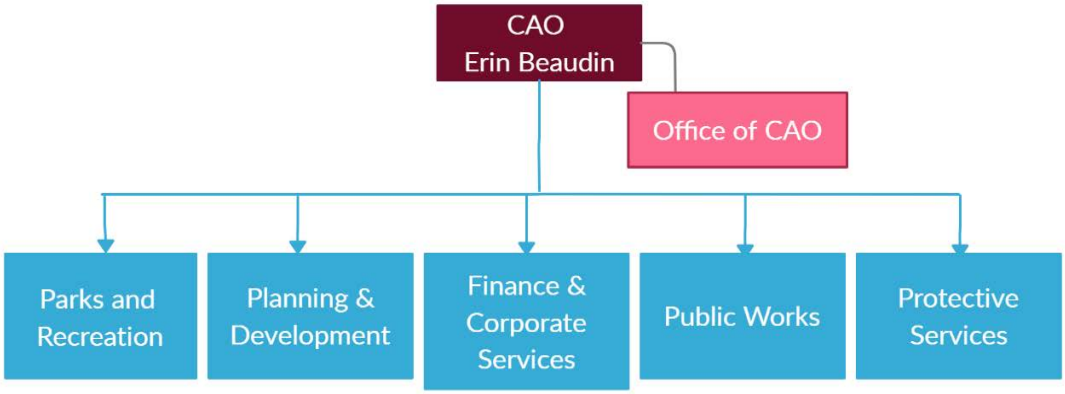
The Chief Administrative Officer is responsible for the proper administration of all the business affairs of the Town in accordance with the bylaws, policies and plans, approved and established by the Council and responsibilities as legislated by the Province of Nova Scotia.

Roles & Responsibility

- Administering the business affairs of the Town
- Advising Council on Town issues and on agenda items during meetings
- Directing the exercise of general financial control of all departments
- Directing the development and implementation of corporate policies, programs and services
- Ensuring Council receives the appropriate reports and information necessary for their decision making
- Assisting Council in strategic planning
- Liaising with officials, groups, agencies and other municipalities and the provincial and federal governments
- Responsible for communications
- Responsible for corporate customer service
- Responsible for human resources

Human Resources

- 4 Directors
- Fire Chief
- 1 Coordinator of Administrative Services
- 1 Community Liaison and Compliance Coordinator
- 1 Special Projects Coordinator
- 1 Administrative Assistant (Shared with Planning & Development)
- 25 Permanent Employees
- 5 non-permanent/Casual Employees
- 20 Union Employees, including
- 7 permanent Seasonal Employees



Office of the CAO Administrative Services

Office of the CAO Administrative Services provides an internal focus and priority for the Town's Human Resource Policies and Standard Operating Procedures, contract management, records management and support for Council and Committees of Council.

Operational Statistics

- 40 + Personnel Files
- 44 Bylaws
- 61 Policies
- 26 HR Policies
- 4 IT Servers
- 5 Core Software Systems

Human Resources

- 1 Coordinator of Administrative Services
- 1 Community Liaison and Compliance Coordinator
- 1 Special Projects Coordinator
- 1 Administrative Assistant (Shared with Planning & Development)

Council and Committee Support

Office of the CAO Administrative Services provides support to the Mayor and Council by overseeing a yearly schedule of meetings, and providing direct support for agenda preparation and minute taking of all Council and Committee of Council meetings.

Human Resource Management

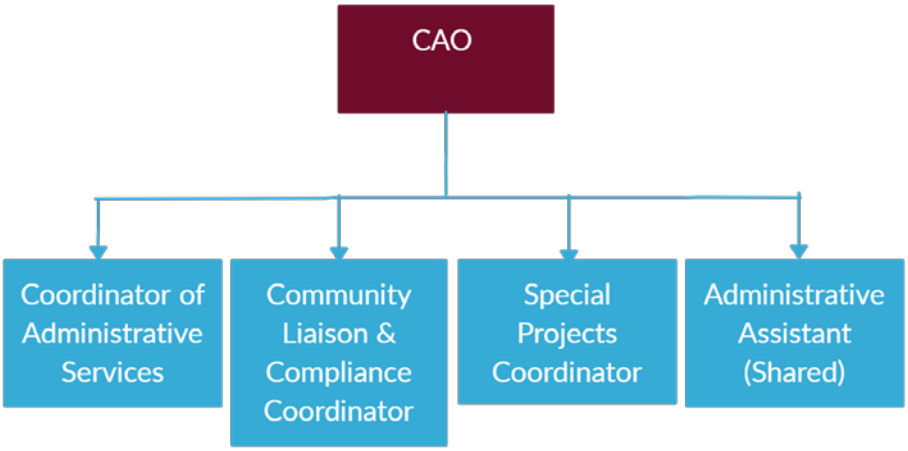
Office of the CAO Administrative Services main responsibilities with HR are to maintain complete and accurate documentation related to HR functions including personnel files, the performance management system, employee compensation plan, personnel policies, recruiting and hiring, and new employee orientation. Administrative Services also manages the Town's training and development plan. The Town's benefit plans and employee pensions are coordinated though Corporate Services and the Finance Department, however, Morneau Shepell and Manulife administer these programs for the Town.

Records Management

Office of the CAO Administrative Services is responsible for ensuring the maintenance and retention of corporate records through the Records Management Policy and Standard Operating Procedure. A key role of records management is the retention of Council minutes, Policies, Bylaws, Town Contracts, etc. through the Town Clerk.

Compliance

The Town is committed to gaining compliance with Council's by-laws on infractions such as Noise, Minimum Standards, Parking and Animal Control in a more proactive manner through community education, partnership development, community engagement and other programs. Strong partnerships with Acadia University have been developed as a way to educate and engage the youth demographic in complying with noise regulations. The Town contracts animal control services from the SPCA, which the Compliance Officer oversees.



Planning & Development

Devin Lake, Director

The Planning & Development department strives to achieve cohesion between the planning, and economic development functions of the Town. Planning & Development is responsible for long range planning and policy development, sustainability and climate change work, economic development, land use and development control, building and fire inspection, and dangerous and unsightly administration.

Operational Statistics

- Manages the implementation of the Municipal Planning Strategy, Land Use By-law, and Subdivision By-law.
- Manages the ongoing Climate Change action planning and implementation
- Manages strategic land use initiatives (e.g. downtown development, library expansion, farmers market area)
- Manages over 200 existing Development Agreements
- Average of 6 development agreements issued annually
- Average of 63 development permits issued annually
- Average of 45 building permits issued annually
- Average of 9.5 new lots approved annually since 2011
- Manages a registry of approximately 35 registered heritage properties in Wolfville
- Supports the Planning Advisory Committee and Environmental Sustainability Committee.

Human Resources

- 1 Director
- 1 Administrative Assistant (Shared with Office of CAO)
- 1 Development Officer
- 1 Senior Building and Fire Inspector
- 1 Junior Building and Fire Inspector
- 1 Climate Change Mitigation Coordinator – (ext. to Sept, 2021)
- Various Casual/summer positions as needed

Planning and Development

After 5 years of consultation and Council direction, the Town adopted new planning documents in September of 2020. These documents should be reviewed in detail to understand where the focus of the planning and development staff will be moving forward. See https://www.wolfville.ca/growing-together.html to find the recently approved documents.

Planning and development control is responsible for the fair, reasonable and efficient administration of Part VIII of the MGA, the Town's Municipal Planning Strategy, Land Use Bylaw, Subdivision bylaw, Vendor Bylaw and Heritage Bylaw and the establishment of a consultative process to ensure the right of the public to have access to information and to participate in the formulation of planning strategies and bylaws made under Part VIII of the MGA.

Section 243 of the *Municipal Government Act* requires Council to appoint a Development Officer to administer its land-use bylaw and the subdivision bylaw. Council has appointed Devin Lake and Marcia Elliott as the Town's Development Officers. Marcia Elliott is the full-time Development Officer and Devin Lake provides planning guidance and oversight.

In the past, the Town contracted planning and development control services to the Town of Windsor. Currently Building and Fire Inspection services are being offered through an agreement to the Town of Middleton. Working regionally with other municipal units on planning and development services may be something that comes and goes depending where other units are with capacity and interest.

Climate Action and Sustainability

The Town employs a Climate Change mitigation coordinator working on both Climate Change mitigation and adaption efforts. The Town is working through the Federation of Canadian Municipalities (FCM) Partners for Climate Protection program. See here: https://fcm.ca/en/programs/partners-climate-protection. Given the term position (the majority of which has been funded through FCM for the past two years) that we have currently, resourcing this area on a go forward basis will be a future decision of Council. The budget currently supports the term position for a six-month term in 2021-22.

Economic Development

The function of economic development is to support growth and development within the Town of Wolfville. The Director of Planning & Development and other staff work collaboratively with existing and potential businesses and the Wolfville Business Development Corporation to achieve this mandate. Economic Development, for a Town, is often the outcome of good governance, planning, smart fiscal decisions, quality infrastructure and recreation.

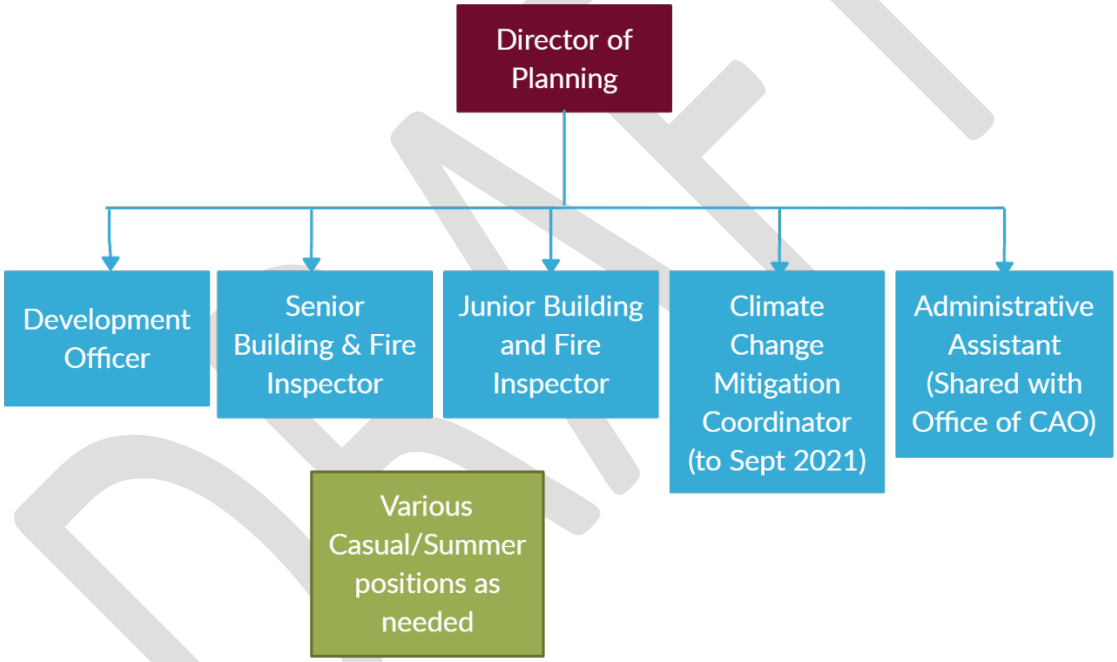
Building and Fire Inspection Services

The Town currently employs a Senior building and fire inspector; Mark Jamieson, and also have recently began a succession planning process through training James Collicutt to be a Building and Fire Inspector, learning from Mark's many years of experience. The Building Code and by-law and Fire Code and system

of fire inspections are the responsibility of our Building and Fire Officials. The Town is working toward improving their system of fire inspections to ensure the safety of our residents, particularly those living in rental accommodations.

Compliance

The Community Liaison & Compliance Officer is now working out of the Office of the CAO but had been working closely with Planning and Development staff on compliance and enforcement issues. It is anticipated the new Compliance Officer will continue to coordinate with Planning and Development Staff on issues that impact various roles within the organization.



Finance & Corporate Services

Mike MacLean, Director

The Finance & Corporate Services Departments core services include accounting, budgeting/financial reporting, customer service/cash receipting, property tax and water utility billings, accounts receivable collections, payroll and insurance policy administration. The department also assists in the development of Town policies as they relate to financial matters/management. The department is responsible for the management of the Town's financial records in accordance with:

- Council policies and by laws;
- The provincial Municipal Government Act (MGA);
- Provincial guidelines as published in the Financial Reporting and Accounting Manual (FRAM);
- Nova Scotia Utility and Review Board guidelines for Water Utilities; and,
- Professional Generally Accepted Accounting Principles (GAAP) as issued through the Public Sector Accounting Board (PSAB).

Finance & Corporate Services acts as a resource for Council, other Town Departments, and the general public. In addition, the department is responsible for annual financial reporting to Council, provincial and federal government, and other outside agencies.

Finance & Corporate Services staff are also the Town's first point of contact with members of the public who visit Town Hall. Beyond the traditional finance responsibilities, the Director also carries out the duties of Treasurer, Freedom of Information and Protection of Privacy (FOIPOP) Responsible Officer as defined in the MGA, Town Accessibility Coordinator, and Acting CAO when required.

Operational Statistics

- 1,602 Residential Tax Accounts
- 107 Commercial Tax Accounts
- 1,575 Water Accounts
- Average of 3 FOIPOP requests annually
- $11.3 m Town Operating Budget
- $4.64 m Town Capital Budget
- $1.13 m Water Operating Budget
- $865,500 Water Capital Budget

Human Resources

- 1 Director
- 1 Accounting Technician
- 1 60% Accounting Clerk – Accounts Payable
- 1 Accounting Clerk – Utilities & Taxes
- 1 IT Manager
- 1 GIS Technician

Accounting

- Carry out the day to day functions around data input of all financial activity for the various funds for which the Town is responsible:
    - Town Operating and Capital Funds
    - Water Utility Operating and Capital Funds
    - Operating and Capital Reserve Funds
    - Trust Accounts administered by the Town

- Process payroll for all employees of the Town including stipend/honorarium pay to Council, Firefighters, EMC, etc.
- Develop and refine accounting processes to ensure accurate records are maintained. This includes implementation of internal controls to ensure the integrity of the financial records. If applicable, recommend to Council policies to guide processes.

Budgeting/Financial Reporting

Finance is responsible for the overall preparation and management of the Town's Operating, Capital and Water Utility Budgets. In 2021/22, the Town has an operating budget of $11.3 million; 86% of revenue is generated by taxes and grants in lieu of taxes with the balance coming from sale of service, sewer rates and provincial and federal grants.

The Town's capital budget for 2021/22 is $4.64 million. The Water Utility Operating budget in 2021/22 is $1.13 million, and the Capital Budget is $850,500.

Finance is also responsible for:

- Assisting all departments with preparation of their department budgets.
- Participating in all public input sessions related to the budget process.
- Preparing and presenting the budget documents for Council approval.
- In accordance with Town Policy, providing Council and Management Team with financial reports which include comparison of actual results to budgeted results.
- Preparing all annual reporting required including audited financial statements, Gas Tax Reporting to Federal Government, and provincial reporting to Service Nova Scotia

Property Tax and Water Utility Billing

The Department administers approximately 1,602 residential and 107 commercial tax accounts and processes tax billings twice a year. Water/Sewer billings are approaching 1,600 accounts and these are billed quarterly.

- Process and issue all billings related to Town services. Mainly involves tax and water/sewer bills, but can also involve any other sundry billing required by a Town department.
- Facilitate customer inquiries regarding amounts owed to the Town.
- Maintain and update assessment information for properties, and metered service data base (water and sewer).
- Provide monitoring of accounts receivable monthly and collection procedures as required.

Geographical Information System (GIS)

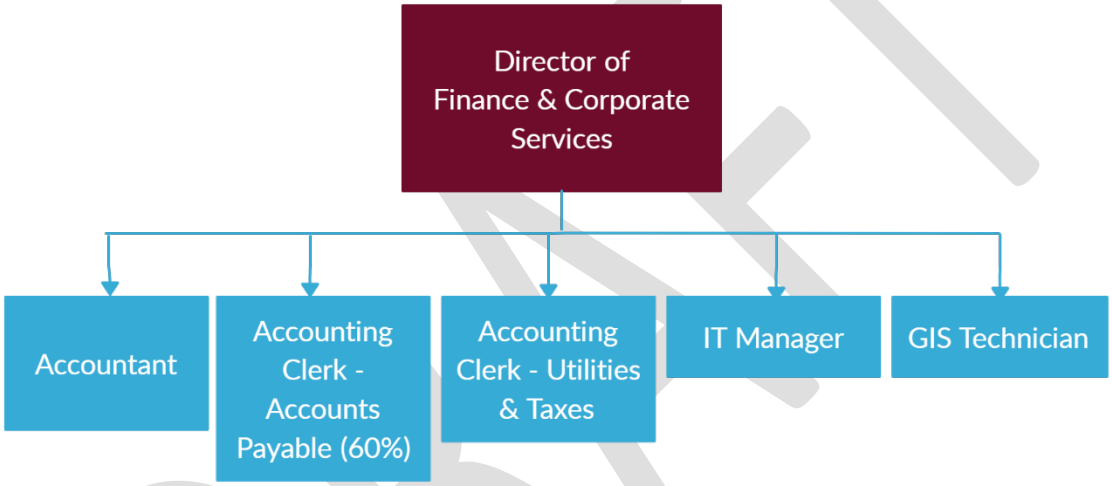
The Town's Planning Technician is responsible for the gathering, maintenance and analysis of the Town's GIS data sets and for providing planning analysis and reporting. This would include demographic information, permit statistics and support to planning applications. GIS services include, but are not limited to:

- Preparation of complex maps, graphics, tables and other materials to assist staff

- Managing and updating of the civic address system.
- Making the datasets available and functional to the entire organizations and partners
- Continuing development and updating of records of the Town's infrastructure (e.g. road network, sewer system, water system, trees, streetlights, etc.)
- Updating and development of various mapping layers in the GIS system – approximately 132 layers at present.

IT Infrastructure and Equipment

IT is responsible for operating the Town's core software systems, IT Servers, System Security, IT equipment purchasing and maintenance, IT solutions for business processes, etc.



Public Works

Kevin Kerr, Director

Public Works consists of both Public Works and the Water Utility. The Department is responsible for the provision of quality water and sewer services as well as the maintenance of Town owned infrastructure including buildings, water, sewer and storm water systems, streets and sidewalks within the Town of Wolfville.

Operational Statistics

- 33.2 km of Roads
- 24.6 km of Sidewalks
- 50.6 km Water Main and Lateral Pipe
- 32.2 km of Storm Water Main and Lateral Pipe
- 41.5 km of Sewer Main and Lateral Pipe
- 6 Lift Stations
- 2 Water Pumping Stations
- 27 Pieces of Town equipment
- 7 Town Facilities
- 11 Town Parking Lots

Human Resources

- 1 Director
- 1 Manager of Public Works
- 1 Administrative Assistant (Shared with Parks & Recreation)
- 1 Public Works Lead Hand
- 1 Operator Mechanic
- 7 Operator/Labourers Class 1
- 2 Water/Waste Water Technicians
- 2 Crossing Guards
- 1 Seasonal Summer Staff

Public Works

The Public Works department is responsible for maintaining, repairing and replacing municipal infrastructure. This includes roads, sewer infrastructure, buildings and vehicle fleet. Public Works is responsible for operating and maintaining Town-owned infrastructure and facilities as follows:

Transportation

- Summer and winter maintenance streets, sidewalks and 11 parking lots
- Traffic control including signage and pavement markings
- Street lighting

Sewer

- Operate and maintain 41.5 kilometers of sewage collection piping, six (6) sewage lift stations and one aerated sewage treatment facility.
- Maintain 32.2 kilometers of storm water collection system throughout Town.

Facilities

- Together with Parks & Recreation, maintain and repair Town-owned facilities as required including the Town Hall, Public Works Building, Visitor Information Centre, Recreation Centre, RCMP office, Fire Hall and the Public Library.

Fleet

- Maintain and repair 27 pieces of Town–owned equipment operated by the Parks, Public Works and Community Development Departments

Capital

- Direct the design, manage and administer an annual capital program of approximately $1.5 million for street improvements.

Community Events

- Assist other Departments and organizations with festivals and events such as Mud Creek Days, Canada Day, Valley Harvest Marathon, Devour! The Food Film Fest and Deep Roots Music Festival.

Water Utility

An effective computerized SCADA (Supervisory Control and Data Acquisition) system is used to monitor the water and wastewater system 24 hours per day, 365 days of the year. The utility operators are both trained as water treatment and water distribution operators in accordance with provincial regulations. The water is sampled and tested regularly in accordance with provincial regulations and the Guidelines for Canadian Drinking Water Quality. The utility operators are required to maintain an acceptable level of training and attend continuing education sessions as required throughout the year.

The Water Utility is responsible for providing quality potable water to Wolfville residents and maintaining all infrastructure owned by the Utility.

Water Utility

- Operate and maintain two water production wells, one water treatment facility and maintain approximately 44 km of water distribution mains and 6 kilometers of water transmission mains throughout Town.
- Provide meter reading services to assist with billing and participate in source water protection planning.

Pumping

- The Utility operate two wells that pump water from an underground aquifer to the water treatment plant and reservoir located on Wolfville Ridge.

Treatment

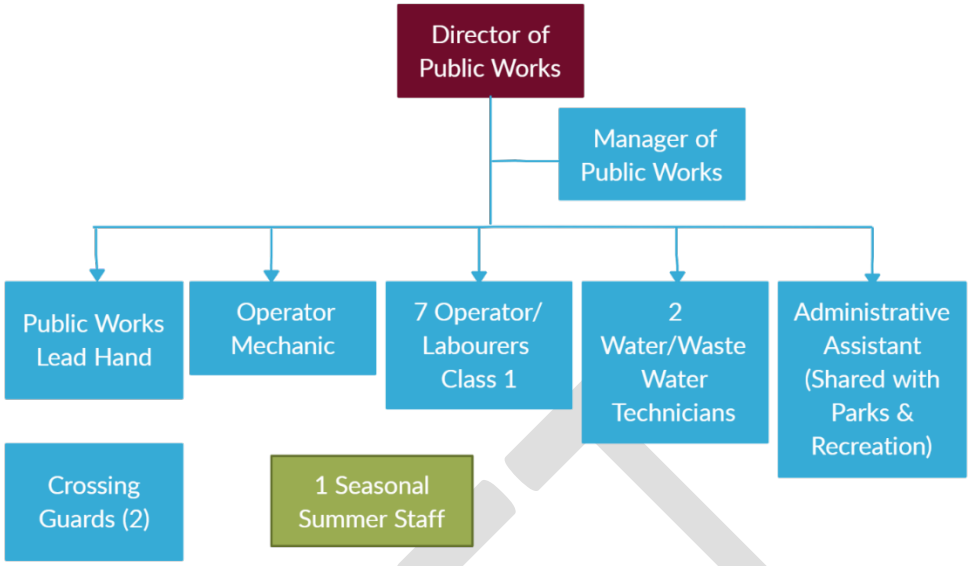
- All water provided is disinfected with chlorine to eliminate any bacteria that may be present and reduce the risk of waterborne diseases. A minimum chlorine residual is maintained throughout the system to ensure the water safety.
- Fluoride is added to help promote dental health and sodium hydroxide is used to adjust the pH of the water. Once treated the water is stored in a three million gallon reservoir.

Distribution

- Water is provided to the residents of Wolfville through approximately 44 kilometers of water main. The water is gravity fed from the reservoir located on Wolfville Ridge. The utility is responsible for the maintenance of the water mains, all valves and hydrants that make up the distribution system.

Meter Reading and Testing

- All water provided is metered and meters are read by the Utility Operators quarterly. A number of water samples are taken daily, weekly, monthly and annually in accordance with governing regulations to ensure the water provided is safe for our customers.



Parks & Recreation

Kelton Thomason, Director

Parks and Recreation is responsible for the provision of maintenance of green spaces, playing fields, playgrounds, trails, buildings, planters and trees, recreation, tourism, and festivals and events within the Town of Wolfville.

Operational Statistics

- Operates the Recreation Centre and Visitor Information Centre
- 92.3 acres of Parks & Recreation Spaces
- 7.8 km of Trails
- Supports Art in Public Spaces Committee

Human Resources

- 1 Director
- 1 Community Recreation Health & Wellness Coordinator
- 1 Community Engagement & Tourism Coordinator
- 1 Administrative Assistant (Shared with Public Works)
- 1 Parks Lead Hand
- 7 Seasonal Labourers
- 3 Visitor Information Centre Staff
- 1 Solid Waste Technician and Labourer
- 2 – 5 After School Instructors

The Parks and Recreation Department is responsible for the maintenance, repair and construction of Town owned parks, playgrounds and playing fields and some privately owned spaces that allow public access. They also maintain the flower beds, urban forest, and the trails. There are currently 21 parks, playing fields and open spaces and 7.8 km of trails. Parks and Recreation is responsible for maintaining Town owned green spaces which includes:

Parks

- Landscape design and maintenance of Town owned parks, playgrounds and playing fields; repair facilities and equipment as required. These areas include but are not necessarily limited to Reservoir Park, Willow Park, Rotary Park and the Millennium Trail system.
- Maintain waste receptacles throughout Town.

Flower Beds

- Design, plant and maintain all flower beds throughout Town. Plant and maintain all baskets and perennial planters throughout the Business District.

Urban Forest

- Plant new trees, prune and remove dying or diseased limbs and trees throughout Town.

Community Events

- Assist other Departments and organizations with festivals and events such as Mud Creek Days, Canada Day, Valley Harvest Marathon, Devour! The Food Film Fest and Deep Roots Music Festival, Heritage Day and Night of Lights.

Tourism

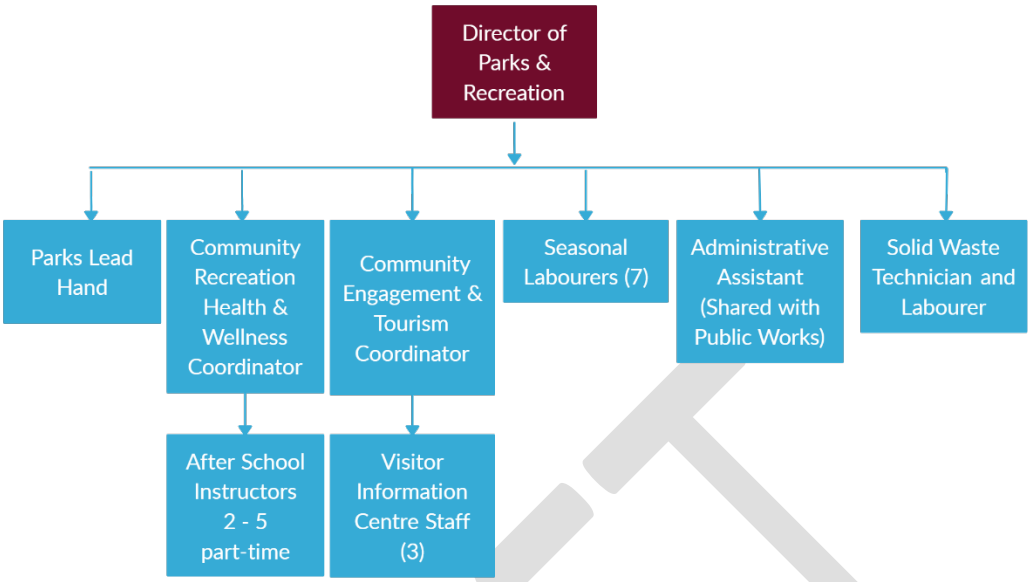
- Tourism is responsible for managing the Town's Visitor Information Centre (VIC) and Information Kiosks, as well, as identifying tourism opportunities that promote and attract visitors to Wolfville. The VIC is open from May to October and is the second busiest centre in the Annapolis Valley; next to Digby. In 2019 the centre had over 16,000 visitors pass through.

Recreation

- The Town provides an after-school program.
- The Town partners with Acadia to deliver Summer and March Break Programming. The Town has developed and delivers a series of summer youth Environmental Leadership Camps.
- The Town administers the "Try it in Wolfville" Program.

Festivals and Events

- In attracting and supporting festivals and events in Wolfville, the department is responsible for coordinating Town festivals and events such as Mud Creek Days, Canada Day, the Tree Lighting Ceremony and Heritage days events. The department supports other festivals and events through funding or in-kind contributions (i.e., staff time, use of facilities or equipment) and has formalized support for our signature events (Devour!, Valley Harvest Marathon and Deep Roots Music Festival).
- In 2016 Council passed a Grants to Organization Policy that identifies Strategic Partnerships with local organizations and commits funding to these partners over a four-year period which will expire in the beginning of the fiscal year of 2021 and will require a renewal process.



Protective Services:

Fire Department

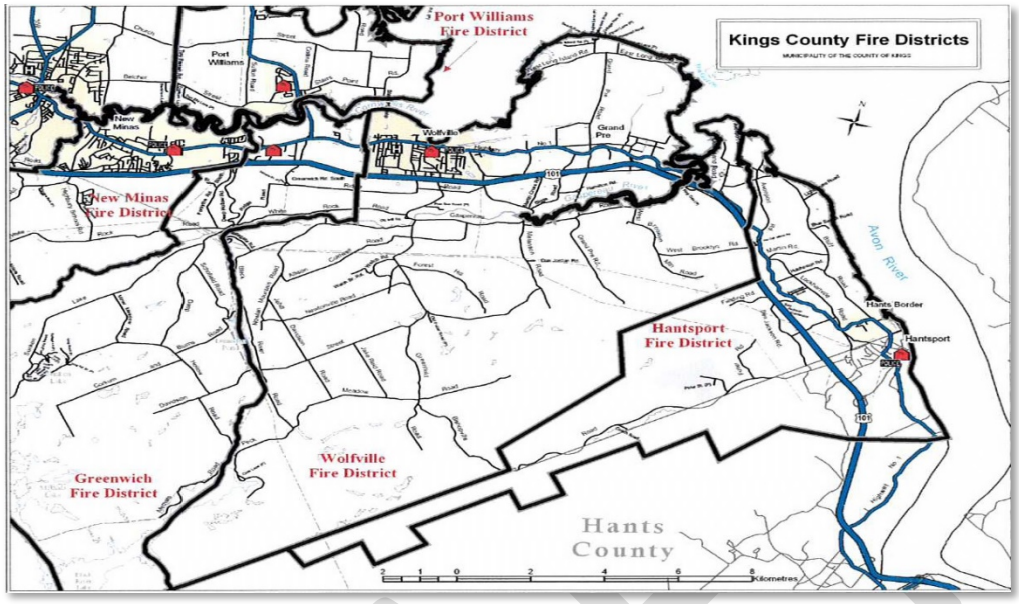
Todd Crowell, Fire Chief

The Wolfville Fire Department is a department of the Town and all of the major assets are owned by the Town, whereas in many communities, the Fire Department is established as a separate non-profit society. The only employee of the Town is the Operator/Mechanic. The Chief is a volunteer and is paid an honorarium to serve. The Department consists of forty-three Volunteer Firefighters, who provide not only the 'usual' firefighting duties but in concert with neighboring departments (Kentville and New Minas Volunteer Fire Departments), have developed a special team to provide Hazardous Materials Emergency Response service across Kings County. The Department is subject to all Town policies but otherwise, the operation is autonomous.

The Town also employees an Operator/Mechanic for the Fire Department who is responsible for the operation of fire apparatus for 40+ volunteer fire fighters throughout daytime hours Monday to Friday under the supervision of the CAO. This position is also responsible for performing mechanic and janitorial functions.

There is an agreement in place with Kings County to cost share on calls that occur outside the Town boundary and are responded to by the Wolfville department. This formula utilizes a five-year average of call data. This arrangement works well for both parties as Wolfville receives contributions to overheads such as vehicles and equipment and the County is relieved of having to establish a fire station in the most eastern part of the County. The Wolfville Fire Department is made up of 1 Fire Chief, 2 Deputy Chiefs, 4 Captains, 2 Lieutenants and approximately 40 firefighters.

Wolfville Fire Department District Service Area Map



Wolfville – Hantsport Mutual Aid Map

Protective Services:
RCMP

Sgt Ryan Kelly

Wolfville had its own police force until 2000 when a decision was made to switch to the Provincial police force, the RCMP. The Province of Nova Scotia has a contract with Public Safety Canada for the services of the RCMP as a provincial police force. By utilizing this existing arrangement, Wolfville enjoys a 70/30 cost split with the federal government on the total RCMP costs. The RCMP police 36 municipalities under this agreement, nine municipalities have a direct contract with the RCMP and ten municipalities have their own police force.

The Wolfville office is part of the larger Kings County detachment and this allows flexibility in staffing for major events in Wolfville beyond the dedicated compliment. The officers assigned to Wolfville include 1 Sergeant, 8 Constables and 1 Detachment Assistant.

Committees of Council

Council currently has nine **Committees of Council, including Committee of the Whole**. Each Committee serves in an advisory capacity to Council and has established priorities for the 2021/22 year to support the implementation of the Operations Plan.

COMMITTEES OF COUNCIL		
AUDIT	**ACCESSIBILITY**	**ART IN PUBLIC SPACES**
Review and provide input into the Low- Income Tax Property Tax Exemption Policy and the Procurement Policy.	Provide guidance on the implementation of the Accessibility Plan and in any revisions of the plan. Prepare an annual report card of progress.	Identify one small scale community art project to implement.
DESIGN REVIEW	**ENVIRONMENTAL SUSTAINABILITY**	**PLANNING ADVISORY**
To inform the planning process by providing peer review of development applications that require interpretation of the Town's architectural guidelines.	Provide leadership and expertise on key projects in the Operational Plan.	Conduct role in accordance with MGA and MPS requirements.
RCMP ADVISORY BOARD	**SOURCE WATER PROTECTION**	**TOWN & GOWN**
Develop and enforce further community policies in regards to: Traffic Crosswalk/Pedestrian Safety RCMP Visibility at key weekend events Relationship with youth Noise Prevention Crime Reduction	Review the recommendations of the 2008 Source Water Protection Plan to determine what is still relevant and develop a revised implementation plan.	Serve as stewards of the Acadia and Town Partnership Agreement.

INTER-MUNICIPAL / PARTNER ORGANIZATIONS / EXTERNAL COMMITTEES

Town Council also has representatives on various external Committees and Inter-Municipal Boards:

Wolfville Business Development Corporation (WBDC) Board

Valley Community Fibre Network (VCFN)

Kings Transit Authority (KTA)

Valley Waste-Resource Management Authority

Annapolis Valley Trails Coalition (AVTC)

Kings Point to Point

Regional Emergency Management Advisory Committee (REMAC)

Annapolis Valley Regional Library Board

EKM Health Centre Liaison Team

Diversity Kings County

Bishop-Beckwith Marsh Body

Grand Pre Marsh Body

Western Regional Housing Authority (WRHA)

BYLAW & POLICY PRIORITIES

Policy and bylaw development is a key role of Town Council and provides the Town with the tools it requires to run the Town effectively. The Town is constantly reviewing its policies and bylaws to ensure they remain relevant and best serve the needs of our residents and business community. Our review process is depicted below:

The following depicts the bylaws and policies that will be created and/or reviewed in the new four-year Operations Plan with Year 1 being 2021-22.

BYLAWS:

YEAR 1 - 2021-2022

- Bill 177
- REMO
- Vending
- Residential Rental Licensing
- Skateboard
- Taxi

YEAR 2 - 2022-2023

- RCMP Advisory Board
- Town Seal
- Dog
- Procedures of Council
- Streets
- Sewer

YEAR 3 - 2023-2024

- Electronic Voting
- Election Candidates Deposit
- Nuisance Party

YEAR 4 - 2024-2025

- Outdoor Fire
- Heritage Property
- Idling

POLICIES:

YEAR 1 - 2021-2022

- Deputy Mayor
- Grants to Organizations
- Procurement
- Committees of Council & Associated Terms of Reference
- Collective Agreement Bargaining Policy
- Snow and Ice Clearing Policy
- HR Various

YEAR 2 - 2022-2023

- Renting Recreational Space Policy
- Open Spaces Fund Policy
- HR Various
- Council Professional Development

YEAR 3 - 2023-2024

- Municipal Fees Policy
- IT Usage Policy
- Property Tax Exemption
- HR Various

YEAR 4 - 2024-2025

- Council Remuneration Policy
- Signing a Code of Conduct for Elected Officials
- HR Various

CONTRACT & LEASE REVIEW

Staff have been reviewing all contract, lease and agreement files on record and have developed a four-year plan for addressing expired or soon-to-expire documents. There are many contracts that automatically renew after the initial time frame and have been renewing for several years. The following plan identifies those contracts that are to be reviewed during the next four-year Operations Plan with Year 1 being 2021-22.

CONTRACTS & AGREEMENTS:

YEAR 1 - 2021-2022

- Sewer Agreement with Kings
- Regional IMSAs
- WBDC Agreement
- Stile Park Lease Wolfville Rotary
- Bank Agreement BMO
- Office Interiors – Neopost
- Pitney Bowes, Inserter
- Collective Agreement SEIU

YEAR 2 - 2022-2023

- Investing in Canada Infrastructure Program
- Lease Renewal 24 Harbourside Drive
- Acadia/ASU/Wolfville MOU Review
- Boundary Review

YEAR 3 - 2023-2024

- Gas Tax Agreement
- Info Sharing Elections NS
- SPCA

YEAR 4 - 2024-2025

- Mutual Aid Firefighting Agreement with Kings
- Legal Services Agreements

ECONOMIC PROSPERITY

Council has established economic prosperity as a strategic direction. Through this direction, Council is seeking to leverage the opportunities enabled in the Town's commercial zoning areas, specifically in the C2 Zone; to maintain and grow our position as a premier destination for culinary and beverage experiences; to continually make improvements to our downtown core; and to ensure that the Town works in support of other entities mandated in economic development. This section includes general economic development activities as well as tourism-related initiatives.

Tourism Development

Tourism development is a key economic driver for Wolfville, and the Annapolis Valley as a whole. It is a collective goal of our region to bring people into the area to enjoy all that we have to offer, including our culinary, wine and craft bevarage industries, for which the town strives to be a premier destination. It is important that Wolfville collaborate with are surrounding municipalities and agencies on tourism development as the benefits and opportunities clearly extend beyond our boundaries and we will be more successful if we work together.

Initiative	***Tourism Development – Destination Acadia***		
Description	The Town will work with Acadia to better define the Town's role on Destination Acadia. The Town will work collaboratively with Acadia to support minimally one significant event in Wolfville per year.		
Lead Department	Parks and Recreation	**Supporting Departments/Committees**	Finance Office of the CAO
Budgetary Implications	$10,000	Annual contribution to Acadia for events hosting. This event will be identified and agreed to between the Town and Acadia prior to funds being released.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	Continued participation on Destination Acadia	$10,000
	Year 3	Continued participation on Destination Acadia	$10,000
	Year 4	Continued participation on Destination Acadia	$10,000

Initiative	***Tourism Development – Welcome Centre***		
Description	The former Visitor Information Centre is evolving into a new Welcome Centre. This Welcome Centre will rely on staff to serve as ambassadors for the Town. It will also leverage new technology to enhance the visitor experience. A new retail space will be developed to make this a shopping spot for Wolfville "memory" purchases. It will also provide space for local crafters and create opportunities for local merchants in the "off season" as part of a special event or holiday promotion. The Centre is planned to be open late summer 2021, with a pop-up VIC serving the public prior to that date. The Centre will close at the beginning of November after Devour! It is envisioned that the Wine Bus will remain an integral part of this experience. The Welcome Centre will also include the installation of a new splash pad, which will also be operational summer 2021.		
Lead Department	Parks and Recreation	**Supporting Departments/Committees**	Finance Department
Budgetary Implications	$76,800 operating costs	New revenues from the sale of Wolfville branded items, books, and local wares have been identified and added to budget. Operational costs include a VIC position, building maintenance and summer students.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	Increase retail sales	$8,500
	Year 3	Increase retail sales	$10,000
	Year 4		

Initiative	***Tourism Development – Grants Programs***
Description	The Town provides various grants to external organizations, many of them with an events and tourism focus. The Town will continue to support our grant program. A policy review will be undertaken to ensure financial stability as it pertains to all grants and the capital grant program specifically. The Town currently has four grant programs: Strategic Partnership Program – provides stable, longer term commitment to those organizations, facilities, and events that the Town has identified as being an integral part of the Town. Community Partnership Program – provides annual support to organizations for events and programming. One time Capital Requests – supports capital initiatives of community benefit within Wolfville.

	One-time Operating Requests – supports unique opportunities that are not part of regular operations for community organizations, including those in the SPP program.		
Lead Department	Parks and Recreation	**Supporting Departments/Committees**	Finance Department and Office of CAO
Budgetary Implications	SPP – $47,000 CPP – $12,000 Operating One Time – N/A Capital One Time - $127,000 Requested	SPP/CPP will remain the same value as in 2020-21 pending a review of the Grants Policy.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	Define limits and expectations on capital grant program	TBD
	Year 3		
	Year 4		

Initiative	***Tourism Development – Town Led Events***		
Description	2021/22 will still see some events potentially impacted by COVID-19. Heritage Day in 2022 will be significant as "Grand Pre" will be the theme for celebration and staff will be planning a day of activities to mark the occasion. Mud Creek Days will potentially allow for in-person events and could allow for fireworks. Mud Challenge could be considered although format might need to be adjusted. The Night of Lights and the Town's holiday celebrations will continue to be supported as a month-long celebration with additional decorations to be purchased. Due to the popularity of the event in 2020, Santa will also return in 2021, driving through Town on successive weekends. In partnership with Acadia University, 2021/22 will also see the return of the annual New Year's Levee. Delivery and promotion of all Town events will be COVID-19 dependent and based on guidelines from the Province.		
Lead Department	Parks and Recreation	**Supporting Departments/Committees**	Art in Public Spaces
Budgetary Implications	$88,900 operation expense – includes the New Years Levee	Budgets can be adjusted to reflect size and scope of an event. It would be reasonable to assume an approved event budget will not go up to support provincial health guidelines. Programing would need to be adjusted.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	Art Centered Event	5000.00
	Year 3	Growth and development of town delivered events	7500.00
	Year 4		

Economic Development

Council has clearly established a key priority area for supporting economic sector growth for the commercial sector, with a focus on both retention and attraction initiatives. The Town is currently not a member of the Valley Regional Enterprise Network (VREN) but this will be re-evaluated in 2021-22 as the municipal partners review all Inter-Municipal Service Agreements (IMSA) for all IMSA organizations, including the VREN. The Town continues to be a strong partner and supporter of the Wolfville Business Development Corporation and the Valley Chamber of Commerce and will seek to partner with any strategic economic-development focused group that will serve to deliver on the initiatives contained in this plan.

<table>
<tr><td>Initiative</td><td colspan="3">Economic Development – Partnership with WBDC (PRIORITY AREA 3)</td></tr>
<tr><td>Description</td><td colspan="3">• The Town is working in a collaborative manner with the WBDC, acknowledging a strong business community is integral to the success of the Town.
• The WBDC will complete their Strategic Plan in March 2021, which will form the basis for a re-negotiated agreement between the Town and the WBDC. The Agreement that is slated to expire on March 31, 2021 will be extended until March 31, 2022 under the same terms to allow for sufficient time to get a revised agreement in place.
• The Town will work with the WBDC to continue to improve communications, connections and linkages in the community. The ASU will be invited to participate in WBDC meetings as a non-voting member to serve to identify opportunities for students and businesses to become more connected.
• The Town will focus this year on a wayfinding initiative for local businesses, advancing a business registry and collaborating on the Welcome Centre and how this new facility can support business success.
• Parking will continue to be discussed, with improvements to parking slotted for 2022/23 and future years.
• The WBDC will work with the Town on the Town website re-design to better align efforts in promoting local businesses.</td></tr>
<tr><td>Lead Department</td><td>Planning and Development</td><td>Supporting Departments/Committees</td><td>Parks and Recreation</td></tr>
<tr><td>Budgetary Implications</td><td>$100,000 Business Development Area Rate

Wayfinding – Capital

Welcome Centre – Capital</td><td colspan="2">Wayfinding improvements and the Welcome Centre are budgeted in other areas of this Operational Plan. Contributions amounts to support these projects from the WBDC are not yet determined.

The Town will work with the WBDC to develop an implement a Business License Registry. This work will be largely supported by a summer student employed by the WBDC.

The WBDC is currently developing a new strategic plan. Once completed, this Plan will inform work for 2021-22 and beyond.</td></tr>
<tr><td rowspan="3">Future Work</td><td></td><td>Initiatives</td><td>Anticipated Budget</td></tr>
<tr><td>Year 2</td><td>TBD – informed by strategic plan</td><td></td></tr>
<tr><td>Year 3</td><td></td><td></td></tr>
</table>

	Year 4		

Initiative	***Economic Development – Developing Tools for Success (PRIORITY AREA 3)***		
Description	• The Town will promote opportunities in the C2 zone (e.g. new grads, entrepreneurship opportunities, live-work for professionals), which will serve to expand the existing commercial area. Future infrastructure needs, such as additional sidewalks, that will be required will be built into the 10 Year CIP. C2 property owners will be engaged in the process. • Bill 177 (tax incentives for commercial improvements/conversions) will be developed to provide incentives for development in targeted C2 commercial areas. • A targeted stakeholder working group will be developed to explore opportunities for enhanced business development (C-2 zone) and attraction. • A four-year work plan will be developed and incorporated into the Operations Plan. • The Town will give consideration into our future participation on the Valley REN.		
Lead Department	Planning and Development	**Supporting Departments/Committees**	Finance
Budgetary Implications	None	May be future budget allocation subject to ongoing work.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	4-year work plan forthcoming	
	Year 3		
	Year 4		

Initiative	***Economic Development – Implementing the new Municipal Planning Strategy (PRIORITY AREA 3)***
Description	• Since the adoption of our overhauled planning documents in September 2020, Staff have been working with potential developers on project planning and implementation. This is primarily done through the provisions of the Land Use By-law. (Note: Large or complex developments will take a substantial amount of Staff time and may impact capacity on other planning initiatives). • Planning issues (e.g. Development Agreements, Rezonings, Heritage matters) will still come to The Heritage Advisory/Planning Advisory Committee and Council for approval. It is likely that the use of the site plan approval process will see a fewer development applications appearing in front of Council for approval. • Planning Staff and the PAC are working with 2 groups of students from Waterloo on research and best practice around Plan Implementation and Monitoring. Staff will use this work to inform a Plan Implementation report in the fall of 2021. This will also include issues that Council may want to consider revising / minor implementation issues that may arise as we continue to work with the new documents.

	• Large ongoing development (e.g. 292 Main Street, West End Lands) will require a significant amount of planning and building inspection services in the coming year. • Staff are beginning to look at ways to better enable development on the large undeveloped Comprehensive Development areas in the east end of Town (e.g. vacant land along Maple Ave).		
Lead Department	Planning and Development	**Supporting Departments/Committees**	Public Works, Parks and Recreation
Budgetary Implications	TBD		
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	Ongoing as per above	
	Year 3		
	Year 4		

Initiative	***Economic Development – Leveraging our Designations***		
Description	**Fair Trade:** Staff will complete the renewal process of the Fair-Trade Town Certification. The Environment and Sustainability Committee will operate as the interim steering committee for the 2021/2022 fiscal year. Staff will coordinate Fair Trade events that coincide with Acadia University's 2021 Fair Trade Campus Week. **Cittaslow:** Staff will complete the renewal process of the Cittaslow Town Certification. Staff will reinstate a Cittaslow community committee and offer a Cittaslow Sunday community celebration in September of 2021, within the public health and safety guidelines.		
Lead Department	Parks and Recreation	**Supporting Departments/Committees**	
Budgetary Implications	$2,150	Cittaslow – Budget allows for the annual recertification fee and to support the planned event.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD	
	Year 3		
	Year 4		

SOCIAL EQUITY

It is critically important to Council and the Town that all residents can enjoy the many services and amenities that the Town provides, regardless of social-economic status, transportation barriers, or barriers related to accessibility. It is also key that diversity within the Town is welcomed, celebrated and is recognized as the reason that Wolfville is the town that it is. Inclusion, community harmony and access are key elements of the initiatives contained in the Operational Plan to help achieve this goal.

<table>
<tr><td>Initiative</td><td colspan="3">Celebrating Diversity</td></tr>
<tr><td>Description</td><td colspan="3">The Town will continue to participate on Diversity Kings and will explore future work through the potential creation of a new IMSA.

The Town will continue to support local events, awareness, and education. In 2021/22 we will start with what we already celebrate and make improvements.

The Town will be deliberate in its outreach when seeking support and guidance in terms of developing and nurturing its relationships within the indigenous community.

The Town will provide Internal education on diversity and inclusiveness for staff and Council.

The Town will explore targeting one of the $5000 Acadia Scholar bursaries we fund to support an under-represented student group - specifically African Nova Scotian and Nova Scotian Mi’kmaq students attending Acadia University.

We will re-paint Town Hall Entrance and purchase updated Pride Flags.</td></tr>
<tr><td>Lead Department</td><td>Parks and Recreation</td><td>Supporting Departments/Committees</td><td>Office of the CAO</td></tr>
<tr><td>Budgetary Implications</td><td>$5,000</td><td colspan="2">Dollars will be required for PD in this area.</td></tr>
<tr><td rowspan="4">Future Work</td><td></td><td>Initiatives</td><td>Anticipated Budget</td></tr>
<tr><td>Year 2</td><td>$5,000</td><td></td></tr>
<tr><td>Year 3</td><td>$5,000</td><td></td></tr>
<tr><td>Year 4</td><td>$5,000</td><td></td></tr>
</table>

Initiative	***Accessibility***		
Description	The Town is working into the final year of its inaugural Accessibility Plan. Work has been accomplished as outline in the plan, but more work is required. It has been identified that a complete inventory of Town owned built environment assets and public park spaces needs to be completed to establish baseline. This inventory will allow for future decision making. Accessibility is noted as a Council priority.		
Lead Department	Parks and Recreation	**Supporting Departments/Committees**	Office of the CAO and Finance Department
Budgetary Implications	$5,000	This will allow for the completion of the built form inventory with the assistance of external consultants, which will be an official Rick Hanson assessment. Funding for this will come out of the CAO contracted services budget.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD with revised plan	
	Year 3		
	Year 4		

Initiative	***Mudley Fund Development***		
Description	The Mudley Fund provides financial support to families with children interested in participating in sport and recreation activities but face financial barriers will excludes them. Staff are committed to developing the Fund through a number of initiatives over the next three years. Year one includes a review of the program and potentially adjustments to criteria, as well as a direct mail campaign and some local "do-good" sponsorships. The Town is looking to generate $10,000 annually which in turn supports families and children by providing access.		
Lead Department	Parks and Recreation	**Supporting Departments/Committees**	Office of the CAO
Budgetary Implications	$2,000	Costing related to year one - $2,000 (direct mail campaign)	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	Formal fundraising event	6,500 (cost recovered)
	Year 3	Program review and linkages to estate planning and giving.	
	Year 4		

Initiative	***Inclusive and Accessible Programming***		
Description	Recreational programming will be developed with inclusivity in mind. Specific initiatives include: • The continuation of the Memory Café program for people experiencing memory issues and their caregivers; • Trail Blazers provided free afterschool programming on Wednesdays • Try it in Wolfville – provides free programming for residents to try various physical and cultural activities throughout Town • Senior connectivity – recognizing the impact COVID-19 has had on the senior population, programming will be targeted to bring seniors together in a safe and fun manner.		
Lead Department	Parks and Recreation	**Supporting Departments/Committees**	Office of the CAO
Budgetary Implications		Programs are budgeted for within the Parks and Recreations Programming Budget.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2		
	Year 3		
	Year 4		

Initiative	***Affordable Housing***		
Description	The new planning documents have provided a start for Council in how to consider their role in the provision of Affordable Housing Discussions with the Province, PAC and interested members of the community this year will better define our role and future priorities in this area. NS Housing (Province) has various initiatives ongoing (e.g. Housing Commission) that should create more clarity. The Director of Planning is currently part of Valley Homeless No More group. Discussions leading up to the fall will form part of MPS implementation report to Council in Fall 2021. Work this year will inform more strategic use of resources, future budget implications and a better understanding for Council		
Lead Department	Planning and Development	**Supporting Departments/Committees**	PAC
Budgetary Implications	None		
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD – informed by year 1 work	
	Year 3		
	Year 4		

Initiative	***Community Harmony***		
Description	Ensuring all residents are able to safely and peacefully enjoy their properties is a key goal of the Town. As such, key stakeholders meet every Monday to discuss issues of concern and to collaborate on innovative solutions to improve neighbourhoods. The Town will continue to employ a Community Liaison and Compliance Coordinator to work with all stakeholders and address concerns.		
Lead Department	Office of the CAO	**Supporting Departments/Committees**	
Budgetary Implications	$99,200	The Compliance Office Budget supports a full time staff person as well as an allowance for contracted support during key events within the community.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2		$100,000
	Year 3		$100,000
	Year 4		$100,000

CLIMATE ACTION

Council has established Climate Action as an area of focus for the next four-year term. The Town is currently in the process of completing a Climate Action Plan, which is anticipated to be presented to Council in September 2021. The Town is also examining opportunities to continue to work on climate-related initiatives through a regional partnership on a go-forward basis. Council will make decisions on how to best resource this work on a go forward basis after the Climate Action Plan is completed and discussions on a potential regional approach are completed.

Initiative	***Reducing Carbon Emissions (PRIORITY AREA 4)***		
Description	The Town has set Climate mitigation targets (February 2021) and Staff will be working with the Environmental Sustainability Committee and the Planning Advisory Committee to deliver a Climate Action Plan pursuant to the targets set by Council. Council will be asked to make a decision on how to move forward with this work (implementation) once the Climate Action Plan is delivered Staff have secured Provincial funding to work with the Towns of Berwick, Kentville and the County of Kings on a regional Climate Mitigation Inventories and a final report The Property Assessed Clean Energy (PACE) program should be running during this fiscal year and will initially focus on fuel switching in our wellhead protection areas.		
Lead Department	Planning & Development	**Supporting Departments/Committees**	All Departments, ESC, PAC

Budgetary Implications	6-month extension to Staff person	A decision will be made by Council on how to resource this work in the future after the adoption of the Climate Change Plan. This work was previously funded through an FCM Grant, with the current budget for the six-month extension of the term position funded through reserves. The IMSA review will also examine the potential of creating an IMSA to undertake this work on a regional level.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD by Climate Plan and Council decision on future resourcing of this work	
	Year 3		
	Year 4		

Initiative	***Supporting Local Transportation (PRIORITY AREA 4)***		
Description	Staff are working through consultation that will inform a minimum AT grid that will be brought to Council for endorsement in the Spring of 2021 Staff have budgeted to get realistic costing on the implementation of the minimum grid to be included in the Town's capital budgeting process The Province may support this work and contribute to the exercise of getting the various components costed for budget purposes The Highland Avenue Street re-build (Prospect to Catherine Court) is included in the capital budget. Options for integration of enhanced active transportation infrastructure, including the potential integration of Acadia University property, are being investigated. There may be grant funding opportunities to ensure the active transportation component is implemented. Details will be brought back to Council for consideration once known. Staff are looking at conducting a micro-Transit feasibility study – if the Provincial funding stream is still active for this work (grant and capacity contingent)		
Lead Department	Parks and Recreation	**Supporting Departments/Committees**	Planning Public Works
Budgetary Implications		Planning contracted services covering AT planning work	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD	
	Year 3		
	Year 4		

Initiative	***Environmental Protection (PRIORITY AREA 4)***		
Description	Staff are working on the implementation of the Town's Flood Risk study. Communications and Education will be the focus of year 1 and staff are working on integrating the other recommendations of the study into the 10-year CIP. The Study contains recommendations around connecting the 2 dyke systems and living shorelines; protecting sewer lift stations and our treatment plant; a flood forecasting and warning system; and monitoring and future actions on infiltration, conveyance, storage, and development measures The new Planning documents introduced a Stormwater Management Guide for the Town. The implementation of this will be tested this year and also communications/education included with the flood risk work. Well-head protection is a focus of the PACE program (outlined under mitigation) Other environmental protection measures (e.g. steep slopes, water courses, well heads, agricultural land) are included in the Town's new planning documents as well.		
Lead Department	Planning & Development	**Supporting Departments/Committees**	PW, Parks, PAC
Budgetary Implications	$5,000	Communications and engagement on flood risk work	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD from Flood Study, Climate Action Plan	
	Year 3	Urban Forest Management baseline and report to Council for direction	
	Year 4		

Initiative	***Food Security (PRIORITY AREA 4)***		
Description	Our new MPS outlines Council's aspirations around contributing to increased food security in the region. The MPS implementation report (fall 2021) will look at this area and potential avenues for future years. Staff will continue to support the Farmers Market on the feasibility of their expansion. This work involves collaboration with both the Farmers Market and Acadia University (academic and administrative). Future projects may involve working in partnership with the Acadia Farm, assessing our role in Community Gardens, looking at the Town owned Agricultural land behind Home Hardware, and recreational programming around food and wellness.		
Lead Department	Planning, Parks	**Supporting Departments/Committees**	ESC, PAC
Budgetary Implications	Contribution toward Market feasibility	Planning contracted services/in-kind	

Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD	
	Year 3		
	Year 4		

COMMUNITY WELLNESS

Ensuring the well being of our community through programming, facility development and health and wellness initiaitives has been identified as a priortiy of Council. Improving and maintaining our existing recreational offering as well as adding new opportunities that are sustainable and strategic are key elements of this Plan.

Initiative	***Alcohol Strategy***		
Description	The Alcohol Working Group will finalize the draft Community Alcohol Strategy in the spring of 2021 and will bring it forward for consideration by Council and other stakeholders. Once adopted, the actions of the plan will be implemented over the next four years.		
Lead Department	Office of the CAO	**Supporting Departments/Committees**	Alcohol Working Group
Budgetary Implications	$5,000	Implementation of Strategy	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	5,000	
	Year 3	5,000	
	Year 4	5,000	

Initiative	***Regional Recreational Opportunities (PRIORITY AREA 1)***		
Description	In 2021-22, the four municipalities within Kings County will undertake a Regional Recreation Study to look at the feasibility of constructing a regional recreational complex, which would include an aquatics facility, within Kings County. This will be a two-phase study that will inform next steps.		
Lead Department	Office of the CAO	**Supporting Departments/Committees**	
Budgetary Implications	$30,000	$30,000 has been budgeted to contribute towards the cost of the study.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD	
	Year 3		
	Year 4		

Initiative	***Library and Town Hall***		
Description	An RFP will be issued to look at how both the Library could expand (consistent with the Library Needs Assessment - new build, addition to existing building) and also include in the scope how or if Town Hall should be integrated in the Library project. This work will better determine our Town Hall needs into the future. Both the existing Town Hall lands and the Library and surrounding Town-owned lands will be looked at in this study. This work will better inform the Town's 10-year Capital Investment Plan and provide Council an opportunity to hear from the public on these important public assets. There are currently uncertainties around exactly how we will direct future investment at the Town Hall property (Fire Hall, RCMP, Town Hall), proposed improvements to the Public Works building, and the envisioned Public Library expansion. Included in the scope will be consideration to sell one of these properties if Council feels everything we need can be accommodated on a single site.		
Lead Department	Planning and Development	**Supporting Departments/Committees**	Parks, Public Works, Finance, PAC, Design Review Committee
Budgetary Implications	$75,000	Library/Town Hall study to inform future investment.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD – see Capital Plan for where future investments stand currently	
	Year 3		
	Year 4		

Initiative	***Acadia Pool***		
Description	The Town, along with other municipal partners, will work with Acadia University to both provide financial support and enhance community aquatics programming in the short-medium term while the region undertakes the Feasibility Study for the Regional Recreation Complex. It is anticipated that financial support will be required on an annual basis to keep the pool open during the late spring/summer months and to continue community access during the academic term.		
Lead Department	Office of the CAO	**Supporting Departments/Committees**	
Budgetary Implications	TBD	Proposal to follow.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2		
	Year 3		
	Year 4		

Initiative	***Camps Programming***		
Description	Staff will evaluate the arrangement with Acadia for camps delivery. 2021-2022 will be status quo. Staff will host Environmental Leadership Camps – 5 one week camps this summer, each with different theme (10-15 campers per camp). It is anticipated that we will receive external funding support for this initiative.		
Lead Department	Parks and Recreation	**Supporting Departments/Committees**	Office of CAO
Budgetary Implications	$15,000 – Acadia $24,100 - ESC	Currently the Town has budgeted $24,100 for operational costs of Environmental Leadership Camps and $7,500 in revenue thereby investing $16,600 into program. Grant requests are being explored to off-set some of the shortfall.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD	
	Year 3		
	Year 4		

Initiative	***Parks Planning and Amenities***		
Description	One of the capital projects in the 21/22 year is the addition of Pickleball Courts at the Rotary Park field – just to the south of the Rec Centre. The number of courts will be dependent on grant funding – either two or three. In addition, the Tennis Club has been asking about the addition of a practice wall – this is also being explored. Practice space would be enclosed separate from the pickleball courts and could also be used for youth programing and lessons. Additional work is being planned for improvements to the Bike Skills Park in Reservoir Park. Parks and Recreation staff (depending on Council decisions) will engage community in a park planning process for two new parks in the West end.		
Lead Department	Office of the CAO	**Supporting Departments/Committees**	
Budgetary Implications	$140,000 Pickleball in Capital $20,000 Capital improvements to Bike skills park.	The Town will fund the development of 2 pickleball courts, three is grant funding is secured.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD	
	Year 3	TBD	
	Year 4	TBD	

Initiative	***Parks Maintenance***		
Description	Park's maintenance is being identified as a key priority for the Parks team and in support of the user experience. This comes with both additional costs and the management of risks and expectations. Nevertheless, we will continue to improve and plan for better and safer parks and trails within Wolfville. Specifically, staff will be seeking direction from Council on expectations surrounding winter maintenance.		
Lead Department	Parks and Recreation	**Supporting Departments/Committees**	Finance Department, Accessablity Committee
Budgetary Implications	$17,500	Parks has added dollars this year start to address parks maintenance – primarily in Reservoir Park. In discussions with Finance Department maintenance should be an operational line item each year. Staff will also review the feasibility, potential service level and required improvements that would be associated with winter trail maintenance on the Harvest Moon Trail and come back to Council will a report for a decision.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD	
	Year 3	TBD	
	Year 4	TBD	

Initiative	***Public Art***		
Description	A piece of Public Art has been tendered for the Town and is planned to be installed late summer early fall in the green space north of main street across from Willow Park, near the trail head. The Town manages an annual contribution to reserves for the purchase of larger art pieces. Consideration of how we fund and support smaller purchases (murals for example) and/or events requires either a larger commitment to funding flexibility or limited expectations beyond larger installations. This will be reviewed in 2021-22.		
Lead Department	Parks and Recreation	**Supporting Departments/Committees**	Finance Department
Budgetary Implications	$28,000	Art has been purchased (by direction of the art in Public Spaces committee) for installation in 2021.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2		
	Year 3		
	Year 4		

Initiative	***Heritage***		
Description	Staff will work with the Heritage Advisory Committee and the Randall House Museum, resource and capacity dependent to move this area of focus forward. Ensuring a heritage lens is applied to ongoing initiatives is essential for both Council and staff. Future initiatives may include: • Update Town's built heritage inventory – this will point out what is not included currently (that should be?); and how we move forward. • Update Town's heritage property program, incentives and tools based on the inventory and preservation goals • Work on expanding heritage programming to include Mi'Kmaq, Acadian, African Nova Scotian and other groups important to the formation of our region.		
Lead Department	Planning, Parks and Recreation	**Supporting Departments/Committees**	Heritage Advisory Committee
Budgetary Implications	None		
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	TBD - Summer student / University project may be valuable	
	Year 3		
	Year 4		

INFRASTRUCTURE MANAGEMENT

Managing our infrastructure in a strategic and safe way, while maximizing limited dollars, is an essential priority for the Town of Wolfville.

Initiative	***Crosswalk Safety (PRIORITY AREA 2)***		
Description	A crosswalk review is currently being completed by Fathom Studio and recommendations will be reviewed and implemented as resources allow. This work will assist in prioritizing crosswalk improvements on a go-forward basis and will assist in identifying the location and requirements of existing and future crosswalks. This review will also examine existing crosswalks from an accessibility perspective and make recommendations for improvements and standards for existing and future crosswalks. Two new RRFB Crosswalk lighting systems are included in the year 1 capital budget. Their location will be confirmed as part of the crosswalk review that is underway. Crosswalk signs are being replaced with hi intensity reflective signs.		
Lead Department	Public Works	**Supporting Departments/Committees**	
Budgetary Implications	$80,000	This will support two new RRFB crosswalk lighting systems.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	Implement recommendations	TBD
	Year 3	Implement recommendations	TBD
	Year 4	Implement recommendations	TBD

Initiative	***Traffic Management (PRIORITY AREA 2)***		
Description	Council has expressed a desire to review the options at the four way stop sign on Main and Harbourside. In 2021-22 staff will review all work and studies done to date, will conduct consultation with key stakeholder groups and the public and will identify the feasibility of a pilot project, if practical. A summary of all findings will be provided to Council in advance of budget deliberations for 2022-23, at which time direction can be given by Council around the inclusion of traffic lights in the 10-Year CIP. As mentioned in other sections of this Operational Plan, staff will also continue to work with the WBDC on Wayfinding improvements, primarily in the core area.		
Lead Department	Public Works	**Supporting Departments/Committees**	
Budgetary Implications	N/A	Much of this work can be done in house. Should a pilot project be feasible, the CAO contracted services budgeted $$ can be used to assist.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	Implement the direction of Council on the four-way stop	
	Year 3	Continue wayfinding improvements	
	Year 4		

Initiative	***Sidewalk Improvements (PRIORITY AREA 2)***		
Description	Continue to rebuild and repair sidewalks throughout Town. Approx 800 m of new concrete sidewalk will be added on Highland Avenue. Approx 950 m of asphalt sidewalk repairs are scheduled (but may be subject to change) on the following streets: • Main St West (Landmark East to Whidden - north) • Downtown Core • Acadia (Highland to Wolfville School -south) • Hillside (Bay to Fairfield) • Winter		
Lead Department	Public Works	**Supporting Departments/Committees**	
Budgetary Implications	Highland – included in capital project Repairs - $42,000		
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	New concrete – 660 m Asphalt repairs – 770 m	New – included in capital Repairs - $37,000

		Downtown core, Skyway (University to Basin - north), Pleasant (Riverview to Gaspereau), Acadia (Linden to Gaspereau - north)	
	Year 3	New Concrete – 350 m Asphalt repairs – 790 m Downtown core, Main (Stirling to Kent - south), Main (Earnscliffe to Westwood - south), Main (Sherwood to Maple - north), Pleasant (Hillside to Evangeline)	New - included in capital Repairs - $38,000
	Year 4	New concrete – 330 m Asphalt repairs – 650 m Downtown core, Main (Landmark East to West end – north), Main (Earnscliffe to Westwood – north), Main (Maple to Laura Moore – north), Pleasant (Orchard to Huron)	New – included in capital Repairs - $31,000

Initiative	***Street Improvements (PRIORITY AREA 2)***		
Description	Continue to rebuild and repairs streets throughout Town. Approx 3000 sq m of new street construction. Approx 13,700 sq m of asphalt mill and paving is scheduled (but may be subject to change) on the following streets: • Chestnut • Sherwood (Alline – Kencrest) • Huron • Iona • Fowler (Civic 26 – end) • Riverview • Maple		
Lead Department	Office of the CAO	**Supporting Departments/Committees**	
Budgetary Implications	New included in capital Mill & Pave - $275,000		
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	New 2400 sq m	New – included in capital

		Mill & pave – 15,100 sq m Fairfield (Highland to Hillside) Olsen (Cobbler to Carriage Way) Gaspereau (Pleasant to 101) Minas View (Cape View to End) Beckwith (Wickwire to end) Beckwith (Chestnut to Grandview) Beckwith (Grandview to Wickwire) Hillside (Fairfield to Pleasant) Maple	Repairs - $318,000
	Year 3	New 2400 sq m Mill & pave – 11,100 sq m Riverview Chestnut (Beckwith to Riga) Chestnut (Riga to Skyway) Acadia (Highland to Linden) Hillside (Bay to Fairfield) Hillside (Fairfield to Pleasant) Glooscap Terrace Maple Avenue	New - included in capital Repairs - $234,000
	Year 4	New 2400 sq m Mill & pave – 12,100 sq m Robie Tufts Huron Chestnut (Queen to Beckwith) Kinley Close Westwood (Park Street – End) Basinview Terrace Maple Avenue	New – included in capital Repairs - $254,000

Initiative	***Asset Management (PRIORITY AREA 2)***		
Description	The Town's AMP is used to guide decisions on maintenance and replacement of Town owned infrastructure to ensure infrastructure is safe, sustainable and responsive to the community. Staff will continue to update and verify existing condition assessment data using excavation reports, video inspection and other field verification methods.		
Lead Department	Public Works	**Supporting Departments/Committees**	Finance (GIS)
Budgetary Implications	N/A		
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	Continue to improve condition assessment data and development of long term financial plan Include climate change considerations as part of risk assessment and asset management	
	Year 3	Formalize levels of service	
	Year 4	Develop and implement Performance Measures Program	

Initiative	***Source Water Protection***		
Description	The Town's Source Water Protection Plan has been integrated into the MPS as a first step to better manage and protect Wolfville's water supply. Staff will review the Source Water Protection Plan and develop a revised implementation plan and schedule. Staff will work alongside the PACE program to assist residents switch from fuel-based heat to low carbon energy sources to help eliminate potential hazards in the wellfield protection areas.		
Lead Department	Public Works	**Supporting Departments/Committees**	Planning and Development
Budgetary Implications			
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	Continue to monitor and make recommendations to protect the Town's potable water supply	
	Year 3		
	Year 4		

GENERAL INITIATIVES

In addition to the many initiatives outlined in previous sections of the Operational Plan, there are also many general operational-type initiatives that will be undertaken in 2021-22 and beyond.

Initiative	***Regional Partnerships***		
Description	The Town of Wolfville will work with the other municipalities from the Annapolis Valley to review existing Inter-Municipal Service Agreements and to examine opportunities for new partnerships, including in the areas of Diversity and Climate Action.		
Lead Department	Office of the CAO	**Supporting Departments/Committees**	
Budgetary Implications	N/A	Financial support for this project will be covered with $$ that were provided in 2018 by all municipalities and the Province to review governance of KTA, Valley Waste and the VCFN.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2		
	Year 3		
	Year 4		

Initiative	***Human Resource Management***		
Description	Collective Bargaining – The existing Collective Agreement expires on March 31, 2022. The Town will strive to begin negotiations in the fall and have a new agreement in place prior to the end of the existing contract. Salary/Pension Review – Staff will undertake a review of salaries and benefits and will come back to Council with recommendations for the 2022-23 budget. It has become evident that in particular the pension benefits need discussion and direction from Council.		
Lead Department	Office of the CAO	**Supporting Departments/Committees**	
Budgetary Implications	$5,000	Allowance for legal to assist with collective bargaining. Salary/Pension review done in-house.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2		
	Year 3		
	Year 4		

Initiative	***Website Re-Development***		
Description	The Town's website will be redesigned to both enhance the user experience but to also make it more simplified to update and maintain. Special attention will be given to accessibility features, video integration, information pertaining to our local business community and improved search functions.		
Lead Department	Office of the CAO	**Supporting Departments/Committees**	
Budgetary Implications	$25,000	This is carried over from 2020-21.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2		
	Year 3		
	Year 4		

Initiative	***Enhancing Communications***		
Description	Improving communications and engagement has been clearly identified as a priority for Council. As such, a key role of the newly created Special Projects Coordinator will be focused on external communications. The Town will refine its social media and communications strategy, will serve to improvement engagement opportunities on its new website, and will continue to improve ways in which we communicate with residents across all communication mediums.		
Lead Department	Office of the CAO	**Supporting Departments/Committees**	
Budgetary Implications	N/A	There is no specific "communications" budget, but pockets of $$ throughout the Operating Budget in various Departments for marketing, promotion, etc. Should an unbudgeted initiative be identified, the CAO contracted services budget can be utilized.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2	Citizen Satisfaction Survey	$15,000
	Year 3		
	Year 4		

Initiative	***Water Rate Study***		
Description	In order to ensure financial stability of the utility, regular (every 3-5 years) rate studies should be carried out to ensure operational and capital costs are being covered. The Water Utility CIP now includes 1.6 million to replace the transmission lines. In addition, COVID has adversely affected meter-based sales. The last review was conducted in 2018.		
Lead Department	Office of the CAO	**Supporting Departments/Committees**	
Budgetary Implications	$8,000	This is budgeted in the Water Budget.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2		
	Year 3		
	Year 4		

Initiative	***Geographic Information Systems***		
Description	GIS is a corporate resource available to all Departments to enhance their work and ability to provide information and data to both the public and to Council to improve decision making. Priorities for 2021-22 include: Asset Management Building Inspection Tracking (maybe 2020-21) Complaints Tracking Compliance Tracking Ongoing support for Departments		
Lead Department	Office of the CAO	**Supporting Departments/Committees**	
Budgetary Implications		The Town employs a full time GIS Technician. This position supports this work.	
Future Work		**Initiatives**	**Anticipated Budget**
	Year 2		
	Year 3		
	Year 4		

ACADIA PARTNERSHIP AGREEMENT

In the fall of 2018, the Town signed an MOU with Acadia and the ASU to collaborate on areas of priority and mutual interest. While many of these initiatives have been highlighted in previous sections of this Operational Plan, it is important to understand, at a glance, what initiatives will be undertaken in 2021-22 in support of furthering collaborative work.

In 2021-22, the key initiatives proposed to be undertaken include:

Communications

- Improve joint and integrated communications where practical;
- Rejuvenate the Council/ASU pairings;
- Continue to host an annual community forum to provide details on what is happening in the Town and at Acadia and allow members of the public to engage and ask questions.

Economic Development

- Define the Town's role in Destination Acadia;
- Develop and support one major event in Wolfville;
- Pursue opportunities to partner with the Acadia Entrepreneurship Centre and other economic development stakeholders;
- Have ASU representation attend WBDC Board meetings;
- Continue to support the efforts of the Farmers Market;
- Promote opportunities for co-op placements within the local business community.

Facilities/Infrastructure

- Determine a plan for short and medium term access to the pool for community members;
- Complete the new turf project at Raymond Field;
- Review the Day Camps arrangement to ensure that it is working for both partners
- Explore the feasibility/future of the Acadia Farm.

Academic Opportunities

- Promote the opportunity for community members to attend lectures;
- Foster relations between Town staff, the ASU and the Department of Community Development;
- Develop list of subject matter experts at Acadia.

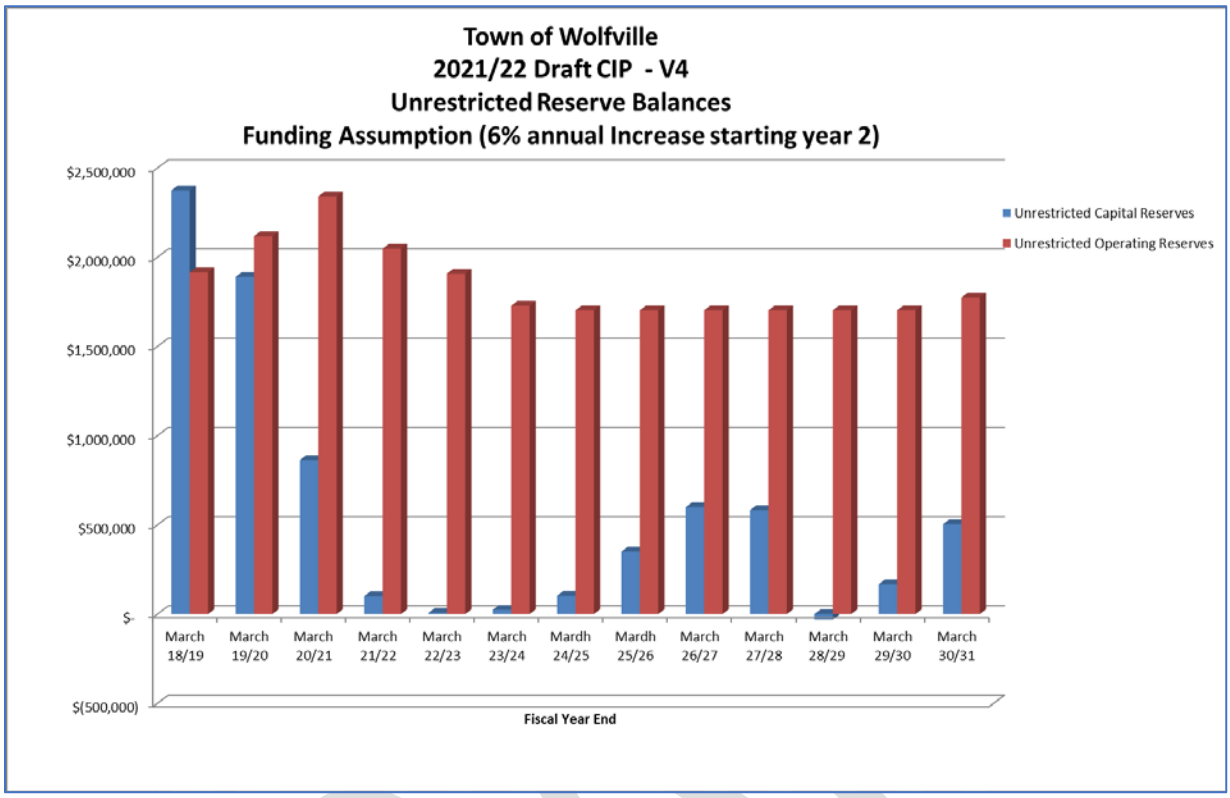
Strategic Planning

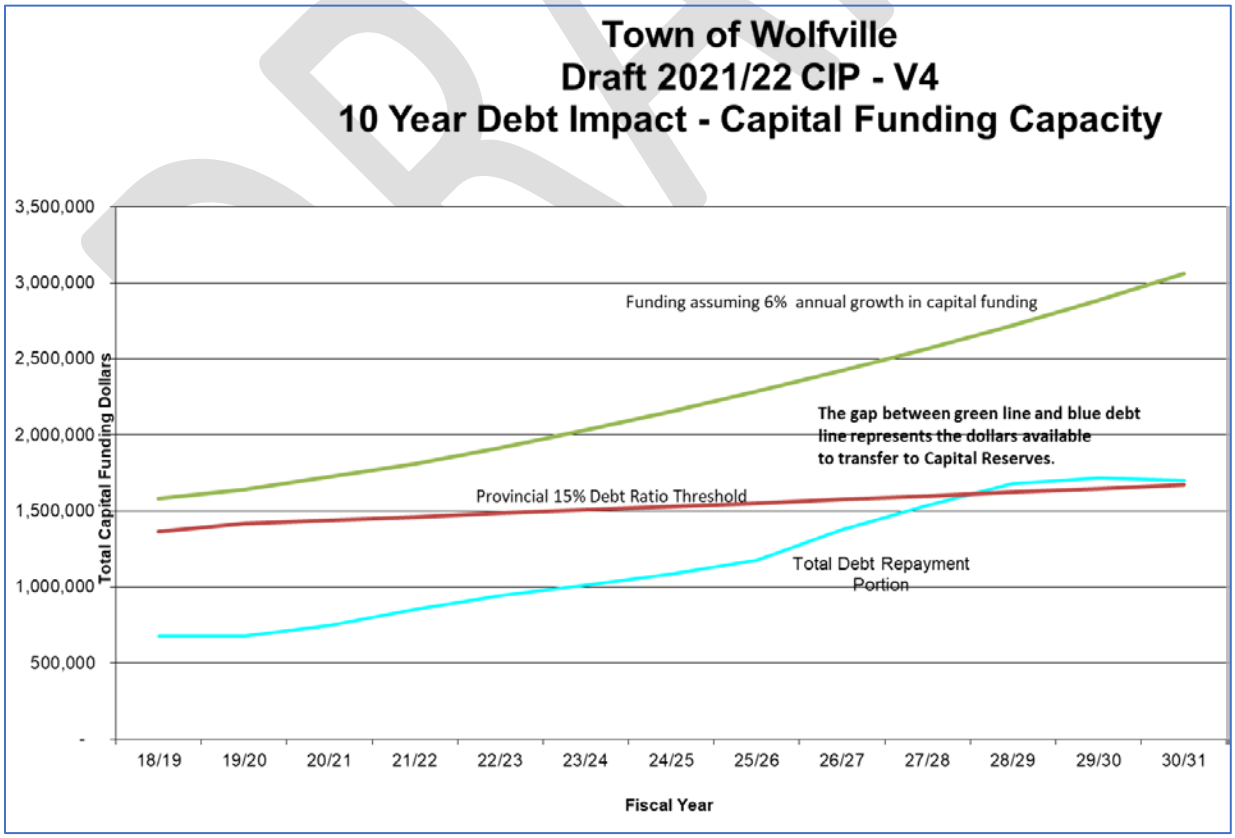
- Key Performance Indicators to measure the success of the MOU will be developed.

Community Harmony

- Finalize and begin implementing the Alcohol Strategy;
- Better educate students on their rights/responsibilities as a town member and tenant;
- Utilize the Code of Conduct to address off-campus behavioural issues as suitable;
- Utilize the Nuisance Party Bylaw to address nuisance parties as suitable;
- Conduct two 'walkabouts" annually for key members of each organization and the community to meet and talk to students living off campus;
- Continue to conduct weekly stakeholder meetings to debrief and address issues of concern, as well as to plan for upcoming events;
- Maintain printed materials related to community harmony and being good neighbours to each other;
- Make Acadia events, such as Cheaton Cup and Homecoming safer, experience less negative community impact and be hosted in improved physical event space.

10 Year Capital Investment Plan – Financing Projections

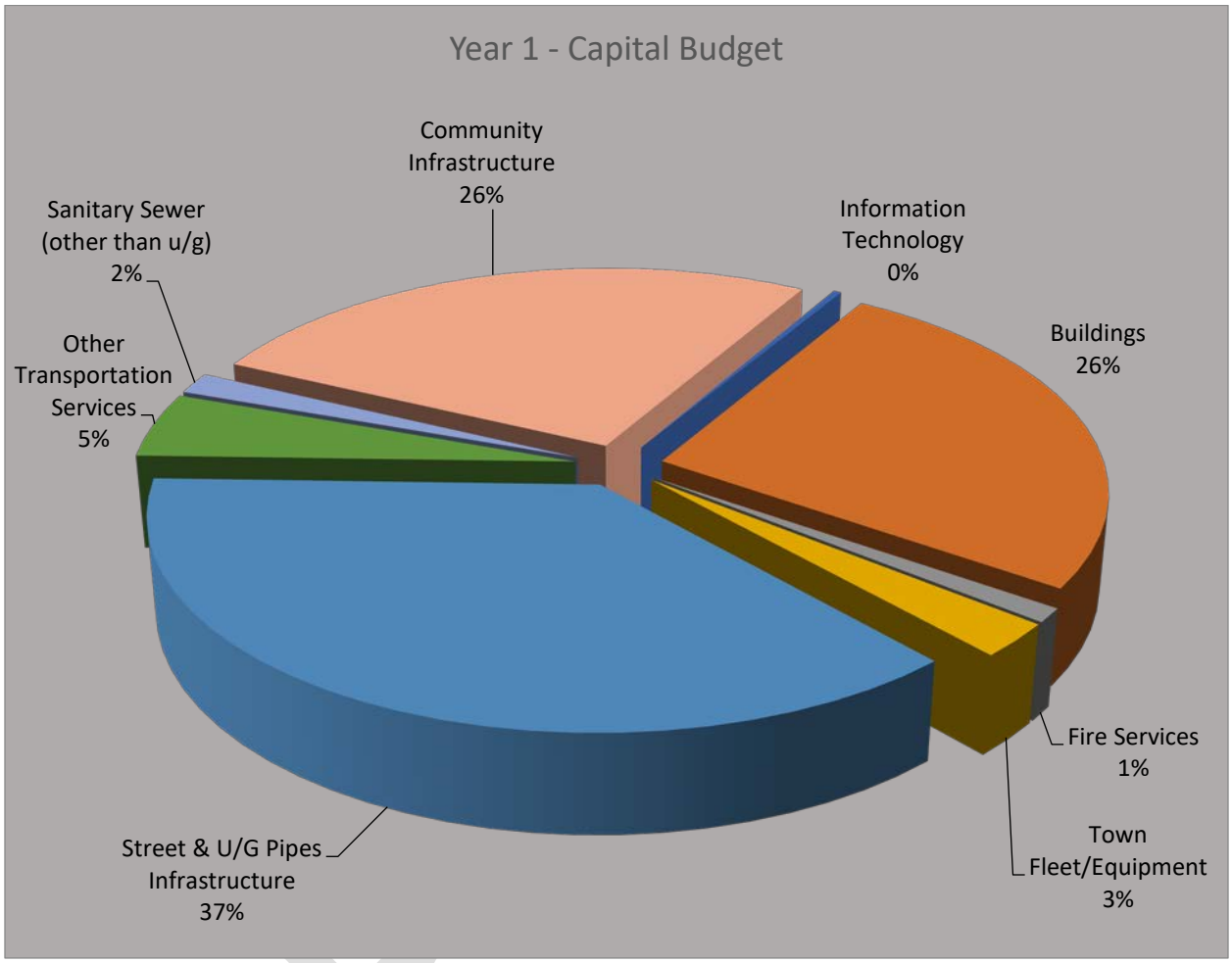




10 year Capital Investment Plan

The Town prepares a 10-Year Capital Investment Plan (CIP) each fiscal year, although Council only approves the projects in Year 1 for the Capital Budget. The 10-Year CIP assists with planning and funding of the capital program. Projects scheduled past year 1 are subject to change due to financial and human resources/opportunities and the priorities of Council.

Year 1 Allocation of Capital Projects ($4,641,500)



Capital Investment Plan Year 1 – 2021/22

Projects Include:

Renovate Council Chambers

Upgrades to Dykeland Building

Upgrades to Salt Shed and Parks Shed

Plans for new Library

Highland – Prospect to Catherine Court

Guard Rail – Orchard Avenue

Decorative Lights to Willow and up Gaspereau

Upgrades to Crosswalks

Replace the VIC and other Gateway upgrades

Public Art Project

Dam Upgrade

Work on West End Parkland and trail

Trails and bike skills park and paving parking lot, Reservoir Park

Create 2 Pickelball Courts

Wayfinding

Video Sewer Lines

Capital Investment Plan Year 1

YEAR 1 - 2021/22

1	**Project:**	**Project Description:**	**Budget:**	**Timeline:**
	Renovate Council Chambers	Video/Audio improvements	15,000	Q1 - April - June 2021
	Department:	**Related Plans:**		
	Corporate Services. IT			
2	**Project:**	**Project Description:**	**Budget:**	**Timeline:**
	Dykeland Building	Upgrades to improve accessibility, fire safety	700,000	Oct 2021
	Department:	**Related Plans:**		
	Public Works	Condition Assessment of Town Buildings		
3	**Project:**	**Project Description:**	**Budget:**	**Timeline:**
	Dykeland Building	Yard Upgrades - Salt Shed and Parks Shed	430,000	Oct 2021
	Department:	**Related Plans:**		
	Public Works	Condition Assessment of Town Buildings		
4	**Project:**	**Project Description:**	**Budget:**	**Timeline:**
	Library	Plans for new library	75,000	Q2
	Department:	**Related Plans:**		
	Planning	Library Feasibility Study		

5	**Project:**	**Project Description:**	**Budget:**	**Timeline:**
	Fire Equipment	Upgrade to fire equipment and SCBA Apparatus	50,000	No specific timeline
	Department:	**Related Plans:**		
	Fire Chief			
6	**Project:**	**Project Description:**	**Budget:**	**Timeline:**
	Town Fleet Replacement	The Town replaces equipment as required to ensure the inventory is maintained in a cost-effective manner	80,000	Tender Q1 – delivery TBD
		Water Utility vehicle replacement	40,000	June 2021
	Department:	**Related Plans:**		
	Public Works/Parks	Fleet Replacement Schedule		
7	**Project:**	**Project Description:**	**Budget:**	**Timeline:**
	Highland - Prospect to Catherine Ct	The project will rehabilitate 405m of street, including underground infrastructure	1,620,000	Nov 2021
	Department:	**Related Plans:**		
	Public Works	Pavement Condition Survey		
8	**Project:**	**Project Description:**	**Budget:**	**Timeline:**
	Guard Rail	Install a Guard Rail - Orchard Avenue	40,000	July 2021
	Department:	**Related Plans:**		
	Public Works			
9	**Project:**	**Project Description:**	**Budget:**	**Timeline:**
	Engineering Design	Plan for Engineering design work a year in advance of implementation	66,000	Throughout the year

	Department:	Related Plans:		
	Public Works			
10	Project:	Project Description:	Budget:	Timeline:
	Decorative Lights	Install decorative light posts to Willow and up Gaspereau	100,000	August 2021
	Department:	Related Plans:		
	Public Works			
11	Project:	Project Description:	Budget:	Timeline:
	Crosswalks	Upgrade Crosswalks - RRB/Accessibility	80,000	August 2021
	Department:	Related Plans:		
	Public Works			
12	Project:	Project Description:	Budget:	Timeline:
	East End Gateway	Replace the Visitor/Welcome Centre Other Gateway upgrades	600,000 340,000	By end of Q3
	Department:	Related Plans:		
	Parks & Recreation			
13	Project:	Project Description:	Budget:	Timeline:
	Public Art Project	Public Art Project	28,000	Installation Q3
	Department:	Related Plans:		
	Parks & Recreation			
14	Project:	Project Description:	Budget:	Timeline:
	Dam Upgrade	Nature Preserve Dam upgrade	50,000	Sept 2021

	Department: Public Works	Related Plans:		
15	Project: Parkland	Project Description: West End Parkland and trail Concept & Design only	Budget: 10,000	Timeline: Q2
	Department: Parks & Recreation	Related Plans:		
16	Project: Reservoir Park	Project Description: Trails and bike skills park	Budget: 20,000	Timeline: Q2
	Department: Parks & Recreation	Related Plans:		
17	Project: Reservoir Park	Project Description: Paving of parking Lot	Budget: 20,000	Timeline: Q1
	Department: Parks & Recreation	Related Plans:		
18	Project: Recreation Centre	Project Description: Create 3 Pickelball Courts	Budget: 145,000	Timeline: Q1
	Department: Parks & Recreation	Related Plans:		
19	Project: Basinview	Project Description: Community Engagement & Design	Budget: 7,500	Timeline: Q2

	Department:	**Related Plans:**		
	Parks & Recreation			
20	**Project:**	**Project Description:**	**Budget:**	**Timeline:**
	Wayfinding	Wayfinding	50,000	Ongoing
	Department:	**Related Plans:**		
	Parks & Recreation			
21	**Project:**	**Project Description:**	**Budget:**	**Timeline:**
	Video Sewer Lines	Continue to video sewer lines	75,000	Oct 2021
	Department:	**Related Plans:**		
	Public Works			

Capital Investment Plan Years 2, 3 and 4

YEAR 2 – 2022/23	YEAR 3 – 2023/24	YEAR 4 – 2024/25
Library Plans	Library Plans	Fire Hall
Highland Catherine Court – Skyway	Fire Truck Upgrade	Fire Truck Upgrade
Decorative Lights	Earnscliffe Av – Main to Civic 16	Earnscliffe Av – Civic 16 - end
Town Hall Generator replacement	Victoria – Main to King	Pleasant – Sherwood to Huron
Flood Mitigation at Sewer Plant	Flood Risk Mitigation Waterfront Park	Flood Risk Mitigation – Waterfront Park
East End Gateway upgrades	Flood Mitigation at Sewer treatment	Nature Preserve Dam Upgrade
West End Parkland trail system	West End Parkland trail system	West End Parkland trail system
Reservoir Park washroom/change rooms	Farmers Market – Pond and Park Area	
Parking Lot Dykeland/Elm		
Basinview Park build		

APPENDIX 1

Council's Strategic Plan – see below.

STRATEGIC PLAN

VISION: A vibrant, progressive town at the centre of a thriving and sustainable region, where residents, visitors, businesses and university thrive and grow.

MISSION: To provide leadership and collaborative governance for the responsive and responsible allocation of public resources for the greater good of Wolfville.

Principles that guide <u>how</u> Council makes decisions and allocates resources

Sustainability	**Transparency**	**Accountability**	**Well-Communicated**	**Evidence-Based**

Strategic Directions (That focus resource allocation)

Economic Prosperity	**Social Equity**	**Climate Action**	**Community Wellness**

Council's Priority Initiatives (for the 2021-24 Council Term)

1. Multi-purpose regional complex to include at minimum an aquatic facility. May also include other recreation and cultural indoor facilities.
2. Clear plan to address, in a timely manner, the revitalization and maintenance of road, sidewalk, crosswalk infrastructure and traffic management including addressing the issue of the 4-way stop.
3. Economic sector growth and support for commercial, business and entrepreneurial opportunities including retention and attraction of new economic opportunities.
4. Climate management related initiatives to reduce carbon emissions, support local transportation, local food security and environmental protection.

Wolfville Council 2021-2024 Strategic Plan, Purpose and Use:

The 2021-24 Town of Wolfville Strategic Plan incorporates elements that will guide our decisions and interactions in the community over the next four years.

The Vision is the future Council wishes for the Town. The vision identifies four equally important elements – residents, visitors, businesses, and the university. All operate in harmony and provide mutual support and benefit. None is expendable, none more important than the other. All must be healthy and stable for this vision to be achieved. The vision statement acknowledges that the Town exists within a sustainable region that supports the Town's health which in turn is necessary to the region's wellbeing.

The Mission outlines the purpose of this Council – to provide leadership for the Town's decisions, to do so in collaboration with the important segments of the community – residents, businesses, the University, and the greater region. Those decisions will be made understanding our role is the responsive and responsible management and expenditure of public funds entrusted to the town for the good of the town.

Principles guide Council's work:

1. **Sustainability:** Decisions will be made with a view to long-term viability of the Town and its sectors.
2. **Transparency:** Decisions will be made openly and in public.
3. **Accountability:** Council is responsible for decisions and their impact. Decisions are a function of the whole of Council.
4. **Well-Communicated:** Council decisions and the processes leading to decisions will be well communicated using the media and mediums available to ensure the decision processes are shared.
5. **Evidence-Based:** Decisions will be based on factual evidence, the importance an issue is to the community, and other realities of our community life.

The **Strategic Directions** found in the new Municipal Planning Strategy – Economic Prosperity, Social Equity, Climate Action and Community Wellness have been adopted by this Council as primary or strategic focuses for the Town's services. Decisions will be made with consideration to these broad goals.

Council's **Priority Initiatives** are initiatives that a majority of Council members heard in the community as priorities. It is hoped that at the end of this Council term Council members can look at the achievements of the term and see clear evidence of achievement on each of these priorities. They will hold a special place in the operations and resource allocation of the Town.

While the priority initiatives figure significantly in the Town's annual Operations Plan, they are not the only things that the Town will achieve. Projects that figured prominently in the 2020-2021 Capital Plan will generally remain there although may be allocated to a different year. Ongoing work of service departments is a major component of each annual budget. These, and other projects for which need and/or opportunity arises during the term of Council, will be incorporated as appropriate and as possible in each annual Operations Plan and Budget.

Town of Wolfville
2021/22 Operating Budget
All Divisions

	2021/22 Budget	2020/21 Forecast/Actual	2020/21 Budget	2019/20 Actual	2019/20 Budget
REVENUES					
Taxes and grants in lieu of taxes	**$ 9,724,500**	$ 9,606,500	$ 9,546,000	$ 9,252,059	$ 9,177,400
Sale of service/cost recoveries	**929,800**	867,400	979,400	1,027,625	912,500
Sewer Rates	**509,000**	420,300	451,500	432,233	430,000
Provincial, Federal & other grants	**98,600**	587,400	175,200	194,504	170,200
	11,261,900	11,481,600	11,152,100	10,906,421	10,690,100
EXPENSES					
Salary and wages	**2,227,100**	1,943,800	2,064,700	2,031,414	2,082,300
Employee Benefits	**443,300**	389,900	411,000	421,559	401,500
Seasonal/Term Wages	**370,200**	364,100	556,300	424,678	369,000
Employee Benefits Seasonal wag	**58,500**	64,900	80,300	54,512	58,600
Meetings, Meals and Travel	**24,000**	10,600	25,600	16,458	25,300
Professional Development	**66,900**	42,600	95,000	72,132	83,500
Membership Dues & Fees	**19,600**	19,500	15,800	17,510	20,700
Advertising	**27,800**	13,200	32,900	27,003	36,900
Telecommunications	**38,300**	36,200	47,400	39,421	43,000
Office Expense	**57,600**	45,500	66,000	51,800	78,800
Legal	**52,700**	49,300	42,700	50,312	50,200
Insurance	**154,500**	118,700	96,000	105,883	91,400
Marketing and Communications	**4,500**	400	3,400	1,125	200
Audit	**21,500**	25,100	20,000	16,647	18,000
Stipends & Honorariums	**207,900**	200,000	205,400	197,283	203,300
Miscellaneous	**1,400**	2,500	2,600	2,859	1,900
Heat	**26,200**	24,600	28,500	25,431	27,100
Utilities	**138,200**	119,000	124,600	133,971	129,400
Repairs and Maintenance	**136,600**	121,300	108,800	120,473	101,800
Vehicle Fuel	**47,700**	40,200	50,400	46,269	50,200
Vehicle Repairs & Maintenance	**144,100**	150,100	140,800	172,455	126,400
Vehicle Insurance	**19,200**	12,800	11,900	10,039	10,100
Operational Equip & Supplies	**563,100**	531,600	598,300	513,118	523,400
Equipment Maintenance	**10,000**	17,300	10,000	17,952	10,000
Equipment Rentals	**5,000**	2,700	-	10,379	-
Program Expenditures	**80,100**	61,700	77,600	52,122	86,100
Contracted Services	**2,693,600**	2,494,400	2,635,600	2,443,478	2,580,000
Grants to Organizations	**154,200**	107,900	245,200	139,150	178,900
Licenses and Permits	**3,300**	3,300	3,300	3,055	3,300
Tax Exemptions	**111,800**	103,300	112,500	104,172	107,600
Election	**-**	24,500	35,000	-	-
Partner Contributions	**1,823,900**	1,689,900	1,767,100	1,814,913	1,788,100
Other debt charges	**10,100**	2,500	10,300	15,375	10,000
Doubtful accounts allowance	**2,500**	2,500	2,500	-	2,500
	9,745,400	8,835,900	9,727,500	9,152,948	9,299,500
Net Operational Surplus (Deficit)	**1,516,500**	2,645,700	1,424,600	1,753,473	1,390,600
Capital Program & Reserves					
Principal Debenture Repayments	**601,800**	562,900	**562,900**	538,366	**538,400**
Debenture interest	**180,400**	**166,200**	**162,400**	157,844	**155,500**
Principal/Interest Future Debt	**-**	-			
Transfer to Operating Reserves	**5,000**	389,700	**5,000**	5,000	**5,000**
Transfer to Capital Reserves	**769,900**	740,300	**740,300**	729,300	**729,300**
Transfer to Cap Reserve - Fire Equip	**259,000**	259,000	**259,000**	219,000	**219,000**
Transfer to Capital Fund		-			
Transfer from Operating Reserves	**(234,600)**	-	**(305,000)**	**(145,485)**	**(256,600)**
Transfer from COVID Reserve	**(65,000)**	-	-	-	-
	1,516,500	2,118,100	1,424,600	1,504,025	1,390,600
Net Surplus (Deficit)	**$ -**	$ 527,600	$ -	$ 249,448	$ -

Town of Wolfville

Operating Budget ~ Tax Revenue Requirement
2021/22 Operating Budget

	BUDGET		
	Current Yr 2021/22	**Required Increase**	**Prior Yr 2020/21**
Total to be funded by Property Tax Rates	7,771,600	120,800	7,650,800
		1.58%	

		Budget 2021/22	$ Increase	**Budget 2020/21**
RESULTING TAXES				
Residential ~ No Change to Rate	1.475	6,481,000	120,400	6,360,600
Resource	1.475	13,500	300	13,200
Subtotal from residential sector		6,494,500	120,700	6,373,800
			1.89%	
Commercial	3.585	1,277,100	100	1,277,000
		-	-	-
Subtotal from commercial sector		1,277,100	100	1,277,000
			0.01%	
TOTAL		7,771,600	120,800	7,650,800
			1.58%	
Revenue surplus (shortfall)		$0		$0
Overall Increase in Tax Revenue		1.58%		

Tax Rate Change Assumption		
Residential - 1 cent increase	1.475	1.475
Commercial - 1 cent increase	3.585	3.585

BUDGETED TAXABLE ASSESSMENTS (net of allowance for appeals)			
Residential	1.89%	439,388,400	431,230,500
Commercial	0.01%	35,623,600	35,619,500
Resource	2.23%	913,900	894,000
Business Occupancy		-	-
TOTAL		475,925,900	467,744,000

2019 PVSC ASSESSMENT ROLL	Per Roll (net of Cap)	Allowance For Appeals & Bus Closings & Adjustments	Expected Taxable Assessment
Residential	440,388,400	(1,000,000)	439,388,400
Commercial	35,623,600	-	35,623,600
Resource	913,900	-	913,900
TOTAL	476,925,900	(1,000,000)	475,925,900

Town of Wolfville
2021/22 Operating Budget
All Divisions

	2021/22 Budget	PROJECTION 2022/23 Budget Projection	2023/24 Budget Projection	2024/25 Budget Projection
REVENUES				
Taxes and grants in lieu of taxes	**$ 9,724,500**	$ 9,919,850	$ 10,124,300	$ 10,309,700
Sale of service/cost recoveries	**929,800**	924,000	930,400	934,600
Sewer Rates	**509,000**	514,000	519,000	524,000
Provincial, Federal & other grants	**98,600**	98,600	77,600	89,800
	11,261,900	11,456,450	11,651,300	11,858,100
EXPENSES				
Salary and wages	**2,227,100**	2,284,200	2,264,900	2,326,300
Employee Benefits	**443,300**	453,700	448,400	458,900
Seasonal/Term Wages	**370,200**	368,300	375,100	382,100
Employee Benefits Seasonal wag	**58,500**	58,800	59,900	61,000
Meetings, Meals and Travel	**24,000**	25,100	25,300	25,500
Professional Development	**66,900**	80,500	86,200	91,900
Membership Dues & Fees	**19,600**	19,800	20,000	20,000
Advertising	**27,800**	28,000	28,400	28,800
Telecommunications	**38,300**	38,900	39,200	39,500
Office Expense	**57,600**	59,500	60,500	61,600
Legal	**52,700**	48,700	49,300	49,900
Insurance	**154,500**	169,200	185,600	203,600
Marketing and Communications	**4,500**	5,000	5,100	5,200
Audit	**21,500**	22,400	22,800	23,300
Stipends & Honorariums	**207,900**	211,500	215,700	220,000
Miscellaneous	**1,400**	1,400	1,400	1,400
Heat	**26,200**	26,600	27,000	27,100
Utilities	**138,200**	140,100	142,300	144,400
Repairs and Maintenance	**136,600**	139,200	140,600	101,000
Vehicle Fuel	**47,700**	48,600	49,500	50,400
Vehicle Repairs & Maintenance	**144,100**	149,900	149,900	149,900
Vehicle Insurance	**19,200**	19,900	20,500	21,200
Operational Equip & Supplies	**563,100**	572,000	576,800	581,600
Equipment Maintenance	**10,000**	10,200	10,400	10,600
Equipment Rentals	**5,000**	5,000	5,000	5,000
Program Expenditures	**80,100**	86,200	95,200	96,900
Contracted Services	**2,693,600**	2,752,000	2,795,800	2,835,300
Grants to Organizations	**154,200**	27,700	32,700	57,700
Licenses and Permits	**3,300**	3,300	1,800	3,300
Tax Exemptions	**111,800**	114,000	116,400	119,000
Election	**-**	-	-	40,000
Partner Contributions	**1,823,900**	1,874,100	1,934,100	1,992,300
Other debt charges	**10,100**	15,100	20,100	20,100
Doubtful accounts allowance	**2,500**	2,500	2,500	2,500
	9,745,400	9,861,400	10,008,400	10,257,300
Net Operational Surplus (Deficit)	**1,516,500**	1,595,050	1,642,900	1,600,800
Capital Program & Reserves				
Principal Debenture Repayments	**601,800**	-		
Debenture interest	**180,400**	-		
Principal/Interest Future Debt	**-**	940,000	1,011,000	1,085,700
Transfer to Operating Reserves	**5,000**	5,000	5,000	5,000
Transfer to Capital Reserves	**769,900**	720,800	765,000	812,400
Transfer to Cap Reserve - Fire Equip	**259,000**	259,000	259,000	259,000
Transfer to Capital Fund		-	-	-
Transfer from Operating Reserves	**(234,600)**	(97,000)	-	-
Transfer from COVID Reserve	**(65,000)**	-	-	-
	1,516,500	1,827,800	2,040,000	2,162,100
Net Surplus (Deficit)	**$ -**	$ (232,750)	$ (397,100)	$ (561,300)

Year 2 thru 4 projections are based upon assumptions that may not match future events. Intended to illustrate possible results based on current budget structure and modest assessment growth.

Town of Wolfville
2021/22 Operating Budget
General Government Division

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Residential & resource taxes	6,494,500	6,372,900	6,373,800	6,016,056	6,018,100
Commercial taxes	1,363,400	1,356,600	1,345,600	1,320,635	1,318,800
Deed Transfer Tax	400,000	446,400	340,000	427,936	340,000
Business development area rate	100,000	30,400	100,000	101,546	100,000
Grant in lieu of taxes	970,500	1,009,100	990,500	981,513	992,500
Kings County Fire Protection	141,200	142,100	141,200	121,100	121,100
Cost recoveries	107,900	109,400	109,400	111,530	112,200
Interest on investments & o/s taxes	92,000	68,900	117,000	149,913	90,000
Other revenues	68,500	72,900	68,500	91,218	69,400
Equilization Grant	70,000	69,800	70,000	69,869	70,000
Farm Acreage Grant	1,100	1,200	1,100	1,168	1,100
Other conditional grants	-	404,700	-	350	-
	9,812,900	10,087,900	9,660,600	9,396,334	9,236,700
EXPENSES					
Salary and wages	644,000	619,000	629,300	611,939	609,300
Employee Benefits	133,300	124,700	128,600	124,400	118,200
Seasonal Wages	12,000	-	50,000	-	-
Employee Benefits Seasonal wag	1,200	-	5,000	-	-
Meetings, Meals and Travel	6,700	3,000	10,100	4,731	7,900
Professional Development	51,900	36,200	80,000	60,251	68,500
Membership Dues & Fees	8,800	10,100	7,000	8,511	7,600
Advertising	8,500	7,500	7,900	8,941	7,900
Telecommunications	14,900	13,800	16,800	16,023	16,700
Office Expense	30,600	31,300	36,800	32,237	44,200
Legal	30,000	22,100	15,000	29,458	20,000
Insurance	147,000	112,300	90,000	96,726	85,000
Marketing and Communications	1,000	100	2,400	1,125	-
Audit	21,500	25,100	20,000	16,647	18,000
Mayor and Council Remuneration	167,500	165,900	167,000	168,854	164,900
Miscellaneous	1,400	2,500	2,600	2,723	1,900
Heat	15,100	14,500	15,400	14,126	13,300
Utilities	5,700	5,300	5,700	5,356	5,700
Repairs and Maintenance	20,000	55,900	23,000	35,950	11,700
Operational Equip & Supplies	122,000	87,100	99,600	78,319	69,600
Program Expenditures	12,000	-	2,000	-	2,500
Contracted Services	91,100	57,800	95,000	16,608	80,000
Grants to Organizations	73,900	59,500	145,500	68,750	100,000
Tax Exemptions	111,800	103,300	112,500	104,172	107,600
Election	-	24,500	35,000	-	-
Other debt charges	10,100	2,500	10,300	15,375	10,000
Doubtful accounts allowance	2,500	2,500	2,500	-	2,500
	1,744,500	1,586,500	1,815,000	1,521,222	1,573,000
Net Division Surplus (Deficit)	$ 8,068,400	$ 8,501,400	$ 7,845,600	$ 7,875,112	$ 7,663,700
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	47,600	-	190,000	25,000	80,000
Net Surplus (Deficit)	$ 8,116,000	$ 8,501,400	$ 8,035,600	$ 7,900,112	$ 7,743,700

Town of Wolfville
2021/22 Operating Budget
Legislative ~ 110

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
TOTAL REVENUE	-		-		-
EXPENSES					
Employee Benefits - CPP	6,600	5,100	6,500	6,325	3,000
Meetings, Meals and Travel	4,300	2,000	6,100	3,481	4,400
Professional Development	16,900	12,300	25,000	19,696	23,500
Membership Dues & Fees	6,100	5,700	5,000	5,509	5,000
Advertising	300	500	300	1,358	300
Telecommunications	3,400	3,000	3,500	3,490	3,900
Stipends & Honorariums	167,500	165,900	167,000	168,854	164,900
Miscellaneous	1,200	2,400	2,200	400	1,500
Contracted Services	-		-	353	
	206,300	196,900	215,600	209,466	206,500
Net Department Surplus (Deficit)	$ (206,300)	$ (196,900)	$ (215,600)	$ (209,466)	$ (206,500)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	-			-	
Net Surplus (Deficit)	$ (206,300)	$ (196,900)	$ (215,600)	$ (209,466)	$ (206,500)

Town of Wolfville
2021/22 Operating Budget
Office of the CAO/General Gov't Administration

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
		Restated	Restated	Restated	Restated
REVENUES					
Cost recoveries from Water Util	-	-	-	-	-
Cost recoveries from Sewer Dept	-	-	-	-	-
TOTAL REVENUE	-	-	-	-	-
EXPENSES					
Salary and wages	258,700	248,700	253,800	243,810	241,100
Employee Benefits	49,800	43,800	47,200	40,745	40,900
Term/Seasonal Wages	-	-	50,000	-	-
Employee Benefits Seasonal wag	-	-	5,000	-	-
Meetings, Meals and Travel	1,000	100	2,500	352	3,000
Membership Dues & Fees	1,900	3,400	1,200	2,658	2,200
Advertising	8,000	7,000	7,200	7,583	7,000
Telecommunications	3,500	3,700	3,300	3,081	3,900
Office Expense	1,200	800	1,200	1,299	1,200
Legal	15,000	12,400	10,000	11,531	15,000
Marketing and Communications	1,000	100	2,400	1,125	-
Miscellaneous	-	-	-	2,275	-
Program Expenditures	12,000	-	2,000	-	2,500
Contracted Services	55,000	20,000	50,000	1,357	40,000
Election	-	24,500	35,000	-	-
	407,100	364,500	470,800	315,816	356,800
Net Department Surplus (Deficit)	$ (407,100)	$ (364,500)	$ (470,800)	$ (315,816)	$ (356,800)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	-	-	110,000	-	30,000
Net Surplus (Deficit)	$ (407,100)	$ (364,500)	$ (360,800)	$ (315,816)	$ (326,800)

Town of Wolfville
2021/22 Operating Budget
Human Resources ~ 130

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Miscellaneous	-	-		13	
Other conditional grants	-		-	350	
	-	-	-	363	-
EXPENSES					
Salary and wages	-				
Employee Benefits	9,000	12,000	9,000	9,423	6,000
Meetings, Meals and Travel	900	400	900	898	-
Professional Development	35,000	23,900	55,000	40,555	45,000
Membership Dues & Fees		300		-	
Office Expense	-	300	-	651	-
Legal	15,000	9,700	5,000	17,927	5,000
Operational Equip & Supplies	10,000	21,000	9,600	9,050	9,600
Contracted Services		-		1,565	
	69,900	67,600	79,500	80,069	65,600
Net Department Surplus (Deficit)	$ (69,900)	$ (67,600)	$ (79,500)	$ (79,706)	$ (65,600)

Town of Wolfville
2021/22 Operating Budget
Finance ~ 140

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Tax Certificates & ByLaws	1,800	1,100	1,800	1,750	1,200
Cost recoveries from Water Util	66,700	66,700	66,700	64,730	65,400
Miscellaneous	-	2,000	-	3,935	-
	68,500	69,800	68,500	70,415	66,600
EXPENSES					
Salary and wages	239,900	233,700	233,400	234,506	229,200
Employee Benefits	41,200	39,300	40,100	43,326	41,200
Meetings, Meals and Travel	300	200	400	-	300
Membership Dues & Fees	800	700	800	344	400
Telecommunications	1,100	1,100	1,100	1,079	1,100
Office Expense	2,900	1,600	2,800	2,402	3,800
Audit	21,500	25,100	20,000	16,647	18,000
Miscellaneous	200	100	400	48	400
	307,900	301,800	299,000	298,352	294,400
Net Department Surplus (Deficit)	$ (239,400)	$ (232,000)	$ (230,500)	$ (227,937)	$ (227,800)

Town of Wolfville
2021/22 Operating Budget
Information Technologies ~ 150

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
		Restated	Restated	Restated	Restated
REVENUES					
Job Cost billings			-		-
Cost recoveries from Water Util	34,000	30,800	30,800	29,800	29,800
Cost recoveries from Sewer Dept	3,800	3,500	3,500	3,500	3,500
Miscellaneous		800			
	37,800	35,100	34,300	33,300	33,300
EXPENSES					
Salary and wages	134,100	130,700	132,300	127,603	129,000
Employee Benefits	24,600	23,900	24,000	24,221	25,200
Seasonal Wages	12,000	-		-	
Employee Benefits Seasonal wag	1,200	-		-	
Meetings, Meals and Travel	200	-	200	-	200
Telecommunications	5,000	4,200	7,000	5,945	5,900
Operational Equip & Supplies	110,000	66,100	80,000	67,188	50,000
Contracted Services	36,100	37,800	45,000	12,916	40,000
	323,200	262,700	288,500	237,873	250,300
Net Department Surplus (Deficit)	$ (285,400)	$ (227,600)	$ (254,200)	$ (204,573)	$ (217,000)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	23,200	-	-	-	-
Net Surplus (Deficit)	$ (262,200)	$ (227,600)	$ (254,200)	$ (204,573)	$ (217,000)

Town of Wolfville
2021/22 Operating Budget
General Government Common Costs ~ 160

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Cost recoveries from Water Util	7,200	11,900	11,900	17,000	17,000
TOTAL REVENUE	7,200	11,900	11,900	17,000	17,000
EXPENSES					
Salary and wages	11,300	5,900	9,800	6,020	10,000
Employee Benefits	2,100	600	1,800	360	1,900
Meetings, Meals and Travel	-	300	-	-	
Advertising	200	-	400	-	600
Telecommunications	1,900	1,800	1,900	2,428	1,900
Office Expense	26,500	28,600	32,800	27,885	39,200
Heat	15,100	14,500	15,400	14,126	13,300
Utilities	5,700	5,300	5,700	5,356	5,700
Repairs and Maintenance	20,000	55,900	23,000	35,950	11,700
Operational Equip & Supplies	2,000	-	10,000	2,081	10,000
Contracted Services			-	417	-
	84,800	112,900	100,800	94,623	94,300
Net Department Surplus (Deficit)	$ (77,600)	$ (101,000)	$ (88,900)	$ (77,623)	$ (77,300)

Town of Wolfville
2021/22 Operating Budget
Other General Government ~ 190

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Residential Tax	6,481,000	6,360,500	6,360,600	6,005,858	6,007,200
Resource Tax	13,500	12,400	13,200	10,198	10,900
Commercial Tax	1,277,100	1,295,500	1,277,000	1,251,819	1,249,800
NSLC - exempt assessment	24,300	-	-	-	-
Aliant	20,500	20,500	20,000	20,203	20,000
NSPI Grant	4,500	4,400	3,600	4,285	3,600
HST Offset Grant	37,000	36,200	45,000	44,328	45,400
Fire Protection Rate	-	-	-	-	
Deed Transfer Tax	400,000	446,400	340,000	427,936	340,000
Commercial Area Rate	100,000	30,400	100,000	101,546	100,000
Post Office GILT	20,500	20,500	20,500	20,558	20,500
Acadia GILT	950,000	988,600	970,000	960,955	972,000
Kings County Fire Protection	141,200	142,100	141,200	121,100	121,100
License & fee revenue	-	-	-	-	-
Facility Rental	16,500	17,800	16,500	16,581	18,000
Land Leases	200	200	200	200	200
Interest on investments	20,000	24,100	45,000	75,403	25,000
Interest on outstanding taxes	72,000	44,800	72,000	74,510	65,000
Miscellaneous	50,000	51,000	50,000	68,739	50,000
Equilization Grant	70,000	69,800	70,000	69,869	70,000
Farm Acreage Grant	1,100	1,200	1,100	1,168	1,100
Other conditional grants		404,700			
TOTAL REVENUE	9,699,400	9,971,100	9,545,900	9,275,256	9,119,800
EXPENSES					
Insurance	147,000	112,300	90,000	96,726	85,000
Miscellaneous	-	-		-	
Grants to Organizations	73,900	59,500	145,500	68,750	100,000
Tax Exemptions	111,800	103,300	112,500	104,172	107,600
Other debt charges	10,100	2,500	10,300	15,375	10,000
Debenture interest	-	-	-	-	-
Doubtful accounts allowance	2,500	2,500	2,500	-	2,500
	345,300	280,100	360,800	285,023	305,100
Net Department Surplus (Deficit)	$ 9,354,100	$ 9,691,000	$ 9,185,100	$ 8,990,233	$ 8,814,700
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	24,400		80,000	25,000	50,000
Net Surplus (Deficit)	$ 9,378,500	$ 9,691,000	$ 9,265,100	$ 9,015,233	$ 8,864,700

Town of Wolfville
2021/22 Operating Budget
Protective Services Division

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Fire Protection Rate	396,100	391,100	396,100	404,373	408,000
Kings County Fire Protection	167,600	176,100	167,600	165,200	165,500
License & fee revenue	5,000	3,800	5,000	4,132	5,000
Parking fines	10,000	3,000	26,000	36,787	26,000
Other fines	10,000	15,300	10,000	12,601	10,000
EMO 911 Cost Recovery	1,900	1,600	1,600	1,924	1,600
	670,600	654,100	686,300	708,782	696,100
EXPENSES					
Salary and wages	210,100	199,300	207,000	201,210	197,500
Employee Benefits	35,200	31,200	34,500	32,374	31,700
Seasonal Wages	16,700	11,100	16,600	14,705	14,700
Employee Benefits Seasonal wag	1,700	1,000	1,700	974	1,500
Meals and Travel	7,700	2,500	7,100	4,403	7,200
Professional Development	15,000	6,400	15,000	11,881	15,000
Membership Dues & Fees	1,700	1,400	1,400	605	2,200
Advertising	-	-	-	2,476	-
Telecommunications	9,400	9,300	10,000	9,134	11,100
Office Expense	7,800	200	9,400	2,052	11,500
Legal	7,700	7,000	7,700	7,827	10,200
Insurance	7,500	6,400	6,000	9,157	6,400
Honorariums	40,400	34,100	38,400	28,429	38,400
Heat	4,100	3,400	4,100	4,112	4,800
Utilities	17,200	15,100	17,200	16,837	17,500
Repairs and Maintenance	11,600	16,500	16,400	28,843	19,000
Vehicle Fuel	6,200	4,700	6,000	4,706	6,000
Vehicle Repairs & Maintenance	46,500	49,100	47,100	51,103	44,100
Vehicle Insurance	9,100	6,100	4,900	4,882	4,900
Operational Equip & Supplies	69,500	62,100	76,400	89,634	74,500
Equipment Maintenance	10,000	17,300	10,000	17,681	10,000
Contracted Services	1,957,500	1,920,200	1,942,200	1,902,283	1,928,200
Licenses and Permits	1,800	1,800	1,800	1,711	1,800
Debenture interest	2,500	4,000	4,000	4,853	5,300
	2,497,900	2,410,500	2,505,900	2,451,872	2,463,700
Net Division Surplus (Deficit)	$ (1,827,300)	$ (1,756,400)	$ (1,819,600)	$ (1,743,090)	$ (1,767,600)

Town of Wolfville
2021/22 Operating Budget
Police Service ~ 210

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Parking fines	-		-		
Other fines	10,000	15,300	10,000	12,601	10,000
	10,000	15,300	10,000	12,601	10,000
EXPENSES					
Salary and wages	6,800	4,300	5,600	4,202	4,400
Employee Benefits	1,400	400	1,100	215	900
Legal	6,500	7,000	4,500	6,465	4,200
Utilities	3,500	3,200	3,500	3,157	4,000
Repairs and Maintenance	2,700	3,700	3,200	2,593	6,000
Contracted Services	1,517,000	1,472,000	1,478,400	1,435,948	1,462,900
	1,537,900	1,490,600	1,496,300	1,452,580	1,482,400
Net Department Surplus (Deficit)	$ (1,527,900)	$ (1,475,300)	$ (1,486,300)	$ (1,439,979)	$ (1,472,400)

Town of Wolfville
2021/22 Operating Budget
Compliance (By Law Enforcement) Dept ~ 215

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Parking fines	10,000	3,000	26,000	36,787	26,000
Other fines			-	-	-
	10,000	3,000	26,000	36,787	26,000
EXPENSES					
Salary and wages	63,600	63,700	62,600	63,256	61,000
Employee Benefits	12,700	9,700	12,500	9,218	12,200
Meetings, Meals and Travel	200	200	200	-	200
Membership Dues & Fees	100	200	200	100	200
Telecommunications	1,000	1,000	1,200	1,002	1,200
Office Expense	1,600	200	1,000	1,001	1,000
Legal	1,200	-	3,200	610	6,000
Marketing and Communications	1,000	300	1,000	-	200
Vehicle Fuel	500	300	600	500	600
Vehicle Repairs & Maintenance	900	1,600	500	810	500
Vehicle Insurance	600	400	300	272	300
Operational Equip & Supplies	1,000	1,300	1,500	1,470	500
Contracted Services	15,000	21,900	38,600	25,967	26,000
Grants to Organizations	-	-	20,000	-	
	99,400	100,800	143,400	104,206	109,900
Net Department Surplus (Deficit)	$ (89,400)	$ (97,800)	$ (117,400)	$ (67,419)	$ (83,900)

Town of Wolfville
2021/22 Operating Budget
Fire Services ~ 220

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Fire Protection Area Rate	396,100	391,100	396,100	404,373	408,000
Kings County Fire Protection	167,000	175,500	167,000	164,100	164,400
Miscellaneous	-	500	-	1,375	
Other conditional grants	-	-	-	12,995	
	563,100	567,100	563,100	582,843	572,400
EXPENSES					
Salary and wages	84,700	79,400	83,900	80,941	82,100
Employee Benefits	12,300	13,100	12,100	14,803	10,600
Meeting, Meals and Travel	2,500	2,100	1,900	2,270	2,000
Professional Development	15,000	6,400	15,000	11,881	15,000
Membership Dues & Fees	1,600	1,200	1,200	505	2,000
Telecommunications	8,400	8,000	8,800	7,694	9,900
Office Expense	500	-	1,000	243	1,500
Insurance	7,500	6,400	6,000	9,157	6,400
Stipends & Honorariums	40,400	34,100	38,400	28,429	38,400
Heat	4,100	3,400	4,100	4,112	4,800
Utilities	13,700	11,900	13,700	13,680	13,500
Repairs and Maintenance	8,900	12,800	13,200	26,250	13,000
Vehicle Fuel	5,700	4,400	5,400	4,206	5,400
Vehicle Repairs & Maintenance	45,600	47,500	46,600	50,293	43,600
Vehicle Insurance	8,500	5,700	4,600	4,610	4,600
Operational Equip & Supplies	60,000	57,700	68,000	85,050	65,000
Equipment Maintenance	10,000	17,300	10,000	17,681	10,000
Contracted Services	410,500	411,300	410,200	425,368	424,000
Licenses and Permits	1,800	1,800	1,800	1,711	1,800
	741,700	724,500	745,900	788,884	753,600
Net Department Surplus (Deficit)	$ (178,600)	$ (157,400)	$ (182,800)	$ (206,041)	$ (181,200)

Note: $396,100 ($396,100 in 20/21) of contracted services expense relates to Fire Hydrant Fee paid to Wolfville Water Utility, as per UARB approved formula. The full amount of this fee is recovered by the Town through the Fire Protection Area Rate, noted in revenues above.

Town of Wolfville
2021/22 Operating Budget
EMO ~ 230

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Miscellaneous	80,000	62,700	80,000	69,395	80,000
	80,000	62,700	80,000	69,395	80,000
EXPENSES					
Salary and wages	52,800	51,600	52,700	52,220	50,000
Employee Benefits	8,500	7,900	8,500	7,870	8,000
Meeting, Meals and Travel	5,000	200	5,000	2,133	5,000
Advertising		-	-	2,476	-
Telecommunications		300	-	438	-
Office Expense	5,700	-	7,400	808	9,000
Legal		-	-	752	-
Operational Equip & Supplies	8,000	2,700	6,400	2,698	8,000
	80,000	62,700	80,000	69,395	80,000
Net Department Surplus (Deficit)	$ -	$ -	$ -	$ -	$ -

Town of Wolfville
2021/22 Operating Budget
Other Protective Services ~ 290

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Kings County Fire Protection	600	600	600	1,100	1,100
License & fee revenue	5,000	3,800	5,000	4,132	5,000
EMO 911 Cost Recovery	1,900	1,600	1,600	1,924	1,600
	7,500	6,000	7,200	7,156	7,700
EXPENSES					
Salary and wages	2,200	300	2,200	591	
Employee Benefits	300	100	300	268	
Seasonal Wages	16,700	11,100	16,600	14,705	14,700
Employee Benefits Seasonal wag	1,700	1,000	1,700	974	1,500
Operational Equip & Supplies	500	400	500	416	1,000
Contracted Services	15,000	15,000	15,000	15,000	15,300
Debenture interest	2,500	4,000	4,000	4,853	5,300
	38,900	31,900	40,300	36,807	37,800
Net Department Surplus (Deficit)	$ (31,400)	$ (25,900)	$ (33,100)	$ (29,651)	$ (30,100)

Town of Wolfville
2021/22 Operating Budget
Public Works Division

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Job Cost billings	7,000	4,500	10,000	8,500	10,000
Cost recoveries from Water Util	115,100	115,100	115,100	111,700	111,700
Cost recoveries from Sewer Dept	45,300	45,300	45,300	43,100	43,100
Land Leases	3,900	3,400	4,000	1,975	4,000
TOTAL REVENUE	171,300	168,300	174,400	165,275	168,800
EXPENSES					
Salary and wages	568,600	503,700	550,400	538,968	580,600
Employee Benefits	124,200	109,700	120,300	111,474	122,800
Seasonal Wages	-	-	12,000	-	12,000
Employee Benefits Seasonal wag	-	-	1,200	-	1,200
Meals and Travel	3,300	3,100	2,300	2,912	2,400
Membership Dues & Fees	1,400	1,200	1,100	521	1,500
Advertising	-	300	-	357	-
Telecommunications	3,800	3,800	4,200	4,241	4,200
Office Expense	4,000	4,500	3,600	3,628	4,100
Legal	5,000	3,500	-	1,281	-
Heat	7,000	6,700	9,000	7,193	9,000
Utilities	33,000	33,200	32,500	37,748	35,500
Repairs and Maintenance	40,000	40,200	50,400	42,947	54,800
Vehicle Fuel	34,000	28,500	36,900	33,065	36,900
Vehicle Repairs & Maintenance	69,500	64,600	65,300	84,327	57,000
Vehicle Insurance	4,900	3,300	4,200	3,804	4,200
Operational Equip & Supplies	147,000	171,500	177,300	136,626	153,800
Equipment Rentals	5,000	-	-	391	-
Contracted Services	425,000	435,800	441,000	318,807	390,700
Licenses and Permits	1,500	1,500	1,500	1,344	1,500
Debenture interest	136,200	133,700	133,500	130,747	133,500
	1,613,400	1,548,800	1,646,700	1,460,381	1,605,700
Net Division Surplus (Deficit)	$ (1,442,100)	$ (1,380,500)	$ (1,472,300)	$ (1,295,106)	$ (1,436,900)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	30,000	-	100,000	73,959	95,000
Net Surplus (Deficit)	$ (1,412,100)	$ (1,380,500)	$ (1,372,300)	$ (1,221,147)	$ (1,341,900)

Town of Wolfville
2021/22 Operating Budget
Public Works Common Costs ~ 310

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Cost recoveries from Water Util	80,900	80,900	80,900	81,400	81,400
Cost recoveries from Sewer Dept	24,800	24,800	24,800	24,900	24,900
TOTAL REVENUE	105,700	105,700	105,700	106,300	106,300
EXPENSES					
Salary and wages	178,900	170,400	168,300	168,364	167,300
Employee Benefits	30,000	30,400	27,900	26,791	27,400
Meetings, Meals and Travel	300	100	300	-	400
Membership Dues & Fees	1,400	1,200	1,100	521	1,500
Advertising		300	-	357	-
Telecommunications	3,800	3,800	4,200	4,241	4,200
Office Expense	4,000	4,500	3,600	3,628	4,100
Legal	5,000	3,500	-	1,281	-
Heat	7,000	6,700	9,000	7,193	9,000
Utilities	10,000	10,400	11,000	15,236	13,100
Repairs and Maintenance	40,000	40,200	50,400	42,947	54,800
Operational Equip & Supplies	3,000	100	3,000	100	3,000
Contracted Services	1,500	-	4,200	448	4,200
Licenses and Permits	1,500	1,500	1,500	1,344	1,500
	286,400	273,100	284,500	272,451	290,500
Net Department Surplus (Deficit)	$ (180,700)	$ (167,400)	$ (178,800)	$ (166,151)	$ (184,200)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	-		-	4,159	13,000
Net Surplus (Deficit)	$ (180,700)	$ (167,400)	$ (178,800)	$ (161,992)	$ (171,200)

Town of Wolfville
2021/22 Operating Budget
Roads and Streets ~ 320

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Cost recoveries from Water Util	34,200	34,200	34,200	30,300	30,300
Cost recoveries from Sewer Dept	20,500	20,500	20,500	18,200	18,200
	54,700	54,700	54,700	48,500	48,500
EXPENSES					
Salary and wages	388,700	333,100	381,100	370,038	408,900
Employee Benefits	94,000	79,300	92,200	84,594	94,400
Seasonal Wages	-	-	12,000	-	12,000
Employee Benefits Seasonal wag	-	-	1,200	-	1,200
Meetings, Meals and Travel	3,000	3,000	2,000	2,912	2,000
Vehicle Fuel	34,000	28,500	36,900	33,065	36,900
Vehicle Repairs & Maintenance	69,500	64,600	65,300	84,327	57,000
Vehicle Insurance	4,900	3,300	4,200	3,804	4,200
Operational Equip & Supplies	125,000	126,600	111,400	116,717	96,600
Equipment Rentals	5,000	-	-	391	-
Contracted Services	385,000	390,400	385,000	264,102	344,700
	1,109,100	1,028,800	1,091,300	959,950	1,057,900
Net Department Surplus (Deficit)	$ (1,054,400)	$ (974,100)	$ (1,036,600)	$ (911,450)	$ (1,009,400)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	30,000	63,000	100,000	54,800	67,000
Net Surplus (Deficit)	$ (1,024,400)	$ (911,100)	$ (936,600)	$ (856,650)	$ (942,400)

Town of Wolfville
2021/22 Operating Budget
Street Lighting ~ 330

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Utilities	23,000	22,800	21,500	22,512	22,400
Operational Equip & Supplies	5,000	3,100	9,600	2,161	9,600
Contracted Services	1,500	300		2,039	
	29,500	26,200	31,100	26,712	32,000
Net Department Surplus (Deficit)	$ (29,500)	$ (26,200)	$ (31,100)	$ (26,712)	$ (32,000)

Town of Wolfville
2021/22 Operating Budget
Traffic Services ~ 340

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Job Cost billings				-	-
	-	-	-	-	-
EXPENSES					
Salary and wages	1,000	200	1,000	566	4,400
Employee Benefits	200	-	200	89	1,000
Operational Equip & Supplies	14,000	41,000	48,500	12,700	29,000
Contracted Services	37,000	38,600	44,500	45,876	34,500
	52,200	79,800	94,200	59,231	68,900
Net Department Surplus (Deficit)	$ (52,200)	$ (79,800)	$ (94,200)	$ (59,231)	$ (68,900)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	-	-	-	15,000	15,000
Net Surplus (Deficit)	$ (52,200)	$ (79,800)	$ (94,200)	$ (44,231)	$ (53,900)

Town of Wolfville
2021/22 Operating Budget
Other Roads & Street ~ 350

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Professional Development		-			
Operational Equip & Supplies	-	700	4,800	4,938	15,600
Contracted Services	-	6,500	7,300	6,342	7,300
	-	7,200	12,100	11,280	22,900
Net Department Surplus (Deficit)	$ -	$ (7,200)	$ (12,100)	$ (11,280)	$ (22,900)

Town of Wolfville
2021/22 Operating Budget
Other Transport ~ 390

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Job Cost billings	7,000	4,500	10,000	8,500	10,000
Land Leases	3,900	3,400	4,000	1,975	4,000
	10,900	7,900	14,000	10,475	14,000
EXPENSES					
Operational Equip & Supplies	-	-	-	10	-
Debenture interest	136,200	133,700	133,500	130,747	133,500
	136,200	133,700	133,500	130,757	133,500
Net Department Surplus (Deficit)	$ (125,300)	$ (125,800)	$ (119,500)	$ (120,282)	$ (119,500)

Town of Wolfville
2021/22 Operating Budget
Sewer & Solid Waste Division

Environmental Health

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUE					
Sewer Rates	509,000	420,300	451,500	432,233	430,000
Kings County Sewer Contribution	2,000	2,000	2,000	2,604	2,000
TOTAL REVENUE	511,000	422,300	453,500	434,837	432,000
EXPENSES					
Salary and wages	87,500	93,300	85,800	87,665	82,900
Employee Benefits	20,300	17,200	19,900	14,566	18,200
Utilities	62,500	45,000	52,700	51,385	52,400
Vehicle Repairs & Maintenance	17,600	21,400	17,900	20,029	17,900
Operational Equip & Supplies	107,800	93,200	109,500	94,932	111,700
Contracted Services	66,000	33,500	63,400	75,491	62,100
Debenture interest	28,200	20,800	17,300	14,043	9,500
	390,900	327,000	366,500	367,182	358,700
Net Division Surplus (Deficit)	$ 120,100	$ 95,300	$ 87,000	$ 67,655	$ 73,300

Town of Wolfville
2021/22 Operating Budget
Sewer Administration ~ 410

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Salary and wages					
Employee Benefits					
Contracted Services	24,800	28,300	24,800	49,033	25,000
	24,800	28,300	24,800	49,033	25,000
Net Department Surplus (Deficit)	$ (24,800)	$ (28,300)	$ (24,800)	$ (49,033)	$ (25,000)

Town of Wolfville
2021/22 Operating Budget
Sanitary & Storm Sewer Collection ~ 420

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Salary and wages	46,500	44,300	45,600	42,523	43,300
Employee Benefits	10,800	9,100	10,600	7,304	9,500
Vehicle Repairs & Maintenance	12,300	12,300	12,600	10,920	12,600
Operational Equip & Supplies	48,000	28,000	27,000	18,844	27,000
Equipment Rentals	-	-		6,390	
Contracted Services	25,000	-	27,000	18,468	25,500
	142,600	93,700	122,800	104,449	117,900
Net Department Surplus (Deficit)	$ (142,600)	$ (93,700)	$ (122,800)	$ (104,449)	$ (117,900)

Town of Wolfville
2021/22 Operating Budget
Lift Stations ~ 430

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Salary and wages		4,000		1,183	
Employee Benefits		500		163	
Utilities	20,300	16,600	20,300	19,227	20,000
Operational Equip & Supplies	23,800	15,400	33,500	23,593	27,400
Contracted Services	3,400	600		1,802	
	47,500	37,100	53,800	45,968	47,400
Net Department Surplus (Deficit)	$ (47,500)	$ (37,100)	$ (53,800)	$ (45,968)	$ (47,400)

Town of Wolfville
2021/22 Operating Budget
Sewer Treatment ~ 440

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
	-	-	-	-	-
EXPENSES					
Salary and wages	41,000	45,000	40,200	43,959	39,600
Employee Benefits	9,500	7,600	9,300	7,099	8,700
Telecommunications		600		590	
Utilities	42,200	28,400	32,400	32,158	32,400
Repairs and Maintenance		-	-	287	4,000
Vehicle Fuel		1,400	-	1,804	-
Vehicle Repairs & Maintenance	5,300	9,100	5,300	9,109	5,300
Vehicle Insurance	1,000	600			
Operational Equip & Supplies	16,000	29,400	29,000	34,064	37,200
Contracted Services	4,000	1,900	2,800	3,158	2,800
	119,000	124,000	119,000	132,228	130,000
Net Department Surplus (Deficit)	$ (119,000)	$ (124,000)	$ (119,000)	$ (132,228)	$ (130,000)

Town of Wolfville
2021/22 Operating Budget
Solid Waste Department ~ 450

	2021/22 Budget	2020/21 Forecast/Act	2020/21 Budget	2019/20 Actual	2019/20 Budget
REVENUES					
	-	-	-	-	-
EXPENSES					
Operational Equip & Supplies	-	400	-	208	-
Contracted Services	5,000	2,700	5,000	3,030	5,000
	5,000	3,100	5,000	3,238	5,000
Net Department Surplus (Deficit)	$ (5,000)	$ (3,100)	$ (5,000)	$ (3,238)	$ (5,000)

Town of Wolfville
2021/22 Operating Budget
Other Environmental ~ 490

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Sewer Rates	509,000	420,300	451,500	432,233	430,000
Kings County Sewer Contribution	2,000	2,000	2,000	2,604	2,000
	511,000	422,300	453,500	434,837	432,000
EXPENSES					
Operational Equip & Supplies	20,000	20,000	20,000	18,223	20,100
Contracted Services	3,800	-	3,800		3,800
Debenture interest	28,200	20,800	17,300	14,043	9,500
	52,000	40,800	41,100	32,266	33,400
Net Department Surplus (Deficit)	$ 459,000	$ 381,500	$ 412,400	$ 402,571	$ 398,600

Town of Wolfville
2021/22 Operating Budget
Planning & Development Division ~ 610

Environmental Development

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Zoning & Subdivision approvals	600	900	600	655	600
Bldg Insp. & Development Revenues	-	2,900	-	2,800	
License & fee revenue	1,500	1,000	1,500	2,580	1,500
Building & development permits	16,000	12,300	16,000	23,041	16,000
Development agreements	1,000	-	1,000		1,000
Land Leases	900	-	900		900
Miscellaneous	-	-		1,200	-
Employment grants	-	-	8,400	1,619	
PNS conditional grants	-	30,000	30,000	30,000	30,000
Other conditional grants	-	46,500	46,500	42,900	46,500
	20,000	93,600	104,900	104,795	96,500
EXPENSES					
Salary and wages	339,600	268,400	269,500	288,584	301,700
Employee Benefits	58,800	61,200	47,500	58,205	54,000
Seasonal Wages	30,000	67,800	91,600	69,369	58,000
Employee Benefits Seasonal wag	3,000	-	9,700	6,307	5,800
Meetings, Meals and Travel	5,000	700	5,000	1,261	5,000
Membership Dues & Fees	2,500	2,300	3,000	2,507	2,100
Advertising	8,000	2,100	8,000	4,951	8,000
Telecommunications	5,300	3,500	5,300	3,760	5,300
Office Expense	13,200	7,000	13,200	11,401	13,200
Legal	10,000	15,000	20,000	11,746	20,000
Miscellaneous	-	-	-	136	
Operational Equip & Supplies	-	20,500	1,000	-	
Program Expenditures	-	32,400	20,000	7,389	30,000
Contracted Services	55,000	200	25,000	65,413	45,000
	530,400	481,100	518,800	531,029	548,100
Net Division Surplus (Deficit)	(510,400)	$ (387,500)	$ (413,900)	$ (426,234)	$ (451,600)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	129,000	-	15,000	10,000	30,000
Net Surplus (Deficit)	$ (381,400)	$ (387,500)	$ (398,900)	$ (416,234)	$ (421,600)

Town of Wolfville
2021/22 Operating Budget
Community Development Division

Recreation & Cultural

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Kings County Recreation Contrib	15,000	10,000	15,000	29,647	10,000
Program fees	15,000	5,800	20,000	15,542	16,000
Festival & events revenues	-	-	-	2,025	500
Facility fees & cost recoveries	12,000	4,600	12,300	11,581	11,000
Tourist Bureau revenues	8,500	100	7,500	2,832	1,500
Miscellaneous	-	1,300	-	1,092	-
Employment grants	4,500	7,000	-	1,619	-
PNS conditional grants	-	18,000	-	13,448	-
Other conditional grants	21,100	8,600	17,600	18,612	21,000
TOTAL REVENUE	76,100	55,400	72,400	96,398	60,000
EXPENSES					
Salary and wages	377,300	260,100	322,700	303,048	310,300
Employee Benefits	71,500	45,900	60,200	80,540	56,600
Seasonal/Term Wages	311,500	285,200	386,100	340,604	284,300
Employee Benefits Seasonal wag	52,600	63,900	62,700	47,231	50,100
Meals and Travel	1,300	1,300	1,100	3,151	2,800
Membership Dues & Fees	5,200	4,500	3,300	5,366	7,300
Advertising	11,300	3,300	17,000	10,278	21,000
Telecommunications	4,900	5,200	11,100	5,673	5,700
Office Expense	2,000	2,500	3,000	2,482	5,800
Legal	-	1,700	-	-	-
Marketing and Communications	2,500	-	-	-	-
Utilities	19,800	20,400	16,500	22,645	18,300
Repairs and Maintenance	65,000	8,700	19,000	12,446	12,300
Vehicle Fuel	7,500	5,600	7,500	6,694	7,300
Vehicle Repairs & Maintenance	10,500	15,000	10,500	16,996	7,400
Vehicle Insurance	4,200	2,800	2,800	1,353	1,000
Operational Equip & Supplies	116,800	97,200	134,500	113,607	113,800
Equipment Maintenance	-	-	-	271	-
Equipment Rentals	-	2,700	-	3,598	-
Program Expenditures	68,100	29,300	55,600	44,733	53,600
Contracted Services	99,000	46,900	69,000	64,876	74,000
Grants to Organizations	80,300	48,400	79,700	70,400	78,900
Debenture interest	13,500	7,700	7,600	8,201	7,200
	1,324,800	958,300	1,269,900	1,164,193	1,117,700
Net Division Surplus (Deficit)	(1,248,700)	$ (902,900)	$ (1,197,500)	$ (1,067,795)	$ (1,057,700)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	61,000	-	-	22,783	51,600
	61,000	-	-	22,783	51,600
Net Surplus (Deficit)	$ (1,187,700)	$ (902,900)	$ (1,197,500)	$ (1,045,012)	$ (1,006,100)

Town of Wolfville
2021/22 Operating Budget
Parks Dept ~ 510

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Miscellaneous	-	1,300	-	940	-
Employment grants	4,500	3,500			
TOTAL REVENUE	4,500	4,800	-	940	-
EXPENSES					
Salary and wages	161,600	63,400	111,700	43,159	67,500
Employee Benefits	32,500	15,700	22,500	37,371	13,200
Seasonal Wages	204,300	218,200	238,000	236,310	193,000
Employee Benefits Seasonal wag	40,800	54,100	43,600	33,420	35,700
Meetings, Meals and Travel		1,000	-	1,016	-
Telecommunications		800	-	738	
Office Expense		200		132	
Utilities	5,400	7,000	5,400	5,647	5,200
Repairs and Maintenance		-		128	
Vehicle Fuel	6,500	5,600	6,500	5,582	6,300
Vehicle Repairs & Maintenance	8,500	14,700	8,500	15,979	5,400
Vehicle Insurance	3,600	2,700	2,400	946	1,000
Operational Equip & Supplies	88,200	85,300	89,200	91,327	82,700
Equipment Maintenance		-		271	
Equipment Rentals		2,700	-	3,598	
Contracted Services	72,500	36,200	42,500	44,995	46,000
Debenture interest	10,400	4,300	4,300	4,452	
	634,300	511,900	574,600	525,071	456,000
Net Division Surplus (Deficit)	$ (629,800)	$ (507,100)	$ (574,600)	$ (524,131)	$ (456,000)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	15,000			13,743	41,600
Net Surplus (Deficit)	$ (614,800)	$ (507,100)	$ (574,600)	$ (510,388)	$ (414,400)

Town of Wolfville
2021/22 Operating Budget
Economic Development Department ~ 710

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Salary and wages	-		-	109,912	90,700
Employee Benefits	-	200	-	22,636	16,300
Meetings, Meals and Travel	-	-	600	1,027	1,200
Membership Dues & Fees	-	400	2,800	1,082	2,800
Advertising	-	-	9,500	5,981	9,500
Telecommunications	-	100	500	779	900
Office Expense	-	-	1,500	1	3,500
Operational Equip & Supplies	-	-	5,000	1,158	10,000
Contracted Services	-	-	5,000	-	10,000
Grants to Organizations	10,000	-	10,000	10,000	10,000
Debenture interest	-	100	100	251	300
	10,000	800	35,000	152,827	155,200
Net Operational Dept. Surplus (Deficit)	$ (10,000)	$ (800)	$ (35,000)	$ (152,827)	$ (155,200)

Town of Wolfville
2021/22 Operating Budget
Festival & Events Department ~ 720

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Festival & events revenues	-		-	2,025	500
PNS conditional grants		10,000	-	4,148	-
Other conditional grants	4,500	1,800	-	2,400	-
	4,500	11,800	-	8,573	500
EXPENSES					
Salary and wages	3,500	-	5,600	953	5,600
Employee Benefits	700	-	700	161	700
Seasonal Wages	9,300	8,800	9,300	13,567	8,900
Employee Benefits Seasonal wag	1,000	800	1,200	1,096	1,100
Advertising	6,000	2,600	5,500	3,160	6,000
Operational Equip & Supplies	12,000	7,000	27,000	17,427	10,000
Program Expenditures	54,000	23,000	47,000	33,861	44,000
Grants to Organizations	35,300	26,000	35,300	41,900	35,300
	121,800	68,200	131,600	112,125	111,600
Net Department Surplus (Deficit)	$ (117,300)	$ (56,400)	$ (131,600)	$ (103,552)	$ (111,100)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	-	-	-	9,040	10,000
	-	-	-	9,040	10,000
Net Surplus (Deficit)	$ (117,300)	$ (56,400)	$ (131,600)	$ (94,512)	$ (101,100)

Town of Wolfville
2021/22 Operating Budget
Parks and Recreation Adm Department ~ 730

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
	-	-	-	-	-
EXPENSES					
Salary and wages	200,500	188,000	194,200	138,448	133,900
Employee Benefits	36,300	28,800	35,100	18,177	24,100
Seasonal Wages	-	400	25,000	5,276	-
Employee Benefits Seasonal wag	-	100	2,500	2,605	-
Meetings, Meals and Travel	800	-	-	23	1,000
Membership Dues & Fees	4,700	4,100	-	4,284	4,000
Advertising	3,300	-	-	30	3,500
Telecommunications	2,300	2,200	8,000	2,105	2,400
Office Expense		1,600	-	1,199	1,100
Legal		1,700	-	-	-
Marketing and Communications	2,500	-	-		-
Utilities	5,800	6,000	2,500	5,591	3,000
Repairs and Maintenance	4,000	3,800	4,000	3,576	3,000
Operational Equip & Supplies		-	-	86	2,500
Contracted Services	1,500	-	1,500	243	15,000
Debenture interest	100	100	100	290	3,600
	261,800	236,800	272,900	181,933	197,100
Net Department Surplus (Deficit)	$ (261,800)	$ (236,800)	$ (272,900)	$ (181,933)	$ (197,100)

Town of Wolfville
2021/22 Operating Budget
Recreation Programs Department ~ 740

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Kings County Recreation Contrib	15,000	10,000	15,000	29,647	10,000
Program fees	15,000	5,800	20,000	15,542	16,000
Festival & events revenues	-	-	-		-
Facility fees & cost recoveries	12,000	4,600	12,300	11,581	11,000
Employment grants	-	3,500	-	1,619	-
PNS conditional grants	-	1,800	-	4,300	-
Other conditional grants	1,500	1,800	2,000	11,212	2,000
	43,500	27,500	49,300	73,901	39,000
EXPENSES					
Seasonal Wages	65,900	20,800	58,100	41,635	30,100
Employee Benefits Seasonal wag	7,600	1,800	7,000	3,614	3,900
Meetings, Meals and Travel	500	300	500	773	500
Advertising	2,000	700	2,000	1,107	2,000
Vehicle Fuel	1,000	-	1,000	1,112	1,000
Vehicle Repairs & Maintenance	2,000	300	2,000	1,017	2,000
Vehicle Insurance	600	100	400	407	
Operational Equip & Supplies	3,100	2,600	2,200	2,568	3,500
Program Expenditures	14,100	6,300	8,600	10,872	9,600
Contracted Services	25,000	6,500	20,000	15,000	3,000
Grants to Organizations	25,000	12,400	24,400	8,500	23,600
	146,800	51,800	126,200	86,605	79,200
Net Department Surplus (Deficit)	$ (103,300)	$ (24,300)	$ (76,900)	$ (12,704)	$ (40,200)

Town of Wolfville
2021/22 Operating Budget
Tourism Department ~ 750

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Tourist Bureau revenues	8,500	100	7,500	2,832	1,500
PNS conditional grants	-	6,200	-	5,000	-
Other conditional grants	10,100	-	10,600	-	14,000
	18,600	6,300	18,100	7,832	15,500
EXPENSES					
Salary and wages	3,300	2,400	3,300	3,448	7,300
Employee Benefits	400	300	400	1,851	1,300
Seasonal Wages	32,000	37,000	55,700	43,816	52,300
Employee Benefits Seasonal wag	3,200	7,100	8,400	6,496	9,400
Meetings, Meals and Travel	-	-	-	312	100
Membership Dues & Fees	500	-	500	-	500
Telecommunications	2,000	1,600	2,000	1,552	1,700
Office Expense	1,000	200	1,000	277	1,100
Utilities	2,000	2,900	2,000	4,935	2,000
Repairs and Maintenance	1,000	1,400	1,000	4,311	5,000
Operational Equip & Supplies	13,000	2,300	10,600	650	4,300
Contracted Services	-	4,200	-	4,170	-
	58,400	59,400	84,900	71,818	85,000
Net Department Surplus (Deficit)	$ (39,800)	$ (53,100)	$ (66,800)	$ (63,986)	$ (69,500)

Town of Wolfville
2021/22 Operating Budget
Library ~ 760

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Miscellaneous				152	
Other conditional grants	5,000	5,000	5,000	5,000	5,000
	5,000	5,000	5,000	5,152	5,000
EXPENSES					
Salary and wages	8,400	6,300	7,900	7,128	5,300
Employee Benefits	1,600	900	1,500	344	1,000
Telecommunications	600	500	600	499	700
Office Expense	1,000	500	500	873	100
Utilities	6,600	4,500	6,600	6,472	8,100
Repairs and Maintenance	60,000	3,500	14,000	4,431	4,300
Operational Equip & Supplies	500	-	500	391	800
Contracted Services	-	-	-	468	-
Debenture interest	3,000	3,200	3,100	3,208	3,300
	81,700	19,400	34,700	23,814	23,600
Net Department Surplus (Deficit)	$ (76,700)	$ (14,400)	$ (29,700)	$ (18,662)	$ (18,600)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	46,000	-	-	-	-
	46,000	-	-	-	-
Net Surplus (Deficit)	$ (30,700)	$ (14,400)	$ (29,700)	$ (18,662)	$ (18,600)

Town of Wolfville
2021/22 Operating Budget
Museum & Historical ~ 770

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Grants to Organizations	10,000	10,000	10,000	10,000	10,000
	10,000	10,000	10,000	10,000	10,000
Net Department Surplus (Deficit)	$ (10,000)	$ (10,000)	$ (10,000)	$ (10,000)	$ (10,000)

Town of Wolfville
2021/22 Operating Budget
Partner Contributions ~ 840

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Local partners					
Grant to WBDC	100,000	30,000	100,000	100,000	100,000
Regional partners					
Regional Solid Waste	512,600	505,800	509,600	542,931	520,200
Transit services	217,000	174,900	172,900	168,317	152,700
Valley Community Fibre	2,000	2,000	2,000	(3,202)	1,500
Regional Development	-	-	-	-	-
Kings Region -cooperative Initiatives	30,000	15,800	20,800	9,349	25,800
Provincial partners					
Annapolis Valley Regional Libra	30,300	25,000	25,000	24,320	25,000
Education	722,000	724,400	736,800	763,704	763,900
Corrections	82,000	81,700	82,000	81,976	82,000
Regional Housing Authority	50,000	53,000	40,000	50,786	40,000
Assessment services	78,000	77,300	78,000	76,732	77,000
	1,823,900	1,689,900	1,767,100	1,814,913	1,788,100
Net Department Surplus (Deficit)	$ (1,823,900)	$ (1,689,900)	$ (1,767,100)	$ (1,814,913)	$ (1,788,100)

NOTE: Increased Transit Costs to be offset by use of COVID Safe Reopening Grant Funds

Town of Wolfville
2021/22 Ten Year Capital Investment Plan
Fiscal 2021/22 to 2030/31

		BUDGET FOCUS								Accessibility Deadline	
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
		2021/22	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**
Information Technology											
Servers		-	-	-	-	-	15,000	-	-	-	-
Other IT Upgrades											
Video/Audio improvements to Chambers		15,000									
Total Other		15,000	-	-	-	-	-	-	-	-	-
Information Technology		**$ 15,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 15,000**	**$ -**	**$ -**	**$ -**	**$ -**
Municipal Buildings											
Town Hall Civic Complex											
New or Major Renovated Facility			-	-		50,000	50,000	-	2,100,000		
Community Development/Public Works											
Accessibility/Reno upgrade - cfwd		700,000									
Dykeland Facility - Yard Upgrades											
Salt Shed & Parks Shed		430,000									
Fire Hall											
New Facility				-	25,000	50,000		2,500,000	-		
RCMP Detachment											
Library											
New Facility		75,000	50,000	50,000		0	2,362,500				
Total Municipal Buildings		**$ 1,205,000**	**$ 50,000**	**$ 50,000**	**$ 25,000**	**$ 100,000**	**$ 2,412,500**	**$ 2,500,000**	**$ 2,100,000**	**$ -**	**$ -**
Protective Services											
Fire Department											
Trucks											
Aerial Ladder Truck	2000				1,350,000	-					
Pumper 1 E-One Cyclone											
Ford 4*4 Utility Vehicle											
Pumper 3 E-One Cyclone	2003			800,000							
Tanker 6 Int'l Pumper/Tanker	2006										500,000
Rescue 4 Pumper Rescue	2007								750,000		
Ford Haz Matt vehicle										120,000	
Fire Trucks		-	-	800,000	1,350,000	-	-	-	750,000	120,000	500,000

Town of Wolfville
2021/22 Ten Year Capital Investment Plan
Fiscal 2021/22 to 2030/31

		BUDGET FOCUS								Accessibility Deadline	
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
		2021/22	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**
Equipment											
Equipment Upgrades		20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
SCBA Apparatus		30,000	30,000								
Misc Fire Equipment		50,000	50,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Total Fire Department		**$ 50,000**	**$ 50,000**	**$ 820,000**	**$ 1,370,000**	**$ 20,000**	**$ 20,000**	**$ 20,000**	**$ 770,000**	**$ 140,000**	**$ 520,000**
Transportation Services											
Public Works - Fleet Inventory											
veh # 18 - 2019 Wacker Neuson Loader	7 yrs			-		-		175,000	-		
veh # 19 - PW 2017 F250 3/4 ton Crew C	7 yrs		-	-	55,000					-	-
veh # 21 - PW 2015 F250 4*4	7 yrs	-	89,000			-			-	95,000	
veh # 22 - PW 2014 Ford F150 1/2 ton	8	-	40,000			-				-	50,000
veh # 23 - PW 2016 F450 1 ton 4*4	6		97,000			-			100,000		
veh # 25 - PW 2017 5 ton plow truck	6			215,000						-	240,000
veh # 27 - PW 2014 JD backhoe	7					-	175,000				
veh # 28 - PW 2013 Case loader	10		195,500						-		
veh # 29 - PW 2012 trackless (sidewalk Tractor)							-	-	195,000		
veh #15 - PW LH Truck 2019 F150	8	-	-	-	-	-	-	45,000			
veh # 24 - PW 2011 asphalt recycler				110,000							
veh # 51 - PW 2017 trackless				-		170,000				-	-
Parks Dept - Fleet/Equip											
veh # 20 - 2014 Ford 1/2 pick up	7	-	40,000							45,000	
veh # 26 - Parks 2016 Ford F250 3/4 ton crew ca		-		75,000				-	-		80,000
veh # 31 - Parks 2001 Suzuki micro truck	9		25,000				-			-	30,000
veh #34 - Parks 2000 Suzuki micro truck	9		25,000					-			30,000
veh #16 - Parks LH Truck 2019 F150	8							45,000			
veh # 39 - Parks 2015 JD mower X730						18,000					20,000
veh # 40 -2015 JD Parks loader 1025			25,000					30,000			
veh # 37 - Parks 2017 JD mower/backho	6?			-	45,000			-			
veh # 38 - Parks 2017 JD mower 1023E			25,000			-			25,000		
veh # 33 - Parks 2015 F450 3/4 ton crew cab 4*4									-	85,000	
veh #59 - Parks 2020 Kubota Mower											
veh #new - Parks 3/4 ton full crew cab 4*4		80,000									
Chipper											
Water & Wastewater Dept's											
Veh #30 - Works 2014 Ford F150	WTP	40,000									
veh # 32 - Works 2017 F250 3/4 ton 4*4	WWTP		-		50,000				-		
Other											
veh # 17 - Bylaw car 2013 Ford Fusion				30,000			-				
flail mower						-					
Rec Dept - 2011 Bike Trailer					15,000						
Fleet/Equipment		120,000	561,500	430,000	165,000	188,000	175,000	295,000	320,000	225,000	450,000

Town of Wolfville
2021/22 Ten Year Capital Investment Plan
Fiscal 2021/22 to 2030/31

		BUDGET FOCUS								Accessibility Deadline	
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
		2021/22	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**
Transportation Infrastructure											
includes active transport corridors, street, sidewalk, sanitary & storm sewer where applicable											
Earnscliffe Ave. - civic 16 to end	150 m			-	600,000						
Earnscliffe Ave. Main to civic 16	180 m		-	720,000							
Gaspereau - civic 128 to Fowler	170 m									-	-
Gaspereau - civic 94 to civic 128	180 m								-	-	720,000
Highland - Prospect to Catherine Ct	405m	$ 1,620,000									
Highland - Catherine Ct to Skyway	330 m		1,320,000								
Maple Ave - civic 43 to Civic 83	230 m								-	-	
Maple Ave - Main to civic 19	210 m		-	-	-		630,000				
Maple Ave -civic 19 to civic 43	210 m						-	-		630,000	
Maple Ave -civic 83 to end	250 m										
Pleasant - Huron to Orchard	240 m							-	960,000		
Pleasant - Sherwood to Huron	180 m	-	-		540,000						
University - civic 18 to Crowell Dr	200 m							-	-	800,000	
University - Main to civic 18	200 m					-	-	800,000			
Victoria - Main to King	170 m			680,000				-	-		
Westwood - Main to Irving Centre	350 m										
Wickwire - Little to Beckwith	300 m					-	1,200,000				
Parking lots ~ Dykeland/Elm		moved to Community Infrastructure			-						
Guard Rail - Orchard Ave		40,000									
In House - Project Mgt position		-	-	-	-	-	-	-	-	-	-
Engineering - design work year in advance		66,000	70,000	57,000	-	91,500	40,000	48,000	71,500	36,000	118,500
		1,726,000	1,390,000	1,457,000	1,140,000	91,500	1,870,000	848,000	1,031,500	1,466,000	838,500
Land Acquisitions/Disposals											
		-	-	-	-	-	-	-	-	-	-
Streets, Sidewalks, Parking Lots		1,726,000	1,390,000	1,457,000	1,140,000	91,500	1,870,000	848,000	1,031,500	1,466,000	838,500

Town of Wolfville
2021/22 Ten Year Capital Investment Plan
Fiscal 2021/22 to 2030/31

		BUDGET FOCUS								Accessibility Deadline	
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
		2021/22	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**
Other Transportation											
Decorative Light Posts - to Willow, & Up Gaspereau		100,000	235,000								
Wayfinding - might be op		50,000									
Flood Risk Mitigation - partial cfwd				50,000	1,000,000			-			
Generator replacements - Town Hall	2006		80,000								
Main Lift Station	2015										80,000
Crosswalks											
Upgrades, eg. RRB/accessibility		80,000									
Storm Water Mgt Plan											
		230,000	315,000	50,000	1,000,000	-	-	-	-	-	80,000
Other Transportation											
TOTAL TRANSPORTATION		**$ 2,076,000**	**$ 2,266,500**	**$ 1,937,000**	**$ 2,305,000**	**$ 279,500**	**$ 2,045,000**	**$ 1,143,000**	**$ 1,351,500**	**$ 1,691,000**	**$ 1,368,500**
Environmental Health Services											
Storm Water Management											
included in Street infrastructure above											
Storm Water System		-	-	-	-	-	-	-	-	-	-
Sewage Treatment/Collection											
Sewer Treatment											
Treatment plant expansion		-			-	2,500,000					
Flood Mitigation @ STP			50,000	400,000			-				
Generator - STP	2015										80,000
		-	50,000	400,000	-	2,500,000	-	-	-	-	80,000
Sanitary Sewer Collection											
included in Street infrastructure above											
Condition Assessment - video sewer lines		75,000									
		75,000	-	-	-	-	-	-	-	-	-
TOTAL Environmental Health Services		**$ 75,000**	**$ 50,000**	**$ 400,000**	**$ -**	**$ 2,500,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 80,000**

Town of Wolfville
2021/22 Ten Year Capital Investment Plan
Fiscal 2021/22 to 2030/31

	BUDGET FOCUS								Accessibility Deadline	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	2021/22	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**
Community Infrastructure										
Infrastructure										
West End Gateway										
Clock Park Lighting										
Old Burial Ground - Entrance Pathway/Seatir	-									
East End Gateway										
Replace VIC - partial cfwd	600,000									
Other Gateway Upgrades - sidewalk/street la	340,000	250,000								
Public Art Project	28,000									
Nature Preserve - dam upgrade	50,000	-	-	400,000	400,000					
West End Parkland & Trail	10,000									
Trail system		20,000	30,000	10,000						
neighborhood	-	150,000								
Reservoir Park										
Washroom/Change Rooms	-	100,000								
Trails and bike Skills Park	20,000									
Main walking trails, steps into large pond,	-									
Paving of parking Lot	20,000									
Rec Centre										
Add two pickelball courts	145,000									
Farmers Market - open space enhancements										
Parking Lot - Dykeland/Elm cul de sac	-	175,000								
Pond & Park area			100,000							
Basinview										
Community Engagement & Design	7,500									
Park Build		100,000								
Allow for Future Park Development					-	100,000	100,000	100,000	100,000	100,000
	$ 1,220,500	**$ 795,000**	**$ 130,000**	**$ 410,000**	**$ 400,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**
GRAND TOTAL ALL PROJECTS	**$ 4,641,500**	**$ 3,211,500**	**$ 3,337,000**	**$ 4,110,000**	**$ 3,299,500**	**$ 4,592,500**	**$ 3,763,000**	**$ 4,321,500**	**$ 1,931,000**	**$ 2,068,500**
										$ 35,276,000

Town of Wolfville

Capital Budget

2021/22 Funding Summary

PROJECT	Total Budget Cost	Internal Sources: Current & Past Years Budget – Capital Reserves	Internal Sources: Current & Past Years Budget – Operating Reserves	Internal Sources: Future Years Budget – Long Term Debt	External Sources – Fed Grant Gas Tax	External Sources – Energy Grants	External Sources – Fed/Prov other	External Sources – Other	Town Water Utility
Information Technology									
Infrastructure Upgrades	15,000	15,000						-	
Municipal Buildings		-							
Dykeland Facility - Pwks/Community Dev	700,000	500,000		200,000					
Dykeland Facility - Salt & Parks shed/storage	430,000	180,000		250,000					
Library	75,000	-	75,000						
Fire Services									
Equipment Upgrades	50,000	50,000							
Vehicles	-								
Public Works Equipment									
Vehicle/Equipment replacement	120,000	80,000							40,000
Street reconstruction projects	1,726,000	270,750	40,000	204,750	810,000		-		400,500
Other	230,000	40,000	90,000	70,000			30,000		
Environmental Health Services									
Sewage Treatment	-	-		-	-				
Sewage Collection	75,000	75,000							
Storm Water Management									
Community Services		-							
Replace VIC	600,000	-		400,000			200,000		
Other East End Gateway	340,000	226,667					113,333		
Public Art	28,000	28,000							
Nature Preserve	50,000	-	50,000						
West End Park & Trails	10,000	-	10,000						
Reservoir Park	40,000	20,000	20,000						
Rec Centre - pickleball	145,000	97,000					43,000	5,000	
Farmers Market/Dykeland - Parking Lot	-	-							
Basin Drive Neighborhood Park	7,500	-	7,500						
Totals	$ 4,641,500	$ 1,582,417	$ 292,500	$ 1,124,750	$ 810,000	$ -	$ 386,333	$ 5,000	$ 440,500

Town of Wolfville

Capital Budget

2022/23 Funding Summary

PROJECT	Total Budget Cost	Internal Sources: Current & Past Years Budget – Capital Reserves	Internal Sources: Current & Past Years Budget – Operating Reserves	Internal Sources: Future Years Budget – Long Term Debt	External Sources: Fed Grant Gas Tax	External Sources: Energy Grants	External Sources: Fed/Prov other	External Sources: Other	Town Water Utility
Information Technology									
Infrastructure Upgrades	-	-						-	
Municipal Buildings	50,000	-	50,000						
Fire Services									
Equipment Upgrades	50,000	50,000							
Vehicles	-	-		-					
Public Works Equipment									
Vehicle/Equipment replacement	561,500	477,300						84,200	
Street reconstruction projects	1,390,000	270,000	-	270,000	520,000		-		330,000
Other	315,000	-		240,000			75,000		
Environmental Health Services									
Sewage Treatment	50,000	-	50,000				-		
Sewage Collection	-	-							
Storm Water Management									
Community Services	795,000	221,000	40,000	451,000			83,000		
Totals	$ 3,211,500	$ 1,018,300	$ 140,000	$ 961,000	$ 520,000	$ -	$ 158,000	$ 84,200	$ 330,000

Town of Wolfville
Capital Budget
2023/24 Funding Summary

PROJECT	Total Budget Cost	Internal Sources: Current & Past Years Budget – Capital Reserves	Internal Sources: Current & Past Years Budget – Operating Reserves	Internal Sources: Future Years Budget – Long Term Debt	External Sources: Fed Grant Gas Tax	External Sources: Energy Grants	External Sources: Fed/Prov other	External Sources: Other	Town Water Utility
Information Technology									
Infrastructure Upgrades	-	-						-	
Municipal Buildings	50,000	50,000							
Fire Services									
Equipment Upgrades	20,000	20,000							
Vehicles	800,000	800,000							
Public Works Equipment									
Vehicle/Equipment replacement	430,000	365,500						64,500	
Street reconstruction projects	1,457,000	482,500		482,500	322,000		-		170,000
Other	50,000	-	50,000						
Environmental Health Services									
Sewage Treatment	400,000	-		400,000					
Sewage Collection	-	-							
Storm Water Management									
Community Services	130,000	-	130,000						
Totals	$ 3,337,000	$ 1,718,000	$ 180,000	$ 882,500	$ 322,000	$ -	$ -	$ 64,500	$ 170,000

Town of Wolfville
Water Utility
2021/22 Operating Budget

	2020/21		2021/22	2022/23	2023/24	2024/25
	Forecast	Budget	Budget	Three Year Budget Projection		
Operating Revenue: Dept 950						
Metered Sales	693,200	721,200	700,000	721,200	721,200	721,200
Fire Protection Charges	396,000	396,000	396,000	396,000	396,000	396,000
Sprinkler Service	10,800	8,900	10,800	10,800	10,800	10,800
Other	16,400	4,500	15,000	15,000	15,000	15,000
Job Cost Billings	3,000	12,000	3,000	6,000	6,000	6,000
Interest on Arrears	1,300	1,800	3,000	3,000	3,000	3,000
Investment Income	5,200	12,000	5,500	6,000	6,500	6,500
	1,125,900	**1,156,400**	**1,133,300**	**1,158,000**	**1,158,500**	**1,158,500**
Operating Expenditures:						
Power & Pumping 962						
Salary and wages	8,700	11,800	12,000	12,200	12,400	12,600
Employee Benefits	1,600	2,400	2,400	2,400	2,500	2,500
Utilities	83,500	91,000	85,000	86,700	88,400	90,200
Operational equipment & supplies	4,000	8,000	8,000	8,000	8,000	8,000
Contracted Service	300	16,000	16,000	8,000	8,000	8,000
	98,100	129,200	123,400	117,300	119,300	121,300
Treatment 964						
Salary and wages	17,200	15,700	17,500	17,900	18,300	18,800
Employee benefits	3,000	3,200	3,500	3,600	3,700	3,800
Professional Development						
Utilities	6,000	6,500	6,500	6,700	6,900	7,100
Repairs & maintenance - Bldg	-	2,400	2,400	1,000	1,000	1,000
Operational equipment & supplies	55,100	50,000	60,000	60,600	61,200	61,800
Equipment Maintenance	-					
Contracted Service	16,900	17,800	18,000	18,200	18,400	18,600
	98,200	95,600	107,900	108,000	109,500	111,100
Transmission & Distribution 966						
Wages	110,500	106,200	111,300	113,500	115,800	119,000
Employee Benefits	18,800	21,000	22,300	22,700	23,200	23,800
Meetings, Meals and Travel	200	1,000	1,000	1,000	1,000	1,000
Telecommunications	800	1,500	1,500	1,500	1,500	1,500
Vehicle Fuel	1,100	3,000	3,000	3,000	3,000	3,000
Vehicle Repairs & Maintenance	18,800	14,400	14,400	14,400	14,400	14,400
Vehicle Insurance	600	400	400	400	400	400
Operational equipment & supplies	118,500	71,000	80,000	80,000	80,000	80,000
Equipment Maintenance	2,000	5,000	5,000	5,000	5,000	5,000
Contracted Service	26,000	30,000	30,000	30,300	30,600	30,900
	297,300	253,500	268,900	271,800	274,900	279,000
Administration And General 970						
Salary/wages	148,000	145,000	149,900	153,600	157,400	161,300
Employee Benefits	29,400	29,000	30,000	30,700	31,500	32,300
Meetings, Meals & Travel	100	400	400	400	400	400
Professional development	-	5,000	5,000	5,000	5,000	5,000
Membership dues & fess	500	500	500	500	500	500
Advertising	-	200	200	200	200	200
Office expense	31,500	34,000	34,000	34,300	34,600	34,900
Legal	-	300	300	300	300	300
Insurance	13,300	10,500	10,500	10,600	10,700	10,800
Audit	6,000	6,000	6,000	6,000	6,000	6,000
Miscellaneous	-					
Contracted services	20,000	20,000	30,000	20,000	20,000	20,000
Doubtful accounts allowance	1,000	1,000	1,000	1,000	1,000	1,000
	249,800	251,900	267,800	262,600	267,600	272,700
Depreciation	160,000	160,000	160,000	160,000	160,000	160,000
Property Taxes	53,200	56,500	53,700	54,800	55,900	57,000
Operating Expense total	**956,600**	**946,700**	**981,700**	**974,500**	**987,200**	**1,001,100**
NET OPERATING REVENUE:	**169,300**	**209,700**	**151,600**	**183,500**	**171,300**	**157,400**

Town of Wolfville
Water Utility
2021/22 Operating Budget

	2020/21 Forecast	2020/21 Budget	2021/22 Budget	2022/23	2023/24	2024/25
				Three Year Budget Projection		
Non Operating Expenditures:						
Debenture Interest	20,500	20,500	18,800	18,000	17,200	16,300
Debenture Principle	80,400	80,400	37,000	37,000	37,000	37,000
Future debt repymts	-		-	9,200	35,100	72,500
Other Debt Charges	1,000	500	500	500	500	500
Capital From Revenue	20,000	45,000	70,000	70,000	70,000	-
Dividend to Town	50,000	50,000	50,000	50,000	50,000	50,000
	171,900	**196,400**	**176,300**	**184,700**	**209,800**	**176,300**
Net Surplus (Deficit)	**$ (2,600)**	**$ 13,300**	**$ (24,700)**	**$ (1,200)**	**$ (38,500)**	**$ (18,900)**
Accumulated Surplus, Op Fund, Opening	**$ 584,266**		**$ 581,666**	**$ 376,966**	**$ 254,366**	**$ 215,866**
Transfer to Water Capital Projects			**(180,000)**	**(121,400)**	-	-
Accumulated Surplus, Op Fund, Opening	**581,666**	**-**	**376,966**	**254,366**	**215,866**	**196,966**
Capital Reserve Fund at Year End						
Water Depreciation Reserve Acct Balance	**$ 239,100**	**$ -**	**$ 13,600**	**$ -**	**$ -**	**$ 10,000**

Town of Wolfville
Water Utility -Five Year Capital Plan
Fiscal 2021/22 to 2025/26

	Year 1 **2021/22**	Year 2 **2022/23**	Year 3 **2023/24**	Year 4 **2024/25**	Year 5 **2025/26**
Equipment					
Remote Meter System	30,000	35,000			
Generator	80,000				
veh #30 - 1/2 pick up	40,000				
Total Other	150,000	35,000	-	-	-
					Ph II STP
Collection System					
Highland - Prospect to Catherine Court	400,500		-		
Highland - Catherine Court to Skyway		330,000			
Earnscliffe - Main to civic 16			180,000		
Victoria - Main to King			170,000		
Earnscliffe - civic 16 to end				150,000	
	400,500	330,000	350,000	150,000	-
Treatment System					
Transmission Line to WTP					
Westwood to University Ave	315,000				
University Ave to Skyway		360,000			
Cherry Lane to Westwood			495,000		
Skyway to WTP				400,000	
	315,000	360,000	495,000	400,000	-
GRAND TOTAL ALL PROJECTS	**$ 865,500**	**$ 725,000**	**$ 845,000**	**$ 550,000**	**$ -**
Funding					
Depreciation Reserve Funds - current year	160,000	160,000	160,000	150,000	
Depreciation Reserve Funds - accumulated	225,500	13,600			
Capital From Revenue	70,000	70,000	70,000	-	
Long Term Debt	230,000	360,000	615,000	400,000	-
Capital From Surplus	180,000	121,400			
	865,500	725,000	845,000	550,000	-

OPERATING & CAPITAL DRAFT BUDGET V4

TOWN OF WOLFVILLE

FISCAL 2021/22

March 9th Committee Of The Whole

A cultivated experience for the mind, body, and soil

Contents

Town of Wolfville
2021/22 Draft Operating Budget - V4
All Divisions

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22 Budget	2020/21 Forecast/Actual	2020/21 Budget	2019/20 Actual	2019/20 Budget
REVENUES					
Taxes and grants in lieu of taxes	**$ 9,724,500**	$ 9,606,500	$ 9,546,000	$ 9,252,059	$ 9,177,400
Sale of service/cost recoveries	**929,800**	867,400	979,400	1,027,625	912,500
Sewer Rates	**509,000**	420,300	451,500	432,233	430,000
Provincial, Federal & other grants	**98,600**	587,400	175,200	194,504	170,200
	11,261,900	11,481,600	11,152,100	10,906,421	10,690,100
EXPENSES					
Salary and wages	**2,227,100**	1,943,800	2,064,700	2,031,414	2,082,300
Employee Benefits	**443,300**	389,900	411,000	421,559	401,500
Seasonal/Term Wages	**370,200**	364,100	556,300	424,678	369,000
Employee Benefits Seasonal wag	**58,500**	64,900	80,300	54,512	58,600
Meetings, Meals and Travel	**24,000**	10,600	25,600	16,458	25,300
Professional Development	**66,900**	42,600	95,000	72,132	83,500
Membership Dues & Fees	**19,600**	19,500	15,800	17,510	20,700
Advertising	**27,800**	13,200	32,900	27,003	36,900
Telecommunications	**38,300**	36,200	47,400	39,421	43,000
Office Expense	**57,600**	45,500	66,000	51,800	78,800
Legal	**52,700**	49,300	42,700	50,312	50,200
Insurance	**154,500**	118,700	96,000	105,883	91,400
Marketing and Communications	**4,500**	400	3,400	1,125	200
Audit	**21,500**	25,100	20,000	16,647	18,000
Stipends & Honorariums	**207,900**	200,000	205,400	197,283	203,300
Miscellaneous	**1,400**	2,500	2,600	2,859	1,900
Heat	**26,200**	24,600	28,500	25,431	27,100
Utilities	**138,200**	119,000	124,600	133,971	129,400
Repairs and Maintenance	**136,600**	121,300	108,800	120,473	101,800
Vehicle Fuel	**47,700**	40,200	50,400	46,269	50,200
Vehicle Repairs & Maintenance	**144,100**	150,100	140,800	172,455	126,400
Vehicle Insurance	**19,200**	12,800	11,900	10,039	10,100
Operational Equip & Supplies	**563,100**	531,600	598,300	513,118	523,400
Equipment Maintenance	**10,000**	17,300	10,000	17,952	10,000
Equipment Rentals	**5,000**	2,700	-	10,379	-
Program Expenditures	**80,100**	61,700	77,600	52,122	86,100
Contracted Services	**2,693,600**	2,494,400	2,635,600	2,443,478	2,580,000
Grants to Organizations	**154,200**	107,900	245,200	139,150	178,900
Licenses and Permits	**3,300**	3,300	3,300	3,055	3,300
Tax Exemptions	**111,800**	103,300	112,500	104,172	107,600
Election	**-**	24,500	35,000	-	-
Partner Contributions	**1,823,900**	1,689,900	1,767,100	1,814,913	1,788,100
Other debt charges	**10,100**	2,500	10,300	15,375	10,000
Doubtful accounts allowance	**2,500**	2,500	2,500	-	2,500
	9,745,400	8,835,900	9,727,500	9,152,948	9,299,500
Net Operational Surplus (Deficit)	**1,516,500**	2,645,700	1,424,600	1,753,473	1,390,600
Capital Program & Reserves					
Principal Debenture Repayments	**601,800**	562,900	**562,900**	538,366	**538,400**
Debenture interest	**180,400**	**166,200**	**162,400**	157,844	**155,500**
Principal/Interest Future Debt	**-**	-			
Transfer to Operating Reserves	**5,000**	389,700	**5,000**	5,000	**5,000**
Transfer to Capital Reserves	**769,900**	740,300	**740,300**	729,300	**729,300**
Transfer to Cap Reserve - Fire Equip	**259,000**	259,000	**259,000**	219,000	**219,000**
Transfer to Capital Fund		-			
Transfer from Operating Reserves	**(234,600)**	-	**(305,000)**	**(145,485)**	**(256,600)**
Transfer from COVID Reserve	**(65,000)**	-	-	-	-
	1,516,500	2,118,100	1,424,600	1,504,025	1,390,600
Net Surplus (Deficit)	**$ -**	$ 527,600	$ -	$ 249,448	$ -

Town of Wolfville

Operating Budget ~ Tax Revenue Requirement Draft Presentation
2021/22 Draft Operating Budget - V4

	BUDGET		
	Current Yr 2021/22	**Required Increase**	**Prior Yr 2020/21**
Total to be funded by Property Tax Rates	7,804,600	153,800	7,650,800
		2.01%	

		Budget 2021/22	$ Increase	**Budget 2020/21**
RESULTING TAXES				
Residential ~ No Change to Rate	1.475	6,481,000	120,400	6,360,600
Resource	1.475	13,500	300	13,200
Subtotal from residential sector		6,494,500	120,700	6,373,800
			1.89%	
Commercial	3.585	1,277,100	100	1,277,000
		-	-	-
Subtotal from commercial sector		1,277,100	100	1,277,000
			0.01%	
TOTAL		7,771,600	120,800	7,650,800
			1.58%	
Revenue surplus (shortfall)		($33,000)		$0
Overall Increase in Tax Revenue		1.58%		

Tax Rate Change Assumption		
Residential - 1 cent increase	1.475	1.475
Commercial - 1 cent increase	3.585	3.585

BUDGETED TAXABLE ASSESSMENTS (net of allowance for appeals)			
Residential	1.89%	439,388,400	431,230,500
Commercial	0.01%	35,623,600	35,619,500
Resource	2.23%	913,900	894,000
Business Occupancy		-	-
TOTAL		475,925,900	467,744,000

2019 PVSC ASSESSMENT ROLL	Per Roll (net of Cap)	Allowance For Appeals & Bus Closings & Adjustments	Expected Taxable Assessment
Residential	440,388,400	(1,000,000)	439,388,400
Commercial	35,623,600	-	35,623,600
Resource	913,900	-	913,900
TOTAL	476,925,900	(1,000,000)	475,925,900

Town of Wolfville
2021/22 Draft Operating Budget - V4
All Divisions

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22 Budget	PROJECTION 2022/23 Budget Projection	2023/24 Budget Projection	2024/25 Budget Projection
REVENUES				
Taxes and grants in lieu of taxes	**$ 9,724,500**	$ 9,919,850	$ 10,124,300	$ 10,309,700
Sale of service/cost recoveries	**929,800**	924,000	930,400	934,600
Sewer Rates	**509,000**	514,000	519,000	524,000
Provincial, Federal & other grants	**98,600**	98,600	77,600	89,800
	11,261,900	11,456,450	11,651,300	11,858,100
EXPENSES				
Salary and wages	**2,227,100**	2,284,200	2,264,900	2,326,300
Employee Benefits	**443,300**	453,700	448,400	458,900
Seasonal/Term Wages	**370,200**	368,300	375,100	382,100
Employee Benefits Seasonal wag	**58,500**	58,800	59,900	61,000
Meetings, Meals and Travel	**24,000**	25,100	25,300	25,500
Professional Development	**66,900**	80,500	86,200	91,900
Membership Dues & Fees	**19,600**	19,800	20,000	20,000
Advertising	**27,800**	28,000	28,400	28,800
Telecommunications	**38,300**	38,900	39,200	39,500
Office Expense	**57,600**	59,500	60,500	61,600
Legal	**52,700**	48,700	49,300	49,900
Insurance	**154,500**	169,200	185,600	203,600
Marketing and Communications	**4,500**	5,000	5,100	5,200
Audit	**21,500**	22,400	22,800	23,300
Stipends & Honorariums	**207,900**	211,500	215,700	220,000
Miscellaneous	**1,400**	1,400	1,400	1,400
Heat	**26,200**	26,600	27,000	27,100
Utilities	**138,200**	140,100	142,300	144,400
Repairs and Maintenance	**136,600**	139,200	140,600	101,000
Vehicle Fuel	**47,700**	48,600	49,500	50,400
Vehicle Repairs & Maintenance	**144,100**	149,900	149,900	149,900
Vehicle Insurance	**19,200**	19,900	20,500	21,200
Operational Equip & Supplies	**563,100**	572,000	576,800	581,600
Equipment Maintenance	**10,000**	10,200	10,400	10,600
Equipment Rentals	**5,000**	5,000	5,000	5,000
Program Expenditures	**80,100**	86,200	95,200	96,900
Contracted Services	**2,693,600**	2,752,000	2,795,800	2,835,300
Grants to Organizations	**154,200**	27,700	32,700	57,700
Licenses and Permits	**3,300**	3,300	**1,800**	3,300
Tax Exemptions	**111,800**	114,000	116,400	119,000
Election	**-**	-	-	40,000
Partner Contributions	**1,823,900**	1,874,100	**1,934,100**	**1,992,300**
Other debt charges	**10,100**	15,100	20,100	20,100
Doubtful accounts allowance	**2,500**	2,500	2,500	2,500
	9,745,400	9,861,400	10,008,400	10,257,300
Net Operational Surplus (Deficit)	**1,516,500**	1,595,050	1,642,900	1,600,800
Capital Program & Reserves				
Principal Debenture Repayments	**601,800**	-		
Debenture interest	**180,400**	-		
Principal/Interest Future Debt	**-**	940,000	1,011,000	1,085,700
Transfer to Operating Reserves	**5,000**	5,000	5,000	5,000
Transfer to Capital Reserves	**769,900**	720,800	765,000	812,400
Transfer to Cap Reserve - Fire Equip	**259,000**	259,000	259,000	259,000
Transfer to Capital Fund		-	-	-
Transfer from Operating Reserves	**(234,600)**	(97,000)	-	-
Transfer from COVID Reserve	**(65,000)**	-	-	-
	1,516,500	1,827,800	2,040,000	2,162,100
Net Surplus (Deficit)	**$ -**	$ (232,750)	$ (397,100)	$ (561,300)

Year 2 thru 4 projections are based upon assumptions that may not match future events. Intended to illustrate possible results based on current budget structure and modest assessment growth.

Town of Wolfville
2021/22 Draft Operating Budget - V4
General Government Division

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Residential & resource taxes	6,494,500	6,372,900	6,373,800	6,016,056	6,018,100
Commercial taxes	1,363,400	1,356,600	1,345,600	1,320,635	1,318,800
Deed Transfer Tax	400,000	446,400	340,000	427,936	340,000
Business development area rate	100,000	30,400	100,000	101,546	100,000
Grant in lieu of taxes	970,500	1,009,100	990,500	981,513	992,500
Kings County Fire Protection	141,200	142,100	141,200	121,100	121,100
Cost recoveries	107,900	109,400	109,400	111,530	112,200
Interest on investments & o/s taxes	92,000	68,900	117,000	149,913	90,000
Other revenues	68,500	72,900	68,500	91,218	69,400
Equilization Grant	70,000	69,800	70,000	69,869	70,000
Farm Acreage Grant	1,100	1,200	1,100	1,168	1,100
Other conditional grants	-	404,700	-	350	-
	9,812,900	10,087,900	9,660,600	9,396,334	9,236,700
EXPENSES					
Salary and wages	644,000	619,000	629,300	611,939	609,300
Employee Benefits	133,300	124,700	128,600	124,400	118,200
Seasonal Wages	12,000	-	50,000	-	-
Employee Benefits Seasonal wag	1,200	-	5,000	-	-
Meetings, Meals and Travel	6,700	3,000	10,100	4,731	7,900
Professional Development	51,900	36,200	80,000	60,251	68,500
Membership Dues & Fees	8,800	10,100	7,000	8,511	7,600
Advertising	8,500	7,500	7,900	8,941	7,900
Telecommunications	14,900	13,800	16,800	16,023	16,700
Office Expense	30,600	31,300	36,800	32,237	44,200
Legal	30,000	22,100	15,000	29,458	20,000
Insurance	147,000	112,300	90,000	96,726	85,000
Marketing and Communications	1,000	100	2,400	1,125	-
Audit	21,500	25,100	20,000	16,647	18,000
Mayor and Council Remuneration	167,500	165,900	167,000	168,854	164,900
Miscellaneous	1,400	2,500	2,600	2,723	1,900
Heat	15,100	14,500	15,400	14,126	13,300
Utilities	5,700	5,300	5,700	5,356	5,700
Repairs and Maintenance	20,000	55,900	23,000	35,950	11,700
Operational Equip & Supplies	122,000	87,100	99,600	78,319	69,600
Program Expenditures	12,000	-	2,000	-	2,500
Contracted Services	91,100	57,800	95,000	16,608	80,000
Grants to Organizations	73,900	59,500	145,500	68,750	100,000
Tax Exemptions	111,800	103,300	112,500	104,172	107,600
Election	-	24,500	35,000	-	-
Other debt charges	10,100	2,500	10,300	15,375	10,000
Doubtful accounts allowance	2,500	2,500	2,500	-	2,500
	1,744,500	1,586,500	1,815,000	1,521,222	1,573,000
Net Division Surplus (Deficit)	$ 8,068,400	$ 8,501,400	$ 7,845,600	$ 7,875,112	$ 7,663,700
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	47,600	-	190,000	25,000	80,000
Net Surplus (Deficit)	$ 8,116,000	$ 8,501,400	$ 8,035,600	$ 7,900,112	$ 7,743,700

Town of Wolfville
2021/22 Draft Operating Budget - V4
Legislative ~ 110

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
TOTAL REVENUE	-		-		-
EXPENSES					
Employee Benefits - CPP	6,600	5,100	6,500	6,325	3,000
Meetings, Meals and Travel	4,300	2,000	6,100	3,481	4,400
Professional Development	16,900	12,300	25,000	19,696	23,500
Membership Dues & Fees	6,100	5,700	5,000	5,509	5,000
Advertising	300	500	300	1,358	300
Telecommunications	3,400	3,000	3,500	3,490	3,900
Stipends & Honorariums	167,500	165,900	167,000	168,854	164,900
Miscellaneous	1,200	2,400	2,200	400	1,500
Contracted Services	-		-	353	
	206,300	196,900	215,600	209,466	206,500
Net Department Surplus (Deficit)	$ (206,300)	$ (196,900)	$ (215,600)	$ (209,466)	$ (206,500)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	-			-	
Net Surplus (Deficit)	$ (206,300)	$ (196,900)	$ (215,600)	$ (209,466)	$ (206,500)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Office of the CAO/General Gov't Administration

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
		Restated	Restated	Restated	Restated
REVENUES					
Cost recoveries from Water Util	-	-	-	-	-
Cost recoveries from Sewer Dept	-	-	-	-	-
TOTAL REVENUE	-	-	-	-	-
EXPENSES					
Salary and wages	258,700	248,700	253,800	243,810	241,100
Employee Benefits	49,800	43,800	47,200	40,745	40,900
Term/Seasonal Wages	-	-	50,000	-	-
Employee Benefits Seasonal wag	-	-	5,000	-	-
Meetings, Meals and Travel	1,000	100	2,500	352	3,000
Membership Dues & Fees	1,900	3,400	1,200	2,658	2,200
Advertising	8,000	7,000	7,200	7,583	7,000
Telecommunications	3,500	3,700	3,300	3,081	3,900
Office Expense	1,200	800	1,200	1,299	1,200
Legal	15,000	12,400	10,000	11,531	15,000
Marketing and Communications	1,000	100	2,400	1,125	-
Miscellaneous	-	-	-	2,275	-
Program Expenditures	12,000	-	2,000	-	2,500
Contracted Services	55,000	20,000	50,000	1,357	40,000
Election	-	24,500	35,000	-	-
	407,100	364,500	470,800	315,816	356,800
Net Department Surplus (Deficit)	$ (407,100)	$ (364,500)	$ (470,800)	$ (315,816)	$ (356,800)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	-	-	110,000	-	30,000
Net Surplus (Deficit)	$ (407,100)	$ (364,500)	$ (360,800)	$ (315,816)	$ (326,800)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Human Resources ~ 130

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Miscellaneous	-	-		13	
Other conditional grants	-		-	350	
	-	-	-	363	-
EXPENSES					
Salary and wages	-				
Employee Benefits	9,000	12,000	9,000	9,423	6,000
Meetings, Meals and Travel	900	400	900	898	-
Professional Development	35,000	23,900	55,000	40,555	45,000
Membership Dues & Fees		300		-	
Office Expense	-	300	-	651	-
Legal	15,000	9,700	5,000	17,927	5,000
Operational Equip & Supplies	10,000	21,000	9,600	9,050	9,600
Contracted Services		-		1,565	
	69,900	67,600	79,500	80,069	65,600
Net Department Surplus (Deficit)	$ (69,900)	$ (67,600)	$ (79,500)	$ (79,706)	$ (65,600)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Finance ~ 140

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Tax Certificates & ByLaws	1,800	1,100	1,800	1,750	1,200
Cost recoveries from Water Util	66,700	66,700	66,700	64,730	65,400
Miscellaneous	-	2,000	-	3,935	-
	68,500	69,800	68,500	70,415	66,600
EXPENSES					
Salary and wages	239,900	233,700	233,400	234,506	229,200
Employee Benefits	41,200	39,300	40,100	43,326	41,200
Meetings, Meals and Travel	300	200	400	-	300
Membership Dues & Fees	800	700	800	344	400
Telecommunications	1,100	1,100	1,100	1,079	1,100
Office Expense	2,900	1,600	2,800	2,402	3,800
Audit	21,500	25,100	20,000	16,647	18,000
Miscellaneous	200	100	400	48	400
	307,900	301,800	299,000	298,352	294,400
Net Department Surplus (Deficit)	$ (239,400)	$ (232,000)	$ (230,500)	$ (227,937)	$ (227,800)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Information Technologies ~ 150

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
		Restated	Restated	Restated	Restated
REVENUES					
Job Cost billings			-		-
Cost recoveries from Water Util	34,000	30,800	30,800	29,800	29,800
Cost recoveries from Sewer Dept	3,800	3,500	3,500	3,500	3,500
Miscellaneous		800			
	37,800	35,100	34,300	33,300	33,300
EXPENSES					
Salary and wages	134,100	130,700	132,300	127,603	129,000
Employee Benefits	24,600	23,900	24,000	24,221	25,200
Seasonal Wages	12,000	-		-	
Employee Benefits Seasonal wag	1,200	-		-	
Meetings, Meals and Travel	200	-	200	-	200
Telecommunications	5,000	4,200	7,000	5,945	5,900
Operational Equip & Supplies	110,000	66,100	80,000	67,188	50,000
Contracted Services	36,100	37,800	45,000	12,916	40,000
	323,200	262,700	288,500	237,873	250,300
Net Department Surplus (Deficit)	$ (285,400)	$ (227,600)	$ (254,200)	$ (204,573)	$ (217,000)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	23,200	-	-	-	-
Net Surplus (Deficit)	$ (262,200)	$ (227,600)	$ (254,200)	$ (204,573)	$ (217,000)

Town of Wolfville
2021/22 Draft Operating Budget - V4
General Government Common Costs ~ 160

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Cost recoveries from Water Util	7,200	11,900	11,900	17,000	17,000
TOTAL REVENUE	7,200	11,900	11,900	17,000	17,000
EXPENSES					
Salary and wages	11,300	5,900	9,800	6,020	10,000
Employee Benefits	2,100	600	1,800	360	1,900
Meetings, Meals and Travel	-	300	-	-	
Advertising	200	-	400	-	600
Telecommunications	1,900	1,800	1,900	2,428	1,900
Office Expense	26,500	28,600	32,800	27,885	39,200
Heat	15,100	14,500	15,400	14,126	13,300
Utilities	5,700	5,300	5,700	5,356	5,700
Repairs and Maintenance	20,000	55,900	23,000	35,950	11,700
Operational Equip & Supplies	2,000	-	10,000	2,081	10,000
Contracted Services			-	417	-
	84,800	112,900	100,800	94,623	94,300
Net Department Surplus (Deficit)	$ (77,600)	$ (101,000)	$ (88,900)	$ (77,623)	$ (77,300)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Other General Government ~ 190

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Residential Tax	6,481,000	6,360,500	6,360,600	6,005,858	6,007,200
Resource Tax	13,500	12,400	13,200	10,198	10,900
Commercial Tax	1,277,100	1,295,500	1,277,000	1,251,819	1,249,800
NSLC - exempt assessment	24,300	-	-	-	-
Aliant	20,500	20,500	20,000	20,203	20,000
NSPI Grant	4,500	4,400	3,600	4,285	3,600
HST Offset Grant	37,000	36,200	45,000	44,328	45,400
Fire Protection Rate	-	-	-	-	
Deed Transfer Tax	400,000	446,400	340,000	427,936	340,000
Commercial Area Rate	100,000	30,400	100,000	101,546	100,000
Post Office GILT	20,500	20,500	20,500	20,558	20,500
Acadia GILT	950,000	988,600	970,000	960,955	972,000
Kings County Fire Protection	141,200	142,100	141,200	121,100	121,100
License & fee revenue	-	-	-	-	-
Facility Rental	16,500	17,800	16,500	16,581	18,000
Land Leases	200	200	200	200	200
Interest on investments	20,000	24,100	45,000	75,403	25,000
Interest on outstanding taxes	72,000	44,800	72,000	74,510	65,000
Miscellaneous	50,000	51,000	50,000	68,739	50,000
Equilization Grant	70,000	69,800	70,000	69,869	70,000
Farm Acreage Grant	1,100	1,200	1,100	1,168	1,100
Other conditional grants		404,700			
TOTAL REVENUE	9,699,400	9,971,100	9,545,900	9,275,256	9,119,800
EXPENSES					
Insurance	147,000	112,300	90,000	96,726	85,000
Miscellaneous	-	-		-	
Grants to Organizations	73,900	59,500	145,500	68,750	100,000
Tax Exemptions	111,800	103,300	112,500	104,172	107,600
Other debt charges	10,100	2,500	10,300	15,375	10,000
Debenture interest	-	-	-	-	-
Doubtful accounts allowance	2,500	2,500	2,500	-	2,500
	345,300	280,100	360,800	285,023	305,100
Net Department Surplus (Deficit)	$ 9,354,100	$ 9,691,000	$ 9,185,100	$ 8,990,233	$ 8,814,700
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	24,400		80,000	25,000	50,000
Net Surplus (Deficit)	$ 9,378,500	$ 9,691,000	$ 9,265,100	$ 9,015,233	$ 8,864,700

Town of Wolfville
2021/22 Draft Operating Budget - V4
Protective Services Division

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Fire Protection Rate	396,100	391,100	396,100	404,373	408,000
Kings County Fire Protection	167,600	176,100	167,600	165,200	165,500
License & fee revenue	5,000	3,800	5,000	4,132	5,000
Parking fines	10,000	3,000	26,000	36,787	26,000
Other fines	10,000	15,300	10,000	12,601	10,000
EMO 911 Cost Recovery	1,900	1,600	1,600	1,924	1,600
	670,600	654,100	686,300	708,782	696,100
EXPENSES					
Salary and wages	210,100	199,300	207,000	201,210	197,500
Employee Benefits	35,200	31,200	34,500	32,374	31,700
Seasonal Wages	16,700	11,100	16,600	14,705	14,700
Employee Benefits Seasonal wag	1,700	1,000	1,700	974	1,500
Meals and Travel	7,700	2,500	7,100	4,403	7,200
Professional Development	15,000	6,400	15,000	11,881	15,000
Membership Dues & Fees	1,700	1,400	1,400	605	2,200
Advertising	-	-	-	2,476	-
Telecommunications	9,400	9,300	10,000	9,134	11,100
Office Expense	7,800	200	9,400	2,052	11,500
Legal	7,700	7,000	7,700	7,827	10,200
Insurance	7,500	6,400	6,000	9,157	6,400
Honorariums	40,400	34,100	38,400	28,429	38,400
Heat	4,100	3,400	4,100	4,112	4,800
Utilities	17,200	15,100	17,200	16,837	17,500
Repairs and Maintenance	11,600	16,500	16,400	28,843	19,000
Vehicle Fuel	6,200	4,700	6,000	4,706	6,000
Vehicle Repairs & Maintenance	46,500	49,100	47,100	51,103	44,100
Vehicle Insurance	9,100	6,100	4,900	4,882	4,900
Operational Equip & Supplies	69,500	62,100	76,400	89,634	74,500
Equipment Maintenance	10,000	17,300	10,000	17,681	10,000
Contracted Services	1,957,500	1,920,200	1,942,200	1,902,283	1,928,200
Licenses and Permits	1,800	1,800	1,800	1,711	1,800
Debenture interest	2,500	4,000	4,000	4,853	5,300
	2,497,900	2,410,500	2,505,900	2,451,872	2,463,700
Net Division Surplus (Deficit)	$ (1,827,300)	$ (1,756,400)	$ (1,819,600)	$ (1,743,090)	$ (1,767,600)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Police Service ~ 210

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Parking fines	-		-		
Other fines	10,000	15,300	10,000	12,601	10,000
	10,000	15,300	10,000	12,601	10,000
EXPENSES					
Salary and wages	6,800	4,300	5,600	4,202	4,400
Employee Benefits	1,400	400	1,100	215	900
Legal	6,500	7,000	4,500	6,465	4,200
Utilities	3,500	3,200	3,500	3,157	4,000
Repairs and Maintenance	2,700	3,700	3,200	2,593	6,000
Contracted Services	1,517,000	1,472,000	1,478,400	1,435,948	1,462,900
	1,537,900	1,490,600	1,496,300	1,452,580	1,482,400
Net Department Surplus (Deficit)	$ (1,527,900)	$ (1,475,300)	$ (1,486,300)	$ (1,439,979)	$ (1,472,400)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Compliance (By Law Enforcement) Dept ~ 215

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Parking fines	10,000	3,000	26,000	36,787	26,000
Other fines			-	-	-
	10,000	3,000	26,000	36,787	26,000
EXPENSES					
Salary and wages	63,600	63,700	62,600	63,256	61,000
Employee Benefits	12,700	9,700	12,500	9,218	12,200
Meetings, Meals and Travel	200	200	200	-	200
Membership Dues & Fees	100	200	200	100	200
Telecommunications	1,000	1,000	1,200	1,002	1,200
Office Expense	1,600	200	1,000	1,001	1,000
Legal	1,200	-	3,200	610	6,000
Marketing and Communications	1,000	300	1,000	-	200
Vehicle Fuel	500	300	600	500	600
Vehicle Repairs & Maintenance	900	1,600	500	810	500
Vehicle Insurance	600	400	300	272	300
Operational Equip & Supplies	1,000	1,300	1,500	1,470	500
Contracted Services	15,000	21,900	38,600	25,967	26,000
Grants to Organizations	-	-	20,000	-	
	99,400	100,800	143,400	104,206	109,900
Net Department Surplus (Deficit)	$ (89,400)	$ (97,800)	$ (117,400)	$ (67,419)	$ (83,900)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Fire Services ~ 220

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Fire Protection Area Rate	396,100	391,100	396,100	404,373	408,000
Kings County Fire Protection	167,000	175,500	167,000	164,100	164,400
Miscellaneous	-	500	-	1,375	
Other conditional grants	-	-	-	12,995	
	563,100	567,100	563,100	582,843	572,400
EXPENSES					
Salary and wages	84,700	79,400	83,900	80,941	82,100
Employee Benefits	12,300	13,100	12,100	14,803	10,600
Meeting, Meals and Travel	2,500	2,100	1,900	2,270	2,000
Professional Development	15,000	6,400	15,000	11,881	15,000
Membership Dues & Fees	1,600	1,200	1,200	505	2,000
Telecommunications	8,400	8,000	8,800	7,694	9,900
Office Expense	500	-	1,000	243	1,500
Insurance	7,500	6,400	6,000	9,157	6,400
Stipends & Honorariums	40,400	34,100	38,400	28,429	38,400
Heat	4,100	3,400	4,100	4,112	4,800
Utilities	13,700	11,900	13,700	13,680	13,500
Repairs and Maintenance	8,900	12,800	13,200	26,250	13,000
Vehicle Fuel	5,700	4,400	5,400	4,206	5,400
Vehicle Repairs & Maintenance	45,600	47,500	46,600	50,293	43,600
Vehicle Insurance	8,500	5,700	4,600	4,610	4,600
Operational Equip & Supplies	60,000	57,700	68,000	85,050	65,000
Equipment Maintenance	10,000	17,300	10,000	17,681	10,000
Contracted Services	410,500	411,300	410,200	425,368	424,000
Licenses and Permits	1,800	1,800	1,800	1,711	1,800
	741,700	724,500	745,900	788,884	753,600
Net Department Surplus (Deficit)	$ (178,600)	$ (157,400)	$ (182,800)	$ (206,041)	$ (181,200)

Note: $396,100 ($396,100 in 20/21) of contracted services expense relates to Fire Hydrant Fee paid to Wolfville Water Utility, as per UARB approved formula. The full amount of this fee is recovered by the Town through the Fire Protection Area Rate, noted in revenues above.

Town of Wolfville
2021/22 Draft Operating Budget - V4
EMO ~ 230

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Miscellaneous	80,000	62,700	80,000	69,395	80,000
	80,000	62,700	80,000	69,395	80,000
EXPENSES					
Salary and wages	52,800	51,600	52,700	52,220	50,000
Employee Benefits	8,500	7,900	8,500	7,870	8,000
Meeting, Meals and Travel	5,000	200	5,000	2,133	5,000
Advertising		-	-	2,476	-
Telecommunications		300	-	438	-
Office Expense	5,700	-	7,400	808	9,000
Legal		-	-	752	-
Operational Equip & Supplies	8,000	2,700	6,400	2,698	8,000
	80,000	62,700	80,000	69,395	80,000
Net Department Surplus (Deficit)	$ -	$ -	$ -	$ -	$ -

Town of Wolfville
2021/22 Draft Operating Budget - V4
Other Protective Services ~ 290

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Kings County Fire Protection	600	600	600	1,100	1,100
License & fee revenue	5,000	3,800	5,000	4,132	5,000
EMO 911 Cost Recovery	1,900	1,600	1,600	1,924	1,600
	7,500	6,000	7,200	7,156	7,700
EXPENSES					
Salary and wages	2,200	300	2,200	591	
Employee Benefits	300	100	300	268	
Seasonal Wages	16,700	11,100	16,600	14,705	14,700
Employee Benefits Seasonal wag	1,700	1,000	1,700	974	1,500
Operational Equip & Supplies	500	400	500	416	1,000
Contracted Services	15,000	15,000	15,000	15,000	15,300
Debenture interest	2,500	4,000	4,000	4,853	5,300
	38,900	31,900	40,300	36,807	37,800
Net Department Surplus (Deficit)	$ (31,400)	$ (25,900)	$ (33,100)	$ (29,651)	$ (30,100)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Public Works Division

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Job Cost billings	7,000	4,500	10,000	8,500	10,000
Cost recoveries from Water Util	115,100	115,100	115,100	111,700	111,700
Cost recoveries from Sewer Dept	45,300	45,300	45,300	43,100	43,100
Land Leases	3,900	3,400	4,000	1,975	4,000
TOTAL REVENUE	171,300	168,300	174,400	165,275	168,800
EXPENSES					
Salary and wages	568,600	503,700	550,400	538,968	580,600
Employee Benefits	124,200	109,700	120,300	111,474	122,800
Seasonal Wages	-	-	12,000	-	12,000
Employee Benefits Seasonal wag	-	-	1,200	-	1,200
Meals and Travel	3,300	3,100	2,300	2,912	2,400
Membership Dues & Fees	1,400	1,200	1,100	521	1,500
Advertising	-	300	-	357	-
Telecommunications	3,800	3,800	4,200	4,241	4,200
Office Expense	4,000	4,500	3,600	3,628	4,100
Legal	5,000	3,500	-	1,281	-
Heat	7,000	6,700	9,000	7,193	9,000
Utilities	33,000	33,200	32,500	37,748	35,500
Repairs and Maintenance	40,000	40,200	50,400	42,947	54,800
Vehicle Fuel	34,000	28,500	36,900	33,065	36,900
Vehicle Repairs & Maintenance	69,500	64,600	65,300	84,327	57,000
Vehicle Insurance	4,900	3,300	4,200	3,804	4,200
Operational Equip & Supplies	147,000	171,500	177,300	136,626	153,800
Equipment Rentals	5,000	-	-	391	-
Contracted Services	425,000	435,800	441,000	318,807	390,700
Licenses and Permits	1,500	1,500	1,500	1,344	1,500
Debenture interest	136,200	133,700	133,500	130,747	133,500
	1,613,400	1,548,800	1,646,700	1,460,381	1,605,700
Net Division Surplus (Deficit)	$ (1,442,100)	$ (1,380,500)	$ (1,472,300)	$ (1,295,106)	$ (1,436,900)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	30,000	-	100,000	73,959	95,000
Net Surplus (Deficit)	$ (1,412,100)	$ (1,380,500)	$ (1,372,300)	$ (1,221,147)	$ (1,341,900)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Public Works Common Costs ~ 310

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Cost recoveries from Water Util	80,900	80,900	80,900	81,400	81,400
Cost recoveries from Sewer Dept	24,800	24,800	24,800	24,900	24,900
TOTAL REVENUE	105,700	105,700	105,700	106,300	106,300
EXPENSES					
Salary and wages	178,900	170,400	168,300	168,364	167,300
Employee Benefits	30,000	30,400	27,900	26,791	27,400
Meetings, Meals and Travel	300	100	300	-	400
Membership Dues & Fees	1,400	1,200	1,100	521	1,500
Advertising		300	-	357	-
Telecommunications	3,800	3,800	4,200	4,241	4,200
Office Expense	4,000	4,500	3,600	3,628	4,100
Legal	5,000	3,500	-	1,281	-
Heat	7,000	6,700	9,000	7,193	9,000
Utilities	10,000	10,400	11,000	15,236	13,100
Repairs and Maintenance	40,000	40,200	50,400	42,947	54,800
Operational Equip & Supplies	3,000	100	3,000	100	3,000
Contracted Services	1,500	-	4,200	448	4,200
Licenses and Permits	1,500	1,500	1,500	1,344	1,500
	286,400	273,100	284,500	272,451	290,500
Net Department Surplus (Deficit)	$ (180,700)	$ (167,400)	$ (178,800)	$ (166,151)	$ (184,200)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	-		-	4,159	13,000
Net Surplus (Deficit)	$ (180,700)	$ (167,400)	$ (178,800)	$ (161,992)	$ (171,200)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Roads and Streets ~ 320

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Cost recoveries from Water Util	34,200	34,200	34,200	30,300	30,300
Cost recoveries from Sewer Dept	20,500	20,500	20,500	18,200	18,200
	54,700	54,700	54,700	48,500	48,500
EXPENSES					
Salary and wages	388,700	333,100	381,100	370,038	408,900
Employee Benefits	94,000	79,300	92,200	84,594	94,400
Seasonal Wages	-	-	12,000	-	12,000
Employee Benefits Seasonal wag	-	-	1,200	-	1,200
Meetings, Meals and Travel	3,000	3,000	2,000	2,912	2,000
Vehicle Fuel	34,000	28,500	36,900	33,065	36,900
Vehicle Repairs & Maintenance	69,500	64,600	65,300	84,327	57,000
Vehicle Insurance	4,900	3,300	4,200	3,804	4,200
Operational Equip & Supplies	125,000	126,600	111,400	116,717	96,600
Equipment Rentals	5,000	-	-	391	-
Contracted Services	385,000	390,400	385,000	264,102	344,700
	1,109,100	1,028,800	1,091,300	959,950	1,057,900
Net Department Surplus (Deficit)	$ (1,054,400)	$ (974,100)	$ (1,036,600)	$ (911,450)	$ (1,009,400)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	30,000	63,000	100,000	54,800	67,000
Net Surplus (Deficit)	$ (1,024,400)	$ (911,100)	$ (936,600)	$ (856,650)	$ (942,400)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Street Lighting ~ 330

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Utilities	23,000	22,800	21,500	22,512	22,400
Operational Equip & Supplies	5,000	3,100	9,600	2,161	9,600
Contracted Services	1,500	300		2,039	
	29,500	26,200	31,100	26,712	32,000
Net Department Surplus (Deficit)	$ (29,500)	$ (26,200)	$ (31,100)	$ (26,712)	$ (32,000)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Traffic Services ~ 340

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Job Cost billings				-	-
	-	-	-	-	-
EXPENSES					
Salary and wages	1,000	200	1,000	566	4,400
Employee Benefits	200	-	200	89	1,000
Operational Equip & Supplies	14,000	41,000	48,500	12,700	29,000
Contracted Services	37,000	38,600	44,500	45,876	34,500
	52,200	79,800	94,200	59,231	68,900
Net Department Surplus (Deficit)	$ (52,200)	$ (79,800)	$ (94,200)	$ (59,231)	$ (68,900)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	-	-	-	15,000	15,000
Net Surplus (Deficit)	$ (52,200)	$ (79,800)	$ (94,200)	$ (44,231)	$ (53,900)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Other Roads & Street ~ 350

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Professional Development		-			
Operational Equip & Supplies	-	700	4,800	4,938	15,600
Contracted Services	-	6,500	7,300	6,342	7,300
	-	7,200	12,100	11,280	22,900
Net Department Surplus (Deficit)	$ -	$ (7,200)	$ (12,100)	$ (11,280)	$ (22,900)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Other Transport ~ 390

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Job Cost billings	7,000	4,500	10,000	8,500	10,000
Land Leases	3,900	3,400	4,000	1,975	4,000
	10,900	7,900	14,000	10,475	14,000
EXPENSES					
Operational Equip & Supplies	-	-	-	10	-
Debenture interest	136,200	133,700	133,500	130,747	133,500
	136,200	133,700	133,500	130,757	133,500
Net Department Surplus (Deficit)	$ (125,300)	$ (125,800)	$ (119,500)	$ (120,282)	$ (119,500)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Sewer & Solid Waste Division

Environmental Health

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUE					
Sewer Rates	509,000	420,300	451,500	432,233	430,000
Kings County Sewer Contribution	2,000	2,000	2,000	2,604	2,000
TOTAL REVENUE	511,000	422,300	453,500	434,837	432,000
EXPENSES					
Salary and wages	87,500	93,300	85,800	87,665	82,900
Employee Benefits	20,300	17,200	19,900	14,566	18,200
Utilities	62,500	45,000	52,700	51,385	52,400
Vehicle Repairs & Maintenance	17,600	21,400	17,900	20,029	17,900
Operational Equip & Supplies	107,800	93,200	109,500	94,932	111,700
Contracted Services	66,000	33,500	63,400	75,491	62,100
Debenture interest	28,200	20,800	17,300	14,043	9,500
	390,900	327,000	366,500	367,182	358,700
Net Division Surplus (Deficit)	$ 120,100	$ 95,300	$ 87,000	$ 67,655	$ 73,300

Town of Wolfville
2021/22 Draft Operating Budget - V4
Sewer Administration ~ 410

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Salary and wages					
Employee Benefits					
Contracted Services	24,800	28,300	24,800	49,033	25,000
	24,800	28,300	24,800	49,033	25,000
Net Department Surplus (Deficit)	$ (24,800)	$ (28,300)	$ (24,800)	$ (49,033)	$ (25,000)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Sanitary & Storm Sewer Collection ~ 420

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Salary and wages	46,500	44,300	45,600	42,523	43,300
Employee Benefits	10,800	9,100	10,600	7,304	9,500
Vehicle Repairs & Maintenance	12,300	12,300	12,600	10,920	12,600
Operational Equip & Supplies	48,000	28,000	27,000	18,844	27,000
Equipment Rentals	-	-		6,390	
Contracted Services	25,000	-	27,000	18,468	25,500
	142,600	93,700	122,800	104,449	117,900
Net Department Surplus (Deficit)	$ (142,600)	$ (93,700)	$ (122,800)	$ (104,449)	$ (117,900)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Lift Stations ~ 430

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Salary and wages		4,000		1,183	
Employee Benefits		500		163	
Utilities	20,300	16,600	20,300	19,227	20,000
Operational Equip & Supplies	23,800	15,400	33,500	23,593	27,400
Contracted Services	3,400	600		1,802	
	47,500	37,100	53,800	45,968	47,400
Net Department Surplus (Deficit)	$ (47,500)	$ (37,100)	$ (53,800)	$ (45,968)	$ (47,400)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Sewer Treatment ~ 440

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
	-	-	-	-	-
EXPENSES					
Salary and wages	41,000	45,000	40,200	43,959	39,600
Employee Benefits	9,500	7,600	9,300	7,099	8,700
Telecommunications		600		590	
Utilities	42,200	28,400	32,400	32,158	32,400
Repairs and Maintenance		-	-	287	4,000
Vehicle Fuel		1,400	-	1,804	-
Vehicle Repairs & Maintenance	5,300	9,100	5,300	9,109	5,300
Vehicle Insurance	1,000	600			
Operational Equip & Supplies	16,000	29,400	29,000	34,064	37,200
Contracted Services	4,000	1,900	2,800	3,158	2,800
	119,000	124,000	119,000	132,228	130,000
Net Department Surplus (Deficit)	$ (119,000)	$ (124,000)	$ (119,000)	$ (132,228)	$ (130,000)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Solid Waste Department ~ 450

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
	-	-	-	-	-
EXPENSES					
Operational Equip & Supplies	-	400	-	208	-
Contracted Services	5,000	2,700	5,000	3,030	5,000
	5,000	3,100	5,000	3,238	5,000
Net Department Surplus (Deficit)	$ (5,000)	$ (3,100)	$ (5,000)	$ (3,238)	$ (5,000)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Other Environmental ~ 490

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Sewer Rates	509,000	420,300	451,500	432,233	430,000
Kings County Sewer Contribution	2,000	2,000	2,000	2,604	2,000
	511,000	422,300	453,500	434,837	432,000
EXPENSES					
Operational Equip & Supplies	20,000	20,000	20,000	18,223	20,100
Contracted Services	3,800	-	3,800		3,800
Debenture interest	28,200	20,800	17,300	14,043	9,500
	52,000	40,800	41,100	32,266	33,400
Net Department Surplus (Deficit)	$ 459,000	$ 381,500	$ 412,400	$ 402,571	$ 398,600

Town of Wolfville
2021/22 Draft Operating Budget - V4
Planning & Development Division ~ 610

Environmental Development

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Zoning & Subdivision approvals	600	900	600	655	600
Bldg Insp. & Development Revenues	-	2,900	-	2,800	
License & fee revenue	1,500	1,000	1,500	2,580	1,500
Building & development permits	16,000	12,300	16,000	23,041	16,000
Development agreements	1,000	-	1,000		1,000
Land Leases	900	-	900		900
Miscellaneous	-	-		1,200	-
Employment grants	-	-	8,400	1,619	
PNS conditional grants	-	30,000	30,000	30,000	30,000
Other conditional grants	-	46,500	46,500	42,900	46,500
	20,000	93,600	104,900	104,795	96,500
EXPENSES					
Salary and wages	339,600	268,400	269,500	288,584	301,700
Employee Benefits	58,800	61,200	47,500	58,205	54,000
Seasonal Wages	30,000	67,800	91,600	69,369	58,000
Employee Benefits Seasonal wag	3,000	-	9,700	6,307	5,800
Meetings, Meals and Travel	5,000	700	5,000	1,261	5,000
Membership Dues & Fees	2,500	2,300	3,000	2,507	2,100
Advertising	8,000	2,100	8,000	4,951	8,000
Telecommunications	5,300	3,500	5,300	3,760	5,300
Office Expense	13,200	7,000	13,200	11,401	13,200
Legal	10,000	15,000	20,000	11,746	20,000
Miscellaneous	-	-	-	136	
Operational Equip & Supplies	-	20,500	1,000	-	
Program Expenditures	-	32,400	20,000	7,389	30,000
Contracted Services	55,000	200	25,000	65,413	45,000
	530,400	481,100	518,800	531,029	548,100
Net Division Surplus (Deficit)	(510,400)	$ (387,500)	$ (413,900)	$ (426,234)	$ (451,600)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	129,000	-	15,000	10,000	30,000
Net Surplus (Deficit)	$ (381,400)	$ (387,500)	$ (398,900)	$ (416,234)	$ (421,600)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Community Development Division

Recreation & Cultural

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Kings County Recreation Contrib	15,000	10,000	15,000	29,647	10,000
Program fees	15,000	5,800	20,000	15,542	16,000
Festival & events revenues	-	-	-	2,025	500
Facility fees & cost recoveries	12,000	4,600	12,300	11,581	11,000
Tourist Bureau revenues	8,500	100	7,500	2,832	1,500
Miscellaneous	-	1,300	-	1,092	-
Employment grants	4,500	7,000	-	1,619	-
PNS conditional grants	-	18,000	-	13,448	-
Other conditional grants	21,100	8,600	17,600	18,612	21,000
TOTAL REVENUE	76,100	55,400	72,400	96,398	60,000
EXPENSES					
Salary and wages	377,300	260,100	322,700	303,048	310,300
Employee Benefits	71,500	45,900	60,200	80,540	56,600
Seasonal/Term Wages	311,500	285,200	386,100	340,604	284,300
Employee Benefits Seasonal wag	52,600	63,900	62,700	47,231	50,100
Meals and Travel	1,300	1,300	1,100	3,151	2,800
Membership Dues & Fees	5,200	4,500	3,300	5,366	7,300
Advertising	11,300	3,300	17,000	10,278	21,000
Telecommunications	4,900	5,200	11,100	5,673	5,700
Office Expense	2,000	2,500	3,000	2,482	5,800
Legal	-	1,700	-	-	-
Marketing and Communications	2,500	-	-	-	-
Utilities	19,800	20,400	16,500	22,645	18,300
Repairs and Maintenance	65,000	8,700	19,000	12,446	12,300
Vehicle Fuel	7,500	5,600	7,500	6,694	7,300
Vehicle Repairs & Maintenance	10,500	15,000	10,500	16,996	7,400
Vehicle Insurance	4,200	2,800	2,800	1,353	1,000
Operational Equip & Supplies	116,800	97,200	134,500	113,607	113,800
Equipment Maintenance	-	-	-	271	-
Equipment Rentals	-	2,700	-	3,598	-
Program Expenditures	68,100	29,300	55,600	44,733	53,600
Contracted Services	99,000	46,900	69,000	64,876	74,000
Grants to Organizations	80,300	48,400	79,700	70,400	78,900
Debenture interest	13,500	7,700	7,600	8,201	7,200
	1,324,800	958,300	1,269,900	1,164,193	1,117,700
Net Division Surplus (Deficit)	(1,248,700)	$ (902,900)	$ (1,197,500)	$ (1,067,795)	$ (1,057,700)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	61,000	-	-	22,783	51,600
	61,000	-	-	22,783	51,600
Net Surplus (Deficit)	$ (1,187,700)	$ (902,900)	$ (1,197,500)	$ (1,045,012)	$ (1,006,100)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Parks Dept ~ 510

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Miscellaneous	-	1,300	-	940	-
Employment grants	4,500	3,500			
TOTAL REVENUE	4,500	4,800	-	940	-
EXPENSES					
Salary and wages	161,600	63,400	111,700	43,159	67,500
Employee Benefits	32,500	15,700	22,500	37,371	13,200
Seasonal Wages	204,300	218,200	238,000	236,310	193,000
Employee Benefits Seasonal wag	40,800	54,100	43,600	33,420	35,700
Meetings, Meals and Travel		1,000	-	1,016	-
Telecommunications		800	-	738	
Office Expense		200		132	
Utilities	5,400	7,000	5,400	5,647	5,200
Repairs and Maintenance		-		128	
Vehicle Fuel	6,500	5,600	6,500	5,582	6,300
Vehicle Repairs & Maintenance	8,500	14,700	8,500	15,979	5,400
Vehicle Insurance	3,600	2,700	2,400	946	1,000
Operational Equip & Supplies	88,200	85,300	89,200	91,327	82,700
Equipment Maintenance		-		271	
Equipment Rentals		2,700	-	3,598	
Contracted Services	72,500	36,200	42,500	44,995	46,000
Debenture interest	10,400	4,300	4,300	4,452	
	634,300	511,900	574,600	525,071	456,000
Net Division Surplus (Deficit)	$ (629,800)	$ (507,100)	$ (574,600)	$ (524,131)	$ (456,000)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	15,000			13,743	41,600
Net Surplus (Deficit)	$ (614,800)	$ (507,100)	$ (574,600)	$ (510,388)	$ (414,400)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Economic Development Department ~ 710

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Salary and wages	-		-	109,912	90,700
Employee Benefits	-	200	-	22,636	16,300
Meetings, Meals and Travel	-	-	600	1,027	1,200
Membership Dues & Fees	-	400	2,800	1,082	2,800
Advertising	-	-	9,500	5,981	9,500
Telecommunications	-	100	500	779	900
Office Expense	-	-	1,500	1	3,500
Operational Equip & Supplies	-	-	5,000	1,158	10,000
Contracted Services	-	-	5,000	-	10,000
Grants to Organizations	10,000	-	10,000	10,000	10,000
Debenture interest	-	100	100	251	300
	10,000	800	35,000	152,827	155,200
Net Operational Dept. Surplus (Deficit)	$ (10,000)	$ (800)	$ (35,000)	$ (152,827)	$ (155,200)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Festival & Events Department ~ 720

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Festival & events revenues	-		-	2,025	500
PNS conditional grants		10,000	-	4,148	-
Other conditional grants	4,500	1,800	-	2,400	-
	4,500	11,800	-	8,573	500
EXPENSES					
Salary and wages	3,500	-	5,600	953	5,600
Employee Benefits	700	-	700	161	700
Seasonal Wages	9,300	8,800	9,300	13,567	8,900
Employee Benefits Seasonal wag	1,000	800	1,200	1,096	1,100
Advertising	6,000	2,600	5,500	3,160	6,000
Operational Equip & Supplies	12,000	7,000	27,000	17,427	10,000
Program Expenditures	54,000	23,000	47,000	33,861	44,000
Grants to Organizations	35,300	26,000	35,300	41,900	35,300
	121,800	68,200	131,600	112,125	111,600
Net Department Surplus (Deficit)	$ (117,300)	$ (56,400)	$ (131,600)	$ (103,552)	$ (111,100)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	-	-	-	9,040	10,000
	-	-	-	9,040	10,000
Net Surplus (Deficit)	$ (117,300)	$ (56,400)	$ (131,600)	$ (94,512)	$ (101,100)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Parks and Recreation Adm Department ~ 730

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
	-	-	-	-	-
EXPENSES					
Salary and wages	200,500	188,000	194,200	138,448	133,900
Employee Benefits	36,300	28,800	35,100	18,177	24,100
Seasonal Wages	-	400	25,000	5,276	-
Employee Benefits Seasonal wag	-	100	2,500	2,605	-
Meetings, Meals and Travel	800	-	-	23	1,000
Membership Dues & Fees	4,700	4,100	-	4,284	4,000
Advertising	3,300	-	-	30	3,500
Telecommunications	2,300	2,200	8,000	2,105	2,400
Office Expense		1,600	-	1,199	1,100
Legal		1,700	-	-	-
Marketing and Communications	2,500	-	-		-
Utilities	5,800	6,000	2,500	5,591	3,000
Repairs and Maintenance	4,000	3,800	4,000	3,576	3,000
Operational Equip & Supplies		-	-	86	2,500
Contracted Services	1,500	-	1,500	243	15,000
Debenture interest	100	100	100	290	3,600
	261,800	236,800	272,900	181,933	197,100
Net Department Surplus (Deficit)	$ (261,800)	$ (236,800)	$ (272,900)	$ (181,933)	$ (197,100)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Recreation Programs Department ~ 740

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Kings County Recreation Contrib	15,000	10,000	15,000	29,647	10,000
Program fees	15,000	5,800	20,000	15,542	16,000
Festival & events revenues	-	-	-		-
Facility fees & cost recoveries	12,000	4,600	12,300	11,581	11,000
Employment grants	-	3,500	-	1,619	-
PNS conditional grants	-	1,800	-	4,300	-
Other conditional grants	1,500	1,800	2,000	11,212	2,000
	43,500	27,500	49,300	73,901	39,000
EXPENSES					
Seasonal Wages	65,900	20,800	58,100	41,635	30,100
Employee Benefits Seasonal wag	7,600	1,800	7,000	3,614	3,900
Meetings, Meals and Travel	500	300	500	773	500
Advertising	2,000	700	2,000	1,107	2,000
Vehicle Fuel	1,000	-	1,000	1,112	1,000
Vehicle Repairs & Maintenance	2,000	300	2,000	1,017	2,000
Vehicle Insurance	600	100	400	407	
Operational Equip & Supplies	3,100	2,600	2,200	2,568	3,500
Program Expenditures	14,100	6,300	8,600	10,872	9,600
Contracted Services	25,000	6,500	20,000	15,000	3,000
Grants to Organizations	25,000	12,400	24,400	8,500	23,600
	146,800	51,800	126,200	86,605	79,200
Net Department Surplus (Deficit)	$ (103,300)	$ (24,300)	$ (76,900)	$ (12,704)	$ (40,200)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Tourism Department ~ 750

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Tourist Bureau revenues	8,500	100	7,500	2,832	1,500
PNS conditional grants	-	6,200	-	5,000	-
Other conditional grants	10,100	-	10,600	-	14,000
	18,600	6,300	18,100	7,832	15,500
EXPENSES					
Salary and wages	3,300	2,400	3,300	3,448	7,300
Employee Benefits	400	300	400	1,851	1,300
Seasonal Wages	32,000	37,000	55,700	43,816	52,300
Employee Benefits Seasonal wag	3,200	7,100	8,400	6,496	9,400
Meetings, Meals and Travel	-	-	-	312	100
Membership Dues & Fees	500	-	500	-	500
Telecommunications	2,000	1,600	2,000	1,552	1,700
Office Expense	1,000	200	1,000	277	1,100
Utilities	2,000	2,900	2,000	4,935	2,000
Repairs and Maintenance	1,000	1,400	1,000	4,311	5,000
Operational Equip & Supplies	13,000	2,300	10,600	650	4,300
Contracted Services	-	4,200	-	4,170	-
	58,400	59,400	84,900	71,818	85,000
Net Department Surplus (Deficit)	$ (39,800)	$ (53,100)	$ (66,800)	$ (63,986)	$ (69,500)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Library ~ 760

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
REVENUES					
Miscellaneous				152	
Other conditional grants	5,000	5,000	5,000	5,000	5,000
	5,000	5,000	5,000	5,152	5,000
EXPENSES					
Salary and wages	8,400	6,300	7,900	7,128	5,300
Employee Benefits	1,600	900	1,500	344	1,000
Telecommunications	600	500	600	499	700
Office Expense	1,000	500	500	873	100
Utilities	6,600	4,500	6,600	6,472	8,100
Repairs and Maintenance	60,000	3,500	14,000	4,431	4,300
Operational Equip & Supplies	500	-	500	391	800
Contracted Services	-	-	-	468	-
Debenture interest	3,000	3,200	3,100	3,208	3,300
	81,700	19,400	34,700	23,814	23,600
Net Department Surplus (Deficit)	$ (76,700)	$ (14,400)	$ (29,700)	$ (18,662)	$ (18,600)
Reserve Funding					
Transfer from Operating Reserves & Accumulated Surplus	46,000	-	-	-	-
	46,000	-	-	-	-
Net Surplus (Deficit)	$ (30,700)	$ (14,400)	$ (29,700)	$ (18,662)	$ (18,600)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Museum & Historical ~ 770

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Grants to Organizations	10,000	10,000	10,000	10,000	10,000
	10,000	10,000	10,000	10,000	10,000
Net Department Surplus (Deficit)	$ (10,000)	$ (10,000)	$ (10,000)	$ (10,000)	$ (10,000)

Town of Wolfville
2021/22 Draft Operating Budget - V4
Partner Contributions ~ 840

Changed from V1 to V2
Changed V2 to V3
Changed V3 to V4

	2021/22	2020/21		2019/20	
	Budget	Forecast/Act	Budget	Actual	Budget
EXPENSES					
Local partners					
Grant to WBDC	100,000	30,000	100,000	100,000	100,000
Regional partners					
Regional Solid Waste	512,600	505,800	509,600	542,931	520,200
Transit services	217,000	174,900	172,900	168,317	152,700
Valley Community Fibre	2,000	2,000	2,000	(3,202)	1,500
Regional Development	-	-	-	-	-
Kings Region -cooperative Initiatives	30,000	15,800	20,800	9,349	25,800
Provincial partners					
Annapolis Valley Regional Libra	30,300	25,000	25,000	24,320	25,000
Education	722,000	724,400	736,800	763,704	763,900
Corrections	82,000	81,700	82,000	81,976	82,000
Regional Housing Authority	50,000	53,000	40,000	50,786	40,000
Assessment services	78,000	77,300	78,000	76,732	77,000
	1,823,900	1,689,900	1,767,100	1,814,913	1,788,100
Net Department Surplus (Deficit)	$ (1,823,900)	$ (1,689,900)	$ (1,767,100)	$ (1,814,913)	$ (1,788,100)

NOTE: Increased Transit Costs to be offset by use of COVID Safe Reopening Grant Funds

Town of Wolfville
2021/22 Ten Year Capital Investment Plan V4
Fiscal 2021/22 to 2030/31

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
changes after Nov COW Draft		BUDGET FOCUS								Accessibility Deadline	
		2021/22	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**
Information Technology											
Servers		-	-	-	-	-	15,000	-	-	-	-
Other IT Upgrades											
Video/Audio improvements to Chambers		15,000									
Total Other		15,000	-	-	-	-	-	-	-	-	-
Information Technology		**$ 15,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 15,000**	**$ -**	**$ -**	**$ -**	**$ -**
Municipal Buildings											
Town Hall Civic Complex											
New or Major Renovated Facility			-	-		50,000	50,000	-	2,100,000		
Community Development/Public Works											
Accessibility/Reno upgrade - cfwd		700,000									
Dykeland Facility - Yard Upgrades											
Salt Shed & Parks Shed		430,000									
Fire Hall											
New Facility				-	25,000	50,000		2,500,000	-		
RCMP Detachment											
Library											
New Facility		75,000	50,000	50,000		0	2,362,500				
Total Municipal Buildings		**$ 1,205,000**	**$ 50,000**	**$ 50,000**	**$ 25,000**	**$ 100,000**	**$ 2,412,500**	**$ 2,500,000**	**$ 2,100,000**	**$ -**	**$ -**
Protective Services											
Fire Department											
Trucks											
Aerial Ladder Truck	2000				1,350,000	-					
Pumper 1 E-One Cyclone											
Ford 4*4 Utility Vehicle											
Pumper 3 E-One Cyclone	2003			800,000							
Tanker 6 Int'l Pumper/Tanker	2006										500,000
Rescue 4 Pumper Rescue	2007								750,000		
Ford Haz Matt vehicle										120,000	
Fire Trucks		-	-	800,000	1,350,000	-	-	-	750,000	120,000	500,000

Town of Wolfville
2021/22 Ten Year Capital Investment Plan V4
Fiscal 2021/22 to 2030/31

changes after Nov COW Draft

BUDGET FOCUS

Accessibility

Deadline

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
		2021/22	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**
Equipment											
Equipment Upgrades		20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
SCBA Apparatus		30,000	30,000								
Misc Fire Equipment		50,000	50,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Total Fire Department		**$ 50,000**	**$ 50,000**	**$ 820,000**	**$ 1,370,000**	**$ 20,000**	**$ 20,000**	**$ 20,000**	**$ 770,000**	**$ 140,000**	**$ 520,000**
Transportation Services											
Public Works - Fleet Inventory											
veh # 18 - 2019 Wacker Neuson Loader	7 yrs			-		-		175,000	-		
veh # 19 - PW 2017 F250 3/4 ton Crew C	7 yrs		-	-	55,000					-	-
veh # 21 - PW 2015 F250 4*4	7 yrs	-	89,000			-			-	95,000	
veh # 22 - PW 2014 Ford F150 1/2 ton	8	-	40,000			-				-	50,000
veh # 23 - PW 2016 F450 1 ton 4*4	6		97,000			-			100,000		
veh # 25 - PW 2017 5 ton plow truck	6			215,000						-	240,000
veh # 27 - PW 2014 JD backhoe	7					-	175,000				
veh # 28 - PW 2013 Case loader	10		195,500						-		
veh # 29 - PW 2012 trackless (sidewalk Tractor)							-	-	195,000		
veh #15 - PW LH Truck 2019 F150	8	-	-	-	-	-	-	45,000			
veh # 24 - PW 2011 asphalt recycler				110,000							
veh # 51 - PW 2017 trackless				-		170,000				-	-
Parks Dept - Fleet/Equip											
veh # 20 - 2014 Ford 1/2 pick up	7	-	40,000							45,000	
veh # 26 - Parks 2016 Ford F250 3/4 ton crew ca		-		75,000				-	-		80,000
veh # 31 - Parks 2001 Suzuki micro truck	9		25,000				-			-	30,000
veh #34 - Parks 2000 Suzuki micro truck	9		25,000					-			30,000
veh #16 - Parks LH Truck 2019 F150	8							45,000			
veh # 39 - Parks 2015 JD mower X730						18,000					20,000
veh # 40 -2015 JD Parks loader 1025			25,000					30,000			
veh # 37 - Parks 2017 JD mower/backho	6?			-	45,000			-			
veh # 38 - Parks 2017 JD mower 1023E			25,000			-			25,000		
veh # 33 - Parks 2015 F450 3/4 ton crew cab 4*4									-	85,000	
veh #59 - Parks 2020 Kubota Mower											
veh #new - Parks 3/4 ton full crew cab 4*4		80,000									
Chipper											
Water & Wastewater Dept's											
Veh #30 - Works 2014 Ford F150	WTP	40,000									
veh # 32 - Works 2017 F250 3/4 ton 4*4	WWTP		-		50,000				-		
Other											
veh # 17 - Bylaw car 2013 Ford Fusion				30,000			-				
flail mower						-					
Rec Dept - 2011 Bike Trailer					15,000						
Fleet/Equipment		120,000	561,500	430,000	165,000	188,000	175,000	295,000	320,000	225,000	450,000

Town of Wolfville
2021/22 Ten Year Capital Investment Plan V4
Fiscal 2021/22 to 2030/31

changes after Nov COW Draft

BUDGET FOCUS

Accessibility Deadline

		Year 1 2021/22	Year 2 2022/23	Year 3 2023/24	Year 4 2024/25	Year 5 2025/26	Year 6 2026/27	Year 7 2027/28	Year 8 2028/29	Year 9 2029/30	Year 10 2030/31
Transportation Infrastructure											
includes active transport corridors, street, sidewalk, sanitary & storm sewer where applicable											
Earnscliffe Ave. - civic 16 to end	150 m			-	600,000						
Earnscliffe Ave. Main to civic 16	180 m		-	720,000							
Gaspereau - civic 128 to Fowler	170 m									-	-
Gaspereau - civic 94 to civic 128	180 m								-	-	720,000
Highland - Prospect to Catherine Ct	405m	$ 1,620,000									
Highland - Catherine Ct to Skyway	330 m		1,320,000								
Maple Ave - civic 43 to Civic 83	230 m								-	-	
Maple Ave - Main to civic 19	210 m		-	-	-		630,000				
Maple Ave -civic 19 to civic 43	210 m						-	-		630,000	
Maple Ave -civic 83 to end	250 m										
Pleasant - Huron to Orchard	240 m							-	960,000		
Pleasant - Sherwood to Huron	180 m	-	-		540,000						
University - civic 18 to Crowell Dr	200 m							-	-	800,000	
University - Main to civic 18	200 m					-	-	800,000			
Victoria - Main to King	170 m			680,000				-	-		
Westwood - Main to Irving Centre	350 m										
Wickwire - Little to Beckwith	300 m					-	1,200,000				
Parking lots ~ Dykeland/Elm		moved to Community Infrastructure			-						
Guard Rail - Orchard Ave		40,000									
In House - Project Mgt position		-	-	-	-	-	-	-	-	-	-
Engineering - design work year in advance		66,000	70,000	57,000	-	91,500	40,000	48,000	71,500	36,000	118,500
		1,726,000	1,390,000	1,457,000	1,140,000	91,500	1,870,000	848,000	1,031,500	1,466,000	838,500
Land Acquisitions/Disposals											
		-	-	-	-	-	-	-	-	-	-
Streets, Sidewalks, Parking Lots		1,726,000	1,390,000	1,457,000	1,140,000	91,500	1,870,000	848,000	1,031,500	1,466,000	838,500

Town of Wolfville
2021/22 Ten Year Capital Investment Plan V4
Fiscal 2021/22 to 2030/31

changes after Nov COW Draft		BUDGET FOCUS								Accessibility Deadline		
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
		2021/22	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	
Other Transportation												
Decorative Light Posts - to Willow, & Up Gaspereau		100,000	235,000									
Wayfinding - might be op		50,000										
Flood Risk Mitigation - partial cfwd				50,000	1,000,000			-				
Generator replacements - Town Hall	2006		80,000									
Main Lift Station	2015										80,000	
Crosswalks												
Upgrades, eg. RRB/accessibility		80,000										
Storm Water Mgt Plan												
		230,000	315,000	50,000	1,000,000	-	-	-	-	-	80,000	
Other Transportation												
TOTAL TRANSPORTATION		**$ 2,076,000**	**$ 2,266,500**	**$ 1,937,000**	**$ 2,305,000**	**$ 279,500**	**$ 2,045,000**	**$ 1,143,000**	**$ 1,351,500**	**$ 1,691,000**	**$ 1,368,500**	
Environmental Health Services												
Storm Water Management												
included in Street infrastructure above												
Storm Water System		-	-	-	-	-	-	-	-	-	-	
Sewage Treatment/Collection												
Sewer Treatment												
Treatment plant expansion		-			-	2,500,000						
Flood Mitigation @ STP			50,000	400,000			-					
Generator - STP	2015										80,000	
		-	50,000	400,000	-	2,500,000	-	-	-	-	80,000	
Sanitary Sewer Collection												
included in Street infrastructure above												
Condition Assessment - video sewer lines		75,000										
		75,000	-	-	-	-	-	-	-	-	-	
TOTAL Environmental Health Services		**$ 75,000**	**$ 50,000**	**$ 400,000**	**$ -**	**$ 2,500,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 80,000**	

Town of Wolfville
2021/22 Ten Year Capital Investment Plan V4
Fiscal 2021/22 to 2030/31

changes after Nov COW Draft	BUDGET FOCUS								Accessibility Deadline	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	2021/22	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**
Community Infrastructure										
Infrastructure										
West End Gateway										
Clock Park Lighting										
Old Burial Ground - Entrance Pathway/Seatir	-									
East End Gateway										
Replace VIC - partial cfwd	600,000									
Other Gateway Upgrades - sidewalk/street la	340,000	250,000								
Public Art Project	28,000									
Nature Preserve - dam upgrade	50,000	-	-	400,000	400,000					
West End Parkland & Trail	10,000									
Trail system		20,000	30,000	10,000						
neighborhood	-	150,000								
Reservoir Park										
Washroom/Change Rooms	-	100,000								
Trails and bike Skills Park	20,000									
Main walking trails, steps into large pond,	-									
Paving of parking Lot	20,000									
Rec Centre										
Add two pickelball courts	145,000									
Farmers Market - open space enhancements										
Parking Lot - Dykeland/Elm cul de sac	-	175,000								
Pond & Park area			100,000							
Basinview										
Community Engagement & Design	7,500									
Park Build		100,000								
Allow for Future Park Development					-	100,000	100,000	100,000	100,000	100,000
	$ 1,220,500	**$ 795,000**	**$ 130,000**	**$ 410,000**	**$ 400,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**
GRAND TOTAL ALL PROJECTS	**$ 4,641,500**	**$ 3,211,500**	**$ 3,337,000**	**$ 4,110,000**	**$ 3,299,500**	**$ 4,592,500**	**$ 3,763,000**	**$ 4,321,500**	**$ 1,931,000**	**$ 2,068,500**
									$ 39,531,500	**$ 35,276,000**

Town of Wolfville

Capital Budget

2021/22 Funding Summary

PROJECT	Total Budget Cost	Internal Sources: Current & Past Years Budget – Capital Reserves	Internal Sources: Current & Past Years Budget – Operating Reserves	Internal Sources: Future Years Budget – Long Term Debt	External Sources: Fed Grant Gas Tax	External Sources: Energy Grants	External Sources: Fed/Prov other	External Sources: Other	Town Water Utility
Information Technology									
Infrastructure Upgrades	15,000	15,000						-	
Municipal Buildings		-							
Dykeland Facility - Pwks/Community Dev	700,000	500,000		200,000					
Dykeland Facility - Salt & Parks shed/storage	430,000	180,000		250,000					
Library	75,000	-	75,000						
Fire Services									
Equipment Upgrades	50,000	50,000							
Vehicles	-								
Public Works Equipment									
Vehicle/Equipment replacement	120,000	80,000							40,000
Street reconstruction projects	1,726,000	270,750	40,000	204,750	810,000		-		400,500
Other	230,000	40,000	90,000	70,000			30,000		
Environmental Health Services									
Sewage Treatment	-	-		-	-				
Sewage Collection	75,000	75,000							
Storm Water Management									
Community Services		-							
Replace VIC	600,000	-		400,000			200,000		
Other East End Gateway	340,000	226,667					113,333		
Public Art	28,000	28,000							
Nature Preserve	50,000	-	50,000						
West End Park & Trails	10,000	-	10,000						
Reservoir Park	40,000	20,000	20,000						
Rec Centre - pickleball	145,000	97,000					43,000	5,000	
Farmers Market/Dykeland - Parking Lot	-	-							
Basin Drive Neighborhood Park	7,500	-	7,500						
Totals	$ 4,641,500	$ 1,582,417	$ 292,500	$ 1,124,750	$ 810,000	$ -	$ 386,333	$ 5,000	$ 440,500

Town of Wolfville

Capital Budget

2022/23 Funding Summary

PROJECT	Total Budget Cost	Internal Sources: Current & Past Years Budget – Capital Reserves	Internal Sources: Current & Past Years Budget – Operating Reserves	Internal Sources: Future Years Budget – Long Term Debt	External Sources: Fed Grant Gas Tax	External Sources: Energy Grants	External Sources: Fed/Prov other	External Sources: Other	Town Water Utility
Information Technology									
Infrastructure Upgrades	-	-						-	
Municipal Buildings	50,000	-	50,000						
Fire Services									
Equipment Upgrades	50,000	50,000							
Vehicles	-	-		-					
Public Works Equipment									
Vehicle/Equipment replacement	561,500	477,300						84,200	
Street reconstruction projects	1,390,000	270,000	-	270,000	520,000		-		330,000
Other	315,000	-		240,000			75,000		
Environmental Health Services									
Sewage Treatment	50,000	-	50,000				-		
Sewage Collection	-	-							
Storm Water Management									
Community Services	795,000	221,000	40,000	451,000			83,000		
Totals	$ 3,211,500	$ 1,018,300	$ 140,000	$ 961,000	$ 520,000	$ -	$ 158,000	$ 84,200	$ 330,000

Town of Wolfville
Capital Budget
2023/24 Funding Summary

PROJECT	Total Budget Cost	Internal Sources: Current & Past Years Budget – Capital Reserves	Internal Sources: Current & Past Years Budget – Operating Reserves	Internal Sources: Future Years Budget – Long Term Debt	External Sources – Fed Grant Gas Tax	External Sources – Energy Grants	External Sources – Fed/Prov other	External Sources – Other	Town Water Utility
Information Technology									
Infrastructure Upgrades	-	-						-	
Municipal Buildings	50,000	50,000							
Fire Services									
Equipment Upgrades	20,000	20,000							
Vehicles	800,000	800,000							
Public Works Equipment									
Vehicle/Equipment replacement	430,000	365,500						64,500	
Street reconstruction projects	1,457,000	482,500		482,500	322,000		-		170,000
Other	50,000	-	50,000						
Environmental Health Services									
Sewage Treatment	400,000	-		400,000					
Sewage Collection	-	-							
Storm Water Management									
Community Services	130,000	-	130,000						
Totals	$ 3,337,000	$ 1,718,000	$ 180,000	$ 882,500	$ 322,000	$ -	$ -	$ 64,500	$ 170,000

Town of Wolfville
Water Utility
2021/22 Draft Operating Budget V4

	2020/21		2021/22	2022/23	2023/24	2024/25
	Forecast	Budget	Budget	Three Year Budget Projection		
Operating Revenue: Dept 950						
Metered Sales	693,200	721,200	700,000	721,200	721,200	721,200
Fire Protection Charges	396,000	396,000	396,000	396,000	396,000	396,000
Sprinkler Service	10,800	8,900	10,800	10,800	10,800	10,800
Other	16,400	4,500	15,000	15,000	15,000	15,000
Job Cost Billings	3,000	12,000	3,000	6,000	6,000	6,000
Interest on Arrears	1,300	1,800	3,000	3,000	3,000	3,000
Investment Income	5,200	12,000	5,500	6,000	6,500	6,500
	1,125,900	**1,156,400**	**1,133,300**	**1,158,000**	**1,158,500**	**1,158,500**
Operating Expenditures:						
Power & Pumping 962						
Salary and wages	8,700	11,800	12,000	12,200	12,400	12,600
Employee Benefits	1,600	2,400	2,400	2,400	2,500	2,500
Utilities	83,500	91,000	85,000	86,700	88,400	90,200
Operational equipment & supplies	4,000	8,000	8,000	8,000	8,000	8,000
Contracted Service	300	16,000	16,000	8,000	8,000	8,000
	98,100	129,200	123,400	117,300	119,300	121,300
Treatment 964						
Salary and wages	17,200	15,700	17,500	17,900	18,300	18,800
Employee benefits	3,000	3,200	3,500	3,600	3,700	3,800
Professional Development						
Utilities	6,000	6,500	6,500	6,700	6,900	7,100
Repairs & maintenance - Bldg	-	2,400	2,400	1,000	1,000	1,000
Operational equipment & supplies	55,100	50,000	60,000	60,600	61,200	61,800
Equipment Maintenance	-					
Contracted Service	16,900	17,800	18,000	18,200	18,400	18,600
	98,200	95,600	107,900	108,000	109,500	111,100
Transmission & Distribution 966						
Wages	110,500	106,200	111,300	113,500	115,800	119,000
Employee Benefits	18,800	21,000	22,300	22,700	23,200	23,800
Meetings, Meals and Travel	200	1,000	1,000	1,000	1,000	1,000
Telecommunications	800	1,500	1,500	1,500	1,500	1,500
Vehicle Fuel	1,100	3,000	3,000	3,000	3,000	3,000
Vehicle Repairs & Maintenance	18,800	14,400	14,400	14,400	14,400	14,400
Vehicle Insurance	600	400	400	400	400	400
Operational equipment & supplies	118,500	71,000	80,000	80,000	80,000	80,000
Equipment Maintenance	2,000	5,000	5,000	5,000	5,000	5,000
Contracted Service	26,000	30,000	30,000	30,300	30,600	30,900
	297,300	253,500	268,900	271,800	274,900	279,000
Administration And General 970						
Salary/wages	148,000	145,000	149,900	153,600	157,400	161,300
Employee Benefits	29,400	29,000	30,000	30,700	31,500	32,300
Meetings, Meals & Travel	100	400	400	400	400	400
Professional development	-	5,000	5,000	5,000	5,000	5,000
Membership dues & fess	500	500	500	500	500	500
Advertising	-	200	200	200	200	200
Office expense	31,500	34,000	34,000	34,300	34,600	34,900
Legal	-	300	300	300	300	300
Insurance	13,300	10,500	10,500	10,600	10,700	10,800
Audit	6,000	6,000	6,000	6,000	6,000	6,000
Miscellaneous	-					
Contracted services	20,000	20,000	30,000	20,000	20,000	20,000
Doubtful accounts allowance	1,000	1,000	1,000	1,000	1,000	1,000
	249,800	251,900	267,800	262,600	267,600	272,700
Depreciation	160,000	160,000	160,000	160,000	160,000	160,000
Property Taxes	53,200	56,500	53,700	54,800	55,900	57,000
Operating Expense total	**956,600**	**946,700**	**981,700**	**974,500**	**987,200**	**1,001,100**
NET OPERATING REVENUE:	**169,300**	**209,700**	**151,600**	**183,500**	**171,300**	**157,400**

Town of Wolfville
Water Utility
2021/22 Draft Operating Budget V4

	2020/21		2021/22	2022/23	2023/24	2024/25
	Forecast	Budget	Budget	Three Year Budget Projection		
Non Operating Expenditures:						
Debenture Interest	20,500	20,500	18,800	18,000	17,200	16,300
Debenture Principle	80,400	80,400	37,000	37,000	37,000	37,000
Future debt repymts	-		-	9,200	35,100	72,500
Other Debt Charges	1,000	500	500	500	500	500
Capital From Revenue	20,000	45,000	70,000	70,000	70,000	-
Dividend to Town	50,000	50,000	50,000	50,000	50,000	50,000
	171,900	**196,400**	**176,300**	**184,700**	**209,800**	**176,300**
Net Surplus (Deficit)	**$ (2,600)**	**$ 13,300**	**$ (24,700)**	**$ (1,200)**	**$ (38,500)**	**$ (18,900)**
Accumulated Surplus, Op Fund, Opening	**$ 584,266**		**$ 581,666**	**$ 376,966**	**$ 254,366**	**$ 215,866**
Transfer to Water Capital Projects			**(180,000)**	**(121,400)**	-	-
Accumulated Surplus, Op Fund, Opening	**581,666**	**-**	**376,966**	**254,366**	**215,866**	**196,966**
Capital Reserve Fund at Year End						
Water Depreciation Reserve Acct Balance	**$ 239,100**	**$ -**	**$ 13,600**	**$ -**	**$ -**	**$ 10,000**

Town of Wolfville
Water Utility -Draft Five Year Capital Plan
Fiscal 2021/22 to 2025/26

	Year 1 **2021/22**	Year 2 **2022/23**	Year 3 **2023/24**	Year 4 **2024/25**	Year 5 **2025/26**
Equipment					
Remote Meter System	30,000	35,000			
Generator	80,000				
veh #30 - 1/2 pick up	40,000				
Total Other	150,000	35,000	-	-	-
					Ph II STP
Collection System					
Highland - Prospect to Catherine Court	400,500		-		
Highland - Catherine Court to Skyway		330,000			
Earnscliffe - Main to civic 16			180,000		
Victoria - Main to King			170,000		
Earnscliffe - civic 16 to end				150,000	
	400,500	330,000	350,000	150,000	-
Treatment System					
Transmission Line to WTP					
Westwood to University Ave	315,000				
University Ave to Skyway		360,000			
Cherry Lane to Westwood			495,000		
Skyway to WTP				400,000	
	315,000	360,000	495,000	400,000	-
GRAND TOTAL ALL PROJECTS	**$ 865,500**	**$ 725,000**	**$ 845,000**	**$ 550,000**	**$ -**
Funding					
Depreciation Reserve Funds - current year	160,000	160,000	160,000	150,000	
Depreciation Reserve Funds - accumulated	225,500	13,600			
Capital From Revenue	70,000	70,000	70,000	-	
Long Term Debt	230,000	360,000	615,000	400,000	-
Capital From Surplus	180,000	121,400			
	865,500	725,000	845,000	550,000	-

REQUEST FOR DECISION 012-2021
Title: Debt Guarantee - VWRM
Date: 2021-03-09
Department: Finance

SUMMARY

Debt Guarantee – Valley Waste Resource Management

Annually the Town is involved in the budget process for Valley Waste Resource Management (VWRM), including any debt guarantees that may be required in relation to the VWRM capital budget. This can involve debt related to the current year capital projects, or can relate to prior years and related debenture balloon payments.

The request before Council with this report relates to a balloon payment/refinancing of the principal outstanding on VWRM Debenture 36A-1. Part of the process for VWRM in arranging debenture financing is to have the Intermunicipal Service Agreement (IMSA) partners provide debt guarantees during the process leading up to the debenture issue.

This is a housekeeping matter that involves required paperwork related to a debenture previously approved by all the partners. VWRM debenture 36A-1 was first dealt with by Wolfville Council by way of RFD 049-2015.

DRAFT MOTION:

That Council guarantees a share of the Valley Waste Resource Management Authority's February Temporary Borrowing Resolution/Debenture Refinance 36A-1 (in the amount of $462,731), with Wolfville's share being 8.31% or $38,453 as per attached loan guarantee form.

1) CAO COMMENTS

The CAO supports the recommendations of staff.

2) LEGISLATIVE AUTHORITY

- Municipal Government Act - Section 88
- VWRM IMSA

3) STAFF RECOMMENDATION

- That Council approve the loan guarantee requested by VWRM to address the ballon payment refinance requirement of debenture 36A-1.

4) REFERENCES AND ATTACHMENTS

- Standard (new) loan guarantee resolution provided by VWRM (attached)
- VWRM TBR – Refinance debenture 36A-1, including schedule A showing breakdown of guarantees, and schedule B noting the Capital Budget items originally funded by way of debt (attached)
- RFD 049-2015 Debt Guarantee (July 2015)

5) DISCUSSION

Similar to the Town, VWRM must go through the process required to access debenture funding for its capital program. As one of the IMSA parties, Wolfville must guarantee its share of any long term borrowings of VWRM. This paperwork deals with the documentation needed to ensure the TBR can be approved by the Minister. The VWRM Board approved this refinance at their Feb. 17th meeting.

The breakdown of guarantees by the IMSA group is:

MUNICIPAL PARTNER	GUARANTEE PERCENTAGE	GUARANTEE AMOUNT
Municipality of the County of Kings	74.56%	345,012.00
Town of Kentville	10.05%	46,504.00
Town of Wolfville	8.31%	38,453.00
Town of Berwick	3.53%	16,335.00
Town of Middleton	2.50%	11,568.00
Town of Annapolis Royal	1.05%	4,859.00
Total Capital Requirements for Borrowing Resolution	**100%**	**462,731.00**

6) FINANCIAL IMPLICATIONS

There is no immediate budget impact to the Town as the annual budget of VWRM takes into account debenture repayments.

7) REFERENCES TO COUNCIL STRATEGIC PLAN AND TOWN REPORTS

None provided for this RFD.

8) COMMUNICATION REQUIREMENTS

Once approved guarantee is signed, advise VWRM staff of Councils decision and provide duly signed documentation to VWRM.

9) ALTERNATIVES

Not provide the guarantee. This option would require VWRM to seek a different mechanism to fund its refinancing of an already approved debenture issue. Since Council has already approved their budget, not providing the guarantee is not a practical.

VALLEY REGION SOLID WASTE-RESOURCE MANAGEMENT AUTHORITY
MUNICIPAL PARTNER GUARANTEE RESOLUTION
COUNCIL OF
Town of Wolfville

Guarantee Share Amount: $38,453.00 Purpose: Refinance 36-A-1Balloon Payment(Per Sch.B)

WHEREAS the Valley Region Solid Waste-Resource Management Authority (hereinafter referred to as the Authority) was incorporated on October 1, 2001 pursuant to Section 60 of the Municipal Government Act;

WHEREAS the Authority has determined to borrow the aggregate principal amount of Four Hundred Sixty Two Thousand, Seven Hundred and Thirty One Dollars ($462,731.00) for purpose of Refinance 36-A-1Balloon Payment(Per Sch.B) ;

WHEREAS the Authority has requested the Council of the Town of Wolfville, a municipality that executed the instrument of incorporation of the Authority, to guarantee said borrowing; and,

WHEREAS pursuant to Section 88 of the Municipal Government Act, no guarantee of a borrowing by a municipality shall have effect unless the Minister if Municipal Affairs and Housing has approved of the proposed borrowing or debenture and of the proposed guarantee;

BE IT THEREFORE RESOLOVED

THAT the Council of the Town of Wolfville does herby approve the borrowing of the aggregate principal amount of Four Hundred Sixty Two Thousand, Seven Hundred and Thirty One Dollars ($462,731.00) for the purpose set out above;

THAT subject to the approval of the Minister of Municipal Affairs and Housing of the borrowing by the Authority and the approval of the Minister of Municipal Affairs and Housing of the guarantee, the Council unconditionally guarantee repayment of Thirty Eight Thousand, Four Hundred and Fifty Three Dollars ($38,453.00) for the purpose set out above; and

THAT upon the issue of the debentures, the Mayor and Chief Administrative Officer of the Municipality do sign the guarantee attached to each of the debentures and affix thereto the corporate seal of the Municipality.

THIS IS TO CERTIFY that the foregoing is a true copy of a resolution read and duly passed at a meeting of the Council of the Town of Wolfville held on the _____ day of _____, 2021.

GIVEN under the hands of the Clerk and under the seal of the Municipality this _____ day of _____, 2021.

_____
Clerk

VALLEY REGION SOLID WASTE-RESOURCE MANAGEMENT AUTHORITY

TEMPORARY BORROWING RESOLUTION

Amount: $ 462,731.00 Refinance 36-A-1, Balloon Payment

WHEREAS the Valley Region Solid Waste-Resource Management Authority (hereinafter referred to as the Authority) was incorporated on October 1, 2001 pursuant to Section 60 of the Municipal Government Act;

WHEREAS the Town of Berwick, the Town of Kentville, the Town of Middleton, the Town of Wolfville, the Town of Annapolis Royal, and the Municipality of the County of Kings entered into an inter-municipal services agreement pursuant to Section 60 of the Municipal Government Act;

WHEREAS the Authority pursuant to the inter-municipal agreement states that the body corporate shall be vested with the power to borrow money for the purpose of capital projects, including the paying or retiring of debentures, the specific amounts and descriptions of which are contained in Schedule B;

WHEREAS any borrowing and/or entering into debt obligations of the municipal body corporate must be approved by the municipal units and the Municipal Guarantee percentages and amounts for each of the six municipal parties are attached at Schedule "A"; and,

WHEREAS pursuant to Section 88 of the Municipal Government Act no money shall be borrowed by a municipality, village, committee by an inter-municipal agreement or service commission pursuant to this Act or another Act of the Legislature until the proposed borrowing and associated municipal guarantees have been approved by the Minister of Municipal Affairs and Housing;

BE IT THEREFORE RESOLOVED

THAT under the authority of Section 92 of the Municipal Government Act, and subject to the approval of the Minister of Municipal Affairs and Housing, the Authority borrow a sum or sums not to exceed Four Hundred Sixty Two Thousand, Seven Hundred and Thirty One Dollars ($ 462,731.00) for the purpose set out above;

THAT the sum be borrowed by the issue and sale of debentures of the Authority of an amount as the Authority deems necessary;

THAT pursuant to Section 92 of the Municipal Government Act, the issue of debentures be postponed and that a sum or sums not to exceed Four Hundred Sixty Two Thousand, Seven Hundred and Thirty One Dollars ($ 462,731.00) in total be borrowed from time to time from any chartered bank or trust company doing business in Nova Scotia;

THAT the sum be borrowed for a period not exceeding Twelve (12) Months from the date of the approval of the Minister of Municipal Affairs and Housing of this resolution;

THAT the interest payable on the borrowing be paid at a rate to be agreed upon; and,

THAT the amount borrowed be repaid from the proceeds of the debentures when sold.

THIS IS TO CERTIFY that the foregoing is a true copy of a resolution read and duly passed at a meeting of the Valley Region Solid Waste-Resource Management Authority held on the 17 day of February, 2021.

GIVEN under the hands of the Chair and the Secretary and under the seal of the Authority this 17 day of FEBRUARY 2021.

Chair

Secretary

VALLEY REGION SOLID WASTE-RESOURCE MANAGEMENT AUTHORITY

TEMPORARY BORROWING RESOLUTION

Amount: $ 462,731.00

Refinance 36-A-1, Balloon Payment

SCHEDULE "A"

MUNICIPAL GUARANTEES

MUNICIPAL PARTNER	GUARANTEE PERCENTAGE	GUARANTEE AMOUNT
Municipality of the County of Kings	74.56%	345,012.00
Town of Kentville	10.05%	46,504.00
Town of Wolfville	8.31%	38,453.00
Town of Berwick	3.53%	16,335.00
Town of Middleton	2.50%	11,568.00
Town of Annapolis Royal	1.05%	4,859.00
Total Capital Requirements for Borrowing Resolution	**100%**	**462,731.00**

VALLEY REGION SOLD WASTE-RESOURCE MANAGEMENT AUTHORITY

TEMPORARY BORROWING RESOLUTION

Amount: $462,731.00

Refinance 36-A-1, Balloon Payment

SCHEDULE "B"
CAPITAL PROJECTS

Item	Term	$
Weigh Scale	5	38,212.00
Wind Turbine	15	424,519.00
Total:		**462,731.00**

REQUEST FOR DECISION 013-2021
Title: COVID Safe Restart Agreement - Grant
Date: 2021-03-09
Department: Finance

SUMMARY

COVID Safe Restart Agreement (SRA) Grant

In response to the impact of the COVID-19 pandemic, the Government of Canada worked with provincial governments to provide support to municipalities across the country. The Province of NS and the federal government have provided $67.5 million to support municipalities in this province.

On November 25th, the Town of Wolfville received $384,657 towards the pressures this Town is facing due to COVID. Note these pressures have been experienced during the past year and are expected to continue into next year at a minimum. Financially we may experience issues into 2022/23. The amount received was broken into two components:

- Town operations $322,257
- Transit related $62,400

The use of the grant funding provided has restrictions to help ensure the funding is appropriately used to meet COVID related financial impacts, both in the current year as well as in the coming year(s).

DRAFT MOTION:

That Council approve the framework included in this RFD for use of COVID SRA funds for fiscal 2020/21 and acknowledge a portion of the funds will be placed in an Operating Reserve to be used in the next fiscal year as per the framework recommended.

1) CAO COMMENTS

The CAO supports the recommendations of staff.

2) LEGISLATIVE AUTHORITY

As per January 22, 2021 correspondence from NS Department of Municipal Affairs and Housing.

3) STAFF RECOMMENDATION

Staff recommend the framework outlined in this report to guide the use of COVID SRA funds in the current fiscal year and continuation of that framework into next year (2021/22) at a minimum.

It should be acknowledged that some funding may remain in a Reserve account until 2022/23 to support financial impacts anticipated arising in that year.

4) REFERENCES AND ATTACHMENTS

N/A

5) DISCUSSION

Early in the COVID pandemic lockdown the Nova Scotia Federation of Municipalities (NSFM) worked with municipalities to estimate the potential financial impact of COVID on municipal operations. At that time expected negative impacts involved reduced/lost revenues in areas of Deed Transfer Tax, interest on investments, interest on customer arrears, and programming revenues, and increased operating costs for facilities (cleaning, plexi-glas, masks, etc). Each municipality provided best guess estimates to the NSFM to help frame the impact by dollar magnitude. Many of the impacts were experienced as anticipated, while others were not. In addition, a number of impacts were experienced that were not initially identified.

Ultimately, the Province of NS worked with the Government of Canada to secure $67.5 million to support municipalities with COVID-19 *operating* costs. The outline provided by the province to the municipalities states, "*The SRA funding is to help the Town:*

- address increased operating costs resulting from a reduction in revenue due to COVID-19;
- continue to implement social distancing and infection prevention and control protocols required to operate facilities, public spaces and effectively deliver services to citizens;
- support safe transit operations and innovative solutions required to adjust to modified capacity; and
- acquire additional PPE.

Based on a teleconference by DMAH with municipalities on January 27th (attended by the CAO and Director of Finance), as well as follow up conversations with counterparts throughout the province, staff identified a need to be clear in the manner in which the funds would be used by the Town and that such use should be clearly communicated to Council. Council approval, much like the year end audited financial statements, is sought to allow formal recognition.

The following list summarizes the intended use of the COVID SRA funds.

- Lost water/sewer revenues
    - Although not part of the initial information provided to the NSFM, it became apparent after the June 2020 Water/Sewer billing run that consumption had dropped below normal and expectations.
    - Key to this impairment in revenues were customers in the commercial sector and Acadia University. A review of 21 such accounts showed an average drop in consumption of almost 50% compared to the same period the year before.
    - Overall (all customers), the Utility had billings that were 2.7% to 5.4% less than budget each quarter.
    - Final impact will be determined after the March billing run in a few weeks.
- Lost interest on investments
    - The Bank of Canada made multiple prime rate decreases in the early days of the pandemic, impacting the return on investment of the Town's cash balances.
    - Documentation is being compiled to support this COVID related impact.
- Decreased interest on arrears during the period Council waived the requirement to charge the penalty on customer accounts. This was directly related to trying to help the community with the financial impact of COVID.
- Allowance to cover expected reductions in commercial assessments in 2021/22 and 2022/23 as PVSC starts to deal with reduced business incomes, ultimately impacting assessment valuations.

- Increased operating costs
    - The Town had to obtain appropriate Personal Protective Equipment (PPE) to ensure required services were maintained for the public. Examples here would include face masks, hand sanitizer and plexi-glas.
    - Increased signage at Town Hall to ensure public health protocols being followed.
- Costs to adapt to a virtual meeting platform for Town Meetings
    - Initially this involved the addition of Zoom to the Town's available IT infrastructure
    - It also relates to work currently underway in adapting technology in the Council Chambers to provide a higher quality virtual link to the public.

- Additional costs of election process for things such as extra staff resources at polling stations to ensure social distancing protocols were in place. Supplies for signage to help ensure public health protocols were being followed.
- The Town's Stay Healthy Main Street Pilot Project in July of 2020 was originally conceived as a way to provide additional space within the downtown core to aid adherence to public health protocols around social distancing. Although it had aspects of active transportation/mobility elements it's focus was to provide additional space for both pedestrians and businesses who would be able to extend their services to a wider patio space.
- Six month extension of the original two year term contract (dating back to early 2019) of the Town's Climate Mitigation Coordinator. This position was originally tied to FCM grant funding with a goal of developing a Climate Action Plan for the Town by March 2021. The COVID pandemic, especially the lockdown periods, has impacted the completion of the full scope of public engagement of this initiative. An additional six months is needed to properly complete the work in order to bring a Climate Action Plan to Council September.

A summary of expected dollar is noted later in this report. It is an *estimated* magnitude of the above items, knowing that many won't be finalized until the completion of the year end financial process.

Municipalities have been informed that any funds not used in the current year are to be carried forward to future years by way of an Operating Reserve. Based on this, staff expect to bring back updates to Council to outline actual dollars used in each fiscal year. This will provide accountability and transparency to the management of the grant funds.

It is also expected that external audits may be performed on individual municipal units to verify proper use of the grant funding.

In terms of Transit portion of the funds, it is expected that approximately half of the amount received will be needed to offset the increase of the Town share of Kings Transit Authority for their 2021/22 Operating Budget. This budget is still in development so the exact amount is unknown at this time. The Transit SRA funds of $62,400 will be carried forward to be utilized in the Town's 2021/22 budget year.

The estimated impact would be as follows for the Town share of SRA funds:

Revenue Shortfalls		
Metered Water revenues	28,000	
Metered Sewer revenue	31,200	
Interest on Investments		
Town Op Bank	20,000	
Reserve accounts	32,000	
Water Utility	8,300	
Interest on Arrears	27,000	
Increased Operaitng Costs		
PPE	12,416	
Additional cost for election		TBD
Stay Healthy Main St project, net of prov grant		TBD
Six month extension for Climate coordiantor	33,000	
Total 2020/21 use of SRA funds	191,916	
Total SRA funds rece'd (non Transit)	322,257	
Balance to carry forward in reserve	**$ 130,341**	

6) FINANCIAL IMPLICATIONS

For the current fiscal year, the legitimate use of COVID SRA funds will indirectly improve the Town's bottom line result for 2020/21. This will have the effect of increasing the Town's overall net surplus for the year. Any net surplus realized by the Town will go into the Town's own Unrestricted Operating Reserve to be used at Council discretion in the future. Final dollar impact will not be available until year end is complete.

7) REFERENCES TO COUNCIL STRATEGIC PLAN AND TOWN REPORTS

Nothing provided for this Report.

8) COMMUNICATION REQUIREMENTS

Part of the Town's year end financial reporting submissions to the province will include a schedule noting the use of COVID SRA funds. Staff will also review with the Town's year end auditor the possible inclusion of a Note Disclosure in the March 31/21 Consolidated Financial Statements.

9) ALTERNATIVES

No alternatives exist at this time. Staff will continue to review possible options to expand the allowable use of funds.

REQUEST FOR DECISION 014-2021
Title: 2021 Spring Debenture Pre-Approval
Date: 2021-03-09
Department: Finance

SUMMARY

2021 Spring Debenture Pre-Approval

Annually the Municipal Finance Corporation (MFC) provides two opportunities for municipalities to participate in debenture issues to meet their long-term debt funding requirements. There is a spring and a fall debenture issue. The dollar amounts leveraged through the combined debt requirements of the province's municipalities allow participants to obtain borrowing rates not otherwise available.

The Town of Wolfville typically participates in the spring issue to obtain long term debt funding for capital projects completed in the previous fiscal year (or completed early in current year). This is the process being followed again this year for a portion of the 2020/21 capital program.

So, the purpose of this report is to complete the process for long term borrowing approved by Council in the 2020/21 Capital Budget. **This is the last formal step required** in order to participate in the 2021 Spring Debenture Issue issued through the MFC. Depending on capital projects that do not get completed within the next month, there may be a need to participate in the fall debenture issue.

The pre-approval process sets the maximum that can be borrowed for the upcoming debenture issue. If projects are incomplete and therefore not eligible to be included, then the full maximum borrowings will not be incurred.

DRAFT MOTION:

That Council approve the attached resolution for pre-approval of participation in the Spring Debenture Issue, with the following **maximum** parameters:

Solar Panels – Public Works Building	$160,000	10 years
Land Acquisition – East End Gateway	$208,600	15 years
TOTAL BORROWING	$368,600	

Maximum average interest rate set at 5.5%

1) CAO COMMENTS

The CAO supports the recommendations of staff.

2) LEGISLATIVE AUTHORITY

- MGA Section 66 - Power to Borrow Money
- MGA Section 88 – Ministerial Approval

3) STAFF RECOMMENDATION

That Council approve the 2021 Spring Debenture Issue funding requirements.

4) REFERENCES AND ATTACHMENTS

- MFC Pre-Approval Resolution Wording (attached)
- Borrowing Certificate – TBR #20/21-01 in amount of 4,268,600 (attached)
- Capital Asset Funding Policy
- RFD 021-2020 – Temporary Borrowing Resolution, 2019/20 Capital (May/19 Council)
- 2020/21 Capital Budget and related funding requirements

5) DISCUSSION

This is one of the steps required in order to participate in the debenture issues processed by the Nova Scotia Municipal Finance Corporation (MFC) each year. ***This is a housekeeping matter at this stage*** as it relates to the 2020/21 capital projects previously approved by Council.

As in past years, this matter is time sensitive. The MFC has set a deadline of April 16th to submit commitment letters for the spring issue.

Last year Council approved Temporary Borrowing Resolution (TBR) #20/21-01. This covered the capital projects included in the 2020/21 Capital Budget for the Town. The TBR was broken down as follows:

Wastewater Treatment Plant Expansion	
(full project cost, debenture will be net of grant)	$3,500,000
Visitor Information Centre	$400,000
Solar Panels – Public Works Building	$160,000
Land Acquisition – East End Gateway	$208,600
Total TBR	**$4,268,600**

NOTE: The amount included for the Wastewater Treatment Plant represents the full budget estimate for that project. The actual long term borrowings will be net of Investing in Canada Infrastructure Grant Program. Expected borrowings on this project will be in the area of $1,300,000.

Typically, the spring debenture covers all projects included in the TBR for the previous year, however this iteration of the process has only the two smaller projects ready for the debenture process.

- The VIC project did not occur over the last year as tender results were well over budget. The project has now been included in the 2021/22 Capital budget.

- The Waste Water Treatment Plant project was undertaken in the past year, however the Director of Public Works now indicates it will not be complete by year end. In fact the completion date may extend into June or July. Only completed projects qualify for participation in the debenture process. This will require the Town to look at the fall debenture issue to pick up the debt funding for this project.

    - This will require some additional work with the province and the bank to extend the TBR currently in place covering this project.
    - It will also require the Town to carry a significant loan balance for an additional six months beyond what would have occurred if the project was completed on schedule. The interest costs will become part of the project costs to be financed in the fall.

As expected, based on funding projections using the Towns Ten Year Capital Investment Plan (CIP), the above noted borrowings can occur without negatively impacting the Town's Debt Service Ratio, which has been in the 7.6% range (according to provincial FCI Report) for last few years. The Province has a guideline that flags a municipality when their Debt Service Ratio exceeds 15%.

As noted during annual capital budget discussions, the Town's Debt Ratio will continue to increase over the next 10 years. This relates to Council's focus to address the existing infrastructure deficit in Town and the need to fund major infrastructure projects. Based on current capital funding model assumptions, the Town will not reach a 15% Debt Ratio until sometime after 2027.

The noted maximum interest rate is the figure suggested by the MFC given current market conditions. In the last two years the final debenture terms have included interest rates lower than the annually suggested threshold. The "maximum" is simply set to ensure the Town is able to participate in the spring debenture issue without having to revise documentation. Timelines do not allow councils to revise parameters and resubmit to the Municipal Finance Corporation (MFC).

6) FINANCIAL IMPLICATIONS

The financial impact of this year's debt requirement was considered as part of the 2020/21 budget approval process. No further analysis is provided here.

7) REFERENCES TO COUNCIL STRATEGIC PLAN AND TOWN REPORTS

Not applicable at this stage. Refer back to Council approval of Annual Operations Plan and related budget documentation.

8) COMMUNICATION REQUIREMENTS

Staff will communicate, in the required format, all information to the NS Municipal Finance Corporation

9) ALTERNATIVES

At this stage no alternatives, as the budget plan included debt financing for the items identified

Name of Unit: __Town of Wolfville_____

Resolution for Pre-Approval of Debenture Issuance Subject to Interest Rate

WHEREAS Section 91 of the *Municipal Government Act* provides that a municipality is authorized to borrow money, subject to the approval of the Minister of Municipal Affairs (hereinafter "the Minister);

AND WHEREAS the resolution of council to borrow for _TBR 20/21-01 Various Purposes_____ was approved by the Minister __June 17, 2020_____;

AND WHEREAS clause 91(1)(b) of the *Municipal Government Act* authorizes the council to determine the amount and term of, and the rate of interest, on each debenture, when the interest on a debenture is to be paid, and where the principal and interest on a debenture are to be paid;

AND WHEREAS clause 91(2) of the *Municipal Government Act* states, that in accordance with the *Municipal Finance Corporation Act*, the mayor or warden and clerk or the person designated by the council, by policy, shall sell and deliver the debentures on behalf of the municipality at the price, in the sums and in the manner deemed proper;

BE IT THEREFORE RESOLVED

THAT under the authority of Section 91 of the *Municipal Government Act*, the

Town of Wolfville
(Name of Unit)

borrow by the issue and sale of debentures a sum or sums not exceeding $_368,600_____ , for a period not to exceed ___15_____ years, subject to the approval of the Minister;

THAT the sum be borrowed by the issue and sale of debentures of the

Town of Wolfville
(Name of Unit)

in the amount that the mayor or warden and clerk or the person designated by the council deems proper, provided the average interest rate of the debenture does not exceed the rate of **5.5%**;

THAT the debenture be arranged with the Nova Scotia Municipal Finance Corporation with interest to be paid semi-annually and principal payments made annually;

THAT this resolution remains in force for a period not exceeding twelve months from the passing of this resolution.

THIS IS TO CERTIFY that the foregoing is a true copy of a resolution duly passed at a meeting of the Council of the

Town of Wolfville
(Name of Unit)

held on the day of 20

GIVEN under the hands of the Mayor/Warden and the Clerk of the

_____
(Name of Unit)

this day of 20

_____
Mayor/Warden

_____
Clerk

NOVA SCOTIA

Department of Municipal Affairs and Housing

Certificate

TEMPORARY BORROWING RESOLUTION

Municipality of the Town of Wolfville

This is to certify that, pursuant to Section 88 of the *Municipal Government Act*, the resolution passed at a duly convened meeting of the Council of the Town of Wolfville on the 28th day of April, 2020 with a request to borrow a sum or sums not exceeding Four Million Two Hundred Sixty-Eight Thousand Six Hundred Dollars ($4,268,600) for purposes and under the terms and conditions as set out within the resolution, is hereby approved.

DATED this 17th day of June, 2020.

Honourable Chuck Porter
Minister of Municipal Affairs and Housing

REQUEST FOR DECISION 015-2021
Title: Flood Risk Study Final Report
Date: 2021-03-09
Department: Planning & Development / Public Works

SUMMARY

Flood Risk Study (Final Report)

Staff have been working for the past year on a detailed Flood Risk Study for the Town, including the inclusion of the study into our new Planning documents (in effect September 2020).

The report's recommendations revolve around:

- Educating and Communicating with our residents and other stakeholders;
- Connecting the two dyke systems through Waterfront Park and 'living shorelines';
- Protecting Sewer Lift Stations and our Treatment Plant;
- Working with REMO on a Flood forecast and warning system (subject to further study with REMO and our Regional Partners);
- Monitoring and future actions (infiltration, conveyance, storage, development measures).

The full report is attached. Council is being asked to adopt the report for decision making/budget purposes.

DRAFT MOTION:

That Council adopt the recommendations of the attached Town of Wolfville Flood Risk Mitigation Plan, prepared by CBCL Consulting Engineers, to inform regulatory approaches to development, operational and capital budget decision making and other relevant matters.

1) CAO COMMENTS

The CAO agrees with the recommendation of Staff. Future budgets will better incorporate the recommendations found in this important piece of work.

2) LEGISLATIVE AUTHORITY

The Municipal Government Act provides authority for Council to study and expel funds on these matters.

Both the forthcoming Coastal Protection Act, Marsh Bodies Act and the NS Department of Agriculture will be key to the future of this work.

3) STAFF RECOMMENDATION

That Council adopt the recommendations of the attached Town of Wolfville Flood Risk Mitigation Plan, prepared by CBCL Consulting Engineers, to inform regulatory approaches to development, operational and capital budget decision making and other relevant matters.

4) REFERENCES AND ATTACHMENTS

1. Town of Wolfville Flood Risk Mitigation Plan (attached)

5) DISCUSSION

The attached report provides both a simplified explanation of the work (see appendices), an executive summary and implementation plan. Staff will provide a high-level summary of the work through a presentation at Committee of the Whole for Council.

An earlier version of this study was presented to Council by CBCL consultants – the study has just been fine-tuned since that time. This work has also been reviewed multiple times by the Environmental Sustainability Committee and Planning Advisory Committee. Other stakeholders (e.g. Dept of Agriculture) have also been engaged in the development of the study. Staff will finish providing an overview of the study and lead a discussion on the communications/education pieces with our Planning Committee on March 11, 2021. The implications of the study will continue to be worked into our budget process.

Recommendations from the study focus on:

- Educating and Communicating with our residents and other stakeholders
- Connecting the two dyke systems through Waterfront Park and living shorelines
- Protecting Sewer Lift Stations and our Treatment Plant

- Working with REMO on a Flood forecast and warning system
- Monitoring and future actions (infiltration, conveyance, storage, development measures)

It should be noted that a flood forecasting and warning system is subject to discussions with REMO and our other municipal partners readiness before any implementation would proceed.

6) FINANCIAL IMPLICATIONS

Various implications, some already outlined in the 10-year Capital Plan (estimates). Detailed design and costing will be required. Operational budget dollars have been allocated to the Education and Communication aspects (2021-22 fiscal year). Given when the final report is being received in the budget cycle, future budgets will better incorporate this study.

7) REFERENCES TO COUNCIL STRATEGIC PLAN AND TOWN REPORTS

Climate Management is a priority of Council. Adapting to Sea Level Rise and other impacts of Climate Change is essential to the resilience and sustainability of our Town.

The new Municipal Planning Strategy (September 2020) has integrated the findings of this study and outlines the importance of Climate Change to the community.

8) COMMUNICATION REQUIREMENTS

Communication and education is a key recommendation from the study. Staff are working on how to carry this out in the 2021-22 budget year. At a minimum:

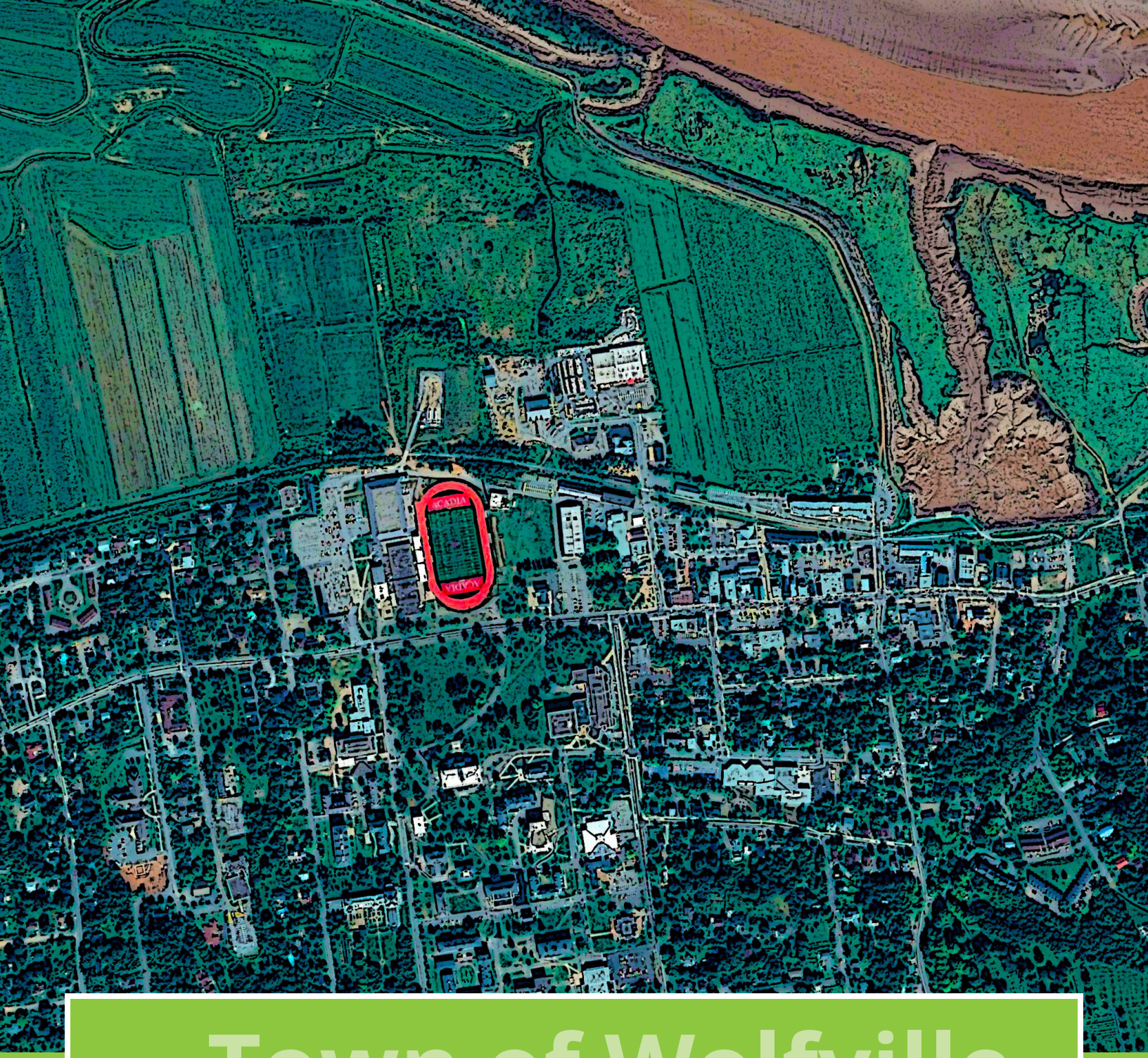
- Resident and landowner notification/education (2021-2022 fiscal after study finalized)
- Site-level stormwater guidance (2021-2022 website, mailing)
- Educational Signage along waterfront and future high-water markers (2021-22 fiscal)

A discussion is set to happen with the planning Advisory Committee, focused on the communication and education on March 11, 2021.

9) ALTERNATIVES

Council may consider alternative options to the recommended decision as follows:

- Not adopt the study;
- Adopt portions of the study and send back to staff for amendment; or
- Other action(s) as defined by Council.



Town of Wolfville

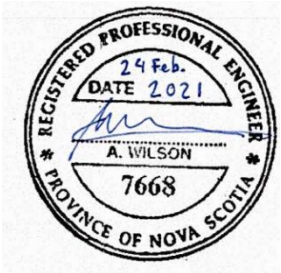
Flood Risk Mitigation Plan

Final Report

CBCL wolfville

201101.00 • Final Report• February 2021

	Final Report		26/02/2021	
	Draft ver.3 Report	Alexander Wilson	12/15/2020	Lauren Fleet
	Draft ver.2 Report	Alexander Wilson	08/31/2020	Lauren Fleet
	DRAFT Report	Alexander Wilson	03/07/2020	Lauren Fleet
Issue or Revision		***Reviewed By:***	***Date***	***Issued By:***



Project Number 201101.00

Solutions today | Tomorrow IN mind
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902-421-7241 | CBCL.ca | info@CBCL.ca

Devin Lake
Director of Planning and Development
Town of Wolfville
200 Dykeland Street
Wolfville, NS B4P 1A2

Dear Mr. Lake:

RE: Town of Wolfville Flood Risk Mitigation Plan – Final Report

CBCL Limited is pleased to provide the following final report for the Town of Wolfville Flood Risk Mitigation Plan. The report presents an analysis of flood risk within the Town of Wolfville and provides mitigation and adaptation options to reduce this risk. The report outlines the recommended actions for the Town based on an assessment of the proposed flood mitigation option presented. We thank you very much for your comments, and have endeavoured to address them fully in this final version of the report.

Please feel free to contact the undersigned at any time to discuss the report at your convenience.

Yours very truly,

CBCL Limited

Alexander Wilson, M.Eng., P.Eng.
Practice Lead – Water Resources

Project No: 201101.00

SCOPE OF WORK

CBCL was contracted to respond to the following scope of work for this project. The table below provides a quick reference to relevant information:

Project Scope Component	Final Report Reference
Consultation with local, regional, and provincial stakeholders.	Chapter 10.1 Stakeholder Consultations
The identification and analysis of flood hazards, highlighting specific areas of vulnerability within the town.	Chapter 7 Vulnerability Assessment
The development and modelling of current and future flood scenarios.	Chapter 4 Coastal Water Level Analysis and Chapter 5 Hydrologic and Hydraulic Analysis
Determining the consequences of developed flood scenarios, in terms of who and what would be impacted, and the nature and severity of those impacts.	Chapter 7 Vulnerability Assessment
A workplan with a mitigation investment strategy, including a prioritized list of identified projects for implementation; and adaptation strategies, covering the areas of land-use planning, protection/relocation/resilience of critical infrastructure, development, personal/household safety and planning measures, and emergency response and service management.	Chapter 8 Flood Risk Mitigation Options and Chapter 9 Preliminary Evaluation of Mitigation Options
Updating current flood maps and models for the Town.	Chapter 6 Flooding Analysis and Appendix A
Recommendations for integration with provincial and regional plans.	Section 3.3: Documentation Review
A public education and engagement component, which could include a community workshop and/or the development of a public-facing communication strategy and materials.	Section 10.2: Community Education and Communication. Appendix B

Executive Summary

A Flood Risk Mitigation Plan has been completed for the Town of Wolfville. The Plan identifies current and future flood risks, including impacts of climate change, and evaluates a list of proposed solutions to mitigate flood risks to the Town. The Plan was developed through communication with both stakeholders and the Town and included a review of the Town's municipal operations and priorities, relevant reports, by-laws, guidelines and strategies.

Inland and coastal flooding within the Town of Wolfville can occur as a result of extreme rainfall events and extreme coastal water levels. Inland flooding occurs when the stormwater collection system has insufficient capacity to convey stormwater runoff downstream during extreme rainfall events resulting in overflow onto areas such as roads, municipal infrastructure and private properties. Coastal flooding occurs when extreme tides reach inland areas either through backup through the stormwater system, overtopping dykes, or between the two dyke systems.

A suite of computer models was used to assess flood risks within the Town, estimate current and future risks and evaluate potential flood mitigation options. A range of rainfall and tidal scenarios were assessed under current and future conditions to evaluate the risks of flooding.

The effects of climate change on both precipitation and sea level rise were considered when examining future conditions (i.e., the year 2100 time horizon). To date, global green-house gas concentrations have most closely tracked the Representative Concentration Pathway (RCP) 8.5, which was used to generate the higher range of climate change projections featured in the Intergovernmental Panel on Climate Change's Fifth Assessment Report. The 1-in-100-year rainfall event is projected to increase by approximately 60% by 2100 under RCP8.5 (95th percentile) according to the Western University IDF-CC Tool.

Existing and projected Future Rainfall intensities using the IDF_CC tool

Peak Rainfall Intensity	1-in-2-year (mm/hr)	1-in-100-year (mm/hr)
Existing	68.57	174.00
Future	88.45	280.12

Extreme coastal water levels include high tide, sea level rise (SLR), storm surge and tidal amplification. Regional sea level rise for the year 2100 "High" scenario is projected to be 1.58m for the Town of Wolfville.

Peak Coastal Total Water Levels for Existing and Future (2100) Conditions

Peak Water Level	1-in-2-year (m CVGD 2013)	1-in-100-year (m CVGD 2013)
Existing (2020)	7.57	7.76
Future (2100)	9.15	9.35

Implementation Plan

A flood mitigation implementation plan has been assembled as part of this study, which is summarized in the following table, according to the timeline for implementation.

	High Priority Action	Timeline	Class "D" Opinion of probable Cost*	Report Reference
Connecting the dyke system & integrating living shorelines				
	Conduct topographic survey of top of dykes and waterfront in-between	1-3 Years	~$20k	Section 3.2 Stormwater Drainage
	Contact rail line owner to assess feasibility of acquiring land for new dyke	1-3 Years	-	Section 8.1.1Connecting the Dyke System and Applying Living Shorelines
	Land negotiations, pending results of above discussions	1-3 Years	-	
	Hold discussions with Department of Agriculture about raising of dykes	1-3 Years	-	10.1.2 Nova Scotia Department of Agriculture
	Following the above, select option for new dyke (in mudflat or rail ROW)	1-3 Years	-	
	Tender and award detailed design for new dyke	1-3 Years	~$50k	
	Investigate financing options for new dyke	1-3 Years	-	
	Design and tender stormwater pipe extensions to reduce erosion and support development of living shoreline	1-3 Years	~$20k	
Raising land around Sewage Lift Stations (SLSs) and new berm around WWTF				
	Review permitting and land requirements based on WWTF berm alignment and footprint	1-3 Years	-	

	Tender and award detailed design for new berm	1-3 Years	~$50k	
	Regrade land around SLSs	1-3 Years	~$10k	
Flood forecasting and warning system in partnership with REMO				
	Discuss with REMO scope and integration of system in existing SCADA	1-3 Years	-	8.2 Flood Forecasting and Warning System
	Tender flood forecasting and warning system	1-3 Years	~$50k	
	Install water level monitoring and recording system with connection to SCADA	1-3 Years	~$50k	
Community education and communication				
	Public Education: - Review Summary Document - Educational Signage about Sea Level Rise - Mail out leaflets to home and building owners in flood risk areas - Prepare open house when feasible	1-3 Years	~$10k	10.2 Community Education and Communication
Construction of new dyke and berm				
	Tender construction of new dyke Remove and dispose of old wooden beams Tender extensions of stormwater pipe outfalls	3-5 Years	~$600k on bank ~$6M in mudflat ~$20k ~$600k	8.1 Coastal Flood Protection Measures and 9.2.1 Coastal Flood Protection Measures
	Tender construction of new berm	3-5 Years	~$300k	8.3.2 Wastewater Treatment Facility
	Coordinate topping of existing dykes with Department of Agriculture	3-5 Years	-	10.1.2 Nova Scotia Department of Agriculture

Future steps				
	Evaluate recorded water level data and assess Sea Level Rise projections	35-45 Years	~$5k	-
	Design and construct (or coordinate with Department of Agriculture) additional raising of the dyke system	35-45 Years	Depends on findings	10.1.2 Nova Scotia Department of Agriculture

	Actions Subject to Further Monitoring	Class "D" Opinion of probable Cost*	Report Reference
Increasing infiltration measures			
	Identifying opportunities wherever pipes, sidewalks or parking lots are replaced or maintained	Will vary	9.2.5 Best Management Practices or Low Impact Development
Increasing storage capacity			
	Construct detention pond in Little Brook Lane area	~$250k	8.5.2 Increasing Storage Capacity
Increasing stormwater conveyance capacity			
	Minor upgrades with street work	Will vary	
	University and Main Street (identified as largest increase in pipe diameter)	~$300k	8.5.3 Increasing Pipe Capacity
Protecting future development			
	Monitoring latest information (data, climate science) and update plans accordingly		5.1.2 Impacts of Climate Change Rainfall Events
	Evaluate recorded water level data and assess Sea Level Rise projections		4.1.2 Climate Change Impacts on Coastal Water Levels

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Chapter 1 Introduction

The increasing risks and costs associated with flooding, extreme weather and climate change on public safety, human health, environment and infrastructure resilience are key considerations in municipal planning. Climate change and extreme weather adaptation strategies are building the foundation for informed risk mitigation investments.

The Town of Wolfville (Town) is seeking to understand the risks associated with flooding and climate change through the implementation of a Flood Risk Mitigation Plan (Plan). This Plan aligns with the priorities set out in the Municipal Planning Strategy and associated planning documents developed by the Town. The Plan has considered both current and future flooding impacts on flooding extents, herein referred to as floodlines, for planning and outlining mitigation strategies to reduce risk and improve resilience. In order to encompass the specific interests and main concerns of the Town, community stakeholders were consulted during Plan development.

Increasing community resilience to coastal flooding and extreme weather events will provide safeguards for important economic, residential, environmental, cultural, and social infrastructure and assets. The Plan identifies and addresses the current and potential future risks and impacts related to coastal flooding and large rainfall events within the Town. The mapping includes flooding impacts to residential properties and assets within the Town. The flood maps will provide decision-makers, engineers, planners, emergency responders, infrastructure owners, and property owners with the information required to make informed decisions pertaining to flood risk.

The Plan also involves a flood risk and vulnerability assessment to inform a broader flood risk mitigation and climate change adaptation plan for the Town. Incorporating projected climate change to produce future floodlines will aid in Plan design and, though the Plan is in draft form, has already supported long-term decision making. Floodline mapping which includes the effects of climate change provides community officials, engineers, asset owners, and planners information to make informed decisions around climate change adaptation initiatives for new and existing infrastructure. The Plan outlines specific measures for protecting existing infrastructure and proposed developments from the identified flooding risks within the Town.

1.1 Climate Change

In the past, Canada has warmed by approximately two times the magnitude of global warming, and this trend is projected to continue into the future (Bush & Lemmen, 2019). Over the period of 1948 to 2016 Canada has experienced a mean annual temperature increase of 1.7°C (Bush & Lemmen, 2019). Atmospheric warming is linked to changes in precipitation, sea level, inland water levels, sea ice, permafrost, and extreme weather events (Palko, 2016). Climatic variability is creating both opportunities and challenges for Canadian municipalities.

According to the Insurance Bureau of Canada (2019), flooding incurs the greatest amount of financial damage and losses. Nationally, the insured losses related to flooding totalled $405 million between 1983 and 2008 and increased to a total of $1.8 billion between 2009 and 2017. Flooding related costs have quadrupled in 40 years and account for 40% of all the Disaster Financial Assistance Arrangements (DFAA) expenses. Furthermore, in 2018 the damage covered by insurance from extreme weather was approximately $2 billion (Insurance Bureau of Canada, 2019).

In the context of climate change, Nova Scotia has experienced rising average temperatures, higher intensity precipitation events, rising sea levels, and amplified coastal erosion and flooding. Overall, climate scientists predict that Atlantic Canada will experience increasingly wetter, warmer, and stormier weather in the future (Bush, 2019).

The Town of Wolfville is on the coast of the Minas Basin. The Minas Basin is part of the Bay of Fundy, which is renowned for having the largest tides in the world. The Town is set back in some areas behind protective dykes and agricultural land, which serve as a buffer from high coastal water levels. However, due to rising sea levels and the potential for larger and more frequent surge events in the future, the current height of the dyke systems may be inadequate to protect against future coastal water levels. Adaptation measures to reduce the impacts of climate change will work to protect current infrastructure and guide planning for sustainable future development.

Chapter 2 Study Approach

Flooding within the Town is a result of two independent events: high intensity rainfall and extreme coastal water levels. Temporal and spatial patterns of flooding are influenced by local hydrology, coastal water elevations, topography, hydraulic structures (e.g., stormwater system), and dyke elevations. To inform an effective Flood Mitigation Plan, a representation of the local hydrologic and hydraulic processes was created using modelling software. The models produced detailed flood maps, which were used to support risk and vulnerability assessments of Town assets and consider options for reducing flood risk.

The study approach includes:

- **Review of Available and Relevant Information**: the Town's current municipal operations and priorities, applicable reports, by-laws, past studies, GIS data, Town assets, federal and provincial data, and historical references.
- **Consultation:** engaging with stakeholders and Town staff to understand the current and potential impacts of sea level rise and flooding on infrastructure, operations, and plans, as well as discussing future development and strategic plans.
- **Hydrologic Assessment**: calculation of rainfall events with varying return periods using climate information from the Environment and Climate Change Canada Kentville climate station.
- **Coastal Water Levels Assessment**: calculation and modelling of extreme coastal water levels including high tide, sea level rise, storm surge and tidal amplification within a 2D hydrodynamic model of the Bay of Fundy.
- **Hydraulic Model Development and Analysis**: development of a hydrologic and hydraulic model of the Town stormwater drainage system, including piped and surface drainage, the dyke system and associated outfalls.
- **Flood Mapping**: flood simulation modelling, floodline delineation mapping, and identification of the potential flooding hazards that are present within the Town of Wolfville. Floodplains were modelled under various precipitation and storm surge scenarios, including the 1-in-2-year, 1-in-20-year and 1-in-100-year events under current and future climate conditions.
- **Risk and Vulnerability Assessment**: identification of important infrastructure that is currently vulnerable, or may become vulnerable, to flooding impacts.
- **Development and Assessment of Mitigation Options:** assessing the effectiveness and feasibility of flood mitigation options to protect priority infrastructure and mitigate flooding.

To ensure that the Plan is consistent with ongoing initiatives, the following relevant documents were referred to in the development of the Plan:

- The current municipal operations and priorities of the Town;
- Applicable reports, by-laws, past studies, GIS data, assets, federal and provincial data; and
- References including the Town's Stormwater Management Guide, the Nova Scotia Coastal Protection Act, the Municipal Planning Strategy and associated documents such as the Land Use By-law, Design Guidelines, and the Subdivision By-law.

Chapter 3 Background

3.1 The Town of Wolfville

The Town of Wolfville is located in Kings County, Nova Scotia, along the shore of the Minas Basin. The Minas Basin is part of the Bay of Fundy, which hosts the world's largest tides. Agricultural dykes (shown in Figure 3.1 below), built by the Acadians in the 17th century, generated rich agricultural land and protected it from coastal waters. The dykes are used by the community as walking trails and provide a scenic landscape.

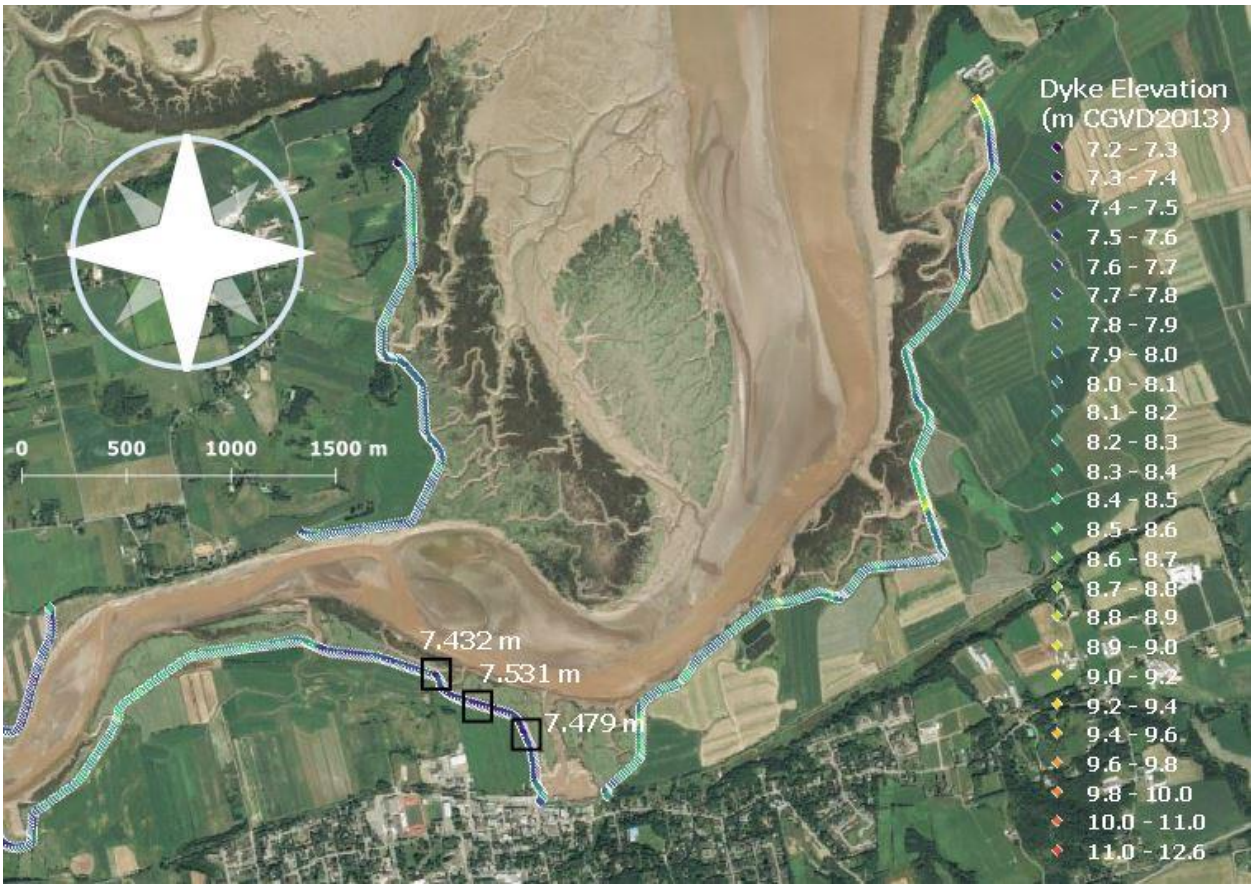


Figure 3.1: Wolfville Dyke System

The Town is located along Highway 1, covering an area of approximately 6.46km^2. Primary land uses include Residential (49%), Agricultural (26%), and Institutional/University (12%) (Town of Wolfville Department of Community Development, 2017). The Town has a population of 4,195 people according to the 2016 Canadian Census, with 2,655 people between the ages of 15 and 65 and 1,150 people that are 65 years and older.

The Municipal Planning Strategy (MPS) that was recently adopted (approved by Council June 2020, provincial review completed and administered since September 2020) projects a 2% future increase in the population of the Town (Town of Wolfville Department of Community Development, 2017). According to the MPS, the priorities of the community include economic prosperity, social equity, climate action, and land use and design. The Town supports a variety of important infrastructure assets, including local and tourist attractions such as wineries and craft beer vendors, restaurants, cafes, parks, green spaces, and trails (e.g., the Harvest Moon Trail).

According to the MPS, Residential and Commercial Zones are the main sources of revenue for the Town. In conjunction with the university and tourism, agriculture has been a defining factor in shaping the local economy.

Sustainable planning and development are a priority of the Town. The Town has invested in developing strategies and documentation regarding land use, municipal planning, and development policies in order to regulate and plan for future growth through residential expansion and development.

3.2 Stormwater Drainage

The stormwater drainage system is owned, operated, and maintained solely by the Town of Wolfville Department of Public Works and Services or in combination with private landowners (Hatch Ltd, 2019). The stormwater drainage network is comprised of a major and minor system. The minor system consists of the underground pipe network, gutters, catch basins, roof gutters, and swales. Minor drainage systems are designed with the capacity to convey runoff from frequent storm events (e.g., 1-in-2-year, or 1-in-5-year storms) without ponding of water. The major system consists of natural water courses, streets, swales, channels and ponds. The purpose of the major system is to accommodate larger rainfall events (e.g., 1-in-100-year storm) in order to eliminate flooding risks and loss of life. As described within the MPS, stormwater has historically been managed through a series of small brooks and natural water courses.

The stormwater drainage system was designed to collect and distribute the stormwater to these natural drainage paths. The Town has fairly steep downhill slopes, which are greater than 20% in some locations. As illustrated in Figure 3.2, runoff is directed north to the Minas Basin (Town of Wolfville, 2020).

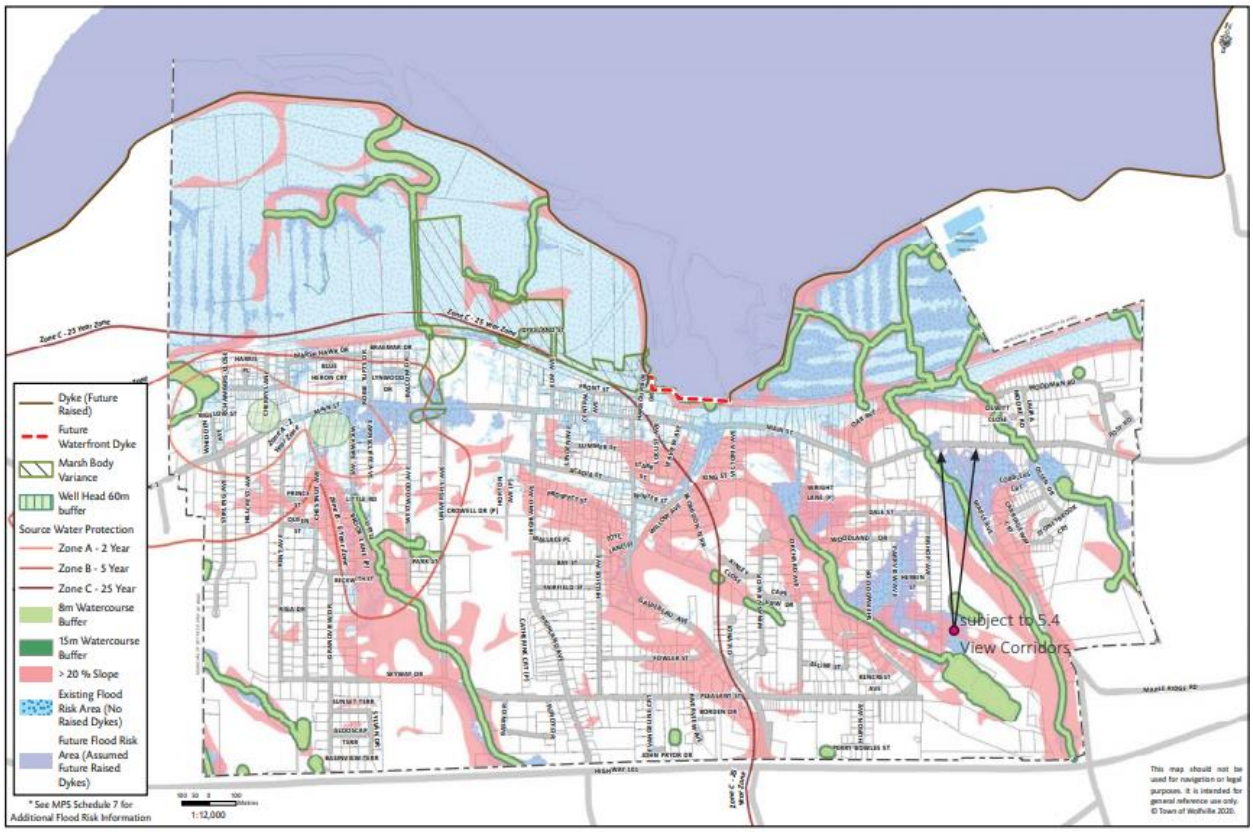


Figure 3.2: Land Use By-law: Schedule B

Stormwater is released to the Minas Basin through a series of aboiteaux along the dyke systems. Aboiteaux consist of a culvert through the dyke with a tide gate which operates on a pressure differential generated between the tide and stream. During low tide, upstream fresh water (e.g., stormwater or natural streams) drain out into the basin. During high tide the gate is closed to prevent saltwater intrusion into agricultural lands and the Town south of the dyke. However, during high tides, freshwater drainage cannot occur, which allows freshwater flows to accumulate, and increases the risk of flooding.

Coastal dykes are built to accommodate tidal fluctuations, storm surge and wave run up. The dyke systems protecting the Town of Wolfville from coastal waters vary in height, as seen in Figure 3.3, where the lowest points are highlighted. This survey dates from 2007, so the values are somewhat out of date, and will need to be surveyed again before any design work is completed.

Wolfville Harbour lies between two unattached dyke systems: the Grand Pre system to the east and the Bishop Beckwith system to the west. There are five aboiteaux in the Grand Pre system and four aboiteaux in the Bishop Beckwith system. It is understood that the upstream areas may be vulnerable to high water levels in the Minas Basin. Historically, frequent flooding has not occurred in the Town of Wolfville; however, low elevations or gaps within the dyke system (identified through a Department of Agriculture asset mapping

study), sea level rise, and climate change (e.g., more frequent and intense storm events) all elevate the risk of coastal flooding.

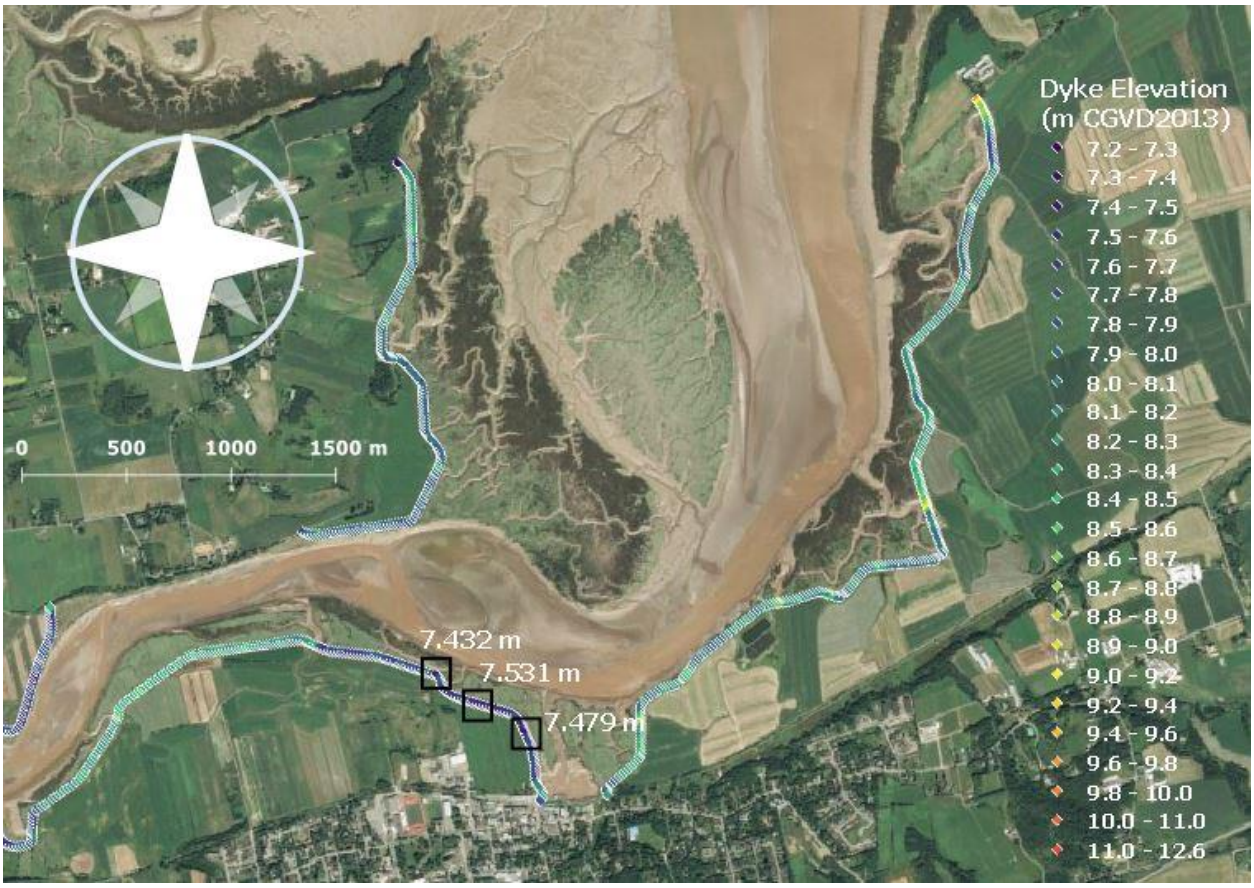


Figure 3.3: Wolfville Dyke System – Lowest Points Highlighted

3.3 Documentation Review

The Town has developed a number of planning documents which were reviewed internally to understand municipal operations, priorities, as well as planning and development. This was done to incorporate and align the Flood Risk Mitigation Plan with the planning goals and priorities of the Town.

The Town currently addresses flood risks, development requirements, and constraints through a set of policies outlined in the updated MPS and through Floodplain Development Standards in the Land Use By-laws. The MPS, land use and subdivision by-laws provided by the Town were the focus of the review.

3.3.1 Stormwater Management Design Guidelines

The Town adopted the Stormwater Management Design Guidelines (Guidelines) prepared by Hatch (2019). The purpose of the Guidelines is to outline design criteria for the stormwater drainage system, in order to achieve the following objectives:

- Prevent loss of life and protect structures and property from damage due to flood events;
- Provide safe and convenient use of streets and lot areas during and following precipitation and snow melt events;
- Adequately convey stormwater runoff from upstream sources;
- Mitigate the adverse effects of stormwater runoff, such as flooding and erosion, onto downstream properties;
- Preserve designated natural watercourses and natural wetland environments; and
- Minimize the long-term effects of development on the receiving surface waters and groundwater regimes from both a quantity and quality perspective.

The Guidelines stipulate the recommended approach for assessing the hydrology and hydraulics of the site area and outline design criteria for standard major and minor drainage systems. A requirement for a net-zero increase in runoff through development is also stipulated, and the Guidelines recommend the adoption of low impact developments[1] (LIDs) or runoff control measures as necessary. In this way, although the extent of impervious surface areas may increase as a result of development, its influence on peak flood conditions may be offset proportionally. Broadly, LIDs are techniques and technologies which work to reduce the impacts of increased runoff and stormwater pollution post urbanization. LID controls include measures that facilitate infiltration and reduce peak flows, such as permeable pavements, grass swales, rain gardens, and bio-retention cells. The flood mitigation options presented in this report are in line with these stipulations, and flood mitigation strategies are further discussed in Chapter 8 of this report.

The Guidelines address the impacts of climate change on the management and design of the stormwater drainage system. It is outlined that climate change, which includes projected sea level rise and the increased frequency and intensity of storms, shall be considered in terms of stormwater quantity and quality within the Stormwater Management Report. This may include identifying vulnerable infrastructure and implementing mitigation measures to reduce the risk of flooding. The recommended approaches in the Guidelines were considered in the Flood Risk Mitigation assessment.

[1] Low Impact Developments (LIDs) are commonly related to, or directly synonymous with, the terms stormwater Best Management Practices (BMPs) and Green Infrastructure.

3.3.2 Municipal Planning Strategy

The MPS update was initiated in 2015, and is part of a series of planning documents written in accordance with Chapter 18 of the Statutes of Nova Scotia, 1998. The updates address concepts such as climate change, floodplains, and development constraints. Information from the present report (while in draft form) was included in the updates to the MPS. A public hearing and 2nd reading have now been completed and the documents were approved by Council in June 2020. The MPS has been established as a 'living document' to adapt to the needs and priorities of the community over time.

The intent of the MPS is to guide and manage growth in line with the Town's vision for future development. The goal of the MPS is to stimulate high-quality design, sustain and develop the Core Area, embrace the history of the Town, enhance economic vitality, and promote social and environmental sustainability. The MPS also serves as the Town's Integrated Community Sustainability Plan (ICSP).

The MPS consists of policies and maps, which outline regulations and specifications regarding the intent of the MPS, and includes the Land Use By-law, Design Guidelines, and the Subdivision By-law.

Land Use policies are illustrated through the use of communication documents and maps. The maps include:

- Future Land Use
- Future Parks and Trails
- Open Space and Mobility Network
- Future Streets
- Land Use (zoning)
- Development Constraints Area Overlay
- Design Guidelines Overlay

Climate change and associated risks have been identified and incorporated in the MPS as climate actions and strategies to manage and mitigate the associated impacts. These strategies include controlling land use to sustain open spaces and protect the natural environment, development of stormwater management plans, and regulation of development. Climate actions also include undertaking adaptation and mitigation measures to build community resilience, including development requirements in flood prone areas, and establishing minimum building heights. The MPS outlines development constraints in Schedule B of the Land Use By-law.

The MPS addresses development in areas at risk of flooding through two sets of policies:

- **Part 4.2 Development Constraints** to ensure that residential institutions such as a hospital, senior citizen home, home for special care, or similar facility, or a use associated with the warehousing or production of hazardous materials are not located where flooding could pose a significant threat to the safety of the Town of Wolfville's

residents or environment. Also, that all new developments on or immediately adjacent to environmentally sensitive areas conduct environmental studies that show no negative environmental impacts related to flooding.

- **Part 4.3 Agriculture and Greenbelt** designate Agriculture (A) areas located on the Dykelands, excluding areas within the Core Commercial or Neighbourhood Designation, as per Map 1- Future Land Use Map. Within the Agriculture zone, only agricultural uses shall be permitted.

The MPS document refers to the current Flood Risk Mitigation Plan in Schedule 7, and contextualizes the mapping in the Land Use By-law. The flood delineation mapping is presented in Schedule B of the Land Use By-law document. The summary of the main findings is a stand-alone document prepared for a wider audience and includes content on sea level rise, flooding risks, typical approaches to flood mitigation, and specific measures homeowners can take to protect themselves against water intrusion within their home.

Land Use By-law

The purpose of the Land Use By-law is to establish regulations described in the MPS, in accordance with the Municipal Government Act. The By-law outlines application requirements for new developments. Part of this requirement includes a Site Grading and a Stormwater Management Plan which work to control overall stormwater drainage within the Town. General requirements may differ depending on the site zoning, which were classified as Neighbourhood, Commercial (each with Core areas), Agricultural, and University within Schedule 1.

CBCL worked with the Town planning staff to update the now adopted planning documents. The findings and recommendations of this study, which include better definitions and an Undertaking Form, have been integrated within the new planning documents.

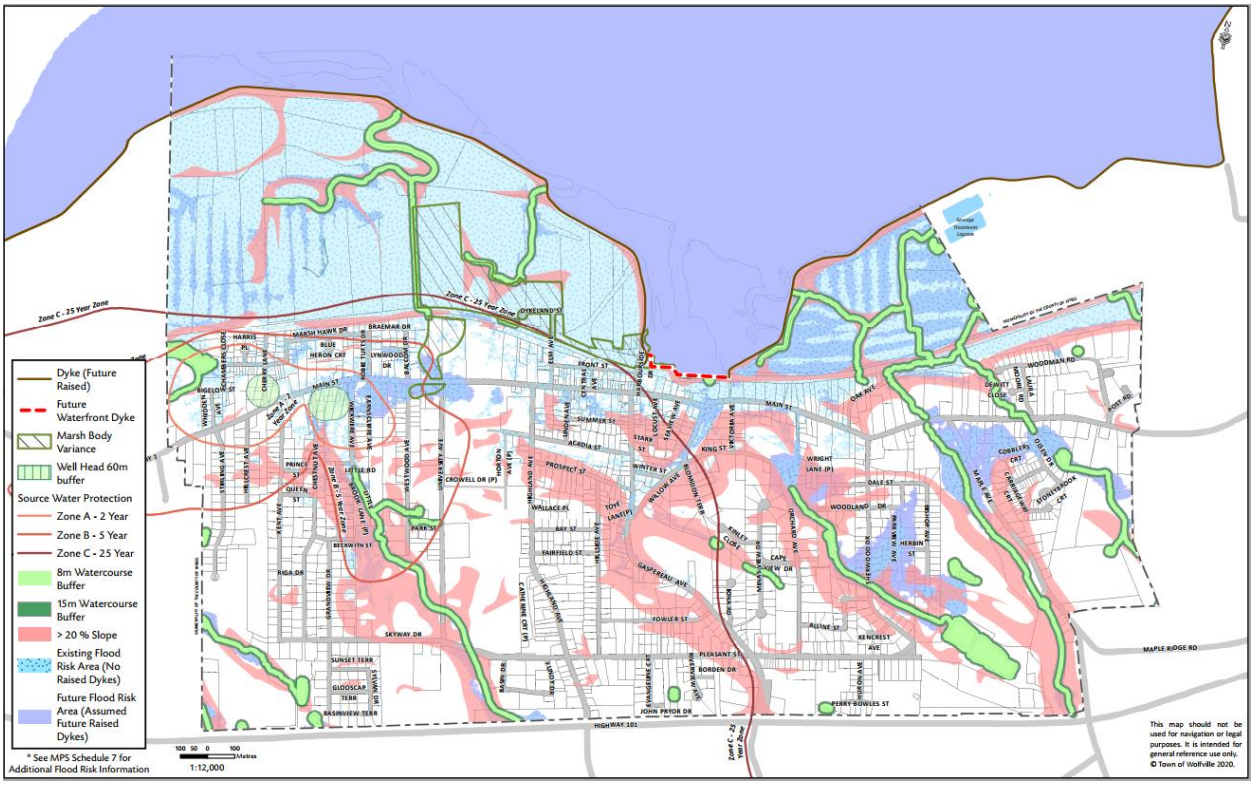


Figure 3.4: Development Constraints (Source: Town of Wolfville Land Use By-law)

Aside from the Agricultural zoning designation in the Dykeland District, flood risk mitigation is explicitly addressed under Land Use By-law Section 5.1 - Floodplain Development Standards. The By-law prohibits hospitals, seniors care facilities, special care facilities, schools, warehousing or storage of hazardous materials and essential services in the floodplains shown in Schedule "B" (Development Constraints) Overlay. Schedule "B" delineates a number of boundaries associated with development constraints. The Schedule "B" Constraints were updated as part of this project to define and delineate floodplain boundaries.

The By-law permits new development in areas within the floodplain shown on Schedule "B", where a Floodplain Development Undertaking Form is to be signed acknowledging recognition of risks, and confirming:

- The development's finished floor elevation is no lower than 8m geodetic (CGVD28);
- The walls and floor below 12m geodetic should be constructed to be flood tolerant; and that
- Consideration be given to placement of mechanical equipment.

The By-law also promotes the utilization of natural green spaces and features to increase stormwater infiltration. These measures are directly related to flood mitigation Best Management Practices (BMPs) as outlined in Chapter 8 of this report.

Design Guidelines

The Design Guidelines act to align future development with the priorities and plans presented within the MPS. The Guidelines follow all regulations and strategies outlined within the MPS and the Land Use By-law and relevant policies. Sustainability and resilience are guiding principles. The Guidelines address sustainable building practices in Section 3.3.4. Included are directions to accommodate climate change and increasing flood risk by minimizing impervious surfaces, incorporating green technologies (e.g., green roofs), and utilizing natural water catchment and filtration features. These design actions align with the mitigation and adaption plans presented within this Flood Risk Mitigation Plan.

Subdivision By-laws

The Subdivision By-law applies to all subdivisions within the Town of Wolfville and outlines all requirements for development and planning of new subdivisions. The by-law follows all regulations and strategies outlined in the MPS and the Land Use By-law and relevant policies. A drainage plan must be developed as part of the application for approval. Required in the drainage plan is a detailed plan of the stormwater runoff within the proposed subdivided land, including all watercourses, channels, and floodplains for all tributary and upstream areas.

3.3.3 Nova Scotia Coastal Protection Act

The Nova Scotia Coastal Protection Act – Bill 106 (CPA) is new legislation enacted in 2019 by the Government of Nova Scotia. The Act was developed based on the increasing identification that sea level rise, coastal flooding, storm surge and coastal erosion pose significant threats to the safety of future development in coastal areas. The purpose of the Act is to protect the provincial coastal environment by preventing development and activity in locations that damage the environment by interfering with the natural dynamic of the coast and put residents and buildings at risk from sea level rise, coastal flooding, storm surges and coastal erosion.

The Act has not yet been proclaimed into law and will come into effect once regulations are approved by the Governor and Assembly. Regulations within the Act were actively being developed during the writing of this report. CBCL is currently contracted by Nova Scotia Environment to develop a “Coastal Erosion Risk Factor Assessment Standard” to identify vertical and horizontal areas of application of the regulations. Notice was given to municipalities that upcoming regulations under the Act will have an impact on development permitting. The Act has been undertaken in parallel with the Province’s Municipal Flood Line Mapping project (also developed with CBCL), which aims at producing flood mapping specifications according to standard methods and guidelines for the entire Province.

The CPA defines a ‘Coastal Protection Zone’ (CPZ) as the area of land, including land covered by water, on the coast that is lying seaward of the ordinary high-water mark and

the area in the landward direction immediately adjacent. The boundaries of the CPZ will constrain development. Delineation of the CPZ will be determined based on vertical and horizontal setbacks. The description of these setbacks has not been legislated and are subject to change.

The Act includes certain exemptions for development within the CPZ, such as agricultural activities (e.g., marsh bodies and dykes), public infrastructure, industrial and commercial activity requiring direct access to water as a functional part of the business plan, and shoreline structures placed by Lands & Forestry. Additionally, certain types of structures may be exempt from the requirement for a Community Environmental Response Facilitation Act Report as provided for under the CPA regulations.

In addition, there is a Minimum Building Elevation (MBE), that will be described in the regulations, that sets the minimum elevation of the ground onto which construction can occur. The description of the MBE is as shown in the Figure 3.5 below.

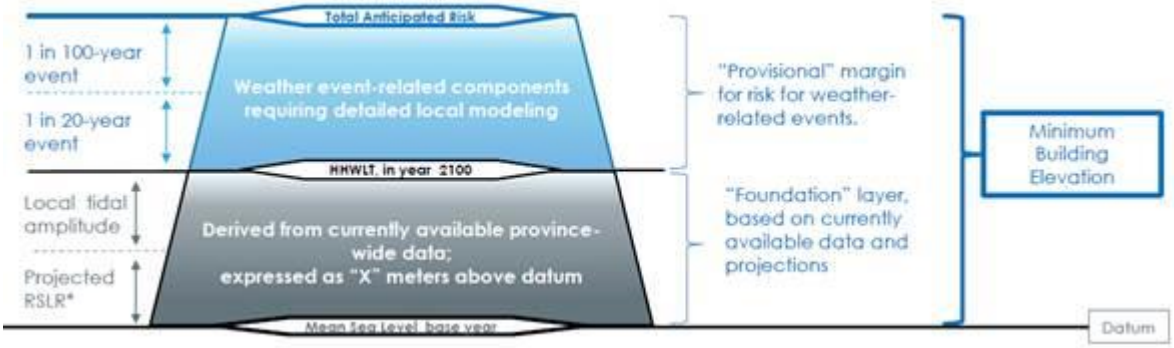


Figure 3.5: Current Description of the Minimum Building Elevation

Following the description above, using the values in the subsequent analyses, the MBE for Wolfville may be set at an approximate elevation of 9.34m CGVD2013. Discussions between the Town and NSE are currently being held.

Chapter 4 Coastal Water Level Analysis

To estimate the extreme coastal water levels influencing flooding risks, coastal water levels were broken down into several components:

- **Tide:** The local astronomical tide was assessed based on the WebTide Tidal Prediction Model (v0.7.1) from Fisheries and Oceans Canada (DFO). Tides in the Bay of Fundy are the highest in the world, with amplitudes of up to 16 metres during spring tides.
- **Storm Surge:** Storm surges are created by meteorological effects on sea level, such as wind set-up and low atmospheric pressure, and can be defined as the difference between the observed water level during a storm and the predicted astronomical tide. The local storm surge levels were derived from CBCL's local hydrodynamic model based on the extreme wind speeds. The extreme storm surge levels in Wolfville were calculated using the MIKE 21 model.
- **Wave Run-up and Overwash:** The wave run-up is the vertical distance a wave travels up the shoreline above the still water level. This was derived using the numerical model XBeach.
- **Sea-Level Rise (SLR):** Nova Scotia coastlines are experiencing SLR which is expected to accelerate due to climate change, causing increased risks of coastal erosion and flooding. As a result, extreme water level events are expected to become more common in a few decades. SLR projections from the recent scientific literature applicable to the Upper Bay of Fundy region was compiled by CBCL and used in the analysis.

Simulations were performed for the year 2100 planning horizon in combination with Annual Exceedance Probabilities (AEP) of 1% and 5%, which correspond to return periods of 100 and 20 years, respectively. The various components above are described individually in detail below, and then assembled and discussed in Section *4.1.5: Considerations for Raising Dykes or New Dyke Construction*.

4.1.1 Extreme Wind Analysis

Wind speed and direction were obtained from the Environment Canada MSC50 offshore wind and wave model hindcast for the period 1954-2018, which contains hourly time series of wind and wave parameters at a location at the Upper Bay of Fundy (45.3°N, 64.6°W). The dataset is a state-of-the art hindcast, wherein data computed from all existing wind and wave measurements were re-analysed and input into a 0.1-degree resolution model that

considered the effect of depth and ice cover (Swail et al. 2006). This dataset also includes hurricane wind fields. The MSC50 hindcast is developed by Oceanweather Inc. and is distributed by Environment Canada.
Figure 4.1 shows the schematization of the yearly wind climate in a wind rose diagram, where each line represents the percentage of occurrence of the different wind speeds and originating directions. As illustrated in Figure 4.1, storm events are predominantly originating from the West, with the highest peaks from the North-West.

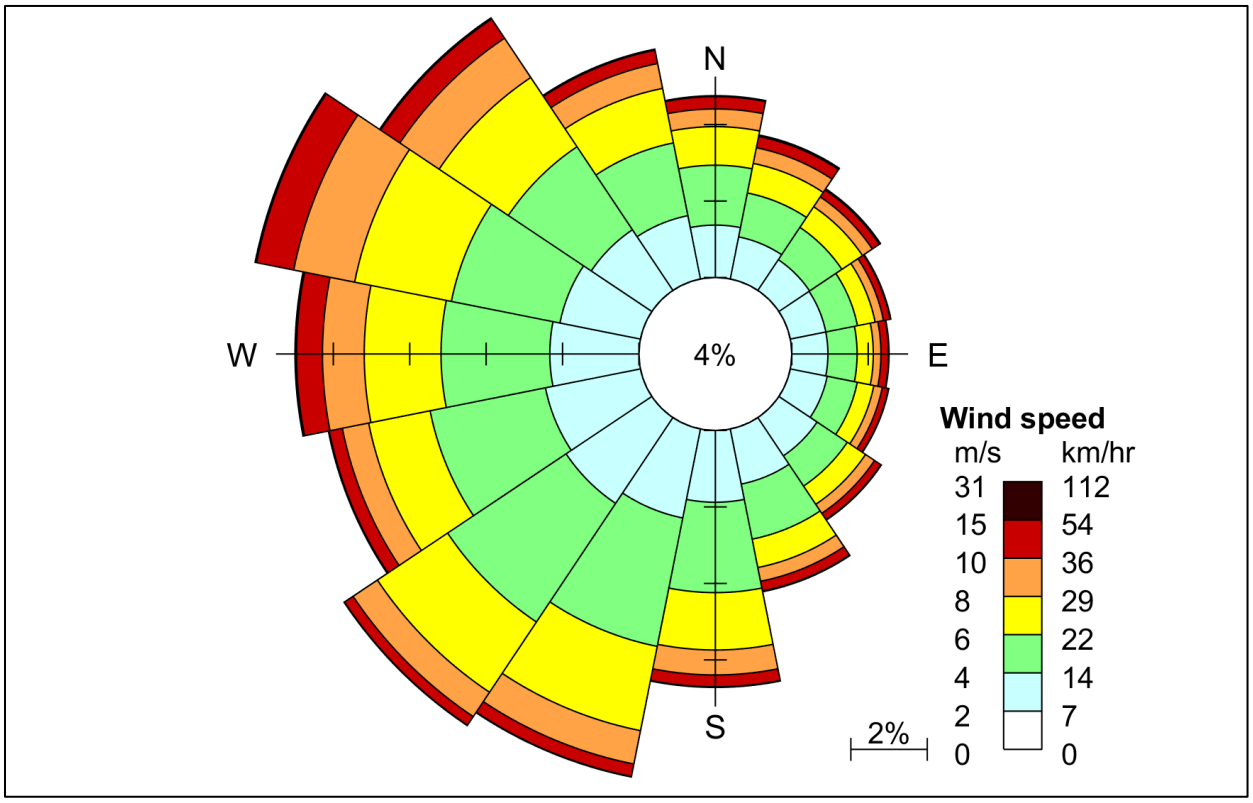


Figure 4.1: MSC50 Wind Rose (datapoint M6008430 45.3N 64.6W, 1954-2018)

Extreme value analyses were conducted on the MSC50 wind data to derive extreme wind conditions. The annual probability of occurrence of wind speed were estimated based on an analysis of storm peaks using the "Peak-Over-Threshold" method for each direction of exposure. For this project, directions of winds originating from North to East were analysed.

The probabilities derived from the wind analysis were then combined with the AEP of given tide levels. This step is important because extreme wind events do not necessarily coincide with the high tide. Since both wind and tide events are independent, the joint probability was calculated simply by multiplying the annual probability of occurrence of wind speed with the AEP of water levels. Figure 4.2 shows the different combination of wind speeds and water levels for each return period.

The joint probability analysis method can be applied to the Town of Wolfville because in the Minas Basin, extreme storm surge events and extreme waves are caused by different storms. Numerical modelling has indicated that the extreme storm surges in the area are typically caused by winds coming up the Bay of Fundy from the southwest, which pile up water into the Minas Basin. Conversely, the highest waves along the Wolfville waterfront are caused by Northeast winds, for which the fetch distance is greatest.

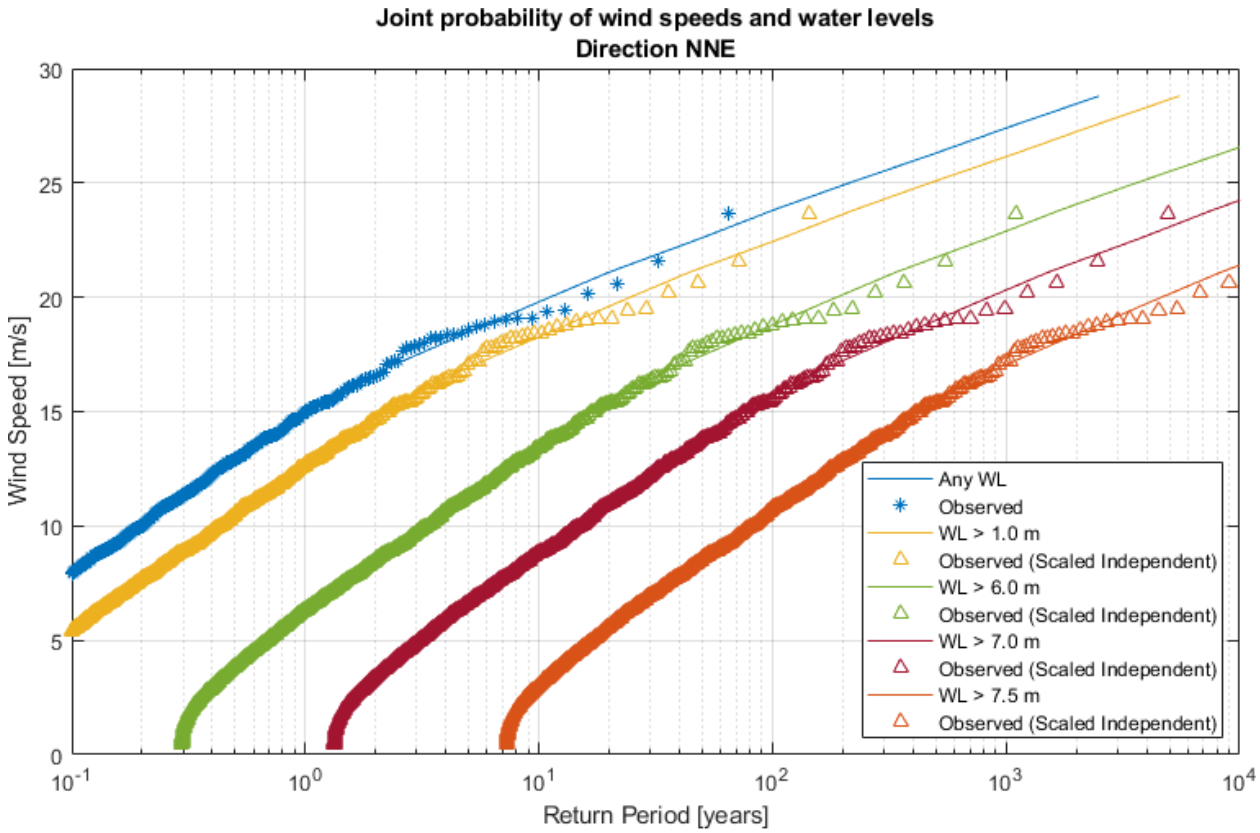


Figure 4.2: Joint Probability of Water Levels and Wind Speeds Coming from the North-Northeast

Summary of Extreme Wind Analysis

An extreme wind analysis was conducted, which included the consideration of high water levels occurring at the same time as high winds. The analysis provided more realistic values for extreme wind effects on high water levels than available in the literature.

4.1.2 Climate Change Impacts on Coastal Water Levels

Sea levels have been rising in the Maritimes since the end of the last ice age, approximately 10,000 years ago. This trend has accelerated in recent years and is expected to continue to accelerate with climate change.

Consensus Intermediate Sea Level Rise (SLR) Projections

The Intergovernmental Panel on Climate Change's Fifth Assessment Report (IPCC AR5 2013) estimated that the upper-bound Global Mean Sea Level (GMSL) rise could be in the order of 1.0m by year 2100. This projection, using process-based models, was for the RCP8.5 high-emission scenario. To derive a relative SLR, DFO then developed the online Canadian Extreme Water Level Adaptation Tool (CAN-EWLAT), based on work by James et al. (2014), which accounts for local factors. CAN-EWLAT is a science-based planning tool for climate change adaptation of coastal infrastructure related to future water-level extremes. Water level calculations were based on IPCC AR5 projections and improved upon by incorporating information on land subsidence measured with high-precision GPS instruments. It was developed to provide SLR allowances for DFO harbours across Canada. Allowances are estimates of changes in the elevation of a site that would maintain the same frequency of inundation that the site has experienced historically. Updated global estimates from the IPCC's Special Report on the Ocean and Cryosphere in a Changing Climate (SROCCC) report, (Oppenheimer et al 2019) remain generally consistent with AR5.

For the Upper Bay of Fundy, tidal expansion should be added as a SLR component. Greenberg et al. (2012) examined long-term tide gauge observations that show that the amplitude of Bay of Fundy tides has been slowly increasing. By 2100, the combination of Vertical Land Motion (VLM) and amplitude change may increase the amplitude of Bay of Fundy tides by 0.3m in the Upper Bay. They assumed a VLM component of 0.2 m/century, leaving 0.1m for tidal amplitude change.

Upper-End Projections with High Uncertainty

Recent studies tend to support higher GMSL upper-end projections based on potential rapid Greenland and West Antarctic Ice Sheet (AIS) reduction. These upper-end SLR projections (DFO Han et al. 2016, or NOAA Sweet et al. 2017) are based on probabilistic projections of the factors driving GMSL rise, which is different than the process-based model approach from IPCC AR5. NOAA's year 2100 GMSL projections range from Low (0.3m), Intermediate (1.0m), High (2.0m) to Extreme (2.5m). These projections carry higher uncertainty. The consensus values from the 2019 IPCC SROCCC report are lower, with up to 0.3m AIS contribution by 2100, in addition to AR5 RCP8.5 contributions. Given these findings, the 2014 DFO CAN-EWLAT estimates based on IPCC AR5 RCP8.5 could be considered intermediate projections. The Greenan et al. report for Canada (2018) propose to add an additional 0.65mby 2100 of GMSL rise to RCP8.5.

Selection of Scenarios

The appropriate scenario to select for a project depends on the ultimate purpose of the projection, such as for a planning time horizon or to evaluate risk tolerance of an area or infrastructure assets. The following approach, which uses two scenarios as a general planning envelope could be considered, as per NOAA 2017.

- Define an *intermediate* SLR projection for short-term and medium-term planning. We propose that this scenario be the CAN-EWLAT estimate, which would represent an intermediate projection typically close to 1m to the end of the century. This intermediate scenario may be used for defining the elevation of coastal protection structures and potentially roads, which could be built for a shorter design life and/or have built-in flexibility to allow incremental raising.
- Define an upper-bound scenario, which in the present case could be the *high or extreme* GMSL rise projection that includes AIS reduction and use it as a guide for overall risk and long-term adaptation strategy. The upper-bound scenario can be used for guiding the selection of minimum site elevations required for siting of future and potentially vulnerable permanent infrastructure.

Table 1 illustrates the expected SLR by decade for the two scenarios presented above.

Finally, the science of SLR will keep evolving with updated observations and improving model predictions. Implications for infrastructure and coastal flooding will need to be re-evaluated with periodic updates in SLR projections.

For the Wolfville study, the intermediate SLR scenario for the year 2100 was selected to be suitable in the estimation of the water levels due to climate change, with the intent of carrying out incremental raising of the dykes.

Table 1: SLR Scenarios

Relative SLR Scenario	SLR (m) by Time Horizon							
	2030	2040	2050	2060	2070	2080	2090	2100
(1) Intermediate SLR from CAN-EWLAT RCP8.5 + Bay of Fundy tidal expansion	0.12	0.19	0.29	0.39	0.50	0.64	0.78	0.93
(2) High = (1) + AIS reduction (+0.65m by 2100)	0.21	0.3	0.49	0.67	0.86	1.09	1.33	1.58

Summary of Climate Change Impacts on Coastal Water Levels

Current knowledge on SLR was reviewed. Due to the uncertainty associated with the sea level rise projections, the "Intermediate" scenario was selected, based on the CAN-EWLAT science-based planning tool, IPCC AR5 scenario.

4.1.3 Numerical Modelling Methodology

MIKE 21 Hydrodynamic Model

CBCL developed a 2D hydrodynamic model of the Bay of Fundy (Figure 4.3), which has been calibrated and validated against measured tide gauge data. For this study, this model was refined in the Minas Basin and extended to include part of the Cornwallis River and the Avon River Estuary. The model resolution near the study area was approximately 15mx 15m. The local model bathymetry was schematized based on the high-resolution Lidar mapping provided by the Town and Canadian Hydrographic Service bathymetric maps.

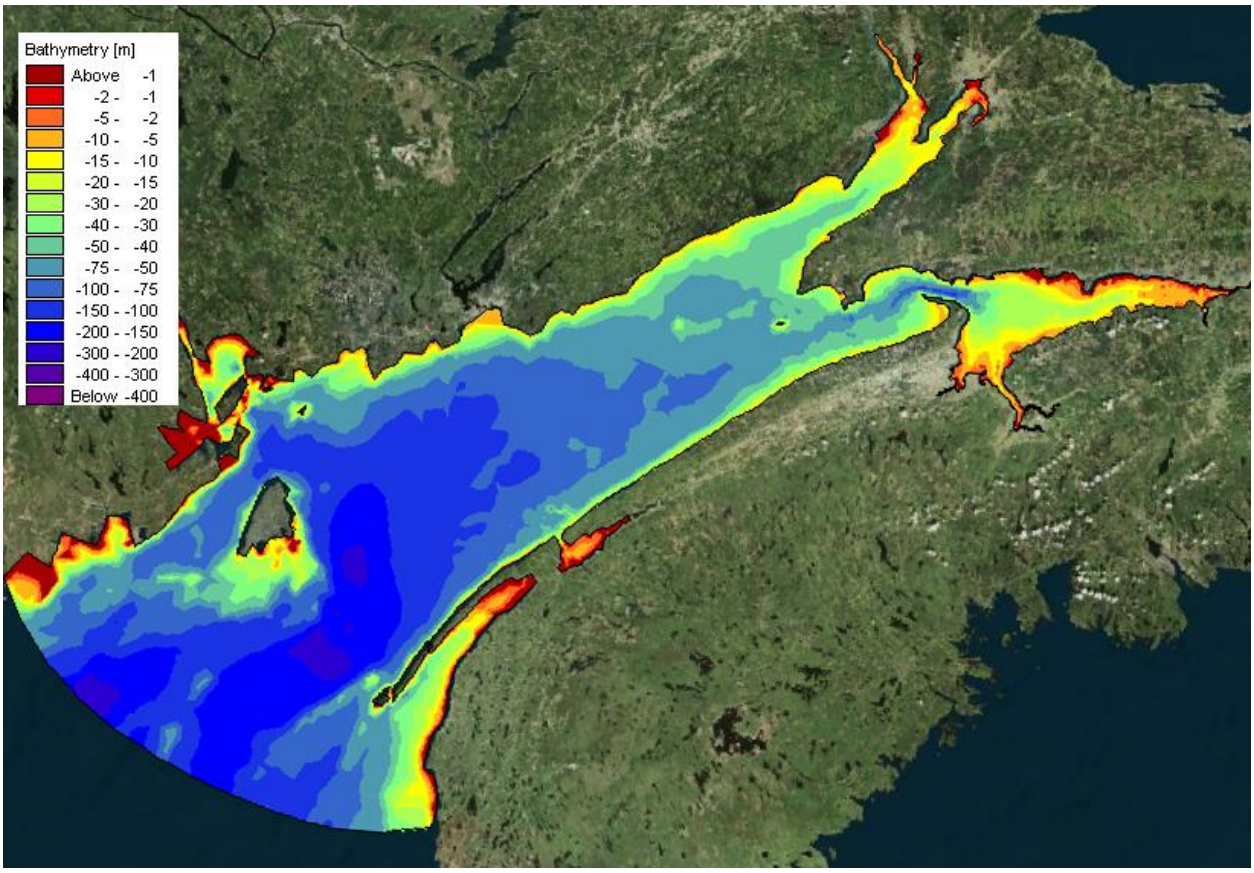


Figure 4.3: Model Domain Depths in CGVD28

The hydrodynamic model includes inputs from Webtide, water level correction due to SLR and air pressure, extreme wind speeds derived from the MSC50 dataset, and extreme discharge from the Cornwallis River derived from the regional hydrological model. The Environment Canada MSC50 offshore wind model hindcast was used to define extreme wind conditions (as noted in Section 4.1.1 above).

The model provides extreme (still) water levels along the existing dykes of Wolfville, to calculate wave run-up levels. The maximum wave run-up height above the still water level defines the expected flood level.

The full tidal model was run for two-weeks to determine the peak tidal levels near Wolfville. The outputs of the tidal model were used as the initial conditions for the surge model, which was run over a period of 12 hours. The surge model used the calculated extreme wind values combined with a low-pressure field based on Hurricane Dorian. To be conservative it was assumed that the maximum storm surge could occur at any point in the tidal cycle.

XBEACH Wave Runup Model

XBeach (Smit et al., 2010; Roelvink et al., 2017) is a powerful open-source numerical wave model, which includes the following hydrodynamic processes:

- Short wave transformation (i.e., refraction, shoaling and breaking);
- Long wave (infragravity wave) transformation (i.e., generation, propagation and dissipation);
- Wave-induced setup and unsteady currents; and
- Overtopping.

The original XBeach application (surfbeat mode), funded by the U.S. Army Corps of Engineers, was developed to assess hurricane impacts on sandy beaches. Since then, the model has been extended, applied and validated for storm impacts on urbanized coasts for the purpose of flood risk assessments, the non-hydrostatic version has been validated with laboratory experiments and field measurements to estimate overtopping.

For this project, a 1D non-hydrostatic XBeach model was developed to calculate the contribution of waves to coastal flooding. The model comprises a schematized profile based on a combination of a representative dyke cross-section and adjacent bathymetry (DEM, Lidar) provided by the Town of Wolfville (Figure 4.4). This model was used to calculate wave runup and overtopping over the dyke.

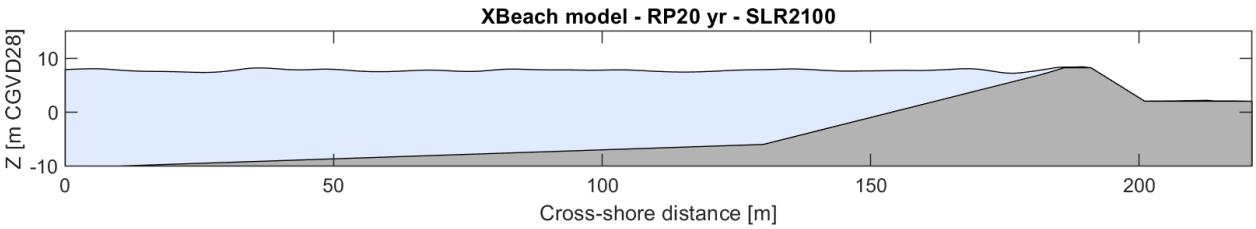


Figure 4.4: Schematized Cross-Shore Profile for the XBeach Wave Overtopping Model

The model was forced with nearshore significant wave height (H_s) and peak wave period (T_p) calculated by the MIKE21 SW model and still water level from the MIKE HD model. Three combinations of water level and wind speed scenarios were simulated per return period and per sea level rise scenario. The different scenarios are shown in Table 2. Only two 1-in-100-year events were simulated as the wave height was expected to be low based on the trends observed for the 1-in-20-year event.

Table 2: Scenarios Simulated with the XBeach Model

Run	Still Water Level (m CGVD28)	Still Water Level (m CGVD2013)	Sea Level Rise Time Horizon	Return Period (years)	Wind Speed (m/s)	H_s(m)	T_p (s)
1	6.0	5.35	Present	20	15.3	1.2	4.7
2	7.0	6.35	Present	20	11.0	0.7	3.5
3	7.5	6.85	Present	20	5.6	0.3	2.1
4	7.7	7.05	2100	20	15.3	1.3	4.7
5	8.8	8.15	2100	20	11.0	0.7	3.6
6	9.2	8.55	2100	20	5.6	0.3	2.3
7	6.0	5.35	Present	100	18.8	1.5	5.4
8	7.0	6.35	Present	100	15.5	1.3	4.7

Note: return period is associated with wind speed at particular still water level threshold (see Figure 4.1). This joint probability analysis is specific only to the wave runup calculations.

Since the waves near Wolfville are generally small, wave overtopping over the dyke only occurs in the model during rare events, for a very limited time (a few seconds), and very small volumes of intruding water. Overtopping occurred in the model by pairing extremely high water levels and the 2100 SLR time horizon. Without sea level rise, no wave overtopping is computed by the model. Therefore, wave runup levels were not included in the total coastal flood levels.

Summary of Numerical Modelling Methodology

Wave runup (the maximum vertical extent of wave uprush on a beach or structure above the still water level) and potential overtopping by waves was estimated with a combination of a Bay of Fundy model and a local wave model. The modelling and joint probability analyses showed that wave runup was not sufficient (only a few seconds) to be a concern for this dyke system, even in future conditions.

4.1.4 Coastal Storm Surge and Waves

The 2D MIKE21 coastal surge model of the Bay of Fundy and Minas Basin was used to simulate storm surge events which were used in the 2D flood model to determine the potential flooding extents.

The surge level was determined at 4 locations (Figure 4.5) for input into the flood model. Wave runup was not included in this estimate as it was determined that wave overtopping occurred only under extreme conditions and with small volumes. It was found that the results were very similar between locations, but the four locations were kept for input to the flood model, since they can slightly affect flood flow direction.

Figure 4.5: Locations of surge outlets used for PCSWMM flood model

A comparison of the modelled surge and the normal tidal elevation shows that the surge can range from 0.62m to 0.81m above the existing Higher High Water Large Tide (HHWLT) when forced by present day 1-in-2 and 1-in-100-year events. Figure 4.6 shows the tidal inputs used for the SWMM model at location 1 and the approximate average dyke elevation. Figure 4.7 shows the Bay of Fundy water levels during the 1-in-100-year storm surge event. Maximum surge levels are presented in Table 3, and coastal extreme water levels are presented in Table 4. Figure 4.6 shows that there is already a risk of overtopping

the dykes and the ground between the two, which is at the same elevation, and that this risk may increase in the future if the dyke system is not upgraded.

Figure 4.6: Tidal Inputs for SWMM Model at Location 1

Table 3: Maximum Surge at Location 1 for existing conditions and by 2100 for design surges with return periods of 1 in 2, 1 in 20, and 1 in 100 years.

Time Horizon	Maximum Surge at Location 1 (m CGVD28) by Return Period*		
	1 in 2 year	1 in 20 year	1 in 100 year
Existing	8.19	8.29	8.41
2100	9.79	9.89	9.99
Time Horizon	**Maximum Surge at Location 1 (m CGVD2013) by Return Period**		
	1 in 2 year	**1 in 20 year**	**1 in 100 year**
Existing	7.57	7.65	7.76
2100	9.15	9.25	9.35

Approximate Dyke Elevation

* The Town currently uses CGVD28 as a vertical reference system, but the provincial standard is now CGVD2013, which is a change of 0.64m in Wolfville. Both systems are included to simplify comparison with existing Town maps.

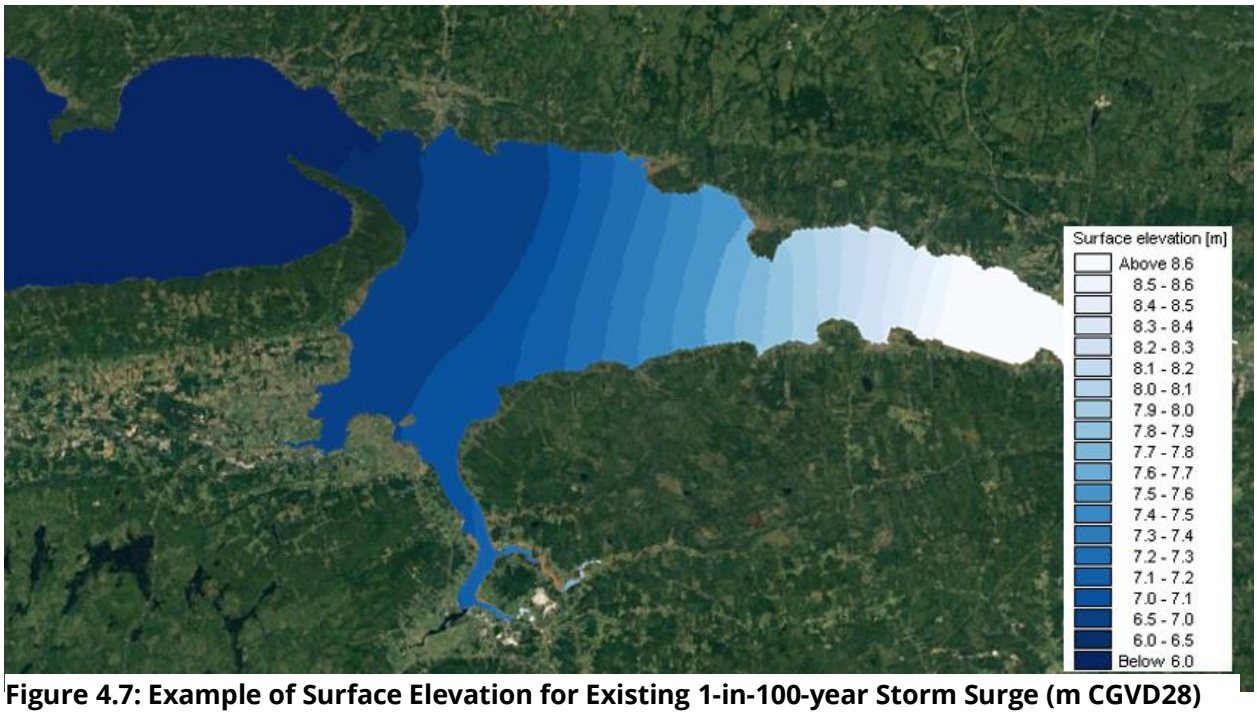


Figure 4.7: Example of Surface Elevation for Existing 1-in-100-year Storm Surge (m CGVD28)

Table 4: 2020 Tidal and Extreme Coastal Water Level Estimates

Extreme Values by Return Period [years]	Meters above CGVD28	Meters above CGVD2013
1 in 100 years	8.41	7.76
1 in 20 years	8.29	7.64
1 in 2 years	8.22	7.57
Tidal Elevations		
Higher High Water Large Tide (HHWLT)	7.60	6.95
Higher High Water Mean Tide (HHWMT)	5.11	4.46
Mean Water Level (MWL)	0.43	-0.22
Lower Low Water Mean Tide (LLWMT)	-4.21	-4.86
Lower Low Water Large Tide (LLWLT)	-5.27	-5.92

Note: wave runup was not included, since most areas are well sheltered from wave action

Summary of Coastal Storm Surge and Waves

Storm surges (increase in water level associated with a low-pressure weather system) were analysed with a 2D coastal storm surge model for various return periods, to be used as input to the Wolfville flood model. It was found that the increase in water level due to storm surges ranges from 0.62m to 0.81m, for the 1-in-2-year and 1-in-100-year events, respectively. It was found that there was a small risk of overtopping the dykes and Waterfront Park in current conditions, and that SLR would make overtopping unavoidable in the coming years.

4.1.5 Considerations for Raising Dykes and New Dyke Construction

As sea level rises, dyke overtopping risks will gradually increase, as illustrated in Figure 4.6. Instead of designing for the sea level as it is projected for the year 2100, it may be more prudent, and more socially acceptable, to design the new dyke level (and raising the existing dykes) to an intermediate scenario. An analysis of incremental increase in overtopping risks was conducted for the intermediate and high Sea Level Rise scenarios, and the results are presented in Figure 4.8. This analysis allows the selection of a level that will provide a consistent level of safety until the year 2070. Figure 4.8 shows that with no new dyke or raising, there may be an average overtopping frequency of twice a year by the year 2035 (in 15 years), if the intermediate sea level rise scenario happens. The same frequency of overtopping is projected to occur by the year 2028 (in 8 years) if the high sea level rise scenario transpires.

Flood mapping for dyke overtopping in the future is presented in Chapter 6 and shows the extent of flooding reached by future sea levels if the dyke system is not overtopped. Chapter 7 presents a discussion on the vulnerability of the various municipal assets and land uses, identifying that the flooding of particular areas with saltwater may compromise key assets, such as the wastewater conveyance and treatment systems.

Depending on the rate of SLR, the elevation of new and existing dykes should be between 8.2 and 8.6m CGVD2013. Since the elevation of the top of the existing dykes and connecting ground is currently between 7.8m and 8.9m CGVD 2013, a design that involves an average increase in top level of approximately 500mm would be suitable. This evaluation can be analysed in more detail at the pre-design level if this option is selected.

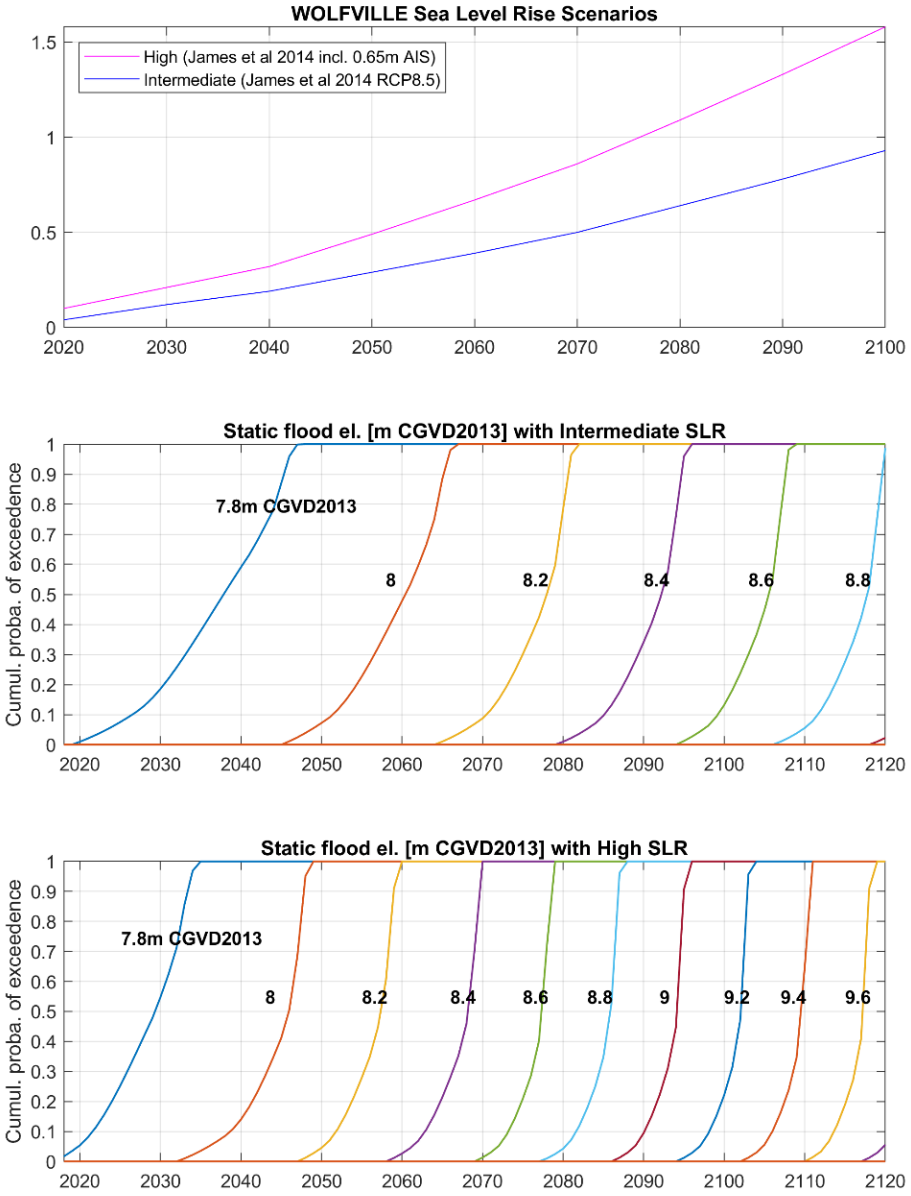


Figure 4.8: Gradually Increasing Risks of Dyke Overtopping with Sea Level Rise

In order to place projected water levels in the context of the current elevations of the ground level around the Waterfront Park area, Figure 4.9 shows colour shading on a map of the Waterfront Park that corresponds to the elevations shown in Figure 4.8. Figure 4.9 also illustrates the potential alignment of a new dyke that would border the outside edge of the park and then follow the railway alignment. It was selected during discussions with the Town to protect the pathways, vegetation, gazebo and electrical infrastructure of the Waterfront Park from regular flooding in the future. Figure 4.10 shows the existing ground elevation (based on the 2012 Lidar data) along that alignment, emphasizing that the ground will need to be raised by approximately 0.5m on average to reach the elevation of 8.5m CGVD2013.

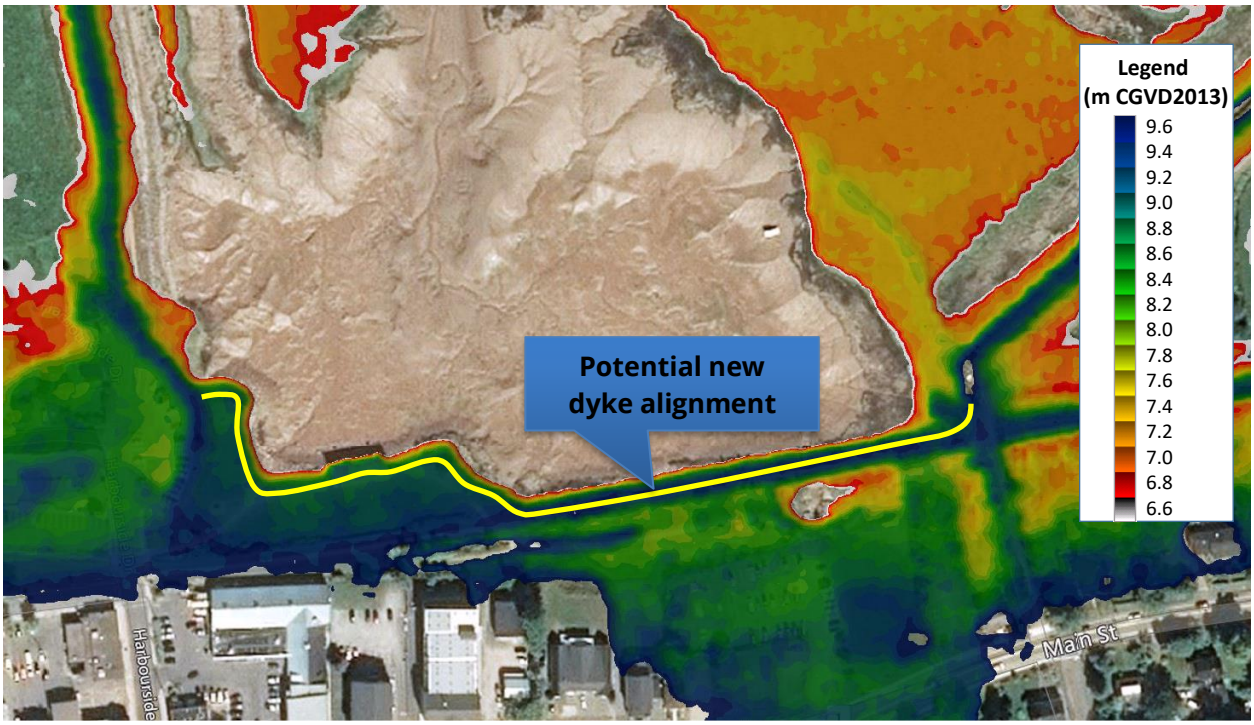


Figure 4.9: Waterfront Park with Ground Elevations and Potential New Dyke Alignment

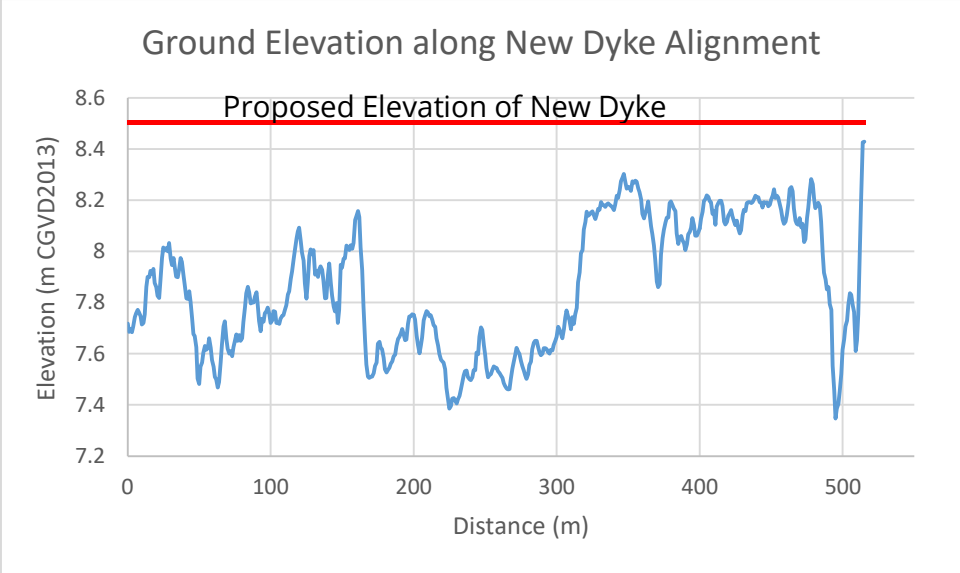


Figure 4.10: Ground Elevation along Potential New Dyke Alignment

Summary of Recommendations for Raising the Dykes, and New Dyke Construction

This analysis shows that without the construction of a new dyke or raising of the existing dykes, the system would be overtopped, leading to saltwater flooding in Wolfville an average of twice a year by:

- 2035 (in 15 years), if the intermediate SLR scenario occurs, and
- 2028 (in 8 years) if the high SLR scenario occurs.

Constructing a new dyke (raising the existing ground) to an elevation of 8.5m CGVD2013, and raising the existing dykes by 500mm on average in the next 3 to 5 years, will provide a suitable level of safety for the next 45 to 65 years, depending on the rate of SLR.

Chapter 5 Hydrologic and Hydraulic Analysis

Hydrologic modelling involves simulating the process of rainfall on a watershed, including infiltration, gradual buildup of runoff, and discharge to the main drainage system. Hydraulic analysis refers to the assessment of water levels, flows, and drainage influenced by the characteristics of the drainage system, its capacity, and relevant tidal effects.

The modelling software PCSWMM was used to assess the potential extents of flooding. PCSWMM is a hydrologic and hydraulic modelling software from Computational Hydraulics International (CHI [2019]), based on the US EPA's Storm Water Management Model 5 (SWMM5). SWMM5 is an industry standard software for semi-urban stormwater management and flooding analyses. The model was used to estimate the extent of flooding due to the combination of extreme precipitation events and extreme coastal water levels.

5.1 Hydrologic and Hydraulic Modelling

In 2003, CBCL prepared the Stormwater System Master Plan for the Town of Wolfville. A hydrologic/hydraulic model was created for that study using PCSWMM. The 2003 model was updated to incorporate more current information, including:

- Rainfall data: current climate and future climate change data
- Watershed Characterization: area, slope, maximum flow length, soil conditions, surface roughness, and percent imperviousness. Additional spatial data included:
    - Lidar (2m resolution CGVD28 datum) obtained from the Municipality of the County of Kings
    - GIS layers of Town infrastructure, including some stormwater and wastewater features and zoning
- Stormwater Drainage Network Site Survey: engineering drawings and hand drawn sketches
- 2D Model: development based on the Lidar topography

Note: The Town of Wolfville has disclaimed that the storm sewer data provided may be missing data or be inaccurate in some locations.

5.1.1 Existing Rainfall Events

The hydrologic part of the model receives time series of precipitation data as input to simulate rainfall and runoff processes. Environment and Climate Change Canada's Kentville climate station (Station # 8202810) is the closest (spatially) to the Town of Wolfville. The

Intensity Duration Frequency (IDF) curve for the Kentville climate station includes 40 years of data (1960-2016). This was compared with the Western University IDF_CC tool (Schardong et al., 2018), and both were found to be in agreement. Since the climate station is located close to Wolfville, it was the most representative data available for this assessment.

For this study the 1-in-2-year, 1-in-20-year and 1-in-100-year flood events were of interest. The 1-in-2-year rainfall event was modelled in combination with extreme coastal water levels to evaluate the flood extents; likewise, the 1-in-20-year and 1-in-100-year rainfall events were used in combination with the 1-in-2-year coastal water level. The selected ensemble of simulations was designed to assess a range of probable rainfall and coastal water level combinations. Figure 5.1 illustrates the hyetographs, which were prepared using the Chicago Method with a 5-minute discretization interval. The Chicago Method is a widely-used standard design storm that reflects the intensity-duration relationship of the IDF curve, which is developed using historical storm data.

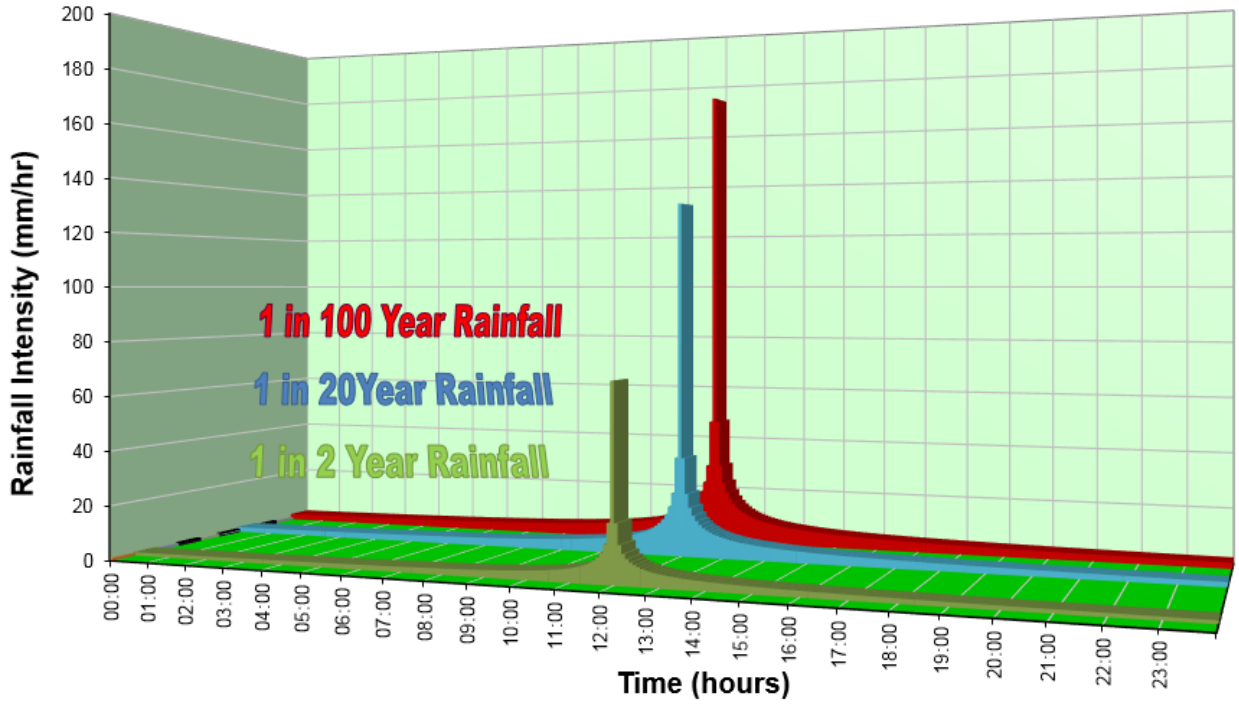


Figure 5.1: Existing Conditions Rainfall Hyetographs

Summary of Existing Rainfall Events

Environment and Climate Change Canada's Kentville Climate Station is the closest (spatially) to the Town of Wolfville, and its Intensity-Duration-Frequency (IDF) curve was used to estimate the extreme precipitation events for the Town. The Chicago method was used to model 1-in-2-year, 1-in-20-year, and 1-in-100-year design storms.

Table 5: Peak Rainfall Intensities (5-min interval) of the Design Storms Used to Model Current Conditions in this Study (Values Based on the Kentville Climate Station IDF Curve)

Peak Rainfall Amount	1-in-2-year (mm/hr)	1-in-20-year (mm/hr)	1-in-100-year (mm/hr)
Existing Climate	69	107	174

5.1.2 Impacts of Climate Change Rainfall Events

Future climate change is expected to increase the intensity of rainfall events, which suggests a potential increase in the severity and frequency of flooding. Therefore, analysis of flood risks requires the consideration of climate change effects.

General Circulation Models (GCMs) are global climate change estimates used to represent existing and future climate dynamics within the Earth's atmosphere. Such models are often based on a 250km by 250km resolution grid. A range of extreme precipitation projections are obtained from the combination of different GCMs and RCPs. High and intermediate projections are derived from RCP8.5 and RCP4.5, respectively.

Given the resolution of GCMs, there is a high level of uncertainty inherent in the application of GCM results at a point location. Therefore, it is important to consider and compare different approaches to assessing the impacts of climate change on projected rainfall. This assessment calculates the potential effect of climate change on sub-daily rainfall intensity by using the Western University IDF_CC tool (Schardong et al., 2018), the Clausius-Clapeyron equation (Westra et al., 2014), both of which apply the results of GCMs. The results of each method are described below:

- The Western University Intensity Duration Frequency Climate Change Tool Version 4 (IDF_CC Tool):
  - Estimates potential impacts of climate change on IDF curves by downscaling GCM outputs to current IDF curves (derived from either gauged locations or from interpolation tools).
  - Was used with the Kentville Climate Station IDF curve. Calculations using the IDF_CC Tool were based on the outcome of a range of bias-corrected GCMs and climate scenarios.

- Outputs suggested a 24% to 61% increase in the 1-in-100-year, 24-hour precipitation for the 2071-2100 time horizon.

- The Clausius-Clapeyron Equation:
  - Converts projected temperature changes (Westra et al., 2014) to precipitation increase due to the tendency of air to hold more water as the temperature increases. The capacity of the atmosphere to hold water is governed by the Clausius-Clapeyron equation, which can be associated with an increase in precipitation intensity by 6% to 7% per degree Celsius. This equation was recommended by Environment Canada because of the lack of certainty in climate change models regarding precipitation.
  - Resulted in a range of 12% to 46% increase in the 1-in-100-year, 24-hour precipitation for the 2071-2100 time horizon.

The IDF_CC Tool results reported higher percent increases in rainfall in all cases. The IDF_CC Tool results were used for the future design storm scenarios, following the precautionary principle. Three emission scenarios were selected for sensitivity analysis and are presented in Table 6. Figure 5.2 illustrates the hyetographs for the three emission scenarios described in Table 6.

Table 6: Projected Increase in the 1-in-100-year, 24-hour Rainfall Intensity by the Year 2100 for Three Projected Scenarios

Emission Scenario	Method	Percentile	Projected Rainfall Intensity (mm)	% Increase from Baseline
			1-in-100-year, 24-hr	1-in-100-year, 24-hr
RCP8.5	IDF_CC	95th	280 mm	61%
RCP8.5	IDF_CC	50th	216 mm	24%
RCP4.5	IDF_CC	95th	261 mm	50%

Of the three emission scenarios presented in Figure 5.2 and Table 6, RCP8.5 (95th percentile) projected the largest increase in rainfall intensity of 61% above the historical baseline, which represents a likely "worst-case scenario". The IDF_CC Tool was also used to project rainfall intensities for both the 1-in-2 and 1-in-20-year events under the RCP8.5 (95th percentile) scenario, which resulted in an estimated 29% and 35% increase in rainfall, respectively. Hyetographs for these projected rainfall events were used as input to the hydrologic model to evaluate future floodlines.

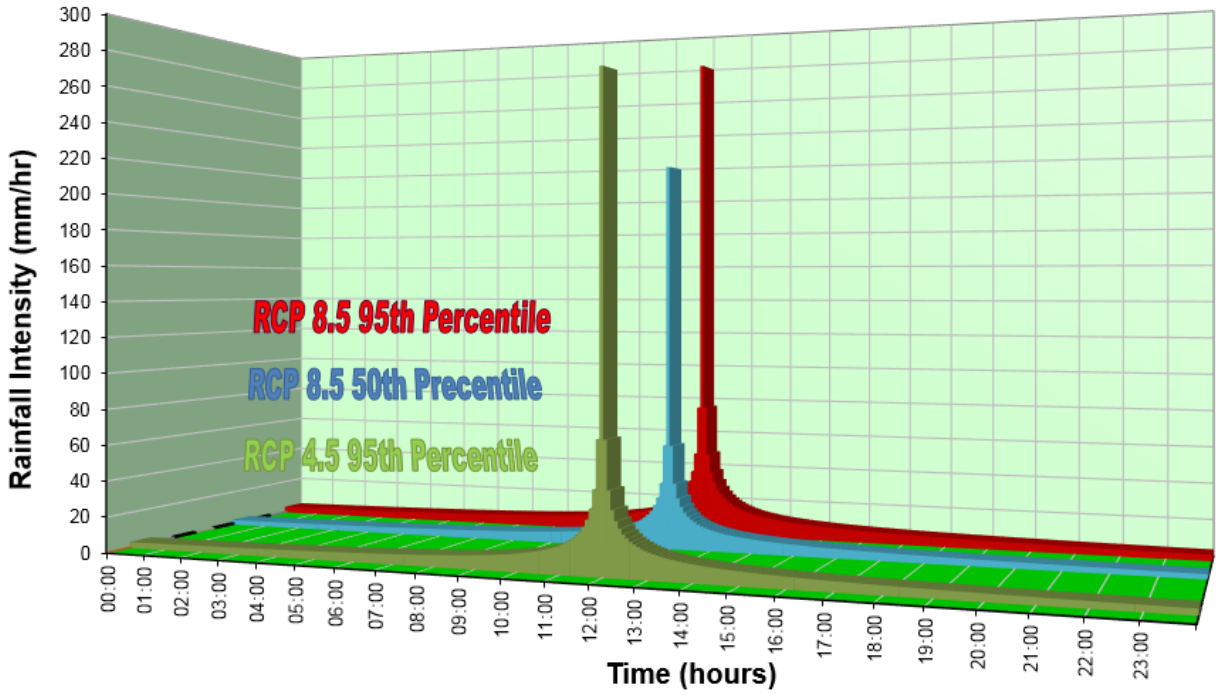


Figure 5.2: Comparison of 1-in-100-year Rainfall Projections for 2100

Summary of Impacts of Climate Change Rainfall Events

The effects of climate change on both precipitation and sea level rise were considered when examining future conditions (i.e., the year 2100 time horizon). To date, global greenhouse gas concentrations have most closely tracked the Representative Concentration Pathway (RCP) 8.5, which was used to generate the higher range of climate change projections featured in the Intergovernmental Panel on Climate Change's Fifth Assessment Report. The 1-in-100-year rainfall event is projected to increase by approximately 61% by 2100 under RCP8.5 (95th percentile) according to the Western University IDF-CC Tool (Table 7).

Table 7: Future and Existing Rainfall Projections of the IDF_CC Tool

Peak Rainfall Intensity	1-in-2-year (mm/hr)	1-in-100-year (mm/hr)
Existing	68.57	174.00
Future	88.45	280.12

5.1.3 Watershed Characterization

Watershed areas supplying key points along the storm sewer drainage network were delineated for the 2003 model by CBCL. Aerial photography was used to identify the land cover in each watershed, from which the surface roughness (combined using an area-weighted average) and percentage of impervious surface could be determined. Slope and maximum overland flow length for each watershed were estimated using the Lidar data. The Green-Ampt infiltration method was selected for infiltration calculations. This method is used to estimate depth of infiltration as a function of soil suction head, porosity and hydraulic conductivity, all of which were estimated based on the soil type.

Although future development will increase the percentage of impervious surfaces, which generally leads to greater runoff, the Town has a net-zero increase in stormwater runoff policy that requires the post-development runoff from a site to meet its pre-development rate. Therefore, future developments will require stormwater detention facilities, or other means of limiting runoff to pre-development rates. As such, the simulation of future conditions in the PCSWMM model did not involve modifying the percent of impervious area or the pervious and impervious roughness values of any watershed. However, rainfall input did include the effects of future climate change (Figure 5.2).

Summary of Watershed Characterization

Watershed delineation had been previously carried out in a 2003 Stormwater Master Plan prepared by CBCL. Watershed characteristics for input to the hydrologic model were extracted from aerial photography, land cover, Lidar data, and soil databases. The net-zero runoff policy of the Town gives reason to expect that runoff will not increase significantly as a result of future development.

5.1.4 Stormwater Drainage Network Update

Figure 5-1: Locations of the Stormwater Conduits that Require Updates Based on Recent Design Drawings

Figure 5-2: Locations of the Stormwater Conduits that Require Updates Based on Recent Design Drawings (Cont'd Figure 5-1)

The Stirling and Hillcrest Avenue developments include four (4) stormwater detention ponds to control stormwater flow. These stormwater ponds were integrated into a 1D hydraulic model to represent storage and release of stormwater during a storm event. No other significant developments were identified within the Town of Wolfville.

In total, 28 as-built or record drawings of the stormwater drainage network were compared to the 2003 model to identify differences. Six (6) surveys were used to update stormwater pipes in eight (8) locations in the model, as shown in Figure 5.1 and Figure 5.2, and outlined in Table 8. Following these updates, the conduit diameters of the stormwater model were reviewed to ensure consistency throughout the downstream network.

Table 8: Stormwater Conduit Geometries of Pre-Established Model (in 2003) and the Updated Model

Number	Location	Type of Conduit in 2003 Model	Diameter of Conduit in 2003 Model	Type of Updated Conduit	Diameter of Updated Conduit	Consultant	Year of Drawing
1	Harbourside Dr.	Circular	0.45 m	Circular	0.9 m	Hatch	2016
2	King St.	Circular	0.375 m	Circular	0.3 m	Hatch	2018
3	Orchard Ave.	Trapezoidal	-	Circular	0.6 m	Hatch	2016
4	Sherwood Ave. (north)	Circular	0.45 m	Circular	0.375 m	CBCL	2007
5	Sherwood Ave. (south)	Circular	0.3 m	Circular	0.375 m	CBCL	2007
6	Skyway Dr.	Circular	0.3 m	Circular	0.375 m	Town of Wolfville	2005
7	Stirling Ave.	Trapezoidal	-	Circular	0.375 m	Hiltz and Seamone II Ltd	2014
8	Stirling Ave. (to the detention pond)	Trapezoidal	-	Circular	0.45 m	Hiltz and Seamone II Ltd	2014

Summary of Stormwater Drainage Network Update

The hydraulic model of the drainage system built by CBCL in 2003 was updated with recent information on the stormwater pipe upgrades. Twenty-eight (28) as-built or record drawings of the stormwater drainage network were reviewed and 8 modifications to the model were made. Four detention ponds were also added in the hydraulic model.

5.1.5 2D Model Development

Both the 1D and 2D modelling capabilities of PCSWMM were used in the flood risk assessment. The 1D model includes underground infrastructure, detention ponds and river channels. The 1D model calculates the flooding in manholes and along the surface drainage network (such as ditches) that may occur during each modelled rainfall event.

A 2D hexagonal hydraulic mesh was generated over the potential flood inundation area using 2m-resolution Lidar data. Any flooding generated in the storm sewer network (1D model) during each rain event is routed to the 2D mesh. The 2D mesh then calculates overland flow, depth, and velocity of the flooded water over time. The maximum extent of flooding is used to generate the flood maps for each scenario evaluated.

Summary of 2D Model Development

The existing 1D model of the drainage network was enhanced with a 2D hexagonal mesh of the topography of the potential flood inundation area. Where the 1D model has insufficient capacity, it will direct water to the 2D model of the ground surface. Overland flow, depth and velocities are calculated over the duration of the flood events, and the maximum extent of flooding is used to generate the flood maps.

Chapter 6 Flooding Analysis

Flooding within the Town of Wolfville is a result of two independent events: high coastal water levels and large precipitations. Coastal flooding can result from a combination of the astronomical tide, storm surge and sea level rise. In general, areas behind the lowest points in the dyke system are the most vulnerable to coastal flooding impacts. Flooding from large rainfall events occurs when the stormwater drainage network has insufficient capacity to convey water to downstream outlets.

The risk and vulnerability of coastal communities continues to rise as climate change causes sea levels and the intensity and frequency of extreme storms to increase. Climate change can threaten public safety, the economic and social benefits of the coastal environment, as well as cause significant damage to infrastructure.

6.1 Flooding Scenarios

The model of the Town's stormwater drainage network and floodplain areas was used to simulate the flood scenarios presented in Table 9. Each extreme event (tide or rainfall) is accompanied by a "high" event (1-in-2-years) from the alternate mechanism (tide or rainfall) to be conservative, while not radically skewing the probabilities.

Table 9: Flooding Scenarios Assessed under Existing and Future Conditions

Climate Condition	Flooding Scenario	Annual Exceedance Probabilities	
		Rainfall Event	Tide Event
Existing Conditions	Tidal Flooding	1 in 2 years	1 in 100 years
	Tidal Flooding	1 in 2 years	1 in 20 years
	Rainfall Flooding	1 in 20 years	1 in 2 years
	Rainfall Flooding	1 in 100 years	1 in 2 years
Future Conditions	Tidal Flooding	1 in 2 years	1 in 100 years
	Tidal Flooding	1 in 2 years	1 in 20 years
	Rainfall Flooding	1 in 20 years	1 in 2 years
	Rainfall Flooding	1 in 100 years	1 in 2 years

The flooding scenarios outlined in Table 10 were assessed to evaluate the performance of the proposed flooding mitigation strategies (described in Chapter 8). The flood mitigation

options were assessed for existing conditions (2020). In order to compare the relative effectiveness of each option, the same set of extreme events was used (i.e., a 1-in-100-year rainfall, associated with a 1-in-2 coastal water level). The flood-mitigation techniques evaluated addressed mostly rainfall-dominated effects (i.e., stormwater storage is intended to alleviate flooding from extreme rainfall, not extreme coastal water levels), except for the option of constructing a new dyke and raising the existing dykes. In this case, the coastal water levels will be held back by the upgraded dyke system, and the main risk to be mapped is the effect of the extreme rainfall event.

Table 10: Flood Mitigation Options Assessed

Mitigation Strategy	Annual Exceedance Probabilities	
	Rainfall Event	Tide Event
Implementation of Best Management Practices	1 in 100 years	1 in 2 years
Increased Storage Capacity	1 in 100 years	1 in 2 years
Increased Pipe Capacity	1 in 100 years	1 in 2 years
Upgraded Dyke System (Raising + Closing Gap)	1 in 100 years	1 in 2 years

6.2 Floodplain Mapping

Model simulation results for the scenarios are presented in Figure 6.1. Data found in Table 9 and Table 10 were used to produce floodplain maps, presented in Appendix A: Flood Mapping. The maximum water levels and extents of flooding along the stormwater drainage network were used to delineate floodlines for each flood scenario. The high-resolution Lidar allows the floodlines to be defined with a high level of precision for each flood scenario. The floodplains, as presented in Appendix A, do not represent the flood extents for a single moment in time, but rather the extent of the floodplain at its maximum during the event. The floodlines have also been provided to the Town in GIS format.

In many instances, the floodlines for the 1-in-20 and 1-in-100-year flood events for existing conditions are very similar. This can be seen in Figure 6.1, which depicts a portion of Drawing Number 1 (Appendix A). In terms of planning regulations, the 1-in-20-year and the 1-in-100-year events define the floodway and floodway fringes, respectively. In this case, since the two floodlines were found to be close together, it was decided, during discussions with the Town, that it would be clearer and simpler to use only the 1-in-100-year floodlines to define the flood boundaries in the Constraints Map in the Land Use By-laws.

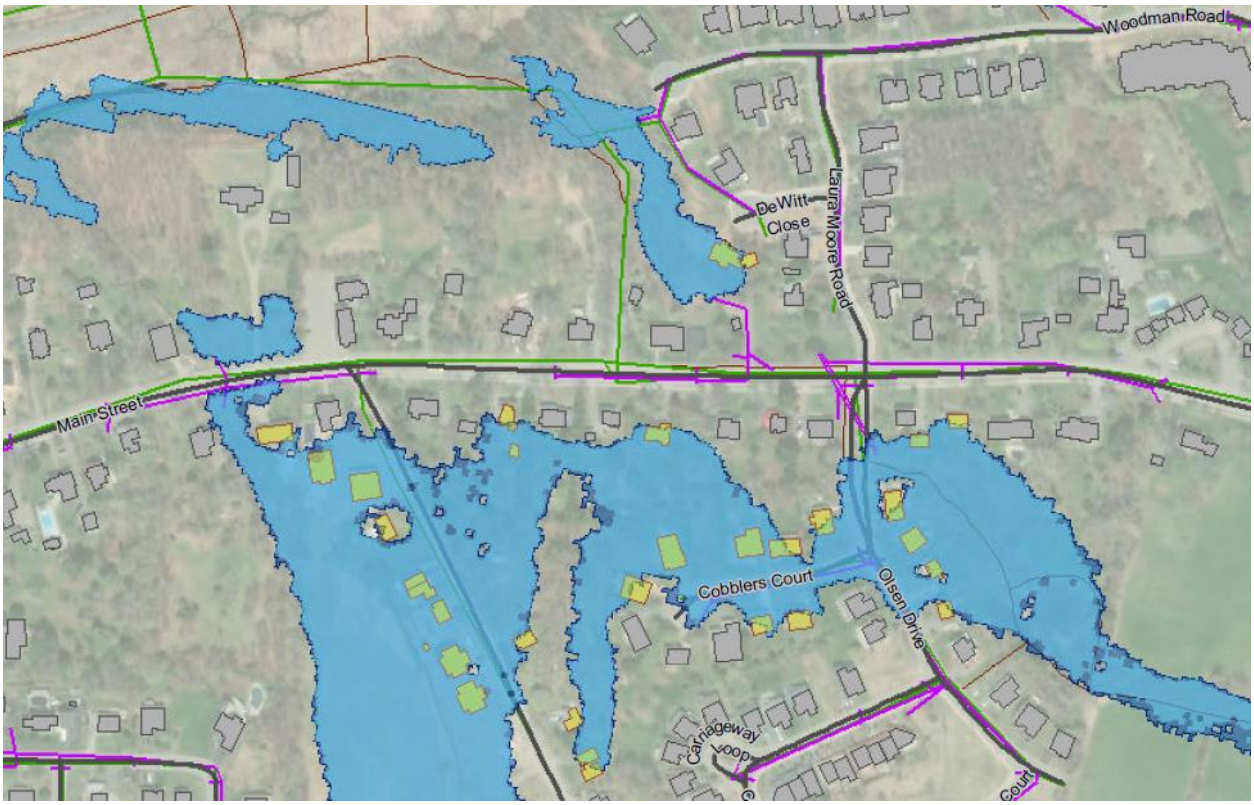


Figure 6.1: Extract of Map 1 – Existing Conditions, 1-in-20-year and 1-in-100-year Floodplains

Chapter 7 Vulnerability Assessment

The vulnerability assessment identifies municipal assets, infrastructure, and areas which are, or may become, vulnerable to extreme weather events and climate change. Adaptation options can be prioritized based on the infrastructure that is at the highest risk of flooding.

The Town provided the following GIS layers which were used to assess flooding impacts to infrastructure:

- Regulatory Zoning
- Sewer Collection System Network
- Stormwater Collection System Network
- Base Mapping
- Assets
- Water Distribution System
- Marshland
- Survey
- Street Index
- Transportation Routes

Assets within the floodplains expected of current climate conditions, with the existing dyke heights, were identified as vulnerable to flooding impacts, such as damage or loss. The focus of the risk and vulnerability assessment is on the impacts of flooding to critical municipal infrastructure and operations. Upholding public safety and the protection of Regional Emergency Management Organization (REMO) facilities is considered to be a top priority, followed by the protection of vital municipal services (e.g., drinking water and sewer collection).

Mitigation measures to protect vulnerable infrastructure are presented in the following chapter. This section represents a high-level risk assessment for critical assets and does not identify nor address all municipal assets comprehensively.

7.1 Historical Vulnerability

Historically, the Town of Wolfville has not experienced frequent or extreme flooding. The existing dykes have historically provided adequate protection from extreme coastal waters during high tide. Any flooding that has been recorded, has been found to occur when:

- Extreme tidal events back up through the stormwater system, or
- Extreme rainfall leads to flooding of the stormwater system due to insufficient pipe capacity or maintenance of the storm sewer system.

The following areas in the Town of Wolfville were identified to have experienced some level of flooding historically:

- Orchard Avenue,
- Willow Avenue,
- Sherwood Drive,
- Main Street,
- Wickwire Avenue near Main Street, and
- University Avenue at Main Street.

It is important to note at this point that even though the Town has not suffered critical damage to residential, municipal or commercial infrastructure in the past, the present assessment has identified that this risk is now present and growing every year with climate change. For example, Hurricane Teddy occurred on the 22nd September, 2020, and it did not carry much rain but had a notable storm surge. The storm surge was high, but did not seem to cause widespread flooding. However, the following photos show that the coastal water level rose fairly close to the dyke level, and that a larger event could easily overtop the dykes.

Figure 7.1: Photos of High Coastal Water Levels During Hurricane Teddy

The extract from the map of future flooding conditions shown in Figure 7.2 represents a 1-in-100-year coastal water level event, and it suggests that a significant amount of residential, municipal and commercial infrastructure is at risk of significant flooding with saltwater, which would cause a significant threat to public safety and is very damaging to all assets involved. This figure demonstrates the importance of protection from extreme coastal water levels, which is addressed in Chapter 8. Because this is such a critical item, it is assumed in subsequent maps that connecting and raising the dykes is carried out in the short term, and remaining flooding risks are related to rainfall events.

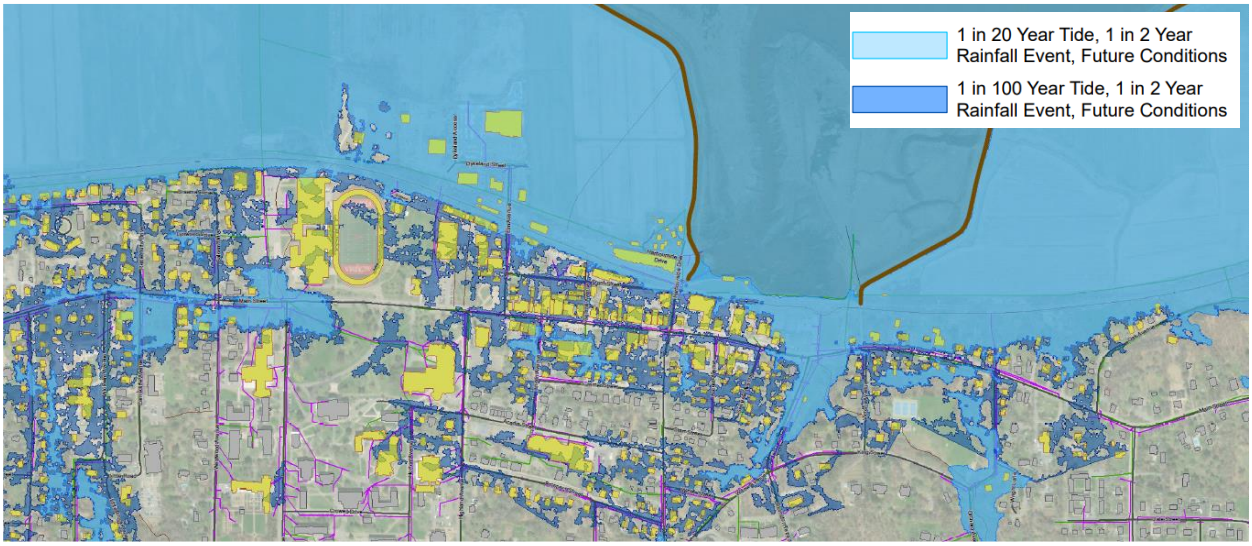


Figure 7.2: Areas at Risk of Saltwater Flooding in Future 1-in-100-Year Event

7.2 Municipal Assets

Integrating floodplain mapping into land use planning and asset management is critical for the long-term viability of municipal assets. According to the MPS, municipal assets are defined in two sets of inventories: the Water Utility and the General Fund. The Town maintains an Asset Management Plan (AMP) that provides the municipality with essential information required to ensure the safe and sustainable management of important assets. Incorporating the findings of this flood risk analysis will further improve asset management planning.

The flood analysis identified vulnerable areas and important infrastructure assets at risk in the Town. The existing 1-in-100-year rainfall and future (climate change) 1-in-100-year rainfall (RCP8.5 95th percentile) events were used to identify areas vulnerable to flooding, today and in the future, if the existing or proposed raised dyke systems were in place. Buildings affected by flooding are identified as yellow on the flood maps in Appendix A. An extract showing the assets on the future 1-in-100-year flood map (with dykes raised) is presented below in Figure 7.3. Assets shown relate to emergency response, water supply, wastewater conveyance and treatment, and transportation/trails. Assets that were identified as being vulnerable to flooding are highlighted with the red text in the labels of Figure 7.3.

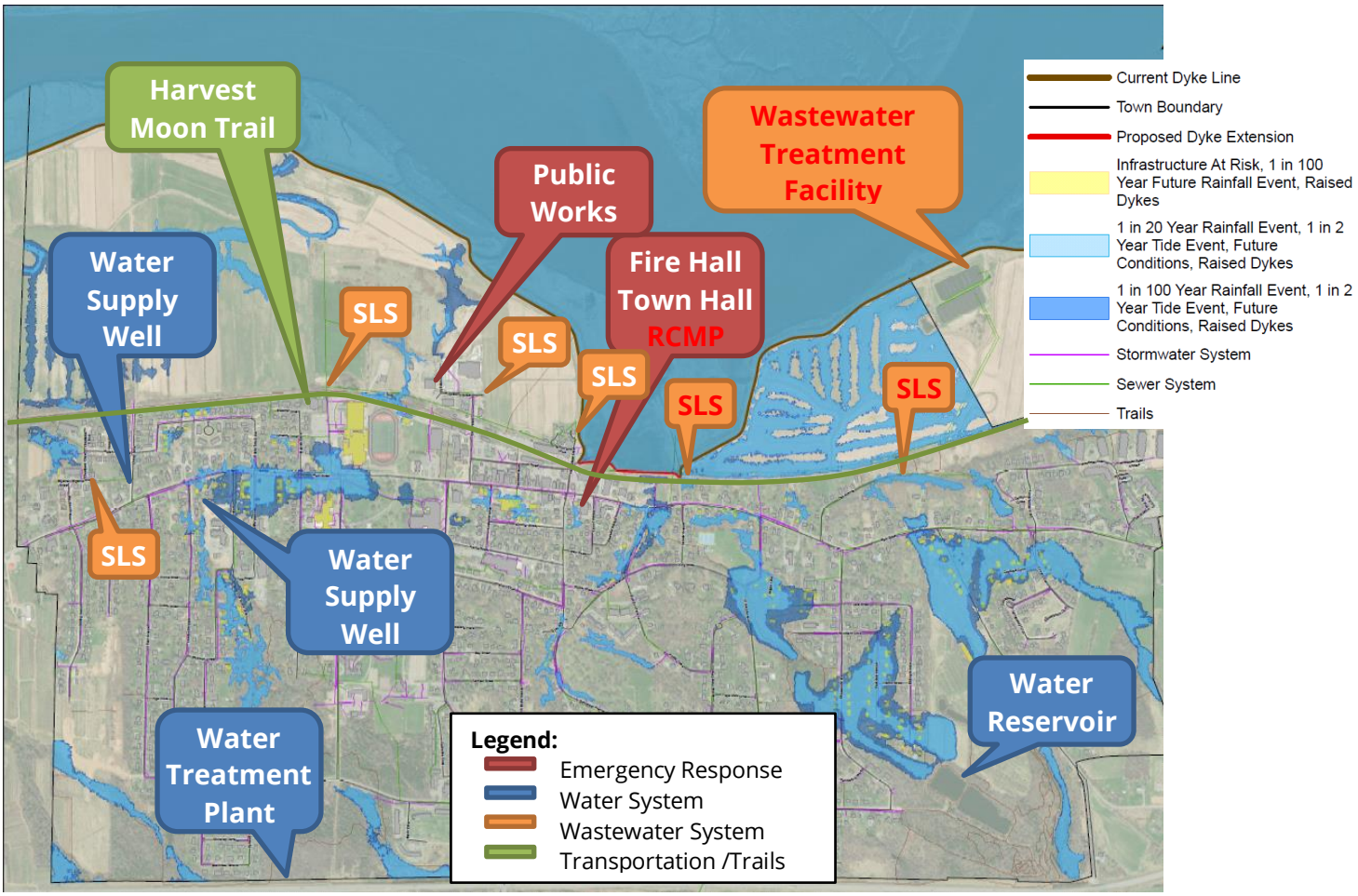


Figure 7.3: Municipal Assets on Future Flood Map (Red Text Shows Risk of Being Flooded). Sewage Lift Stations (SLS); Royal Canadian Mounted Police station (RCMP).

7.2.1 Emergency Response and Recovery

Police, fire protection and regional emergency management are considered essential services for the Town and are treated with the utmost importance. The RCMP office, as well as the Wolfville Volunteer Fire department, are located on Main Street near Gaspereau Avenue and provide 24-hour service for the community. During an extreme flooding event, the fire department needs to maintain access to most areas of the Town and the community emergency center made accessible.

The Wolfville Fire Department is connected to the Town Hall building, and neither are directly at risk of flooding, although the RCMP parking lot and corner of the garage are exposed to some shallow flooding risks, as shown in Figure 7.4.

Figure 7.4: RCMP Building and Parking Lot at Risk of Shallow Flooding

The public works building also houses a fleet of vehicles that need access to other areas in the Town. The modelling suggests that this facility is not exposed to current flooding risks or future flooding risks if the dyke system is raised.

The results of this flood risk mapping exercise can be incorporated into an Emergency Response Plan to determine how access can be maintained for all critical infrastructure during a flood.

7.2.2 Water System

The Water Utility includes the water treatment facility, wells, water reservoir, water mains, and supporting equipment. The Water Utility is owned and operated by the Town of Wolfville and financially operates separately through collected user revenues. The local water supply consists of two wells located in the area of West Main Street, which is pumped to a 12 ML concrete storage reservoir located on Ridge Road. The water is treated through chlorination at the Water Treatment Plant (WTP) and is supplied to residents through approximately 41km of gravity-fed water distribution lines from the reservoir.

As shown in Figure 7.3, none of the municipal water system assets are directly at risk of flooding. Even though the water supply wells are located in a fairly low-lying area close to flooded areas, they are not themselves flooded during either of the existing or future flood events.

7.2.3 Wastewater System

According to the AMP, there are six (6) sewage lift stations (SLSs) in the Town, which are used for pumping wastewater from lower to higher elevations to the wastewater treatment facility (WWTF). The WWTF is an aerated lagoon located northeast of the Town, directly south of the dyke system (elevated to be protected from flooding). It is noted that in 2019 the Town began a substantial capital upgrade to the wastewater treatment plant.

Considering the WWTF lagoons and buildings, the berms of the lagoons are at a safe elevation for current flooding risks, but they will not be at an adequate elevation for future flooding risks if the dyke system is not raised. Conversely, some of the older WWTF buildings are positioned in a low-lying area that is at risk of flooding. This the case for the existing blower and UV buildings. Conversely, the new screener building is at an elevation of 8.5m, which is safe from flooding. Figure 7.5 below shows the expected flood depths produced by existing 1-in-100-year extreme coastal water levels. Protection of the low-lying buildings is discussed in Chapter 8.

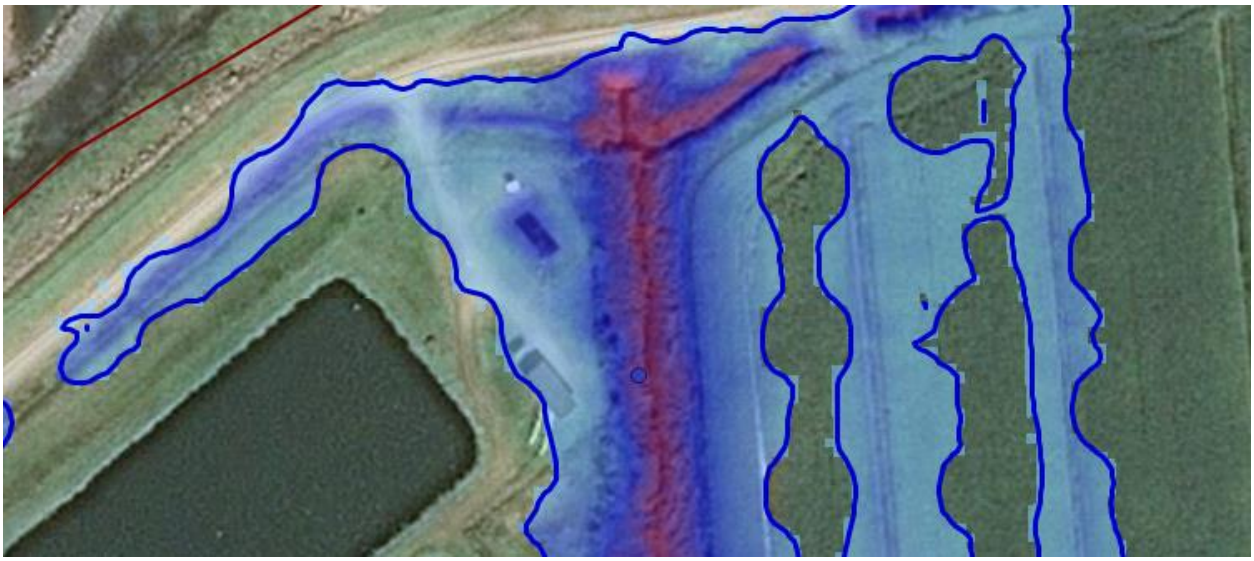


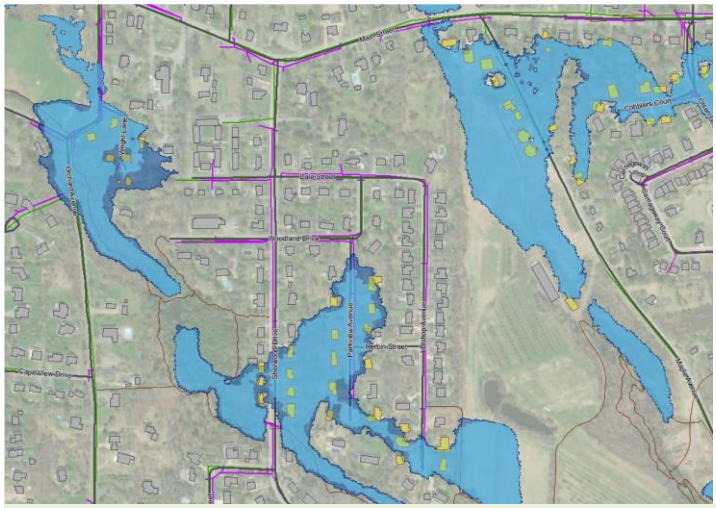
Figure 7.5: Flooded WWTF Buildings in 1-in-100-year Coastal Water Levels

Two SLSs are also just within, or very close to, the floodplain, both in existing conditions (involves the potential for salt water), and in future conditions, as shown in Figure 7.3. Flooding the SLSs would place the overall system at risk of being surcharged, overflowing wastewater to areas accessible by the public, treating excess stormwater, and damaging the wastewater conveyance and treatment infrastructure with saltwater. If electrical and instrumentation infrastructure within the SLS buildings are submerged, significant damage or loss may result. Typically, operation staff may opt to turn the pumps off to prevent damage to them when an SLS is flooded. This will result in untreated wastewater overflows to the environment, which is a public health concern. As discussed in Chapter 8, protecting areas with small berms is recommended. Although sewers are unlikely to sustain significant damage from inundation, flood water can also enter the sanitary sewers through holes in the manhole covers and cracks in the frame, potentially resulting in excessive flows, overwhelming the conveyance system and leading to wastewater overflows.

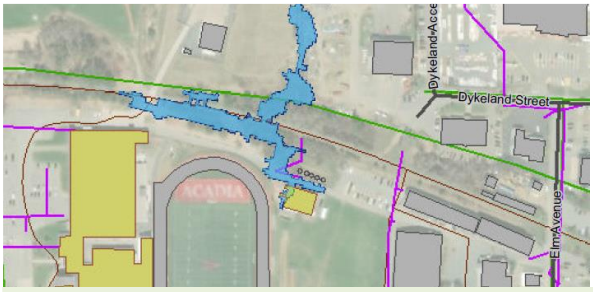
7.2.4 Transportation and Buildings

The Town's road infrastructure consists of local, collector, private and shared streets. The Town has a public transit system provided by Kings Transit, which services other

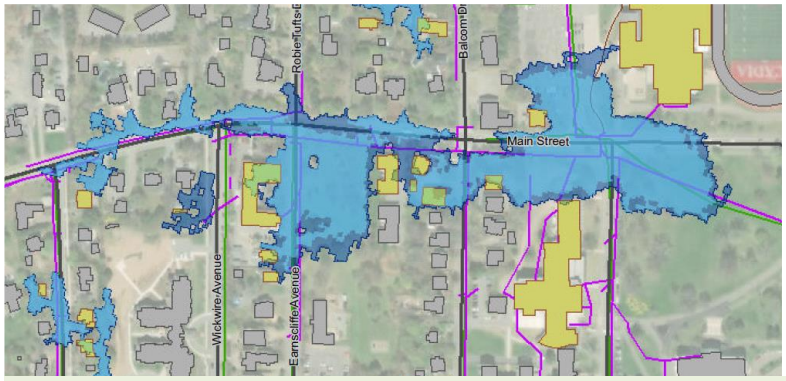
surrounding counties. A historic railway system runs along the north end of the Town, along which a popular public walking trail now exists. The Harvest Moon Trail is a 110km-long trail providing local active transportation, fitness opportunities, and views of the local natural setting. Flooding risks have not historically been a concern, with the areas in Figure 7.6 below identified as only being at risk of shallow, temporary flooding.



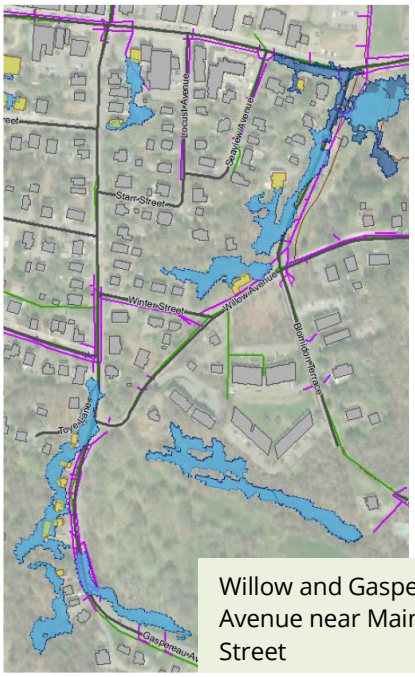
Orchard, Sherwood Parkview, Maple Avenues near Main Street



Short sections of the Railway by the Acadia sports field



Wickwire, Earnscliffe, Westwood and University Avenues near Main Street



Willow and Gaspereau Avenue near Main Street

Figure 7.6: Transportation Infrastructure Vulnerable to Flooding

7.2.5 Agriculture and Commercial

Low-lying portions of agricultural fields were identified to be vulnerable to flooding during the existing 1-in-20 and 1-in-100-year coastal water level events (with some saltwater flooding) and future 1-in-20-year and 1-in-100 rainfall events (with some freshwater flooding).

Even though dyke overtopping has not been noted by the Town as a historic occurrence, the modelling shows that some overtopping could occur during the current 1-in-20-year and 1-in-100-year coastal water level events, as shown in Figure 7.7 below. This figure shows that a fairly significant amount of agricultural land is at risk of flooding with saltwater under existing climate conditions. A discussion on flood protection from extreme coastal water levels is presented in Chapter 8.

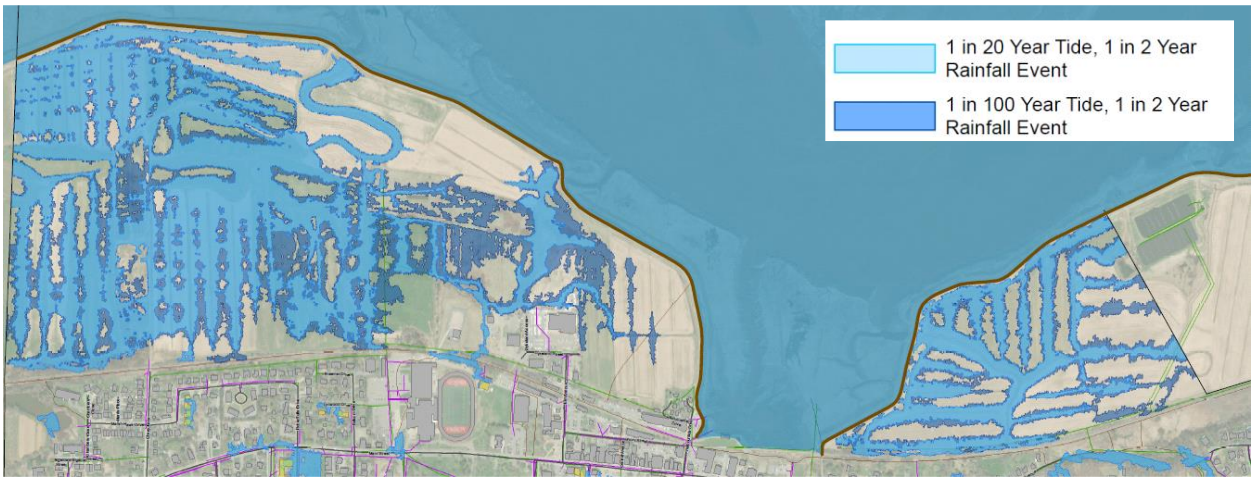


Figure 7.7: Agricultural Land Flooded in Existing Conditions Extreme Events

There are few commercial buildings currently at risk of flooding. The Wolfville Nursing Homes on Main St and Wickwire Ave. was identified as being at risk, as shown on the Figure 7.8 below. The figure also shows the "Town Centre" commercial area on Main St, opposite Central Avenue, also being at risk of flooding, together with the jewellery and photography stores across Linden Ave. It is worth noting that this risk is expected to increase slightly with climate change, as rainfall is expected to increase as well.

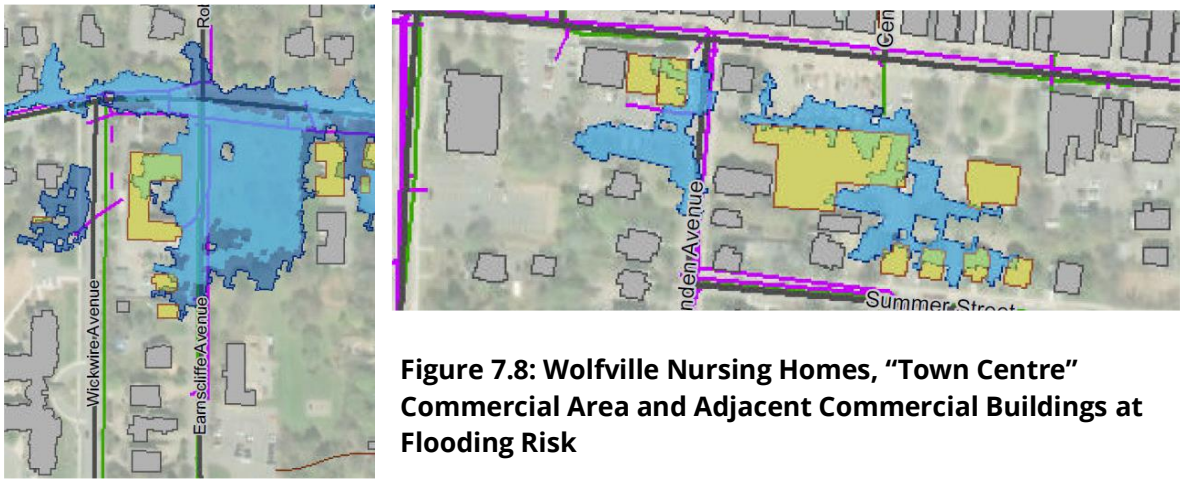


Figure 7.8: Wolfville Nursing Homes, "Town Centre" Commercial Area and Adjacent Commercial Buildings at Flooding Risk

Chapter 8 Flood Risk Mitigation Options

A number of flood mitigation options were identified and assessed. This section reviews the available options to mitigate the flooding of vulnerable areas identified in Chapter 7. Chapter 9 then evaluates the options presented here to support the development of a flood mitigation plan.

When developing a mitigation plan to reduce the impacts of flooding, determining the mitigation approach greatly depends on the infrastructure in question, the associated level of risk, as well as the cost-benefit of the various options. The Town has been proactive in addressing flooding through the implementation of development control measures, such as the net-zero increase in runoff requirement, which has been approved in the updated MPS document. Short term critical items now include connecting and raising the dyke system, as well as constructing a berm to protect the WWTF buildings.

The flood mitigation options for The Town include:

- Updating the Town's Municipal Planning Strategy to include updated floodlines, net-zero runoff development requirements, and limitations on the types of development permitted in floodplains. These changes have already been implemented by the Town in a document that received the Canadian Institute of Planners' Award for Planning Excellence.
- Coastal flood protection measures:
  - Connecting the dyke systems and implementing living shorelines; and
  - Increasing dyke elevations.
- Flood forecasting and warning system.
- Protecting municipal assets.
- Adapting existing buildings.
- Additional flood reduction measures:
  - Implementation of Best Management Practices;
  - Increasing storage capacity; and
  - Increasing pipe capacity.

8.1 Coastal Flood Protection Measures

The following actions are proposed to mitigate the risk of coastal flooding in the Town of Wolfville. Each action is discussed further in the following sections.

- Connect the dyke system, and apply erosion protection using a living shoreline.
- Coordinate with NS Department of Agriculture to raise existing dyke elevations:
  - Build up identified low elevations in the dyke system; and
  - Incrementally increase dyke elevations to accommodate increasing sea levels.

8.1.1 Connecting the Dyke System and Applying Living Shorelines

As shown in Chapter 7, the risk of flooding by overtopping the dykes is currently high, resulting in some flooding of farmland and WWTF infrastructure, and very significant in the future, resulting in flooding of most of downtown Wolfville. To mitigate flood risks in the Town during extreme coastal water levels, it is recommended to connect the Grand Pre and the Bishop Beckwith dyke systems, as roughly outlined in red in Figure 8.1. Connecting the two dyke systems provides a continuous elevated structure, which provides protection from the increasing risk associated with sea level rise and wave action. The dyke can be constructed to include a community trail that would connect with the existing trail, which is frequently used by residents.

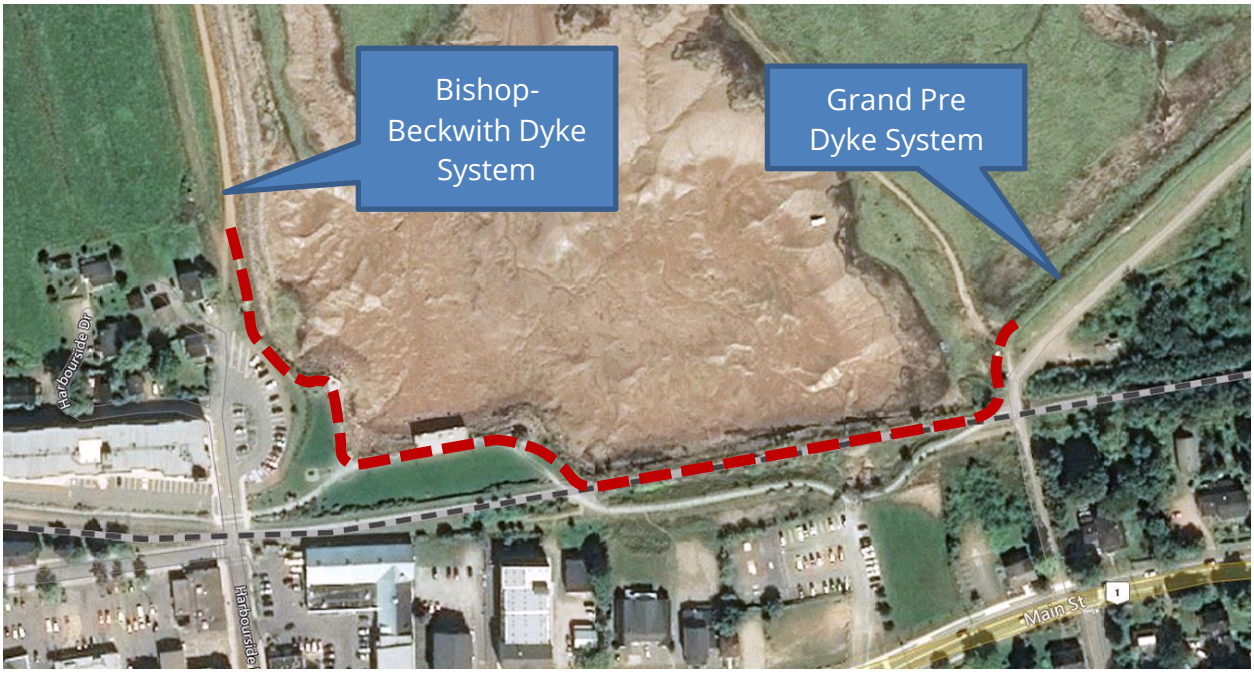


Figure 8.1: Connection between the Two Dyke Systems

There are two main options available to construct a new dyke:

- Construction of a new 8.5m full-height dyke in the mudflat, which will include the removal of (potentially deep) unsuitable material. Shallow side slopes will mean that the footprint of the new dyke could extend up to 75m in width (almost half the area of the mudflat in front of the park), along the 400m stretch of coastline between the two ends of the existing dykes. Allowances for settling over time will also need to be made. This represents a large volume of structural fill, and would lead to significant costs.
- Raising the existing ground connecting the two dyke systems, which is composed of trails and the former railroad. Since the existing ground would only need to be raised by 500mm on average, it would be simple from a construction perspective, require a much smaller volume of material, and would therefore be less expensive. The pending issue is the existing land ownership, since the land where the old rail line is still present does not belong to the Town. Discussions will need to take place between the land owner and the Town before this option can be finalized.

Raising the existing ground for a shallow dyke, following the path shown in Figure 8.1, would also mean that some existing structures would need to be moved or modified to adapt to the change, as they lie within the alignment of the proposed dyke. This would include moving an electrical panel, raising the wharf, and raising the wooden interpretive plazas. The gazebo is already raised, so it would not need to be modified.

Both a dyke in the mudflat and a shallow dyke will result in the same level of protection for the Town. Since the level of effort and cost is significantly different between options, it may be prudent to initiate discussions as early as possible with the landowner to assess the feasibility of the second option.

In terms of erosion protection of the outward facing slope, both options will need to include some surface treatment to reduce the energy of any incoming waves and minimize the risk of wave erosion and overtopping, even though it is very low. Both options will need to be protected in the same manner. Therefore, the subsequent erosion protection approaches are applicable to both options.

For the shoreline below the neap tide level (HHW-MT level of 4.46m CGVD2013), the existing riprap protection can be kept. Therefore, the option of elevating the existing ground by 500mm would not require replacing the existing riprap. However, there is the potential to use a more permanent approach to bank stabilization above this elevation where there currently is no riprap. A more resilient form of bank protection would take the form of a living shoreline. This would simply be an extension of the existing plant growth that already exists on the western and eastern banks of the Waterfront Park mudflat. Candidate locations to implement the living shorelines are noted in Figure 8.2 below. Some general information about living shorelines is also presented below for reference.

Figure 8.2: Candidate Locations for Living Shorelines

Some of the north-facing bank is currently eroding where the railroad abuts the mudflat, as seen in Figure 8.3, and could benefit from being readjusted or reinforced. The old wooden beams are likely coated with creosote and leaching toxins, so those should be removed as part of the dyke construction project.

Figure 8.3: Erosion on the Bank by the Railroad

This may not seem intuitive, but the erosion process in a mudflat is by far dominated by freshwater flows, rather than tidal flows, as shown in Figure 8.4. Therefore, the erosion of this bank is caused by the stormwater pipe outlets and not the incoming tidal flows and waves. Similarly, it is clear that the erosion within the mudflat by Waterfront Park (Figure 8.5) is caused by the stormwater pipe outfalls (shown in pink in Figure 8.5).

Figure 8.4: Typical Erosion Patterns in the Mudflats Originating at Stormwater Outfalls

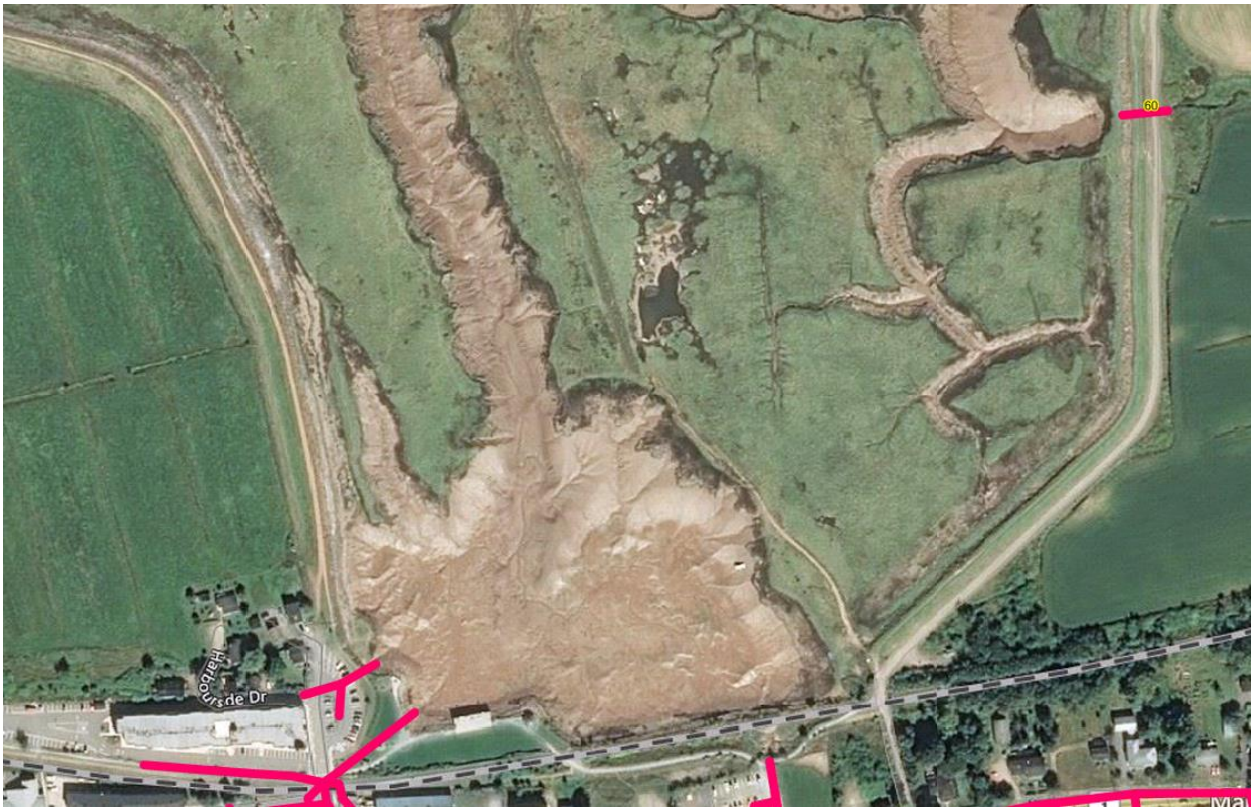


Figure 8.5: Erosion in Waterfront Mudflat and Stormwater Pipe Outfalls

The proposed approach to restoring the banks to their original shapes, which will allow the former salt marshes to re-establish themselves, is to extend the stormwater pipe outfalls by 50m to 75m. The tidal flows will then deposit sediment along the disturbed shorelines and restore the natural slopes. Following this, the salt marshes will then naturally re-establish themselves. Figure 8.6 below shows that some natural slopes in the area that have not been eroded have maintained their shallow slopes and salt marsh growth.

Figure 8.6: Existing Salt Marsh on Western and Eastern Banks of the Waterfront Mudflat

8.1.2 Notes About Living Shorelines as an Erosion Protection Approach

Natural or green infrastructure, also known as living shorelines, such as foreshore salt marsh, can provide protection to infrastructure such as dykes, while increasing shoreline resilience and providing ecosystem and cultural benefits. The plant communities that form the foundation foreshore marsh ecosystems depend on a number of factors including the frequency and duration of flooding, salinity, elevation, and the composition of nearby marshes that act as a seed source. Natural foreshore marshes in the Upper Bay of Fundy are typically composed of low and high marsh zones. The low marsh is characterized by salt marsh cordgrass (*Spartina alterniflora*), while the high marsh usually has a more diverse community that includes salt meadow hay (*Spartina patens*), seaside goldenrod (*Solidago sempervirens*), and blackgrass (*Juncus gerardii*).

Figure 8.7: Source: NOAA living Shoreline Guidance

Salt marshes can protect infrastructure and enhance coastal resilience to the effects of climate change, including storms and sea level rise, by stabilizing soils, storing water, maintaining/increasing elevation by trapping sediment, and dampening wave energy. Salt marshes are known for their ability to accrete sediment and build soils at rates that can keep pace with sea level rise (under certain conditions), which can mitigate the loss of coastal land and risks posed to infrastructure. The salt marsh vegetation creates drag that can dampen wave energy and reduce wave heights, particularly during the growing season. The extent of wave reduction depends on factors such as vegetation type, vegetation density, and foreshore marsh width. The presence of a foreshore marsh can reduce wave impacts to infrastructure such as dykes and can enhance the protection afforded by a dyke (Vuik et al., 2019).

In Europe, vegetated foreshore marshes are an integral part of dyke engineering designs (Vuik et al., 2016). In North Carolina, marshes have been shown to perform better than bulkheads for reducing erosion from a Category 1 hurricane (Gittman et al., 2014). Natural, restored or created salt marshes and related coastal habitats have also been shown to be more resilient to hurricane damage than hardened shorelines or built infrastructure. This is because they have the ability to absorb and dissipate a significant portion of the incoming wave energy and can recover (self-repair) and maintain form and function with little to no human intervention (Smith et al., 2018).

Salt marshes provide significant ecosystem benefits such as habitat for fish, forming the base of the coastal and marine food chains, and climate regulation through long-term carbon storage in marsh soils (McLeod et al., 2011). Invertebrates and crustaceans that use salt marshes provide a vital link between the nutrients produced by salt marsh plants and higher levels of the food chain (i.e., fish and birds). Salt marshes in Nova Scotia provide habitat for numerous commercial, recreational and aboriginal fish species (i.e., Striped Bass (*Morone saxatilis*), Flounder (*Pleuronectidae*), American eel (*Anquilla rostrata*), and Tomcod (*Microgadus tomcod*)). Salt marshes can also provide cultural benefits such as nature observation, opportunities for wild food collection, and outdoor classrooms for hands-on learning.

Restoration of salt marshes has the potential to achieve diverse goals including reducing climate risks, increasing the resilience and sustainability of the coastal community and ecosystem, as well as providing many cultural and economic benefits.

The current salt marsh in front of the existing dykes provides a highly aesthetic feature in the heart of downtown Wolfville. Developing a living shoreline will allow the current salt marsh to expand and reconnect both sides of the marshes in front of the existing dykes. Furthermore, the salt marsh provides an opportunity for the large student population, as well as interested residents, to learn about ecosystem restoration and Building with Nature techniques.

8.1.3 Design Elevations for New Dyke and Raising Existing Dykes

As noted in Section 4.1.5, the current average dyke and ground elevation surrounding the Town of Wolfville is approximately 8.15m CGVD2013 according to a Department of Agriculture survey completed in 2008. However, sections of the dyke system have been identified to have lower elevations. The minimum elevation of the dykes surrounding the Town of Wolfville is approximately 7.6m CGVD2013 (8.2m CGVD28) based on Lidar data collected in 2007. The 1-in-100-year storm surge elevation (approximately 7.8m CGVD2013), is slightly higher than the minimum dyke elevation. Sections of the existing dykes having a top elevation equal to, or lower than, the 1-in-100-year storm surge elevations do not meet design standards as there is no freeboard for safety. It is therefore critical to connect the dyke system and raise the existing dykes in the short term.

Since sections of the existing dykes may have settled since the collection of the survey (2008) and Lidar (2007), it is recommended that a new survey be conducted to obtain current minimum elevations to be used to support design.

Since coastal water levels and storm surge elevations will increase gradually as a result of climate change, it is recommended that both the construction of the new dyke and raising of the existing dykes be conducted in stages to gradually introduce the increased dyke elevation to the Wolfville waterfront. For the first stage, it is recommended that the Town construct a new dyke to an elevation of 8.5m CGVD2013 within the next 3 to 5 years, which corresponds to an average increase in ground level of approximately 500mm on the Kings County Rail Trail and edge of the Waterfront Park. This would be carried out with a cross-section similar to the schematic shown in Figure 8.8 below.

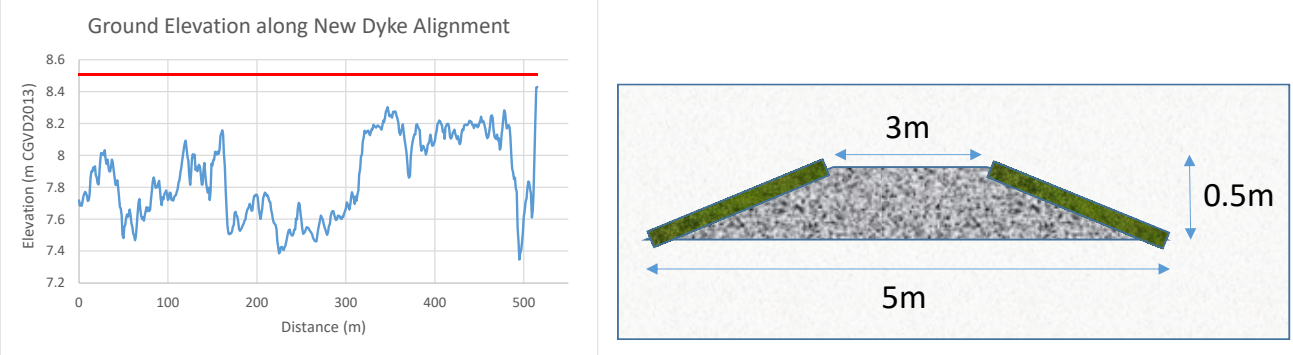


Figure 8.8: Schematic Profile and Cross-Section of Elevated Path

In conjunction with the development of the new dyke, it is recommended that the Town coordinate with the Nova Scotia Department of Agriculture (NSDA), who is responsible for maintaining the existing dykes, to raise the existing dykes by an average of 500mm to a consistent elevation of at least 8.5m CGVD2013. This will provide protection to the Town for the next 45 to 65 years, depending on the rate of SLR.

Discussions with the NSDA will also need to include the new *Guidelines for Safety of Coastal and Estuarine Dykes and Aboiteaux in New Brunswick and Nova Scotia* (Amec Foster Wheeler, February 2018), and how/if those would be incorporated in this design. Implementing those would likely mean that dykes would be constructed to a much greater height, since they consider dykes to be similar to dams.

Due to the critical importance of SLR in this context, it is recommended that continuous monitoring of the water levels behind the dykes be implemented and regularly analysed to track the rate of SLR. Based on this information, a safe timeframe to conduct a new analysis and design the next stage of upgrades for the system can be identified. It is generally expected that a safe timeframe to conduct a new study and design would be within the next 30 to 40 years. Monitoring will however be needed to review potentially changing or new information, and a study or specific intervention may be required sooner.

8.2 Flood Forecasting and Warning System

Although this study considered the 1-in-100-year event, events larger than this are still possible and happen regularly throughout the world. Furthermore, the intensity and frequency of events may be anticipated to gradually increase due to climate change. A greater coastal water level event may not be stopped by the dyke system should it occur before the recommended dyke system upgrade or subsequent future upgrades. The other uncertain risk is the rate of climate change. So far, greenhouse gas concentrations have most closely tracked RCP8.5. There are now some sea level rise projections that, even though unlikely, predict a sea level rise of 3.0m within the next 100 years (NOAA). An important consideration in this case is that even though the likelihood is very low (less than 1% chance each year), the potential consequences could be devastating. There is a balance between the acceptable level of risk, given the likelihood and potential consequences. This study considers the 1-in-100-year likelihood as establishing that balance, but assumes that risks that are not protected against, called residual risks, are understood and managed.

Management of residual risks can happen in a number of ways. Public information, preparation of emergency services, and building resilience in the existing infrastructure are the examples recommended in this study. During an extreme event that exceeds the design event, time is a very critical commodity, and it has to be managed extremely carefully to focus and deploy emergency efforts where they are most needed as fast as possible. The greatest benefit of a flood forecasting and warning system is that it provides a much longer timeframe (up to 5 days) to prepare emergency management efforts, providing time to inform the public and businesses, protect the municipal infrastructure, evacuate certain areas if necessary, and mobilize Regional Emergency Management Organization (REMO) staff and vehicle fleets. The cost of a flood forecasting and warning system is very low compared to any capital works expenditure recommended in this study.

It is therefore recommended that a flood forecasting and warning system be implemented to manage the current risks, as well as the growing risks associated with climate change. A flood forecasting and warning system can directly inform the REMO, who will then decide how to manage the warning.

Such a system can be developed to various levels of sophistication but, in its simplest form, it is a mapping tool that extracts the rainfall and storm surge forecast from Environment Canada and runs it in the model created for this study. Water levels are automatically extracted, mapped, and published on a password-access webpage. For better effectiveness, it should connect to the WWTF's SCADA system and connect to a tidal water level monitoring system. Figure 8.9 shows a diagram of the structure of such a system.

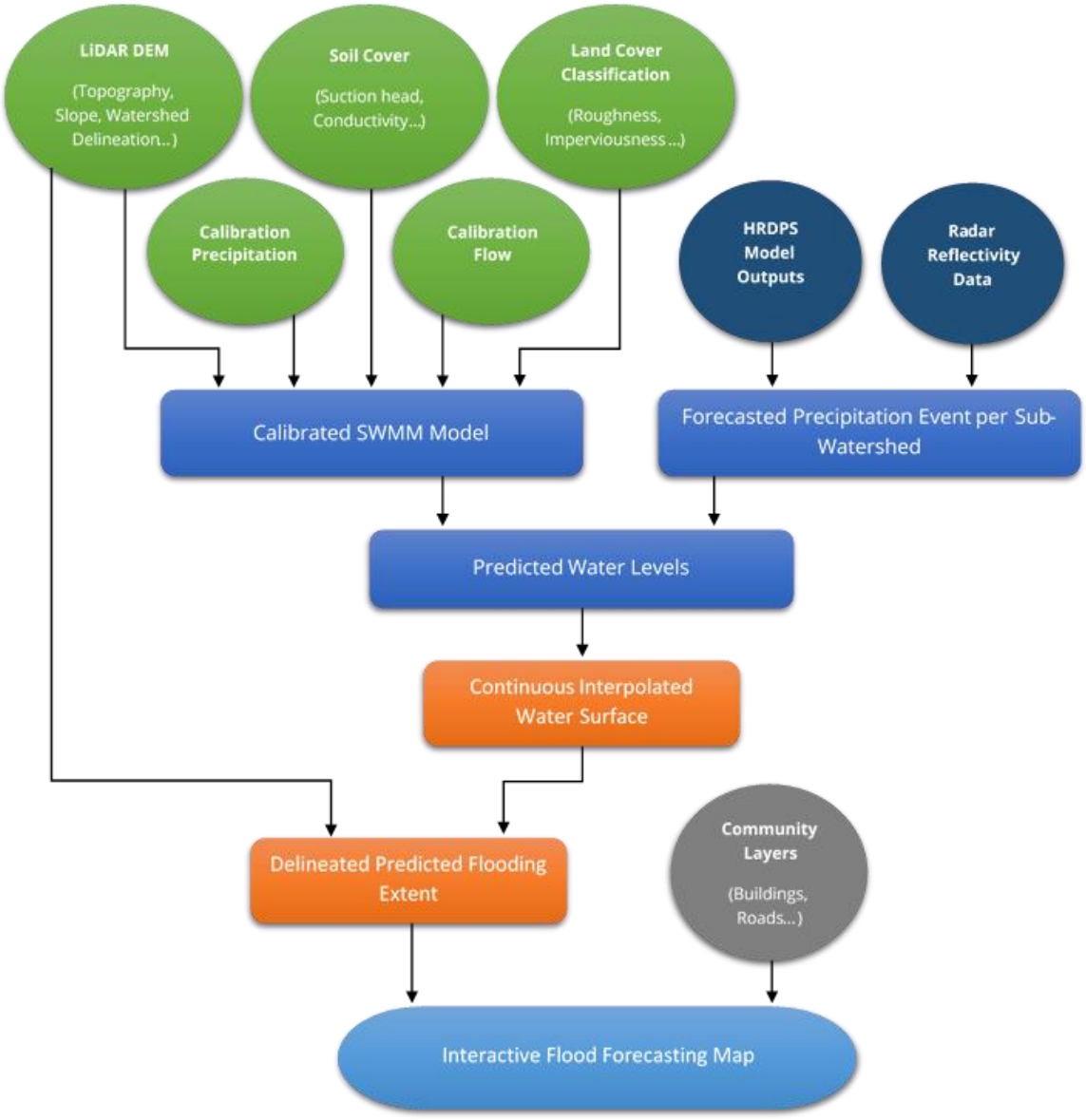


Figure 8.9: Flood Forecasting and Warning System Flow Chart

This can then become a useful tool for emergency management staff, such that informed emergency planning can take place and resources can be effectively allocated in advance.

8.3 Flood Protection Measures for Municipal Assets

The municipal assets identified as being vulnerable to flooding included the parking lot and corner of the RCMP garage, two sewage lift stations (SLS) and the wastewater treatment facility (WWTF). It is not expected that a small amount of flooding of the parking lot and corner of the vehicle garage during an extreme rainfall event requires flood mitigation. The flood extent or depth is not expected to increase in the future, even with the effects of climate change. Therefore, the only municipal assets that require flood protection involve the wastewater collection and treatment system.

The wastewater collection infrastructure includes pipes, manholes, and lift stations. The wastewater treatment plant is an aerated lagoon facility located directly south of the dyke system to the North-East of the Town, which has associated facilities, including a blower and UV building, and chlorine contact building. As noted in Chapter 7, those buildings are highly vulnerable to flooding risks with saltwater, and flooding will severely disrupt the quality of the treatment system and result in very costly repairs if it occurs. A new screening facility building is being designed at a much higher elevation, safe from flooding risks. In addition, sanitary manholes can also be a vulnerable point of entry of flood water into the conveyance system and result in overflows and decreased life of the system. This section provides high level mitigation and adaptations options to protect wastewater infrastructure from flood risks.

The Town's WWTF is protected both by the dyke system as well as berms surrounding the lagoon. During the existing 1-in-100-year sea level event, the model suggests that the dyke is overtopped and that the berms surrounding the lagoon are very close to being overtopped. However, the WWTF lagoon berms will be overtopped and the lagoons flooded with saltwater under future coastal water conditions (RCP8.5 95th percentile) if the dykes are not raised. Flooding of the WWTF could lead to service disruptions, complete loss of wastewater treatment services, raw sewage leakage, washout, and/or foul odour. Additional pumping, sand-bagging and associated costs to keep critical infrastructure dry during a flood event may be required. This may require diesel generators during a power outage.

WWTFs have significant subsurface infrastructure such as pipes, electrical components, tanks, and liners. Critical infrastructure located outdoors would be directly exposed during a flooding event. Critical mechanical and electrical/instrumentation equipment located within control buildings are also vulnerable if situated below flood elevations.

The mitigation and adaptation options presented below were identified to mitigate flooding impacts to the wastewater collection and treatment system.

8.3.1 Sewage Lift Stations:

Two sewage lift stations (SLS) have been identified as being vulnerable to flooding risks, notably by saltwater. Both SLSs are located in areas that can flood when dykes are overtopped, which is currently a risk for the 1-in-20-year and 1-in-100-year events, until the dyke system is connected and raised. Figure 8.3 below shows the locations of the two SLSs with respect to the flooding anticipated due to extreme coastal water levels.

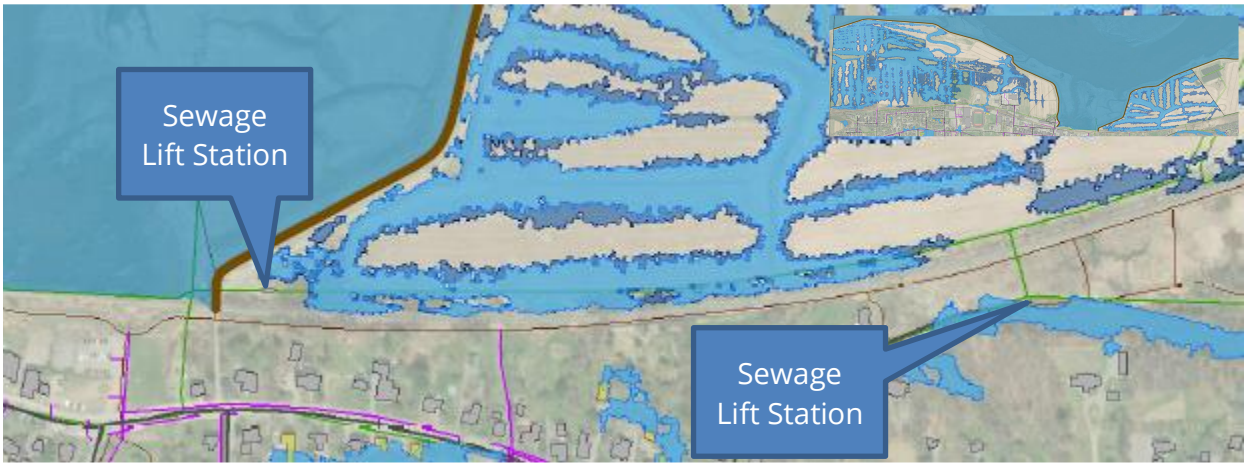


Figure 8.10: Sewage Lift Stations at Risk of Flooding

Both SLSs are located north of Main Street in the low-lying floodplain that used to be salt marsh before the dykes were first built. The natural topography causes it to be one of the first areas to flood, whether by dyke overtopping or during extreme rainfall events, when the tide gates are closed during high tides.

Fortunately, the locations of the SLSs are not highly urbanized, and some small amount of land regrading around the stations should ensure that flooding risks are averted. It is recommended to raise the ground level around the stations by 0.5m, and allow slopes to be directed outwards from the SLSs.

8.3.2 Wastewater Treatment Facility

As noted in Chapter 7, the lagoons will be at risk of flooding if the dykes are not raised. The associated buildings are currently at risk of severe flooding, both during extreme rainfall events and during extreme coastal water level events.

Protection of the lagoons cannot be approached with emergency pumping, simply because the floodwaters involve a significant volume of water and will rise against the entire circumference of the lagoon berms. Essentially, a second, higher berm would need to be

built around the lagoons to keep them protected, which is not feasible in an emergency situation.

Alternatively, the option of connecting and raising the dyke system will allow the continued protection of the lagoon into the future, as long as it is carried out within the next 3 to 5 years. This is therefore the recommended flood protection measure for the lagoons.

The associated blower and UV buildings are located at a much lower elevation. The UV disinfection building in particular is closer to the drainage ditch and is at risk of being flooded to a depth of up to 1.5m under existing conditions. This is a significant risk and should be addressed in the short term. The connection and raising of the dyke system will reduce flooding risks, but not eliminate them.

It is not feasible to raise the blower and UV buildings to protect them against flooding, due to the high costs of modifying the piped connections, tanks, electrical and mechanical systems, etc. It is much more effective to construct another berm around those buildings to protect them from high water levels in existing and future climate conditions. The height of the new berm should be at least 7.2m CGVD2013, which is the average height of the lagoon berms. The proposed berm can be integrated into the functionality of the area, and its footprint minimized, by connecting the lagoon berms to the access road along the dyke and following the edge of the drainage ditch on the eastern side, as shown by the red dashed line in Figure 8.11 below. The proposed new Screening Building is intended to be built at an elevation of 7.9m CGVD2013, which is even higher and safer. The proposed berm can then function as an access road and lead to the higher elevated ground around the building (as shown in Figure 8.11). Figure 8.12 shows a schematic cross-section through the proposed berm. The berm would have a 3m-wide top for vehicle access and 1:1.5 side slopes to reduce its footprint, but it would still encroach on the brook, which would have to be diverted approximately 5m, as shown in Figure 8.12.

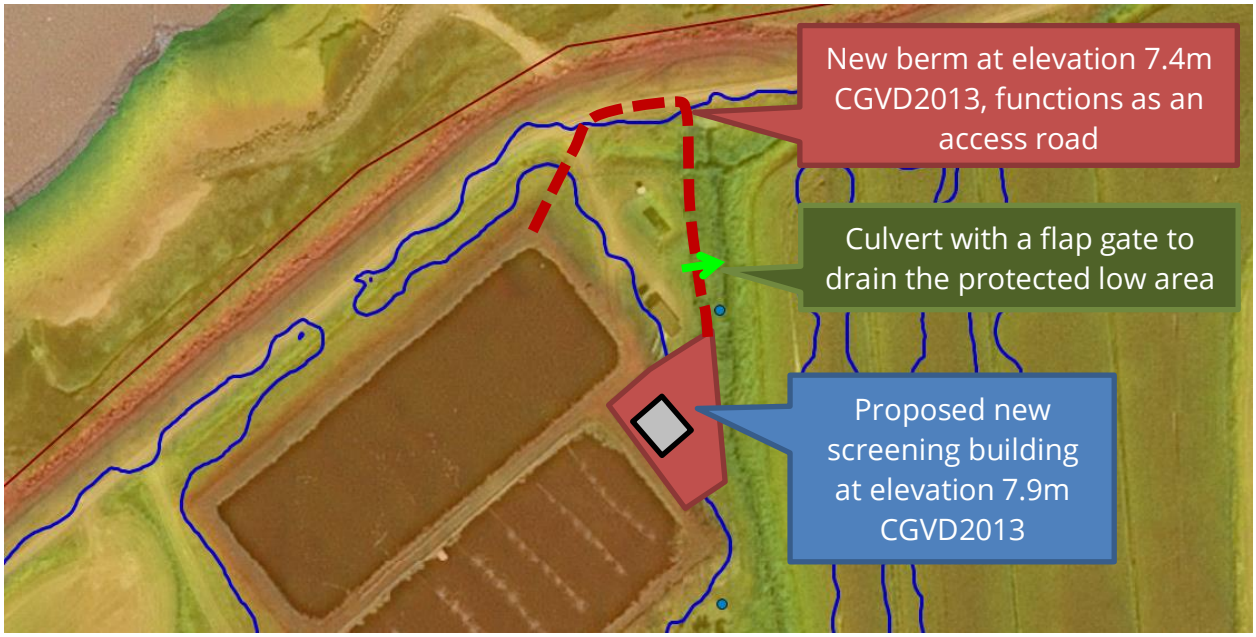


Figure 8.11: Proposed Berm to Protect WWTF Buildings

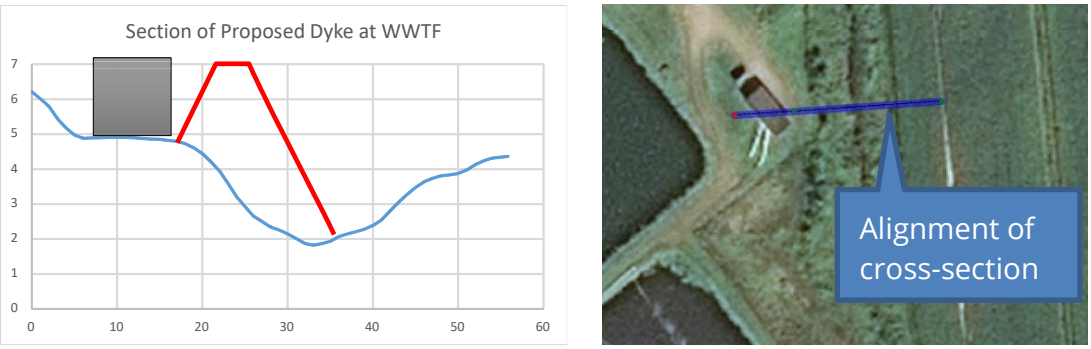


Figure 8.12: Schematic Cross-Section of Proposed Berm

8.4 Adapting Existing Buildings

As discussed in Chapter 7 and presented in Appendix A, flooding was not found to impact any municipal buildings. The back corner of the RCMP building and parking lot could receive some shallow flooding, but this would be temporary and would not increase in the future (as long as the dyke system is raised). Some commercial and private buildings are nevertheless exposed to shallow flooding risks, as identified in the flood mapping in Appendix A. A key example is the Wolfville Nursing Home, which is at risk of flooding in both existing and future climate conditions.

High water levels from extreme precipitation events alone, or in combination with high sea levels, may directly enter a building, and can also cause sewer backups into the basement.

Inflow and infiltration of clean surface water or groundwater into sewer manholes and pipes are issues in the Wolfville sanitary system that constantly require maintenance efforts to be kept to manageable amounts. During extreme rainfall events, inflow and infiltration will increase, potentially also exceeding the sanitary system capacity. This can create a risk of sewer backup in some low-lying buildings where the sewage pressurises the sanitary pipe, flows back up towards the building, overflows the toilets, and causes the basement to flood with sewage. In such instances, a backwater valve can be key to protecting buildings, including private residences, from sewer backups.

Adapting existing infrastructure to flooding vulnerabilities involves modifying construction to increase resilience to flood events. Development within the floodplain can be generally adapted by:

- Locating essential systems or infrastructure off the ground floor;
- Prescribing a minimum elevation (e.g., minimum freeboard above applicable flood elevation) as is currently the case;
- Raising buildings;
- Extending the foundation walls to above flood elevations; or
- Abandoning basements if they experience frequent flooding (Proverbs & Lamond, 2017).

General approaches towards flood-proofing individual buildings include raising the house off the foundations, wet flood-proofing, and dry flood-proofing. While raising a typical wood-frame house with a crawlspace and basement may cost $60,000 - $100,000 per house, basements may be proofed against occasional flooding for approximately $20,000 or rebuilt with waterproofed foundations for approximately $50,000. It does not look like raising structures would be necessary in Wolfville, although some landowners may decide to waterproof their basements.

The following list outlines general adaptation options which may prevent basement flooding in the event of extreme storm events and increased water levels. The selection of adaptations for each building depends on each specific building, as well as the level of risk that each building owner is willing to accept. The following adaptation options are available to building owners to manage flooding risks and are outlined for information purposes.

- **Foundation Grading:** Proper grading of the property away from the foundation at a minimum slope can improve drainage and prevent flooding and associated damage. Reverse driveways should also be avoided if possible.
- **Installing Sump Pumps:** A backup power source or generator may be required to keep the sump pump in operation during power outages. The sump pump discharge point should be at least 2m away from the foundation.
- **Installing a Backup Sump Pump:** A backup sump pump will prevent flooding in the event the primary sump pump is out of order.

- **Gutters and Downspouts:** Flow should be diverted at least 2m from the foundation. Installation of a back-flow preventer on the sewer lateral (if applicable).
- **Repairing Cracks in Foundations:** Cracks or openings may be sealed with a waterproof sealing material, such as an epoxy resin, to prevent infiltration.
- **Window Wells Installation:** Installation of window well covers on basement windows can prevent flooding. It is recommended that basement window wells extend 10-15cm above the surface of the ground and are sealed at the foundation.
- **Alternative Insulation Materials:** Spray foam is the preferred insulation material if the basement is not finished. When a basement is finished, then spray foam insulation may not be practical. An adaptive measure against water damage in basements is to select a closed cell foam insulation (cellulose) that is water resistant for installation at or below grade. A waterproofing sealant on the exterior of basement walls to protect the insulation may also mitigate losses from flooding or water infiltration.

Figure 8.13 below shows some additional measures that were included in the public communication summary document that will help building owners and homeowners better prepare against flooding risks.

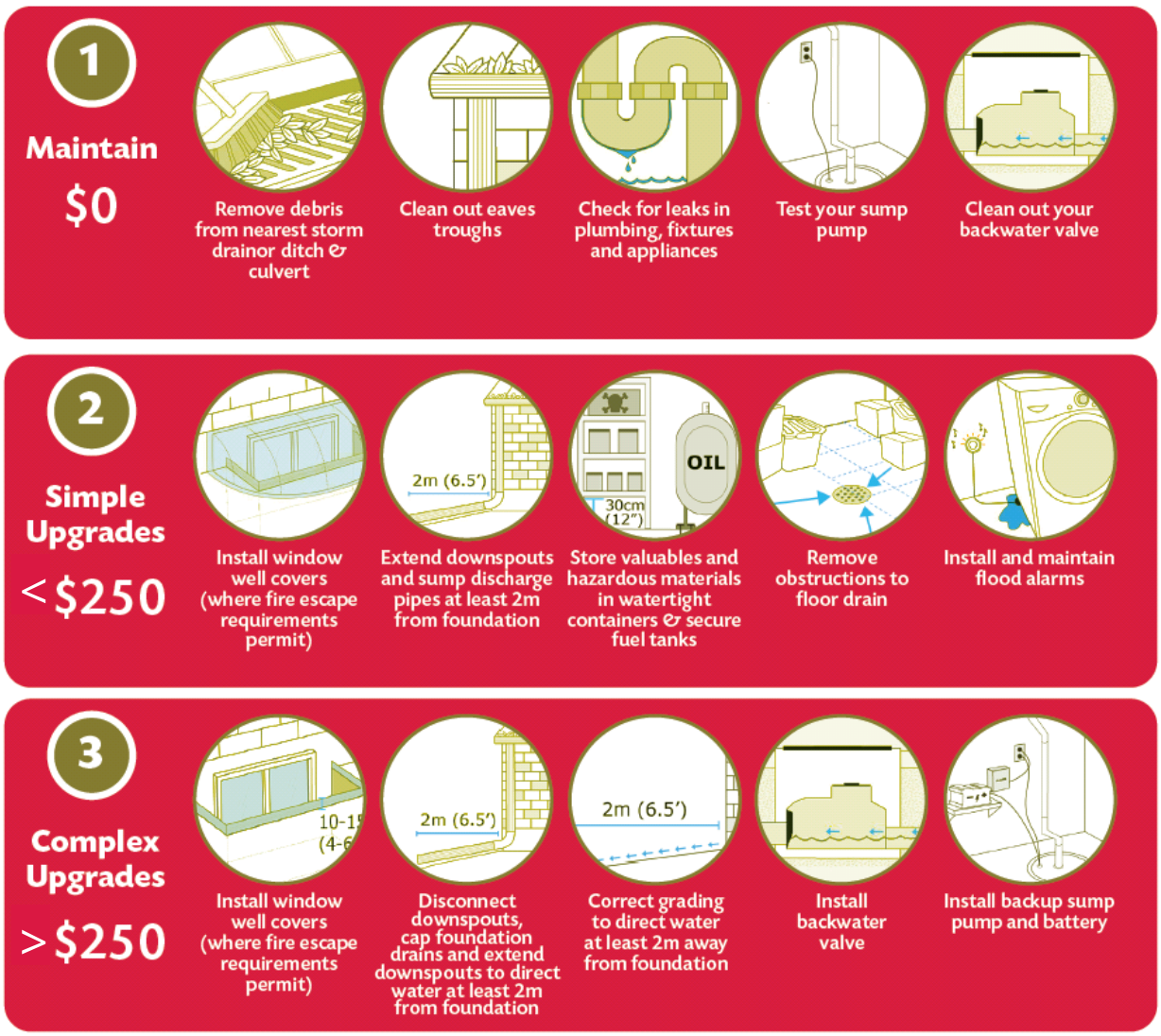


Figure 8.13: Local Flood Reduction Measures for Buildings and Homes

8.5 Additional Flood Mitigation Measures for Consideration

The Town has recently developed Stormwater Management Design Guidelines (Hatch Ltd, 2019), which state a requirement for a net-zero increase in stormwater runoff policy. The objective of the policy is to limit the peak discharge rate from a new development to the pre-development rate; the flood mitigation options presented here are consistent with this objective. Under those Guidelines, Best Management Practices, or Low Impact Development measures, are presented, as well as increasing storage capacity. In addition, increasing pipe capacity is also presented as an option (although not part of the guidelines).

8.5.1 Best Management Practices or Low Impact Development

It is noted that in this context, Best Management Practices or Low Impact Development measures refer to infiltration systems (perforated pipes, infiltration swales, rain gardens, etc.) as opposed to detention ponds, which are not designed to infiltrate water.

Figure 40: Vegetative Filter Strip Example

An efficient approach to dealing with flooding risks from stormwater, as a result of development, is to manage the issue of high runoff at its source. Flooding is amplified when runoff is allowed to increase and infiltration of water into the ground is decreased. The more water is encouraged to infiltrate in the ground, the more the stormwater runoff from a site is controlled.

For example, street renewals can include:

- new perforated stormwater pipes;
- permeable sidewalks (pavers, asphalt or concrete);
- gravel beds under the sidewalks that connect to the stormwater main for added infiltration; and/or
- draining (perforated) catch basins.

Parking lot construction or renewals can include:

- permeable surfaces (pavers, asphalt or concrete);
- drainage system using perforated pipes, catch basins and manholes;
- infiltration strips;
- permeable linear drains connected to infiltration media; and/or
- rain gardens, infiltration swales, bioswales accessed with low curb inlets.

New buildings can include:

- green roofs;
- blue roofs;
- cisterns to collect rain water and reuse as grey water; and/or
- downspouts draining to the ground surface, with infiltrating media.

There is a vast array of measures that can be implemented, where the objective is to allow the runoff an opportunity to infiltrate the soil, mimicking natural conditions. Each site is unique, and a customized approach is needed for each site. Examples, and more information on those measures are available in the Stormwater Management Design Guidelines (Hatch Ltd, 2019).

Stormwater Best Management Practices and Low Impact Development techniques have the following benefits for the overall watershed and the Town:

- Decrease flooding risk and associated risks to infrastructure, land value, liability and public safety;
- Decrease peak flows, resulting in lower infrastructure costs;
- Aquifer recharge reduces the strain on water supply sources;
- Reduce pollution to drinking water supplies, recreational waters and wetlands, saving future expenditures for restoration of valuable water resources;
- Protect water quality and increase low flows in the natural drainage systems;
- Can reduce energy costs by constructing new green roofs or retrofitting existing roofs; and
- Through the above results, improve quality of life and increase property value.

Gradually implementing stormwater Best Management Practices would take many years to make an impact at the Town scale, but it would gradually reduce the volume of runoff from new development and therefore reduce the amount of flooding. The impact on the flood extents was estimated by the model to be limited, but this approach nevertheless helps additional development to not compound the flooding risks for existing landowners, which is a key aspect.

8.5.2 Increasing Storage Capacity

Storage is generally added to a stormwater system through ponds, underground storage, or constructed wetlands, in combination with a flow control structure at the outlet. The flow control structure increases the volume of storage and retention time of stormwater runoff, delaying the timing of the peak flow downstream.

In total, four (4) locations in the Town were identified for potential implementation of additional storage as identified in Table 11, , Figure 8.17, and Figure 8.18. The preliminary estimated dimensions of these structures are outlined in Table 11 and are included in the flood scenarios presented in Appendix A. The potential locations for the stormwater control structures were selected in order to mitigate identified areas of downstream flooding within the Town.

Table 11: Proposed Stormwater Storage/Retention Areas

Location Description	Approximate Coordinates	Proposed Area (m^2)	Proposed Depth (m)
Expansion of Little Brook natural water course near the southern end of Little Brook Lane	Latitude: 45.09 Longitude: -64.37	4,000	1.5
Expansion of natural waterbody located between Orchard Avenue and Sherwood Drive	Latitude: 45.09 Longitude: -64.35	5,000	1.5
Open Space at the Top of Willow Avenue	Latitude: 45.09 Longitude: -64.36	6,000	1.5
Open Space west of the Reservoir near Pleasant Street	Latitude: 45.08 Longitude: -64.34	6,000	1.5

Figure 8.15: Proposed Stormwater Storage Area near Little Brook Lane

Figure 8.16: Proposed Stormwater Storage Area between Orchard Avenue and Sherwood Drive

Figure 8.17: Proposed Stormwater Storage Area in open space near top of Willow Avenue

Figure 8.18: Proposed Stormwater Storage Area in Open Space west of the Reservoir near Pleasant Street

Recommended design of the stormwater storage and retention areas will need to follow the Stormwater Management Design Guidelines (Hatch Ltd, 2019).

The modelling conducted for the inclusion of storage systems indicated that the four potential sites presented above for storage, were all able to slightly reduce flood extents in the downstream areas, more notably in the Wickwire to University Avenue section of Main Street.

8.5.3 Increasing Pipe Capacity

Areas of recurring flooding were identified from consultation with the Town and evaluated through the model results. Insufficient capacity in the stormwater drainage system was indicated by the model results as a potential source of flooding. Pipe sizes in the model were increased in the locations identified in Figure 8.19, Figure 8.20, and Figure 8.22 to assess the potential impact of increased stormwater conveyance within the minor system on local flooding. The changes implemented to the stormwater drainage network are outlined in Table 12, and results are presented in Appendix A. All of the potential changes investigated are relatively minor increases in pipe diameter, meaning that the current system is very close to having sufficient capacity. The largest increase in pipe diameter is identified as number 5: University Avenue and Main Street (Table 12).

The modelled results show only a very minor decrease in the total area flooded as a result of capacity upgrades Therefore, it may only be economical to replace the identified pipes with larger pipes when they are nearing the end of their useful life. The largest improvement, even though limited, is indicated by the model results to be at the corner of Main Street and University Avenue.

Table 12: Modelled Stormwater Pipe Upgrades

Identifier	SWMM Conduit Label	Original Pipe Diameter (m)	Upgraded Pipe Diameter (m)
1	C203D	0.75	0.9
2	C204D	0.9	1.2
3	C220E	0.3	0.45
4	C221E	0.75	0.9
5	C222E	0.9	1.5
6	C224E	0.45	0.6
7	C124I	0.3	0.6
8	C125I	0.3	0.6
9	C1_LF	0.45	0.6
10	C127I	0.45	0.6
11	C83J	0.3	0.45
12	C89J	0.6	0.75
13	C99J	0.6	0.75
14	C92J	0.45	0.6
15	C70K	0.45	0.6
16	C71K	0.45	0.6
17	C72K	0.45	0.6

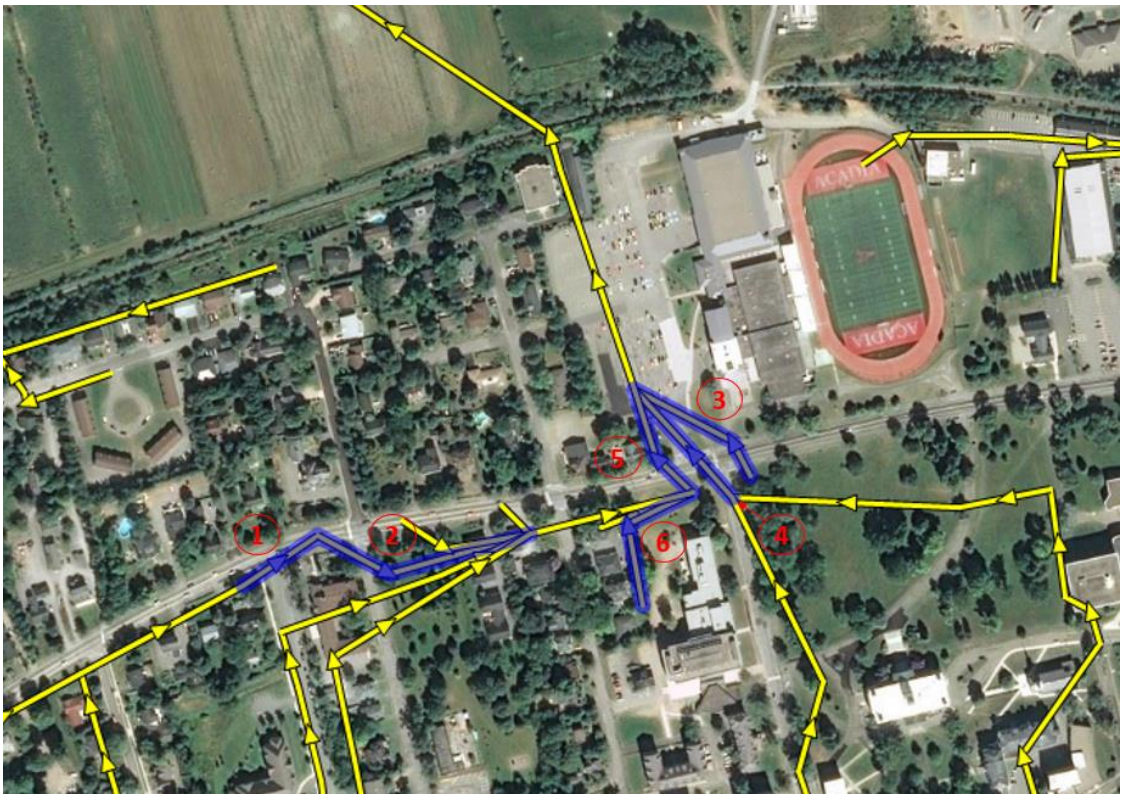


Figure 8.19: Proposed Upgrades for Stormwater Pipes near University Avenue and Main Street

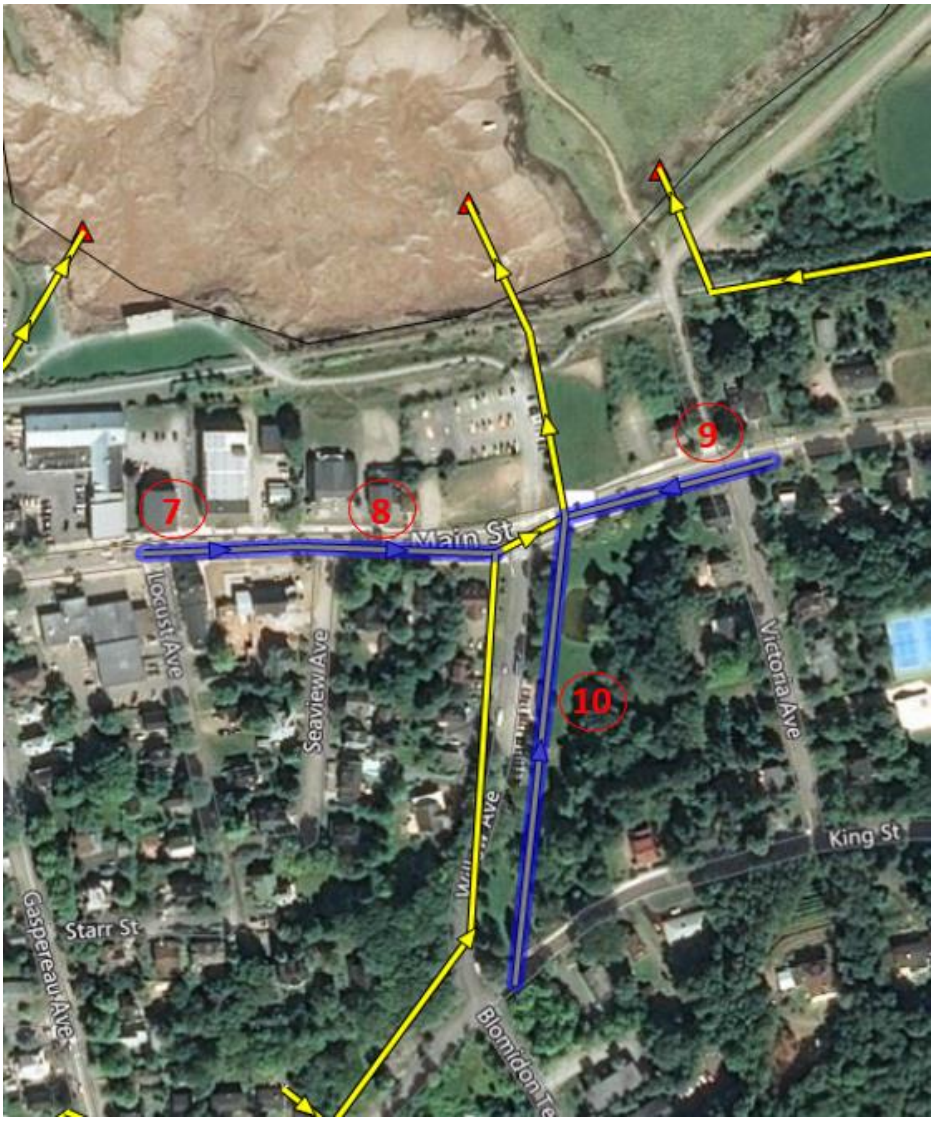


Figure 8.20: Proposed Upgrades for Stormwater Pipes near Willow Avenue and Main Street

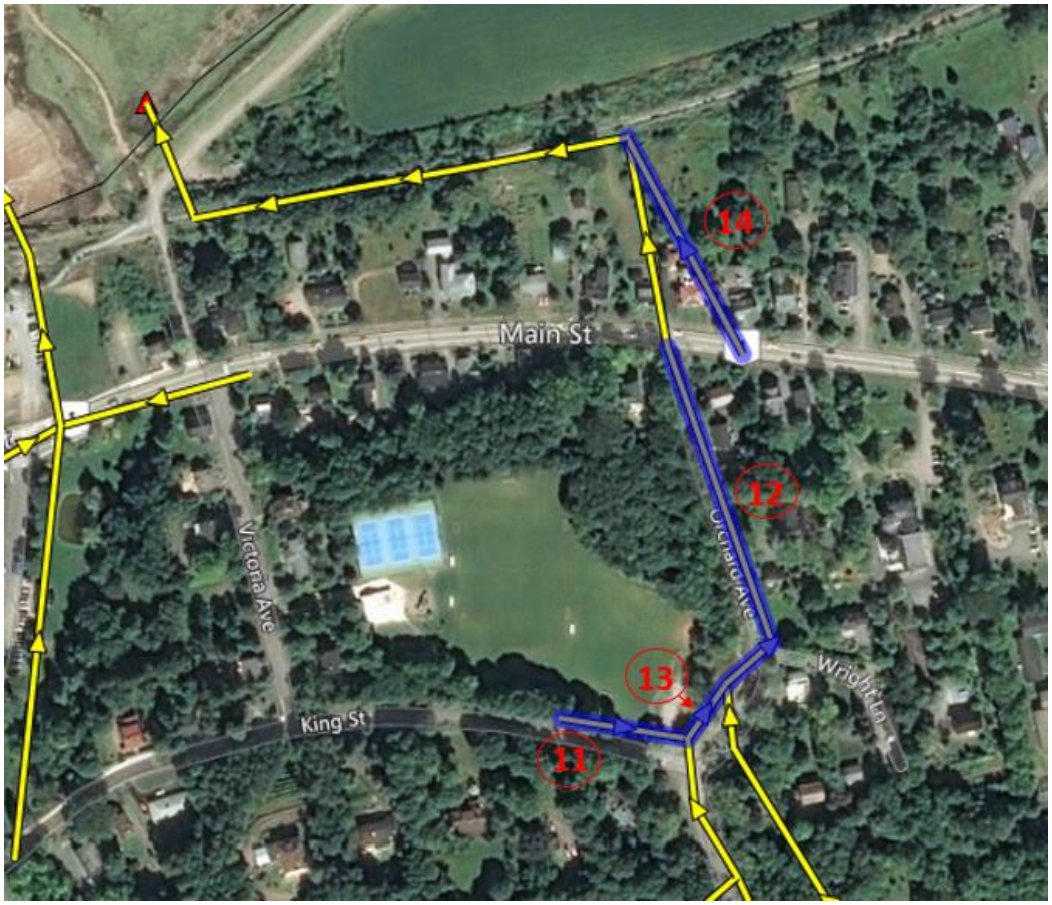


Figure 8.21: Proposed Upgrades for Stormwater Pipes near Orchard Avenue and Main Street

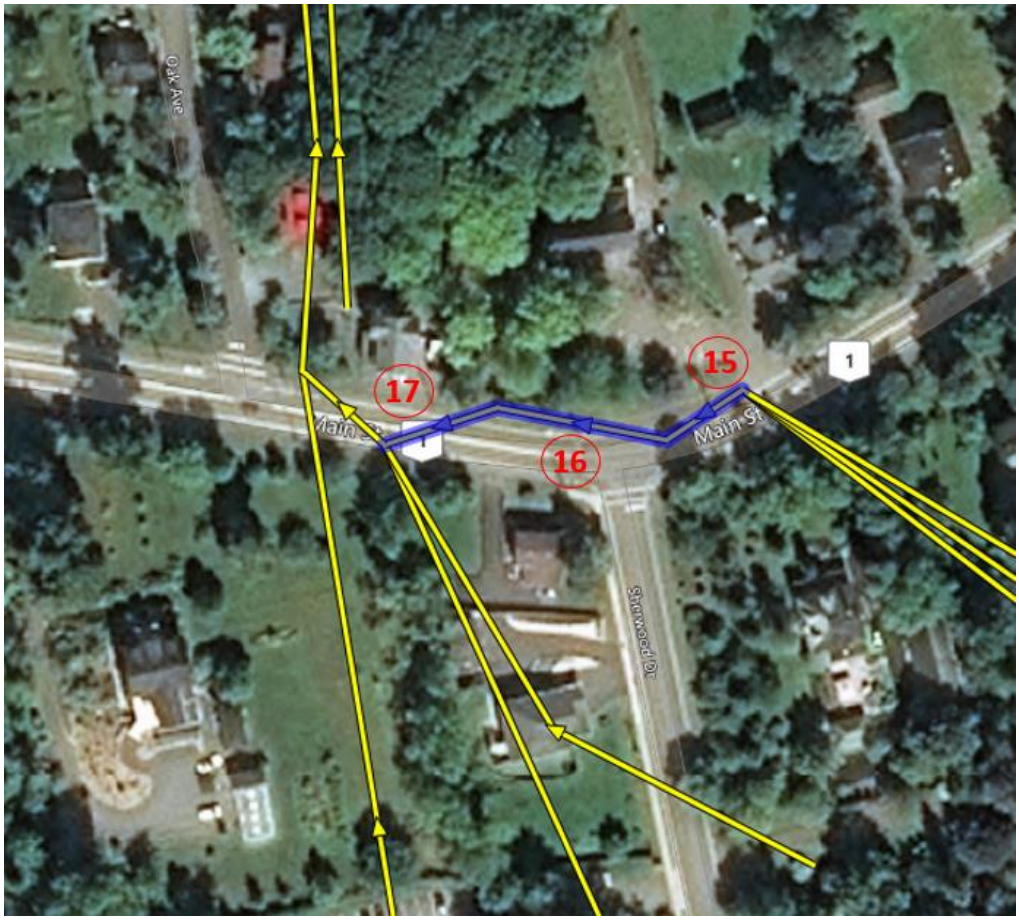


Figure 8.22: Proposed Upgrades for Stormwater Pipes near Main Street and Sherwood Drive

Chapter 9 Preliminary Evaluation of Mitigation Options

The flood mitigation and adaptation options presented in Chapter 8 were evaluated based on set criteria to determine recommended actions for the Town of Wolfville. Many of the options reviewed in Chapter 8 were clearly more suitable than others, however, a cost-benefit analysis of the options reviewed will better support the preparation of the flood mitigation plan. The ranking of the preferred options is presented below in Section 9.1, with supporting logic presented in Section 9.2.

9.1 Mitigation Option Ranking

The mitigation options were evaluated and ranked as *high priority* or *subject to further monitoring* as follows:

High Priority Measures:

1. **Coastal Flood Protection Measures**: includes connecting the dyke systems by raising the existing ground in the park and on the railroad. Also includes coordinating with the NSDA to raise the existing dyke system and periodically increase the dyke elevation to accommodate increasing sea levels. Optional inclusion of salt marsh restoration by extending the stormwater outfall pipes.
2. **Flood Protection of Municipal Assets**: protecting the 2 sewage lift stations (SLS) with land regrading, and constructing a new berm to protect the WWTF existing and new buildings.
3. **Flood Forecasting and Warning System:** informing the REMO of potential rainfall flooding or dyke overtopping risks. Includes monitoring water levels and connection with the WWTF SCADA system.
4. **Incentivize Local Flood Protection for Private Buildings**: includes site specific flood mitigation efforts to reduce the risk of flooding within private buildings.
5. **Community Education and Communication**: includes mailing of flood study overview, household education and actions, and waterfront signage and markers.

Actions Subject to Further Monitoring:

1. **Best Management Practices – Infiltration Measures:** includes promoting stormwater infiltration by identifying opportunities wherever pipes, sidewalks or parking lots are replaced or maintained.
2. **Increasing Stormwater Storage Capacity:** includes the construction of stormwater detention facilities and outlet control structures to control the release of flow downstream.
3. **Increasing Pipe Capacity**: includes upgrading identified undersized stormwater pipes.

9.2 Review of Mitigation Options

9.2.1 Coastal Flood Protection Measures

Coastal flood protection measures include connecting the Grand Pre and the Bishop Beckwith dyke systems, coordinating with the NSDA to raise the existing dyke system, and periodically increasing the dyke elevation to accommodate rising sea levels. A trail can be designed on top of the new dyke to connect with the current trail, which is a popular attraction for residents. This mitigation measure was evaluated in Table 13.

Extension of the outfalls for restoration of the natural banks with a living shoreline will allow for the restoration of valuable salt marsh habitat, which had formerly existed at the site. Salt marshes provide continued protection from the increasing risks of sea level rise and provide an added protection against wave action on the dyke.

Table 13: Review of Coastal Flood Protection as a Flood Mitigation Measure

Evaluation Criteria	Rank	Details
Flood Reduction Effectiveness	Very High	Eliminates the risk of coastal flooding impacts up to the 1-in-100-year event
Project Cost: - **New Dyke in existing mudflat** - **New Dyke over Existing rail bed**	High (>$5M) Low (<$1M)	Requires detailed design and construction of approximately 400m of dyke Use of Existing trail and rail bed means significantly reduced volume of fill can be used. For both, optional extension of the stormwater outfalls to support restoration of natural banks
Operational Cost	Low	No operational requirements
Management Requirements	Low	Management includes maintaining the trail on top of the dyke and period

		topping of the dyke to accommodate increasing sea levels
Environmental Considerations and Regulatory Requirements	High (positive)	Constructing a new dyke in the Salt Marsh will impact a large area of fish habitat, and will require a significant amount of habitat compensation. Raising the existing ground would have no environmental impact. Implementing salt marsh restoration will have positive environmental impacts. Regulatory bodies such as NSDA and the Marsh Body will need to be consulted and requirements under the Agricultural Marshland Conservation Act and all applicable regulatory documents followed.
Economic Impacts	Low	Will significantly reduce the cost of flooding impacts to vulnerable infrastructure. The net benefits of recreational activities can potentially increase with the newly joined trial system and natural feature. The University may use the salt marsh restoration for educational purposes about environmental sustainability and Nature Based solutions.
Social Acceptance	High	The newly joined trail system including the implementation of salt marsh restoration provides a natural aesthetic feature to the landscape is a major added benefit to the Town

As per this analysis, it is recommended to construct a new dyke to an elevation of 8.5m CGVD2013 within the next 3 to 5 years, which corresponds to an average increase in ground level of approximately 500mm on the Kings County Rail Trail and edge of the Waterfront Park. In conjunction with this, it is recommended that the Town coordinate with the NSDA to raise the existing dykes by an average of 500mm to reach a consistent elevation of at least 8.5m CGVD2013. NSDA will need to be consulted about the potential implementation of the new *Guidelines for Safety of Coastal and Estuarine Dykes and Aboiteaux in New Brunswick and Nova Scotia* (Amec Foster Wheeler, February 2018). A new dyke at an elevation of at least 8.5m CGVD2013 will provide protection to the Town for the next 45 to 65 years, depending on the rate of SLR.

9.2.2 Flood Protection Measures for Municipal Assets

As noted in Section 8.3, the municipal assets at risk of flooding involve two SLSs (low risk) and the existing WWTF buildings (significant risk). Land regrading around the SLSs to increase the land height by approximately 500mm, which is considered to require a minimal amount of capital budget (~$2,000), is one mitigative measure that was considered. Conversely, a berm may be required to protect the WWTF buildings, as described in Section 8.3. This flood protection infrastructure is considered critical for maintaining the essential functions of the Town and is therefore recommended for implementation in the short term (i.e., within the next 3 to 5 years). Further evaluation of these options is presented in Table 14.

Table 14: Review of Flood Protection Measures for Municipal Assets

Evaluation Criteria	Rank	Details
Flood Reduction Effectiveness	High	Critical infrastructure to protect essential service. A new berm will eliminate flooding risks up to the 1-in-100-year tidal event.
Project Cost	Low (<$1M)	Detailed design and construction requirements
Operational Cost	Low	These structures typically have no to low operational requirements
Management Requirements	Low	Period maintenance and inspection required
Environmental Considerations and Regulatory Requirements	High	Regulatory requirements as well as environmental impact assessments may need to be undertaken. Some watercourse alteration permitting may be required, and if agricultural land is affected, regulatory bodies such as NSDA and the Marsh Body will need to be consulted and requirements under the Agricultural Marshland Conservation Act and all applicable regulatory documents followed
Economic Impacts	Medium	Averts medium economic impacts of a flood event
Social Acceptance	Low	Project is not expected to encounter strong interest from the public.

9.2.3 Flood Forecasting and Warning System

As noted in Section 8.2, a flood forecasting and warning system would support the management of flooding risks of events greater than the 1-in-100-year flood, as well as provide warnings for the shallower floods, within the 1-in-100-year event, that can still occur with the proposed flood mitigation measures. As the sea levels rise, tracking the gradually increasing risk of dyke overtopping from extreme coastal water levels will be complex and difficult to estimate. A flood forecasting and warning system will connect to the Environment and Climate Change Canada rainfall and storm surge forecasts, run the flood models, and prepare flood maps on a website accessible by Regional Emergency Management Organization (REMO) staff to inform them on potential risks and support effective allocation of resources. For better effectiveness, it should connect to the WWTFs SCADA system and a tidal water level monitoring system. This measure is also recommended for implementation within the next 3 to 5 years and is reviewed in Table 15.

Table 15: Review of Flood Forecasting and Warning System Implementation as a Flood Mitigation Option

Evaluation Criteria	Rank	Details
Flood Reduction Effectiveness	High	Supports flood preparation, allows to increase public safety
Project Cost	Low (<$0.1M)	Coordination with REMO needed
Operational Cost	Low	Regular maintenance needed, server and website costs
Management Requirements	Low	Regular monitoring, QA/QC, calibration, updates
Environmental Considerations and Regulatory Requirements	Low	Only include those taken by the EMO for flood preparations to protect public safety
Economic Impacts	Low	Reduces economic impacts of a flood event
Social Acceptance	High	Project is expected to see positive interest from the public.

9.2.4 Adapting Existing Buildings

The adaptation of existing buildings involves site specific options to reduce flood risk to specific infrastructure. None of the buildings at risk in the Town involve municipal infrastructure, they are commercial or private, and the risks are limited to temporary, shallow flooding. Therefore, the assessment of costs and impacts is specific to the site and adaptation option selected, as described in Section 8.4, and will depend on individual owner's intentions for the management of flood risks. This differs from the other flood

mitigation strategies provided as they aim to reduce flooding throughout the entire watershed areas. Nevertheless, since the risk exists, the Town may decide to incentivize the implementation of local flood proofing measures as listed in Section 8.4, and as such, the general public may feel this is a high-priority flood mitigation measure. Reference to the Homeowner Residential Rehabilitation Assistance Program (RRAP) is already made in the community summary document presented in Appendix B, a section of which is reproduced in Section 8.4.

9.2.5 Best Management Practices or Low Impact Developments

The Stormwater Management Guidelines (Hatch Ltd, 2019) are already referred to in the updated Land Use By-laws, and therefore, are already required to be implemented in all future development.

Modelling results indicate that increasing the amount of stormwater infiltration slightly reduces the amount of flooding within the Town of Wolfville. Further review of these options is available in Table 16.

Table 16: Review of Best Management Practices or Low Impact Developments as a Flood Mitigation Measure

Evaluation Criteria	Rank	Details
Flood Reduction Effectiveness	Medium	Flood risks are slightly reduced but vulnerable areas are still at risk
Project Cost	Low	Already Implemented
Operational Cost	Low	
Management Requirements	Low	
Environmental Considerations and Regulatory Requirements	Low	Low Impact Development measures typically reduce damage to downstream environment.
Economic Impacts	Medium	Even though such measures slightly increase the cost of development, flood protection and sustainable methods are expected to improve land value.
Social Acceptance	High	Low Impact Development measures are typically well accepted by the community.

9.2.6 Increasing Storage Capacity

Model results indicate that implementing the proposed storage facilities and flow control structures, as described in Section 8.5.2, were all able to slightly reduce flood extents in the downstream areas, more notably in the Wickwire to University Avenue section of Main Street. An evaluation of increasing the storage capacity of the watersheds as a flood mitigation option is available in Table 17.

Table 17: Review of Increasing the Storage Capacity of the Watershed as a Flood Mitigation Measure

Evaluation Criteria	Rank	Details
Flood Reduction Effectiveness	Low	Limited effectiveness, but more notable in the Wickwire to University area on Main St.
Project Cost	Low (per pond): ~$0.3M	Detailed design and construction requirements
Operational Cost	Low	These structures typically have no to low operational requirements
Management Requirements	Medium	Periodic maintenance and inspection required
Environmental Considerations and Regulatory Requirements	High	Regulatory requirements as well as environmental impact assessments may need to be undertaken
Economic Impacts	Low	Reduce the cost of flood impacts in downstream areas
Social Acceptance	Medium	Large project undertaking and may have push back to large construction project and structure near residences

9.2.7 Increasing Pipe Capacity

Model results indicate that increasing the size of select storm sewer pipes increases the conveyance capacity of the storm sewer network and slightly reduces localized flooding. The storm sewer upgrades evaluated are outlined in Section 8.5.3 and include upgrades to seventeen (17) pipes. The limited reduction in flooded areas is related to the fact that the capacity of the system is reduced to zero when the tide is high.

As noted in Section 8.5.3, it may be most economical to replace the identified pipes (with larger pipes) only when they are nearing the end of their useful life, or if street repairs are planned. The largest reduction in flooding, even though limited, was indicated by the model results to be at the corner of Main Street and University Avenue. An evaluation of

increasing the pipe capacity of the municipal stormwater system as a flood mitigation measure is presented in Table 18.

Table 18: Review of Increasing Pipe Capacity as a Flood Mitigation Measure

Evaluation Criteria	Rank	Details
Flood Reduction Effectiveness	Low	Very limited, with some reduction noted in the University Ave/Main St area
Project Cost	Low (~$0.3M) for University/Main	Detailed design and construction requirements
Operational Cost	Low	No operational cost
Management Requirements	Low	Period maintenance and inspection
Environmental Considerations and Regulatory Requirements	Low	Storm sewer design requirements and construction requirements
Economic Impacts	Low	Limited reduction in flood impacts expected
Social Acceptance	Medium	Disruption to areas such as sidewalks and roads during construction

Chapter 10 Stakeholder Consultations and Community Communication

10.1 Stakeholder Consultations

Stakeholder consultations plays an important role in a study that involves potential modifications to infrastructure that is not owned by the Town, or connects with land or infrastructure that is not owned by the Town. There can be land transfer, infrastructure operation, and management or maintenance considerations to take into account. In addition, some propositions for new infrastructure may not be consistent with future plans of various stakeholders. To minimize such risks, coordination with the various stakeholders is a key step in the development of a flood mitigation plan for the Town.

Prior to this study, 5 years of consultations were carried out through the review of the Town's planning documents, which included an assessment of the flood risk of the Town. The findings of these consultations were consolidated in the recently implemented update to the MPS and Land Use By-laws. This process involved a flood risk workshop and multiple committee and council reviews.

As part of the current study, a number of stakeholders were contacted. The objective was to inform them of the current study and give them an opportunity to provide comments on the study.

The following stakeholders were contacted for an opportunity to provide feedback:

- Acadia University,
- Municipality of the County of Kings,
- Nova Scotia Department of Agriculture,
- Nova Scotia Transportation and Infrastructure Renewal,
- Bishop Beckwith Marsh Body,
- Grand Pre Marsh Body.

Responses were obtained from the Municipality of the County of Kings and the Nova Scotia Department of Agriculture. After several attempts, no responses were obtained from the other stakeholders by the time this report was completed. This could be related to the challenging conditions associated with COVID-19, or it could also mean that no potential issues were identified by the respective stakeholders.

10.1.1 Municipality of the County of Kings

The Municipality of the County of Kings provided feedback and expressed its appreciation for being contacted and informed of this study. They expressed interest in being informed of its progress and its next steps, including planning considerations, as well as potential flood mitigation options that could be implemented. At this time, no potential issues were found to exist with the proposed flood mitigation options.

10.1.2 Nova Scotia Department of Agriculture

The NSDA is a key stakeholder in this project, since the main flood mitigation option identified in this study is the extension and topping of the existing dyke system owned by the NSDA. The NSDA was contacted and various considerations were discussed and addressed, including:

- Current plans from NSDA to top (raise) the existing dyke system to offer continued protection against SLR;
- Ability to allow walking trails on the dyke system;
- Ownership of the potential new dyke; and
- Maintenance of new dyke.

The NSDA noted that it currently had plans to address increasing risks of SLR at both the Grand Pre and Bishop-Beckwith dyke systems. No timeline is available yet, but the NSDA is also interested in looking at the findings of the current study to inform their future plans.

Considering the ability to allow walking trails on the dyke system, the NSDA noted that walking on dykes can damage the vegetation, which is a key component of the erosion protection for the dyke and provides structural stability. In addition, access for maintenance of the dykes can be more difficult if it is open to the public. This notwithstanding, the NSDA has previously allowed the construction of walking trails on its dykes and has developed some adaptations that are necessary for the inclusion of a walking trail. These adaptations include a slightly higher top elevation (to compensate for erosion risks), some geotextile fabric, and erosion-resistant material (coarse gravel) that is covered with finer material for the trail surface (crusher dust). Increased monitoring efforts would be required by the Town, and maintenance is more difficult, but the possibility will certainly be considered by the NSDA.

Regarding ownership of the new dyke, which would link the Grand Pre and Bishop-Beckwith dyke systems, if the Town designs and builds a new dyke that follows the NSDA dyke design guidelines, NSDA are open to receiving ownership of it and providing maintenance.
From a maintenance perspective, while NSDA will provide some general maintenance of the dykes, to the same level as the remainder of the dyke system around the Bay of Fundy, erosion caused by pedestrian traffic would have to be monitored, and if necessary, repaired by the Town.

These considerations show that it is certainly feasible to implement the construction of a new dyke to close the existing gap between the dykes, as long as the design is closely coordinated with the NSDA.

10.2 Community Education and Communication

A public-facing communication strategy and materials have been prepared in draft form and are presented below.

10.2.1 Public Communication Summary Document

A summary document was assembled touching on the main points in the report (available in Appendix B). It is designed to be concise, clear, and accessible. The document includes the following information:

- Introduction to climate change;
- Description of existing and future flooding risks;
- Flood mapping;
- Flood mitigation measures recommended in this report, including:
  - New dykes and raised dykes;
  - Infiltration systems;
  - Increasing stormwater storage capacity; and
  - Increasing pipe capacity;
- Flood-proofing measures at the building or household level, including:
  - Explanation of sources of stormwater into the household;
  - Lot and building level flood mitigation and flood proofing measures; and
  - Reference to the Homeowner Residential Rehabilitation Assistance Program (RRAP).

10.2.2 Layout of Document to be Sent to Residents in a Flood-Affected Area

Communication documents can take many different forms. Typically, the most helpful documents prepared for communication are those that are focused on the main questions that readers are likely to be asking themselves, for example:

- Why is there a flooding risk in the Town?
- Am I at a risk of flooding?
- How much flooding am I at risk of experiencing?
- Am I likely to suffer damages to my home?
- Are my loved ones and me at risk?
- How can I prepare for a potential flood?
- What can I do to my home and property to reduce risks of damage?
- How can I access help to pay for the costs of those measures?

It may be helpful to directly include the questions in the mail-out document so that the readers can see that those questions will be answered and feel that the document is helpful.

The answers to the questions are in the summary document and in the flood maps. Even though flood maps could be sent to residents, it is typically the case that members of the public at large are not familiar with maps or how to find their home on a map.

Since the flood risks to the buildings identified in the mapping is very consistent and involves only temporary, shallow flooding, it may be more effective to focus on the risks, rather than asking readers to understand the details of a map. For example, it could be noted that their home has been identified as being at risk of flooding, but that the flooding will only be temporary (in the order of a few minutes to a few hours) and it will not involve deep water or place any lives at risk.

Preparation measures for a flood are detailed at the beginning of Section 8.4, while flood protection measures at the lot and building level are presented further down in the same section.

Access to financial support is also noted in the community summary document referencing the Homeowner Residential Rehabilitation Assistance Program (RRAP), and the Town could also provide some financial incentives.

As noted in Section 8.2, residual risk would also need to be managed and communicated. It may include noting that the dyke system would be designed up to a certain level of protection (in this report, the 1-in-100-year event is used as a design basis). Regardless of the design event used to construct the new dyke, and/or to raise the existing dykes, there will always be a risk that an event greater than the design event occurs. In this case, the risk

is managed by the REMO, through preparation, response, and recovery. A flood forecasting system would then include a warning response procedure, where the public is warned if the dykes are at risk of being overtopped. Since this type of flooding would involve deep water and fast-moving water, any persons within the area at risk would have to be evacuated (this would include any building North of the railroad and a handful of buildings West of Old Dyke Lake and North of Main St, including the Southwest Nova Insurance Group up to Orchard Avenue).

Perhaps it can be noted with an explanation that the dykes are built to reduce the risk, but will never eliminate the risk of overtopping, and/or failing. This risk is managed by the REMO, who will provide alerts if necessary, and ensure that any necessary evacuations will take place.

This communication will need to take place with any owner of a building or home that has been identified as being at risk of flooding in existing conditions by the 1-in-100-year event, or the future conditions (with dykes raised) 1-in-100-year event. The mapping in Appendix A has identified those buildings by colouring them in yellow. In addition, communication with owners of any building and home that is within the future 1-in-100-year flood extents (scenario with no dyke raised) will also need to be informed that they would be at risk of being evacuated if an event greater than the 1-in-100-year event occurred, and/or if the dykes were to fail.

10.2.3 Draft Education Signage for Waterfront Showing Future Water Levels

The Public Communication Summary Document (presented in Appendix B) is a good document to draw from to produce education signage. The first two pages address climate change, sea level rise and storm surge related flooding. Some slight wording changes to adapt the document from a summary of a study to an informative panel would be needed and may involve the following edits:

- Changing “Town of Wolfville Flood Mitigation Plan” to “Climate Change and Peak Water Levels in Wolfville”; and
- Changing “Climate change projections have been incorporated into this study to determine how flood risk will increase over time and how these risks can be reduced” to “Climate change projections have been analysed to determine how flood risk will increase over time”.

A standard signage showing potential future peak water level could look something like Figure 10.1 below:

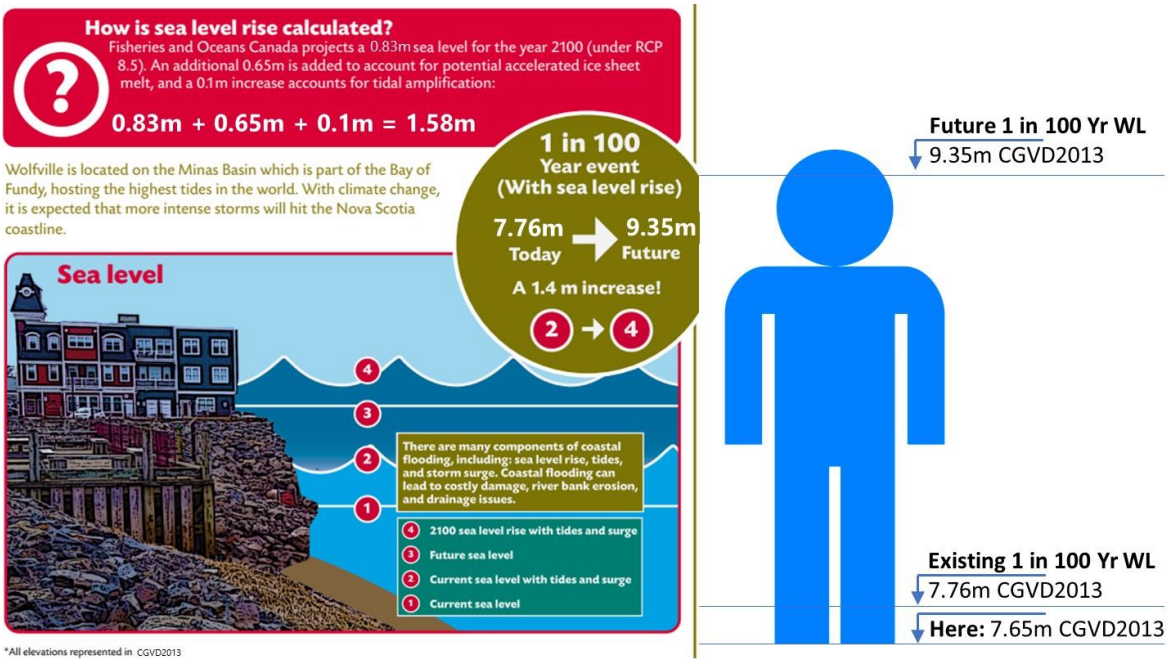


Figure 10.1: Example of Water Level Signage and Marker

10.2.4 Considerations for Leaflet Mailed to Residents About Flood Proofing their Properties

The information and layout presented in the last page of the Public Communication Summary Document (in Appendix B, and presented below in Figure 10.2) is a good starting point. It could be a stand-alone document, but it would be considered more effective if this is directly included in the mailed information to building owners that have been identified as being at risk of flooding. The measures listed in the document apply to both buildings and homes, especially since many businesses are homes converted for that purpose. Another version can perhaps be kept at the Town Hall for additional information to any resident curious about flood proofing their home.

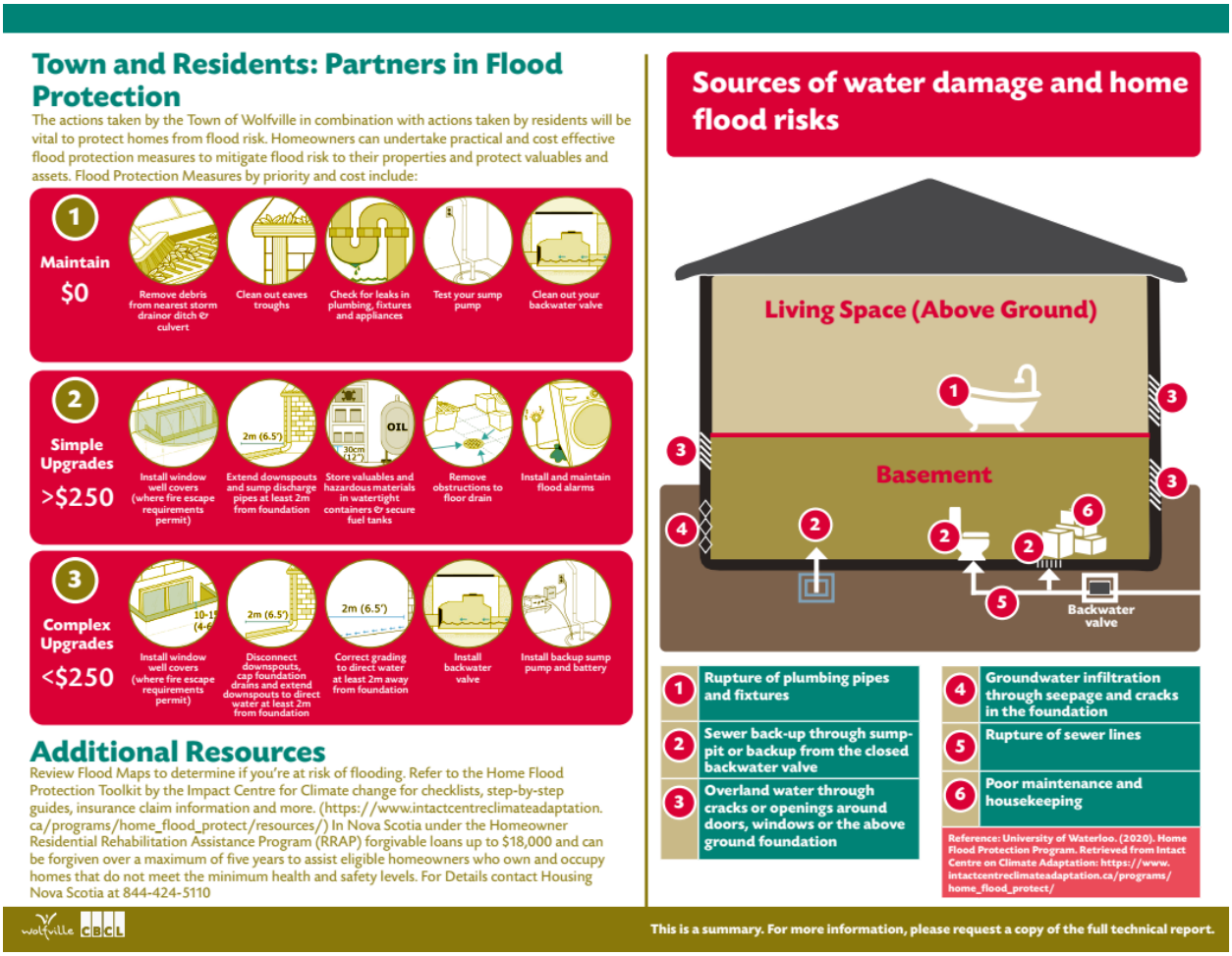


Figure 10.2: Section of Community Summary Document that Addresses Flood Proofing Measures

10.2.5 Considerations for Effective Communication of Flooding Risks and Flood Protection

Communication of flooding risk is a complex and delicate process. While it is very important to carry out, it is also important to take care in preparing a communication plan that is both informative and considerate of various individuals' circumstances. An effective plan could include several methods of contacting building owners and homeowners, including:

- Town's planning documents (already on the Town website);
- Document mailed directly to those affected by flooded area (as describe above);
- Leaflet with flood proofing measures (as described above) to be published on the Town website and made available to anyone who walks in the Town Hall;

- Community summary document to be published on the Town website and made available as a leaflet to anyone who walks in the Town Hall;
- Education signage and markers of high water levels (as discussed above);
- A public open house to present this analysis and new flood maps; and
- A contact phone number to call if any further questions arise.

While communicating the fact that there is a risk and providing mitigation measures is key, it is also important to communicate the information, facts and science behind the flood elevations and mapping presented. This is not a simple undertaking and can easily lead to confusion. This is likely best addressed though a combination of making available the summary community document, the markers and education signage, holding an open house, and making available the full technical report on the Town website. The open house, in particular, would be the most suitable setting for any member of the public to ask any question, and it would allow the Town/CBCL technical staff to walk the person through the key steps of the analyses in simple, clear terms. A public open house is typically the most effective setting to allow each person to ask any question they like and have an informative one-on-one conversation. Projected presentations in an auditorium setting are much less effective and seldom achieve the goal of effectively informing members of the public. Of course, this open house will necessarily be delayed until the COVID-19 pandemic is over, but it should still be held once safe to do so.

Chapter 11 Conclusions and Recommendations

11.1 Summary

A Flood Risk Mitigation Plan has been completed for the Town of Wolfville. The Plan identifies current and future flood risks, including impacts of climate change, and evaluates a list of proposed solutions to mitigate flood risks to the Town. The Plan was developed through communication with both stakeholders and the Town, and it included a review of the Town's municipal operations and priorities, relevant reports, by-laws, guidelines and strategies.

Inland and coastal flooding within the Town of Wolfville can occur as a result of extreme rainfall events and extreme coastal water levels. Inland flooding occurs when the stormwater collection system has insufficient capacity to convey stormwater runoff downstream during extreme rainfall events resulting in overflow onto areas such as roads, municipal infrastructure and private properties. Coastal flooding occurs when extreme tides reach inland areas either through backup through the stormwater system, overtopping dykes, or between the two dyke systems.

A suite of computer models was used to assess flood risks within the Town, estimate current and future risks, and evaluate potential flood mitigation options. A range of rainfall and tidal scenarios were assessed under current and future conditions to evaluate the risks of flooding.

The effects of climate change on both precipitation and sea level rise were considered when examining future conditions (i.e., the year 2100 time horizon). To date, global green-house gas concentrations have most closely tracked RCP8.5, which was used to generate the higher range of climate change projections featured in the IPCC's AR5. The 1-in-100-year rainfall event is projected to increase by approximately 61% by 2100 under RCP8.5 (95th percentile) according to the Western University IDF-CC Tool (Table 19).

Table 19: Future and Existing Rainfall Projections of the IDF_CC Tool for a 1-in-2 and 1-in-100-year Occurrence Probability

Peak Rainfall Intensity	1-in-2-year (mm/hr)	1-in-100-year (mm/hr)
Existing	68.57	174.00
Future	88.45	280.12

Extreme coastal water levels include high tide, sea level rise (SLR), storm surge and tidal amplification. Regional SLR for the year 2100 is projected to be 1.58m for the Town of Wolfville. Extreme coastal water levels included high tide, SLR and storm surge ("High" Scenario), as presented in Table 20.

Table 20: Future and Existing Sea Level Projections for a 1-in-2 and 1-in-100-year Occurrence Probability

Peak Water Level	1-in-2-year (m CVGD 2013)	1-in-100-year (m CVGD 2013)
Existing	7.57	7.76
Future	9.15	9.35

A list of key recommendations separated under "high priority", and "subject to further monitoring" was developed and is presented in Table 21 and Table 22. In addition, the main items requested in the Request for Proposals are listed below, with each relevant sections of the report noted for simplified reference.

Scope of Work

CBCL was contracted to respond to the following scope of work for this project. The table below provides quick reference to relevant information:

Project Scope Component	Final Report Reference
Consultation with local, regional, and provincial stakeholders.	Chapter 10.1 Stakeholder Consultations
The identification and analysis of flood hazards, highlighting specific areas of vulnerability within the town.	Chapter 7 Vulnerability Assessment
The development and modelling of current and future flood scenarios.	Chapter 4 Coastal Water Level Analysis and Chapter 5 Hydrologic and Hydraulic Analysis
Determining the consequences of developed flood scenarios, in terms of who and what would be impacted, and the nature and severity of those impacts.	Chapter 7 Vulnerability Assessment
A workplan with a mitigation investment strategy, including a prioritized list of identified projects for implementation; and adaptation strategies, covering the areas of land-use planning, protection/relocation/resilience of critical infrastructure, development, personal/household safety and planning measures, and emergency response and service management.	Chapter 8 Flood Risk Mitigation Options and Chapter 9 Preliminary Evaluation of Mitigation Options
Updating current flood maps and models for the Town.	Chapter 6 Flooding Analysis and Appendix A
Recommendations for integration with provincial and regional plans.	Section 3.3: Documentation Review
A public education and engagement component, which could include a community workshop and/or the development of a public-facing communication strategy and materials.	Section 10.2: Community Education and Communication. Appendix B

11.2 Recommended Implementation Plan

A recommended flood mitigation implementation plan has been assembled as part of this study, which is summarized in Table 21 and Table 22, and includes a timeline for implementation, opinions of probable costs, and report references. These recommended actions are divided into a High Priority Table (Table 21) and Actions Subject to Further Monitoring Table (Table 22).

Table 21: Recommended Flood Mitigation Plan – High Priority Actions

	High Priority Action	Timeline	Class "D" Opinion of probable Cost*	Report Reference
Connecting the dyke system & integrating living shorelines				
	Conduct topographic survey of top of dykes and waterfront in-between	1-3 Years	~$20k	Section 3.2 Stormwater Drainage
	Contact rail line owner to assess feasibility of acquiring land for new dyke	1-3 Years	-	Section 8.1.1Connecting the Dyke System and Applying Living Shorelines
	Land negotiations, pending results of above discussions	1-3 Years	-	
	Hold discussions with Department of Agriculture about raising of dykes	1-3 Years	-	10.1.2 Nova Scotia Department of Agriculture
	Following the above, select option for new dyke (in mudflat or rail ROW)	1-3 Years	-	
	Tender and award detailed design for new dyke	1-3 Years	~$50k	
	Investigate financing options for new dyke	1-3 Years	-	
	Design and tender stormwater pipe extensions to reduce erosion and support development of living shoreline	1-3 Years	~$20k	
Raising land around SLSs and new berm around WWTF				
	Review permitting and land requirements based on WWTF berm alignment and footprint	1-3 Years	-	

	Tender and award detailed design for new berm	1-3 Years	~$50k	
	Regrade land around SLSs	1-3 Years	~$10k	
Flood forecasting and warning system in partnership with REMO				
	Discuss with REMO scope and integration of system in existing SCADA	1-3 Years	-	8.2 Flood Forecasting and Warning System
	Tender flood forecasting and warning system	1-3 Years	~$50k	
	Install water level monitoring and recording system with connection to SCADA	1-3 Years	~$50k	
Community education and communication				
	Public Education: - Review Summary Document - Educational Signage about Sea Level Rise - Mail out leaflets to home and building owners in flood risk areas - Prepare open house when feasible	1-3 Years	~$10k	10.2 Community Education and Communication
Construction of new dyke and berm				
	Tender construction of new dyke Remove and dispose of old wooden beams Tender extensions of stormwater pipe outfalls	3-5 Years	~$600k on bank ~$6M in mudflat ~$20k ~$600k	8.1 Coastal Flood Protection Measures & 9.2.1 Coastal Flood Protection Measures
	Tender construction of new berm	3-5 Years	~$300k	8.3.2 Wastewater Treatment Facility
	Coordinate topping of existing dykes with Department of Agriculture	3-5 Years	-	10.1.2 Nova Scotia Department of Agriculture
Future steps				
	Evaluate recorded water level data and assess Sea Level Rise projections	35-45 Years	~$5k	-
	Design and construct (or coordinate with Department of Agriculture) additional raising of the dyke system	35-45 Years	Depends on findings	10.1.2 Nova Scotia Department of Agriculture

Table 22: Recommended Flood Mitigation Plan – Actions Subject to Further Monitoring

	Actions Subject to Further Monitoring	Class "D" Opinion of probable Cost*	Report Reference
Increasing infiltration measures			
	Identifying opportunities wherever pipes, sidewalks or parking lots are replaced or maintained	Will vary	9.2.5 Best Management Practices or Low Impact Development
Increasing storage capacity			
	Construct detention pond in Little Brook Lane area	~$250k	8.5.2 Increasing Storage Capacity
Increasing stormwater conveyance capacity			
	Minor upgrades with street work	Will vary	
	University and Main Street (identified as largest increase in pipe diameter)	~$300k	8.5.3 Increasing Pipe Capacity
Protecting future development			
	Monitoring latest information (data, climate science) and update plans accordingly		5.1.2 Impacts of Climate Change Rainfall Events
	Evaluate recorded water level data and assess Sea Level Rise projections		4.1.2 Climate Change Impacts on Coastal Water Levels

Should you have any questions about this analysis, please do not hesitate to contact the undersigned. We thank you again for the opportunity to conduct this very interesting analysis.

Yours very truly,

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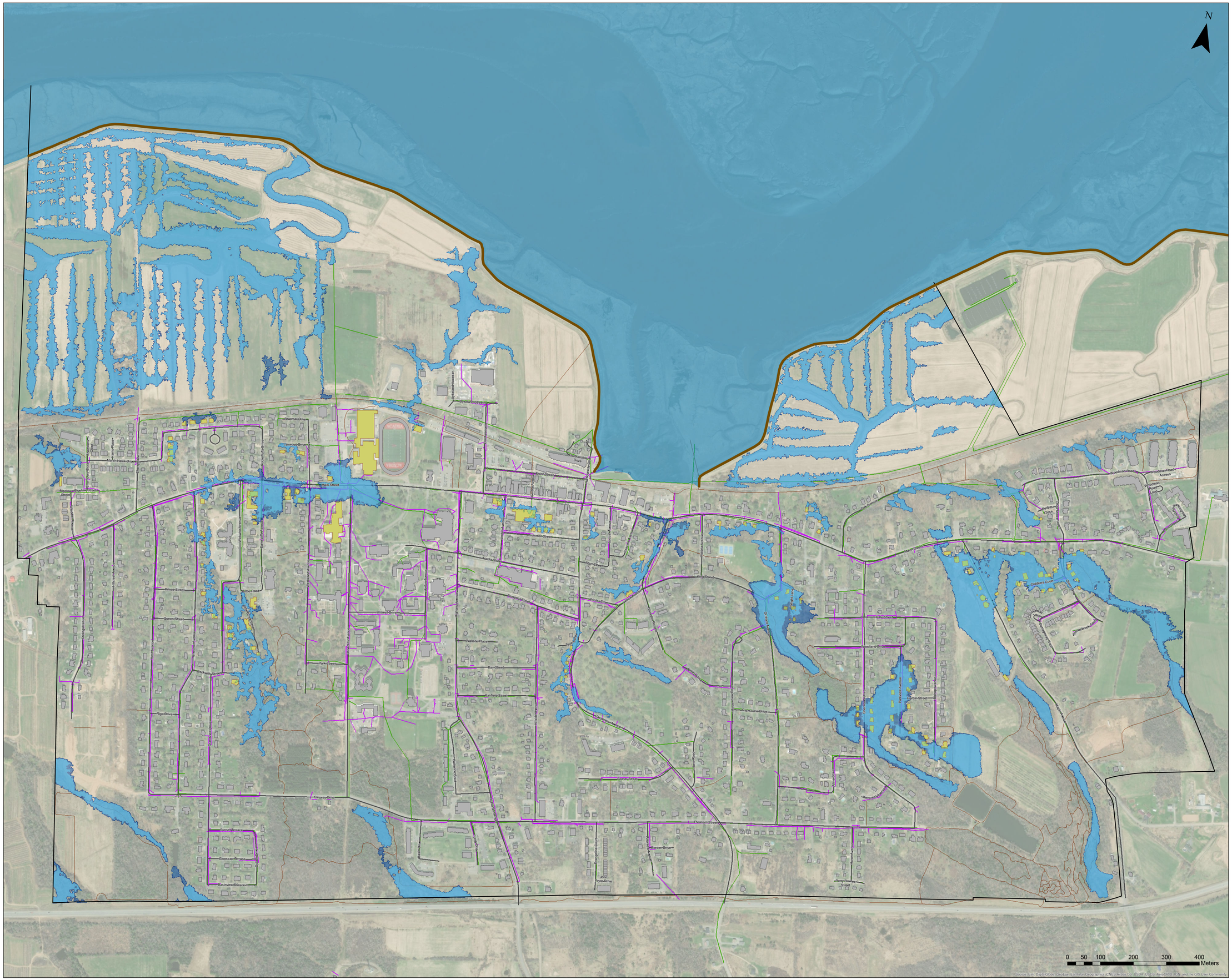
APPENDIX A

Floodline Delineation Maps



- Current Dyke Line
- Town Boundary
- Infrastructure at Risk in 1 in 100 Year Rainfall Event
- 1 in 20 Year Rainfall Event, 1 in 2 Year Tide
- 1 in 100 Year Rainfall Event, 1 in 2 Year Tide
- Stormwater System
- Sewer System
- Trails

No	Date	Description
1	04/15/2020	Issued for Report

Revision or Issue

wolfville NOVA SCOTIA

Project:

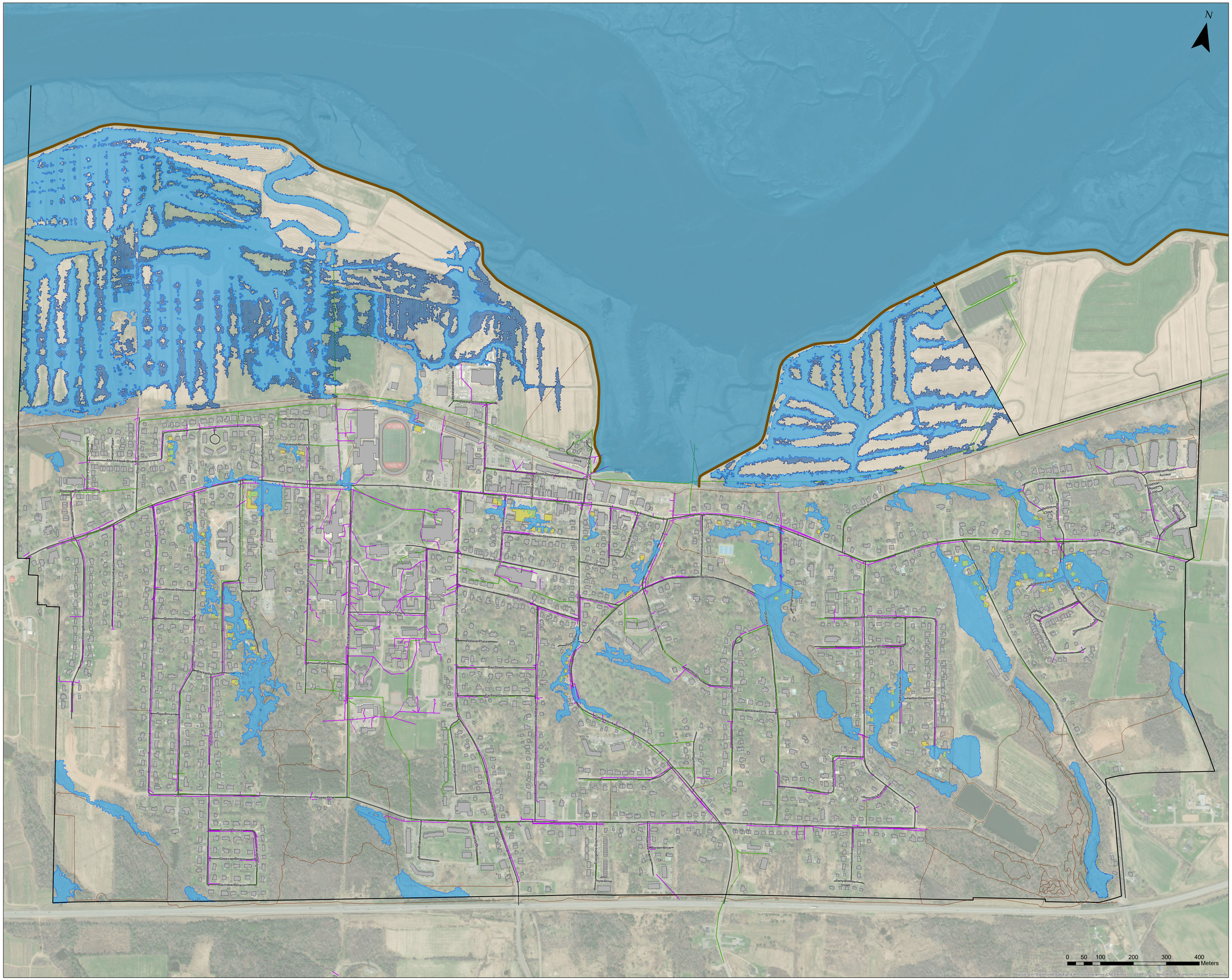
TOWN OF WOLFVILLE
FLOOD RISK PROFILE

Drawing Title:

EXISTING CONDITIONS
1 in 20 AND 1 in 100 YEAR
RAINFALL EVENTS

CBCL

Date:	MAY 2020	Scale:	1:3,650
Project No:	201101.00	Drawing No:	1



- Current Dyke Line
- Town Boundary
- Infrastructure at Risk in 1 in 100 Year Tide
- 1 in 20 Year Tide, 1 in 2 Year Rainfall Event
- 1 in 100 Year Tide, 1 in 2 Year Rainfall Event
- Stormwater System
- Sewer System
- Trails

No	Date	Description
1	04/15/2020	Issued for Report

Revision or Issue

wolfville NOVA SCOTIA

Project:

TOWN OF WOLFVILLE
FLOOD RISK PROFILE

Drawing Title:

EXISTING CONDITIONS
1 in 20 AND 1 in 100 YEAR
TIDE EVENTS

CBCL

Date: MAY 2020	Scale: 1:3,650
Project No: 201101.00	Drawing No: 2

N

Current Dyke Line
Town Boundary
Infrastructure at Risk in Future 1 in 100 Year Rainfall Event
1 in 20 Year Rainfall Event, 1 in 2 Year Tide, Future Conditions
1 in 100 Year Rainfall Event, 1 in 2 Year Tide, Future Conditions
Stormwater System
Sewer System
Trails

0 50 100 200 300 400 Meters

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

No	Date	Description
1	04/15/2020	Issued for Report

Revision or Issue

wolfville NOVA SCOTIA

Project:

TOWN OF WOLFVILLE
FLOOD RISK PROFILE

Drawing Title:

FUTURE CONDITIONS
1 in 20 AND 1 in 100 YEAR
RAINFALL EVENTS

CBCL

Date:	MAY 2020	Scale:	1:3,650
Project No:	201101.00	Drawing No:	3

N

- Current Dyke Line
- Town Boundary
- Infrastructure at Risk in Future 1 in 100 Year Tide
- 1 in 20 Year Tide, 1 in 2 Year Rainfall Event, Future Conditions
- 1 in 100 Year Tide, 1 in 2 Year Rainfall Event, Future Conditions
- Stormwater System
- Sewer System
- Trails

0 50 100 200 300 400 Meters

No	Date	Description
1	04/15/2020	Issued for Report

Revision or Issue

wolfville NOVA SCOTIA

Project:

TOWN OF WOLFVILLE
FLOOD RISK PROFILE

Drawing Title:

FUTURE CONDITIONS
1 in 20 AND 1 in 100 YEAR
TIDE EVENTS

CBCL

Date: MAY 2020	Scale: 1:3,650
Project No: 201101.00	Drawing No: 4

N

Current Dyke Line
Town Boundary
Infrastructure at Risk 100 Year Rainfall with BMPs
1 in 100 Year Rainfall Event, 1 in 2 Year Tide, BMPs
1 in 100 Year Rainfall Event, 1 in 2 Year Tide, Existing Conditions
Stormwater System
Sewer System
Trails

0 50 100 200 300 400 Meters

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

No	Date	Description
1	04/15/2020	Issued for Report

Revision or Issue

wolfville NOVA SCOTIA

Project:

TOWN OF WOLFVILLE
FLOOD RISK PROFILE

Drawing Title:

EXISTING CONDITIONS
MITIGATION OPTION
1 in 100 YEAR RAINFALL EVENT
WITH BMPs

CBCL

Date:	MAY 2020	Scale:	1:3,650
Project No:	201101.00	Drawing No:	5

N

Current Dyke Line
Town Boundary
Infrastructure at Risk 100 Year Rainfall with Increased Conveyance
1 in 100 Year Rainfall Event, 1 in 2 Year Tide, Increased Conveyance
1 in 100 Year Rainfall Event, 1 in 2 Year Tide, Existing Conditions
Stormwater System
Sewer System
Trails

0 50 100 200 300 400 Meters

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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1	04/15/2020	Issued for Report

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Project:

TOWN OF WOLFVILLE
FLOOD RISK PROFILE

Drawing Title:

EXISTING CONDITIONS
MITIGATION OPTION
1 in 100 YEAR RAINFALL EVENT
INCREASED CONVEYANCE

CBCL

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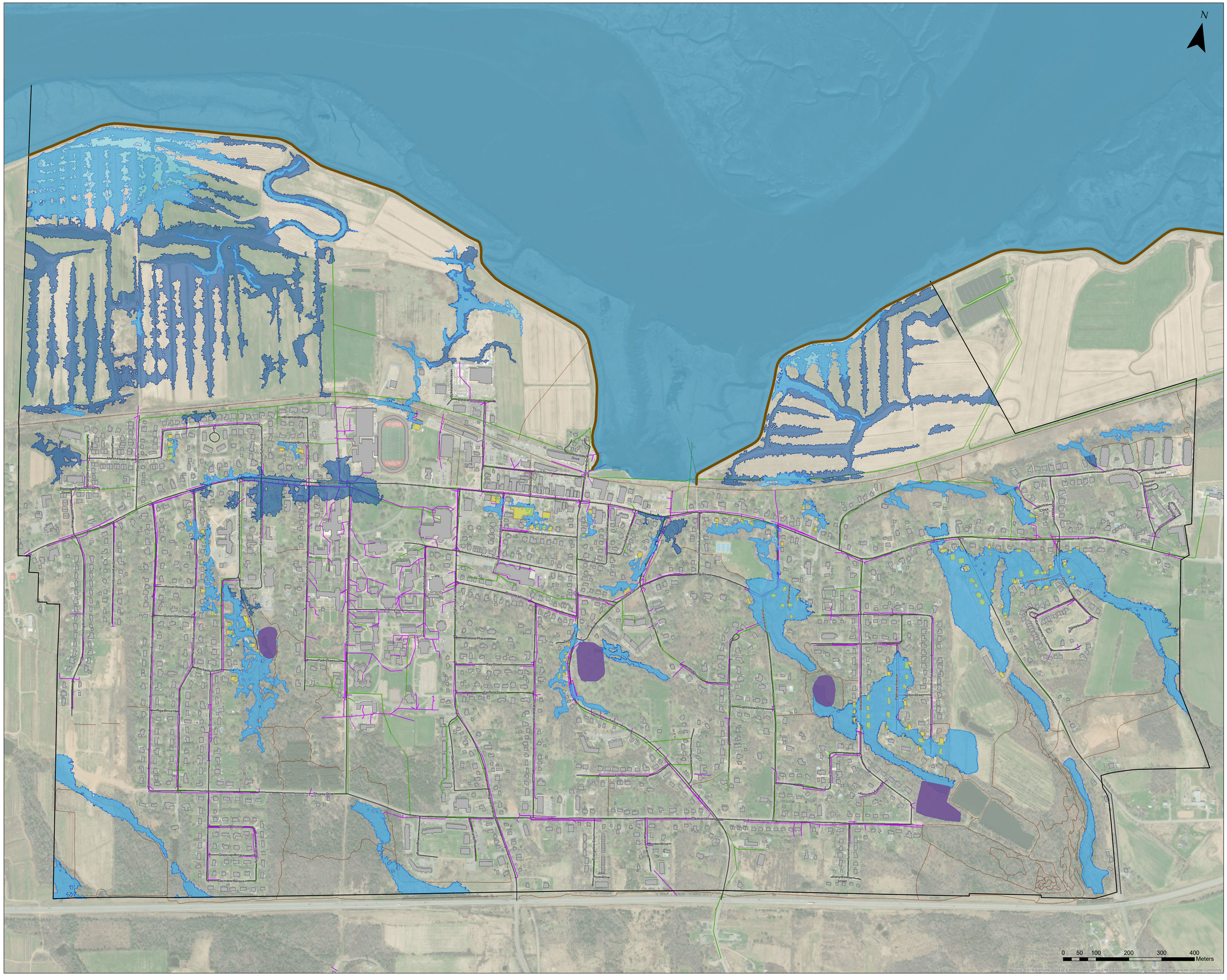

- Current Dyke Line
- Town Boundary
- Infrastructure at Risk 100 Year Rainfall with Increased Storage
- Proposed Stormwater Pond Locations
- 1 in 100 Year Rainfall Event, 1 in 2 Year Tide, Increased Storage
- 1 in 100 Year Rainfall Event, 1 in 2 Year Tide, Existing Conditions
- Stormwater System
- Sewer System
- Trails

No	Date	Description
1	04/15/2020	Issued for Report

Revision or Issue

wolfville NOVA SCOTIA

Project:

TOWN OF WOLFVILLE
FLOOD RISK PROFILE

Drawing Title:

EXISTING CONDITIONS
MITIGATION OPTION
1 in 100 YEAR RAINFALL EVENT
INCREASED STORAGE

CBCL

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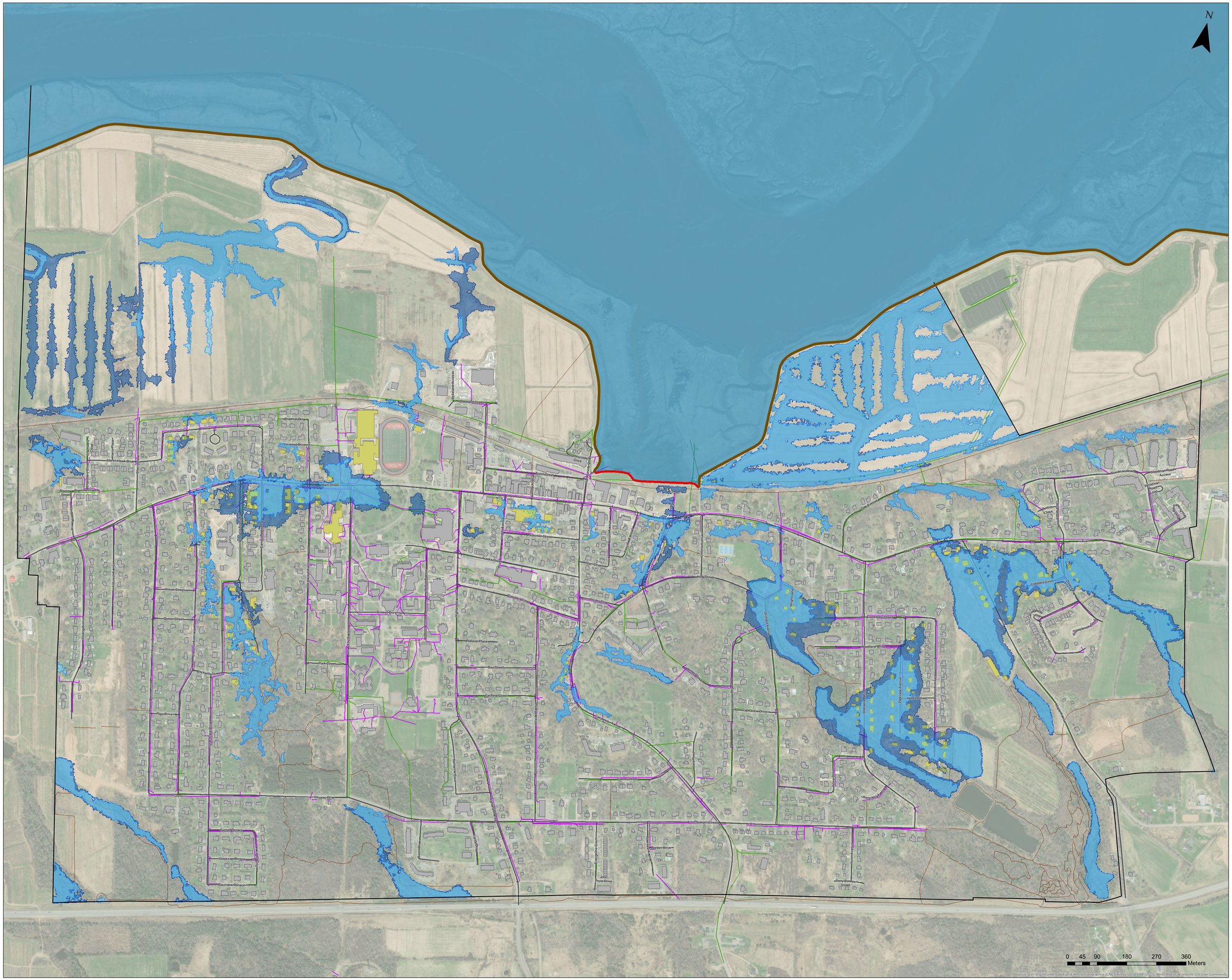


- Current Dyke Line
- Town Boundary
- Proposed Dyke Extension
- Infrastructure At Risk, 1 in 100 Year Future Rainfall Event, Raised Dykes
- 1 in 20 Year Rainfall Event, 1 in 2 Year Tide Event, Future Conditions, Raised Dykes
- 1 in 100 Year Rainfall Event, 1 in 2 Year Tide Event, Future Conditions, Raised Dykes
- Stormwater System
- Sewer System
- Trails

No	Date	Description
1	04/15/2020	Issued for Report

Revision or Issue

wolfville NOVA SCOTIA

Project:

TOWN OF WOLFVILLE
FLOOD RISK PROFILE

Drawing Title:

FUTURE CONDITIONS
MITIGATION OPTION
RAISED DYKES

CBCL

Date: MAY 2020	Scale: 1:3,650
Project No: 201101.00	Drawing No: 8

APPENDIX B

Public Communication Summary Document

Town of Wolfville Flood Mitigation Plan

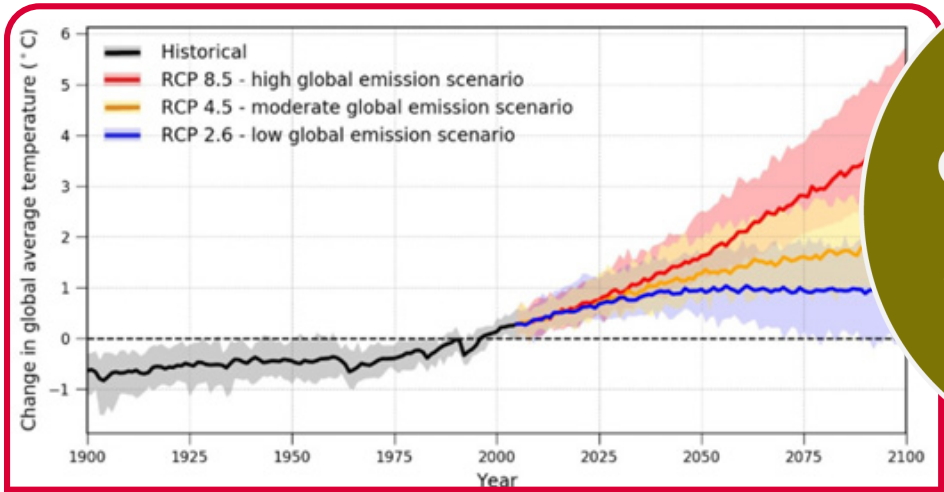
Flooding in Nova Scotia can impact public safety, the economy, agriculture, and the environment. It can lead to damage and costly upgrades for municipal infrastructure and residential home owners. Like many communities across Atlantic Canada, Wolfville is situated along a prominent coastline which poses a flood risk if not monitored and mitigated. Flooding in Wolfville can occur during a storm surge event or extreme rainfall. Flood risk will increase with climate change. For this reason, Wolfville engaged CBCL Limited to complete a comprehensive analysis of flooding in our town and to develop a flood mitigation plan that will protect the community and help reduce flood risk today and in the future. This document highlights key findings from this study.

How Climate Change Impacts Flooding

Climate scientists have studied how climate change will impact rainfall patterns, sea level, and storm surge in the future. Climate change projections have been incorporated into this study to determine how flood risk will increase over time and how these risks can be reduced.

What causes Climate Change?

Climate change is a change in global and regional climate patterns as a result of both natural cycles and human activity. Burning of fossil fuels increases the amount of heat trapping gases within our atmosphere leading to rising temperatures. This is called the **greenhouse gas effect.**



Change in Global Average Temperature Relative to the 1986-2005 Reference Period for RCP 2.6, RCP 4.5, and RCP 8.5 (Canadian Centre for Climate Services)

In Canada, climate is generally expected to become warmer, wetter, and less stable.

Predicting Climate Change in Wolfville

Global emissions have most closely tracked along the highest projected emission scenario (RCP 8.5, red line) which was used in the Flood Mitigation Plan.

Sea Level Rise and Storm Surge Flooding

Sea levels have been rising in the Maritimes since the end of the last ice age 10,000 years ago. This trend is expected to accelerate with climate change, notably from melting of the polar ice caps. Sea level is expected to rise to 1.46 m by 2100 at the Town of Wolfville.

How is sea level rise calculated?

Fisheries and Oceans Canada projects a 0.83m sea level for the year 2100 (under RCP 8.5). An additional 0.65m is added to account for potential accelerated ice sheet melt, and a 0.1m increase accounts for tidal amplification:

0.83m + 0.65m + 0.1m = 1.58m

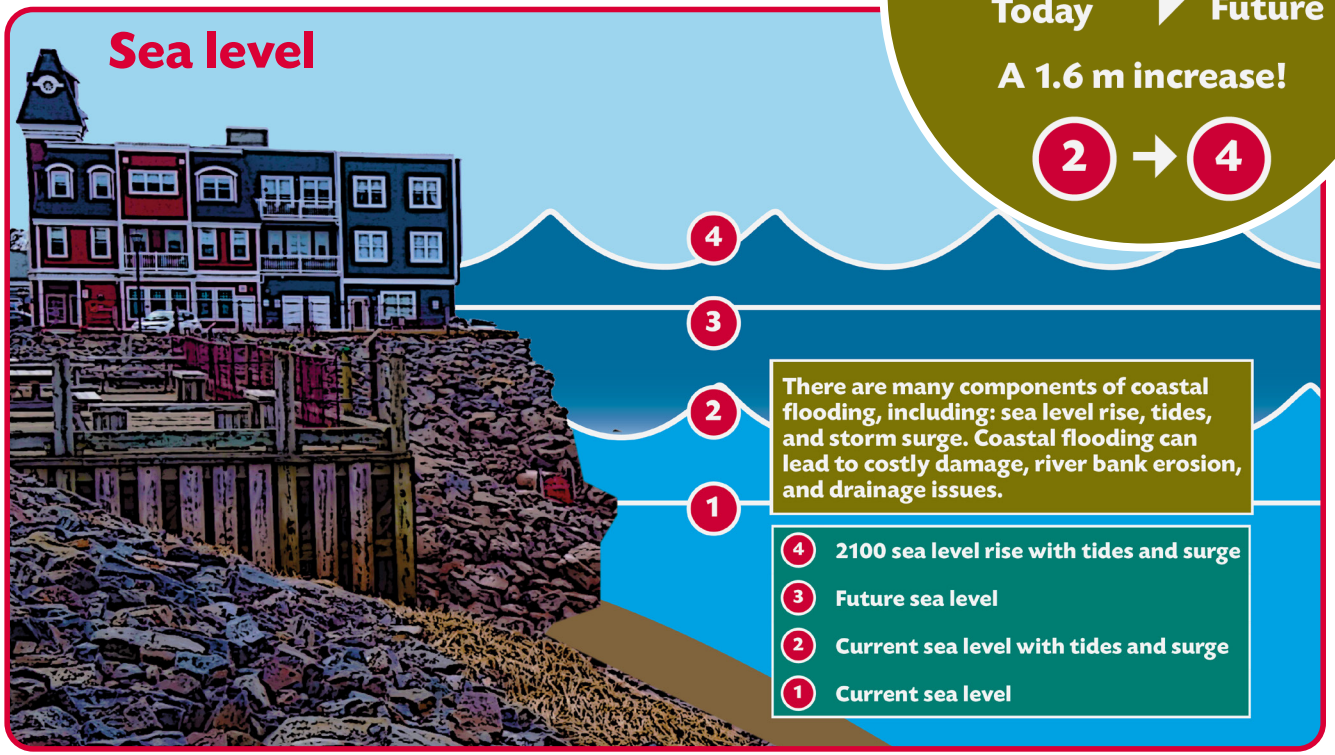
Wolfville is located on the Minas Basin which is part of the Bay of Fundy, hosting the highest tides in the world. With climate change, it is expected that more intense storms will hit the Nova Scotia coastline.

1 in 100 Year event (With sea level rise)

7.76m Today → **9.35m** Future

A 1.6 m increase!

2 → 4

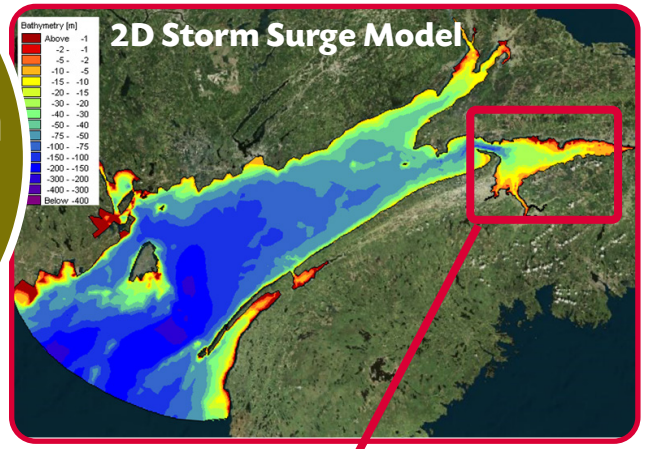


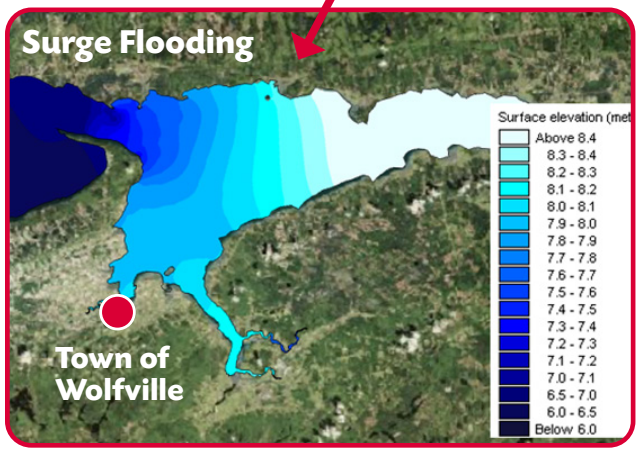
*All elevations represented in CGVD28

Assessing Flood Risk

Historically, flooding has not been a common occurrence within the Town of Wolfville; this is due to the dyke system that acts as a wall of protection against tides and storm surge flooding. However, the risk of flooding increases over time as sea levels rise, rainfall becomes more intense, and storm surge events increase.

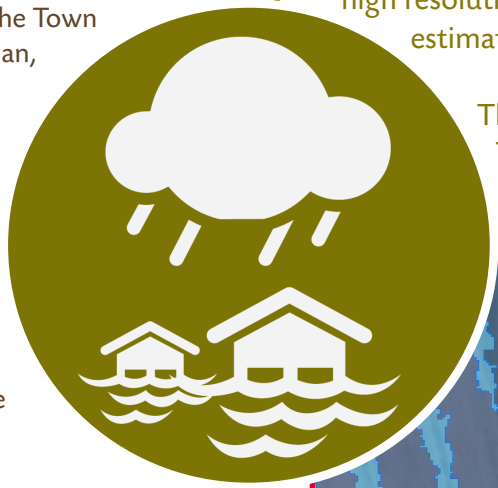
CBCL analyzed the risk of the dyke overtopping using a model of the Bay of Fundy to run future flooding scenarios with rising sea levels.





Communicating the likelihood of extreme weather

Climate events such as extreme sea levels, wind, and rainfall are communicated by their annual exceedance probabilities (or AEP). A 1 in 100 year rainfall event means that there's a 1% chance every year of this extreme rainfall happening. For the Town of Wolfville's Flood Mitigation Plan, the future 1 in 100 year rainfall event was used to understand potential future stormwater flood risks.



Rainfall events are expected to increase as a result of climate change. CBCL used the IDF-CC tool developed by the University of Western Ontario to determine how climate change will increase rainfall by 2100 (RCP 8.5):

1 in 100 Year rainfall event

174 mm/hr Today

↓

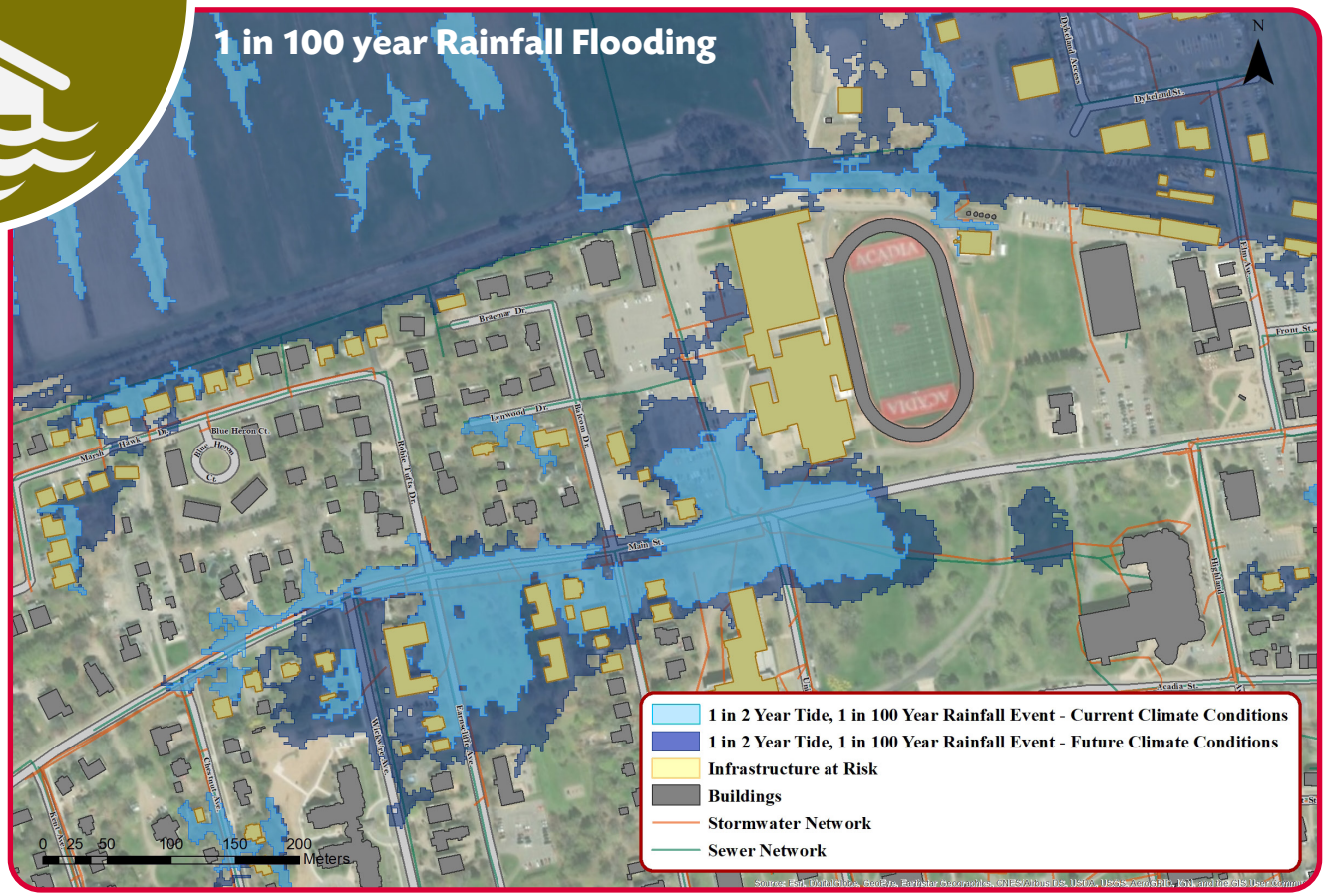
280 mm/hr Future With Climate Change

Flood Risk Mapping

Flooding in the Town of Wolfville occurs during large rainfall events combined with high tide. Water drains over lawns and in ditches, eventually being captured into the Town's storm water collection system. If rainfall exceeds the capacity of this system, flooding occurs on roads and private property.

CBCL developed a model of the town's stormwater drainage network to assess the risk of flooding during extreme rainfall and tidal events to identify strategies to mitigate flood risk. The model uses high resolution topography of the town along with underground infrastructure to produce flood estimates.

The map below is a snapshot of future flooding results for the highest risk area of the Town. This flooding can be reduced using engineering approaches, such as raising the dykes or carrying out storm water drainage network enhancements, as shown on the following pages.



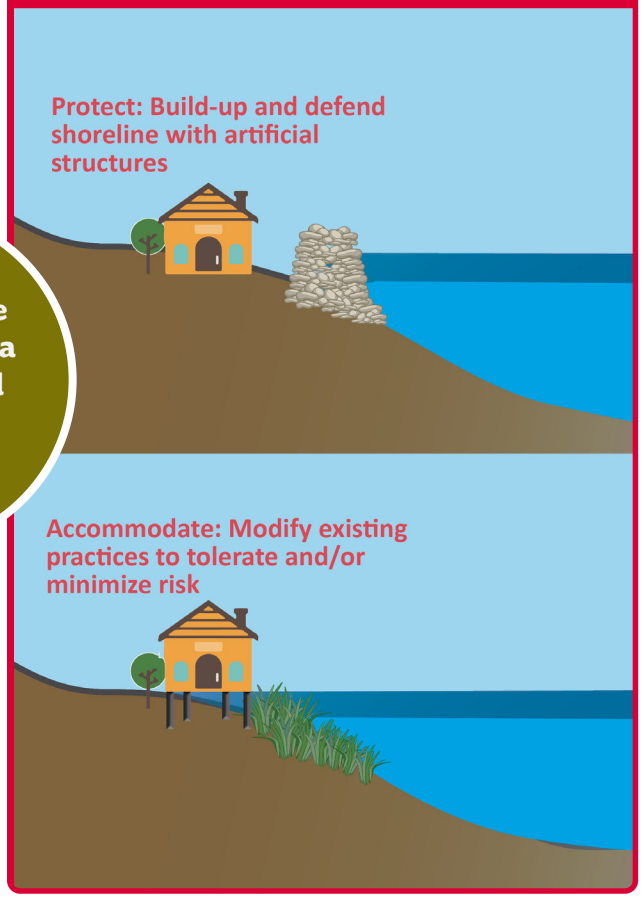
How do we Mitigate Coastal Flood Risk?

The Town of Wolfville has been protected from extreme coastal water levels by the Grande Pré and Bishop Beckwith dyke systems. Coastal dykes are large embankments built to prevent coastal flooding during high tides and storm surge. Currently, the average height of the dykes along the Town of Wolfville is approximately 8.75m and the two dyke systems are not connected. This presents a heightened risk of coastal flooding to adjoining areas.

Raising and connecting the dyke system is a recommended approach for protection of the Town.

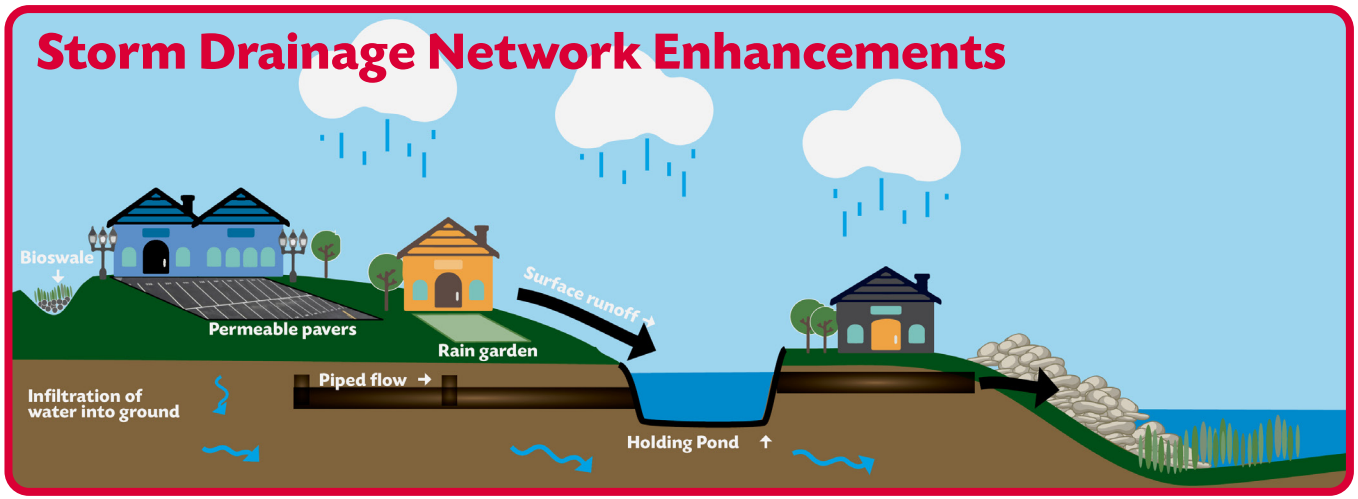
As coastal water levels continue to rise, the risk of overtopping or breaching of the dykes increases

Typical ways to limit flood risk

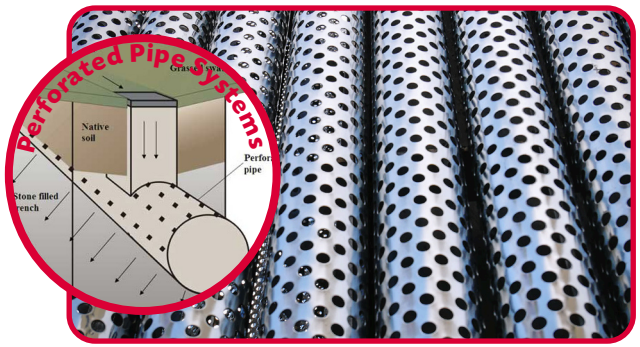


As part of the Municipal Planning Strategy Review, the Town has developed a Stormwater Management Guide. This plan addresses updated constraints mapping, development regulations, and management of flood risk for development within the flood plain.

Storm Drainage Network Enhancements



Flooding due to large rainfall events occurs as a result of overland flow and storm sewer backup. Storm sewer backup occurs when there is insufficient capacity within the drainage network to convey flow downstream to the Minas Basin. As our communities expand and develop, less water has the opportunity to infiltrate, causing runoff to increase. Best management practices can be implemented to increase infiltration, which in turn reduces the amount of runoff from large rainfall events. These practices include:



The Town can construct pond systems to hold stormwater during large rainfall events and reduce downstream flooding.

Storm Drainage Network Upgrades

The subsurface pipe network can be upgraded in areas where there is insufficient capacity.

Town and Residents: Partners in Flood Protection

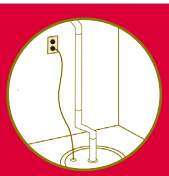
The actions taken by the Town of Wolfville in combination with actions taken by residents will be vital to protect homes from flood risk. Homeowners can undertake practical and cost effective flood protection measures to mitigate flood risk to their properties and protect valuables and assets. Flood Protection Measures by priority and cost include:

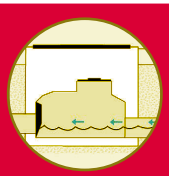
1 Maintain $0


Remove debris from nearest storm drainor ditch & culvert

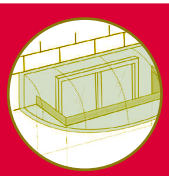

Clean out eaves troughs

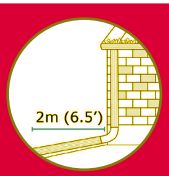

Check for leaks in plumbing, fixtures and appliances


Test your sump pump


Clean out your backwater valve

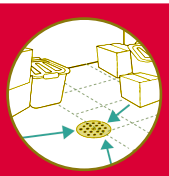
2 Simple Upgrades <$250


Install window well covers (where fire escape requirements permit)



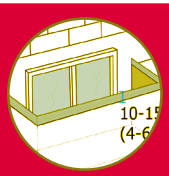
Extend downspouts and sump discharge pipes at least 2m from foundation

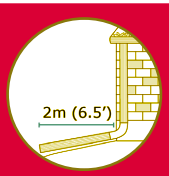
Store valuables and hazardous materials in watertight containers & secure fuel tanks


Remove obstructions to floor drain

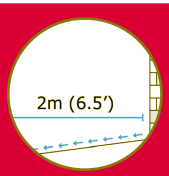

Install and maintain flood alarms

3 Complex Upgrades >$250

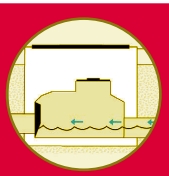

Install window well covers (where fire escape requirements permit)

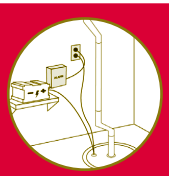


Disconnect downspouts, cap foundation drains and extend downspouts to direct water at least 2m from foundation



Correct grading to direct water at least 2m away from foundation

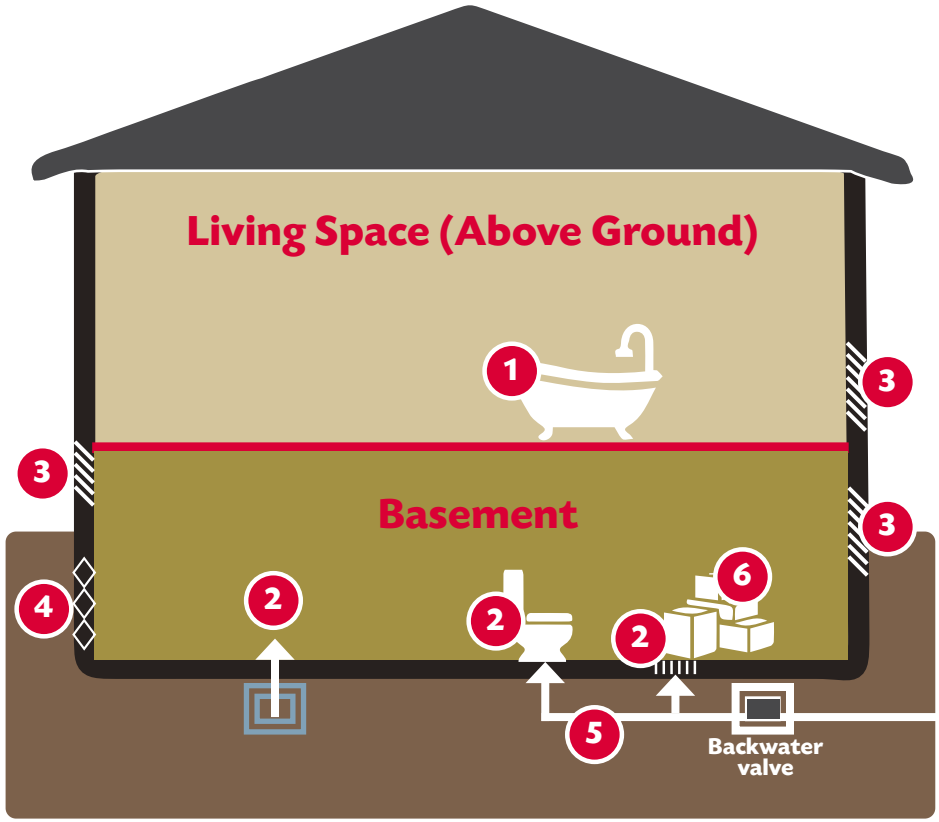

Install backwater valve


Install backupsump pump and battery

Additional Resources

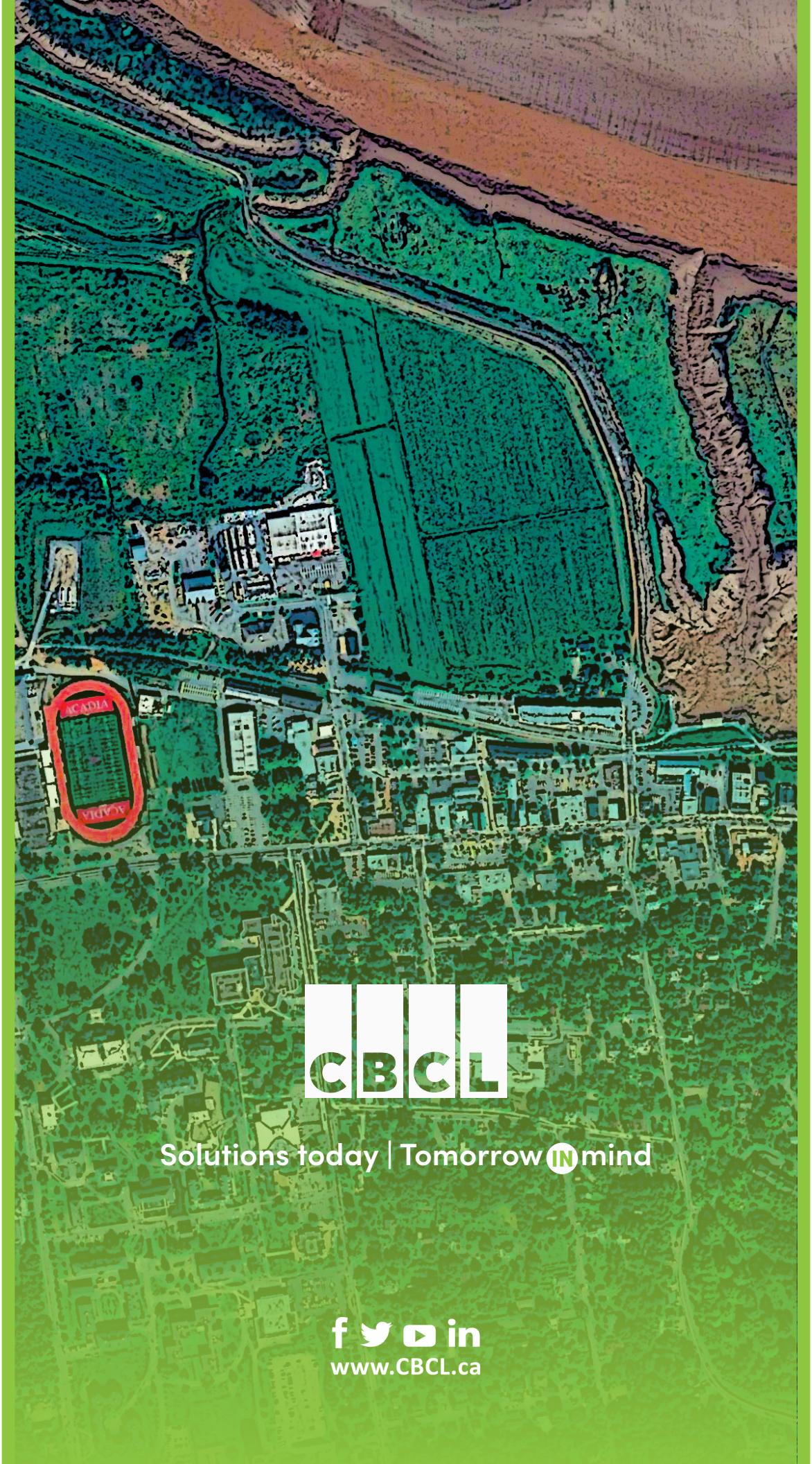
Review Flood Maps to determine if you're at risk of flooding. Refer to the Home Flood Protection Toolkit by the Impact Centre for Climate change for checklists, step-by-step guides, insurance claim information and more. (https://www.intactcentreclimateadaptation.ca/programs/home_flood_protect/resources/) In Nova Scotia under the Homeowner Residential Rehabilitation Assistance Program (RRAP) forgivable loans up to $18,000 can be forgiven over a maximum of five years to assist eligible homeowners who own and occupy homes that do not meet the minimum health and safety levels. For Details contact Housing Nova Scotia at 844-424-5110

Sources of water damage and home flood risks



1	Rupture of plumbing pipes and fixtures
2	Sewer back-up through sump-pit or backup from the closed backwater valve
3	Overland water through cracks or openings around doors, windows or the above ground foundation
4	Groundwater infiltration through seepage and cracks in the foundation
5	Rupture of sewer lines
6	Poor maintenance and housekeeping

Reference: University of Waterloo. (2020). Home Flood Protection Program. Retrieved from Intact Centre on Climate Adaptation: https://www.intactcentreclimateadaptation.ca/programs/home_flood_protect/



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REQUEST FOR DECISION 016-2021

Title: Development Agreement Discharges – Whispering Creek and Pompano Estates

Date: 2021-03-09

Department: Planning and Development

SUMMARY

Development Agreement Discharges

During the course of the Municipal Planning Strategy Review (2015-2020), a number of areas of Town with existing Development Agreements in place were identified as being mostly or completely built out and it was recommended that these areas be zoned to encompass the intent of the new planning documents and subsequently discharge the Development Agreements. These areas are now zoned in the new Land Use Bylaw. This report covers two of these areas – Whispering Creek (Carriageway and Stoneybrook Court and a portion of Olsen Drive) and Pompano Estates (Chambers Close, Bigelow Street and a portion of Whidden Ave). These are shown with the new zoning below.

FIGURE 1: Excerpts from new Land Use By-law Zoning Map showing relevant DA areas: LEFT 'Whispering Creek' (Carriageway and Stoneybrook Court and a portion of Olsen Drive) and RIGHT 'Pompano Estates' (Chambers Close, Bigelow Street and a portion of Whidden Ave).

(NOTE: Link to full zoning map provided in this report)

Staff continue to work on other Development Agreement Discharges and will be bringing others forward as they are prepared and reviewed with the Town Solicitor.

DRAFT MOTION:

That Council approve the discharge of the following Development Agreements including subsequent amendments:

- DA-02-04 Whispering Creek Village - AAC Developments Inc. or mixed density development.
- DA-02-06 Pompano Estates – MIR I Developments Inc. for a mixed density development.

1) CAO COMMENTS

The CAO supports the recommendation of Staff.

2) LEGISLATIVE AUTHORITY

The Municipal Planning Strategy grants Council the authority to enter into development agreements. The Municipal Government Act guides Council when discharging a development agreement. It states:

Discharge of development agreement

229 (1) A development agreement is in effect until discharged by the council.

(2) A council may discharge a development agreement, in whole or in part, in accordance with the terms of the agreement or with the concurrence of the property owner.

(3) After a development agreement is discharged, the land is subject to the land-use by-law. 1998, c. 18, s. 229

3) STAFF RECOMMENDATION

Staff recommend that the DA-02-04 Whispering Creek Village and DA-02-06 Pompano Estates be discharged.

4) REFERENCES AND ATTACHMENTS

1. Discharge Agreements (attached)

5) DISCUSSION

The previous Municipal Planning Strategy (MPS) designated areas of Town that required a Development Agreement (DA) to be developed. These areas were zoned Residential Comprehensive Development Districts (RCDD) in the Land Use Bylaw (LUB). As part of the recent Municipal Planning Strategy review the RCDD areas that have DAs in place were examined and any that were mostly or completely built-out

were identified and Staff recommended that zoning these properties and discharging the development agreements would bring these areas more in line with Council's goals and objectives - as outlined in the new MPS.

The new Planning documents were approved in June 2020 (in effect September 2020) with the acknowledgment from Council that the discharges of existing DAs would be forthcoming.

This RFD covers two areas - Whispering Creek (Carriageway and Stoneybrook Court and a portion of Olsen Drive) and Pompano Estates (Chambers Close, Bigelow Street and a portion of Whidden Ave).

DA-02-04 - Whispering Creek Village was approved in December 2002 for a mixed density development in the Whispering Creek subdivision – Carriageway and Stoneybrook Court and a portion Olsen Drive. The development included single detached, semi-detached and townhouse dwellings. R-2 zoning has been applied to Carriageway Court and the upper portion of Olsen Drive and R-3 zoning has been applied to Stoneybrook Court where the developer proposes to put townhouses.

The development conditions as laid out in the DA are similar to that of R-2 zoning with the exception of an allowance for 60% hard surface coverage (50% in LUB) and a 6m front yard setback (4.5m in LUB).

The building design conditions require that building heights shall be similar with a maximum of one story and an allowance for a second storey on other sides as a result of a walk out basement level/grade change; roof pitches between 4/12 and 7/12; cladding to be horizontal and comprised of clapboard, vinyl, or something similar no greater than five inches to the weather; trim to be identical style and size to those of existing buildings; and garages shall be flush or recessed from the main wall of the building. Staff are of the opinion that these design requirements are either already covered in the LUB as is the case with the requirement for recessed garages or are no longer consistent with design standards for areas outside our design control areas in the LUB.

One clause still outstanding is the requirement for street trees. Clause 4.6.1 of the DA requires that street trees be installed to certain specifications. While all of the developed lots have been landscaped, except for those currently under construction (3 lots), not all of the property owners have installed the required street trees (see map below) and this part of the DA had not been enforced in the past (~20 years since adoption).

Staff have been in contact with the Developer and he will be contacting the property owners that have yet to install a tree and has agreed to add a requirement to lots not sold (covenant) that requires trees to be planted. Having said that, the Town has no jurisdiction over covenants that the Developer puts in place, so any enforcement of this would be up to the Developer. Staff feel comfortable with the level of landscaping that is being carried out and feel with such old agreements, enforcement action at this point is difficult.

As an alternative to discharging the entire agreement, Council could consider a partial discharge where the requirement for street trees remains in effect and the other development aspects of the agreement would then be subject to the requirements of the zone as laid out in the Land Use Bylaw. Administratively, a partial discharge is not ideal.

(As a relevant side note to this file: the learning here should be that for future development – if street trees are deemed to be something that is desirable, then they should be planted in the right-of-way by the developer, a warranted attached and maintained in the Town-owned right of way).

Whispering Creek – existing conditions (aerial):

DA-02-06 - Pompano Estates was approved in October of 2002 for a mixed density development on Chambers Close, Bigelow Steet and a portion of Whidden Ave. The development included single detached, semi-detached and multi-unit apartment buildings. The single and semi-detached lots have been zoned R-2 and multi-unit lots have been zoned R-4 which is consistent with the DA. This development has been mostly built out with the exception of three lots on Whidden Avenue.

The lot standards for the single and semi-detached lots are similar to the R-2 zone standards with the exception of 6m front and flankage yard setback (4.5 and 4m in the LUB) and 33.3% lot coverage (40% in LUB).

The requirements for the apartment buildings have been met.

As with the Whispering Creek DA, there is a clause for street trees; however in this case, the developer has supplied the Town with a deposit for the planting of the street trees on the remaining lots, therefore the requirements of the DA have been met.

Pompano Estates – existing conditions (Aerial):

Staff Recommendation

Staff are of the opinion that the requirements of these DAs have been met or are similar to the lot standards for the zone and discharging the DAs and having the lands subject to the LUB would complement existing neighbourhoods.

Section 229 of the MGA says that *"A council may discharge a development agreement, in whole or in part, in accordance with the terms of the agreement or with the concurrence of the property owner."*

Clause 7.1 of each of these development agreements states:

7.1 Portions of the development agreement or the development agreement in its entirety may be discharged by the Town.

Staff are recommending the full discharge of the Development Agreements.

6) FINANCIAL IMPLICATIONS

There will be a cost of approximately $500.00 to cover legal fees to complete the registration of the discharge documents in the Land Registry.

7) REFERENCES TO COUNCIL STRATEGIC PLAN AND TOWN REPORTS

The Town's new planning documents can be found here.

- Municipal Planning Strategy
- Land Use By-law
- Zoning Map

8) COMMUNICATION REQUIREMENTS

This is housekeeping following the adoption of our new planning documents. Communication and engagement during the planning document review has been carried out and was extensive.

9) ALTERNATIVES

- That Council not approve the discharges and the Development Agreements remain in place.

- That Council partially discharge one or both of the Development Agreements, removing certain clauses from the agreement leaving the remainder of the agreement in effect, as follows:

  That Council approve the discharge of Development Agreement DA-02-06 Pompano Estates – MIR 1 Developments Inc. for a mixed density development including any subsequent amendments; and

  That Council approve the partial discharge of Development agreement DA-02-04 Whispering Creek Village – AAC Developments Inc. deleting clause *4. Development Details*, including sub-clauses, except sub-clause *4.6 Street Trees and other Landscaping*, which will remain in effect.

THIS PARTIAL DISCHARGE OF DEVELOPMENT AGREEMENT is made this __ day of _____, 2021

WHEREAS:

A. The Town of Wolfville (the "Town") entered into a Development Agreement with AAC Development Incorporated dated January 23, 2003, which was registered at the Kings County Registry of Deeds on February 3, 2003 at Book 1363, Pages 840-856, document 662, and on other dates and other book and page numbers and/or document numbers (the "Development Agreement");

B. The Development Agreement was subsequently amended, which amendment was registered at the Kings County Registry of Deeds on September 5, 2007 as document #88747788 and on other dates and other book and page numbers and/or document numbers;

C. Pursuant to section 229 of the *Municipal Government Act* and Section 7.1 of the Development Agreement, the Town may discharge all or portions of the Development Agreement;

D. Town Council passed a resolution discharging portions of the Development Agreement at a meeting held on the XXth day of XXXX, 2021.

NOW THEREFORE:

1. The Town of Wolfville hereby discharges the following portions of the Development Agreement:

    a. Sections 4.1 through 4.5 inclusive, including sub-clauses;

    b. Sections 4.7 through 4.9 inclusive, including sub-clauses.

BEFORE WITNESSES the party to this Partial Discharge has executed it on the date set out above.

SIGNED, SEALED AND DELIVERED In the presence of:	))
	) TOWN OF WOLFVILLE
	))
	)By _____
_____	) Mayor
Witness	)
	))
	)By _____
	) Town Clerk

CANADA
PROVINCE OF NOVA SCOTIA
COUNTY OF KINGS

I certify that on _____,2021, _____ a witness to this discharge came before me, made oath, and swore that the TOWN OF WOLFVILLE caused the same to be executed by its proper officers who affixed its Corporate Seal and subscribed their hands in its name and in its behalf in his/her presence.

_____
A Commissioner of the Supreme Court of Nova Scotia

THIS DISCHARGE OF DEVELOPMENT AGREEMENT is made this __ day of _____, 2021

WHEREAS:

A. The Town of Wolfville (the "Town") entered into a Development Agreement with AAC Development Incorporated dated January 23, 2003, which was registered at the Kings County Registry of Deeds on February 3, 2003 at Book 1363, Pages 840-856 and on other dates and other book and page numbers and/or document numbers (the "Development Agreement");

B. The Development Agreement was subsequently amended, which amendment was registered at the Kings County Registry of Deeds on September 5, 2007 as document #88747788 and on other dates and other book and page numbers and/or document numbers (the "Amendment");

C. Pursuant to section 229 of the *Municipal Government Act* and Section 7.1 of the Development Agreement, the Town may discharge the Development Agreement;

D. Town Council passed a resolution discharging the Development Agreement, including the Amendment, at a meeting held on the XXth day of XXXX, 2021.

NOW THEREFORE:

1. The Town of Wolfville hereby discharges the Development Agreement, including the Amendment.

BEFORE WITNESSES the party to this Discharge has executed it on the date set out above.

SIGNED, SEALED AND DELIVERED In the presence of:	))) TOWN OF WOLFVILLE)))By _____) Mayor)))By _____) Town Clerk
_____ Witness	

CANADA
PROVINCE OF NOVA SCOTIA
COUNTY OF KINGS

I certify that on _____,2021, _____ a witness to this discharge came before me, made oath, and swore that the TOWN OF WOLFVILLE caused the same to be executed by its proper officers who affixed its Corporate Seal and subscribed their hands in its name and in its behalf in his/her presence.

_____
A Commissioner of the Supreme Court of Nova Scotia

THIS DISCHARGE OF DEVELOPMENT AGREEMENT is made this __ day of _____, 2021

WHEREAS:

A. The Town of Wolfville (the "Town") entered into a Development Agreement with M.I.R. 1 Developments Inc. and 3079714 Nova Scotia Limited dated July 23, 2003, which was registered at the Kings County Registry of Deeds on August 25, 2003 at Book 1397, Pages 1-19 and on other dates and other book and page numbers and/or document numbers (the "Development Agreement");

B. The Development Agreement was subsequently amended, which amendment was registered at the Kings County Registry of Deeds on January 18, 2005 as document #81225303 and on other dates and other book and page numbers and/or document numbers (the "Amendment");

C. Pursuant to section 229 of the *Municipal Government Act* and Section 7.1 of the Development Agreement, the Town may discharge the Development Agreement;

D. Town Council passed a resolution discharging the Development Agreement, including the Amendment, at a meeting held on the XXth day of XXXX, 2021.

NOW THEREFORE:

1. The Town of Wolfville hereby discharges the Development Agreement, including the Amendment.

BEFORE WITNESSES the party to this Discharge has executed it on the date set out above.

SIGNED, SEALED AND DELIVERED In the presence of:	))) TOWN OF WOLFVILLE))
_____ Witness	)By _____) Mayor)))By _____) Town Clerk

CANADA
PROVINCE OF NOVA SCOTIA
COUNTY OF KINGS

I certify that on _____,2021, _____ a witness to this discharge came before me, made oath, and swore that the TOWN OF WOLFVILLE caused the same to be executed by its proper officers who affixed its Corporate Seal and subscribed their hands in its name and in its behalf in his/her presence.

_____
A Commissioner of the Supreme Court of Nova Scotia

SUMMARY

Town of Wolfville Acadia Scholar-Bursary Amendments

Staff are proposing changes to the existing Town of Wolfville Acadia Scholar-Bursary program to both 1) improve utilization of the budgeted amounts annually and 2) to align the awards to further the goals and objectives of Council's recently adopted Strategic Plan.

DRAFT MOTION:

That Council approve the proposed changes to the Town of Wolfville Acadia Scholar-Bursary Program.

1) CAO COMMENTS

See staff recommendation below.

2) LEGISLATIVE AUTHORITY

The Scholar-Bursaries are enabled through the Town's annual operating budget.

3) STAFF RECOMMENDATION

Staff recommend the changes noted in the Discussion section below. Staff feel that these changes will allow more students to be supported by the bursaries. The changes will specifically support a local student with financial need; a Nova Scotian student that self-identifies as someone who has barriers and represents the mandate of equity, diversity and inclusion; and a Nova Scotian student that self-identifies as a member of the LGBTQ2+ community.

4) REFERENCES AND ATTACHMENTS

N/A.

5) DISCUSSION

Current Situation

The Town of Wolfville Scholar-Bursaries (two at $5,000 each) are currently awarded annually to two students who are now, and have been, a resident of the Town of Wolfville for at least three years and who are entering the first year of a four year degree program at Acadia University. The award is provided by the Town of Wolfville to address the wishes of its citizens that outstanding local candidates for university have every opportunity and encouragement to "stay at home" and attend university.

The eligible students must possess an outstanding academic record at the Grade 12 level (must have an average of at least 80% on university allowable grade 12 courses), show evidence of community service during high school years and/or examples of leadership initiatives that have positively affected the quality of life of others. The students must also possess a demonstrated need for financial assistance. The scholar-bursaries may be renewed for up to four years.

In past years there has been some success in awarding the scholar-bursaries, but there are some years where they go unawarded as students from the Town that meet the criteria of both academic achievement and financial need do not apply. Specifically:

- For the last 4 years we have had one student each year (same student last 3 years);

- From 2013/14 to 2016/17 there was only one year with a student;
- We changed the criteria in 2015 due to lack of students meeting the criteria (85% academic average requirement was lowered to 80%);
- Two students were awarded in 2011/12

Additionally, the awards currently do not target students that self-identify as having barriers or that meet the mandate of equity, diversity and inclusion. Social Equity is a key Strategic Direction in this Council's recently adopted Strategic Plan.

As well as the two scholar-bursaries, the Town also allocates $500 annually to the Bob Stead Award. This has not yet been awarded as it was anticipated that the Town amount would be matched with another $500 from an external donor to support the award, which has not materialized.

Proposed Changes

After discussions with the team at Acadia Advancement, the following is recommended for the Town's Bursary program. Please note that the two $5,000 awards will both be bursaries (eliminating the scholar requirement).

PROPOSED REVISED (x1 @ $5,000 renewable)
The Town of Wolfville Bursary is awarded annually to a student who is now and has been a resident of the Town of Wolfville for at least three years and who is entering the first year of a four-year degree program at Acadia University. The eligible student shows evidence of community service during high school years and/or extracurricular initiatives that have positively affected the quality of life of others. The student must also demonstrate financial need. The bursary may be renewed for up to four years. The award is provided by the Town of Wolfville to address the wishes of its citizens to encourage excellent local students to "stay at home" and attend university.

PROPOSED REVISED (x1 @ $5,000 renewable)
The Town of Wolfville EDI Bursary is awarded annually to a student who is from Nova Scotia and who is entering the first year of a four-year degree program at Acadia University. The eligible student self-identifies as someone who has barriers, and represents the mandate of equity, diversity and inclusion. The student must also possess a demonstrated need for financial assistance. The bursary may be renewed for up to four years. The award is provided by the Town of Wolfville to celebrate diversity and encourage Nova Scotia students of all backgrounds to "stay at home" and attend university.

PROPOSED NEW (x1 @ $1,000)
The Bob Stead Award is awarded annually to a student who is from Nova Scotia and who is entering the first year of a four-year degree program at Acadia University and who self-identifies as a member of the

LGBTQ2+ community. The award is provided by the Town of Wolfville in memory of Bob Stead to celebrate diversity and encourage Nova Scotia students to "stay at home" and attend university.

Robert “Bob” Stead ('63) was Acadia's Registrar and later Mayor of the Town of Wolfville. Over his 27-year career with Acadia, Bob became the face of the Admissions Office, epitomizing the ‘personal touch’ that is an Acadia trademark. He was exceptionally well-liked and well-respected by colleagues and students alike. Prior to his retirement from Acadia, Bob was elected to Wolfville’s Town Council, a foray into municipal governance that would ultimately become his second career and would last for 24 years. He was elected Mayor in 1997, a position he held until October of 2012.

6) FINANCIAL IMPLICATIONS

The Town currently supports $10,500 annually in Scholar-Bursary and Award support. With these changes the Town will now support $11,000 annually, as the Town will provide the full $1,000 towards the Bob Stead Award.

With respect to the two $5,000 renewable awards, we have maintained $10,000 in the annual budget just in case students are awarded the program. This equates to two students at $5,000 per academic year. Unless there is some sort of limit put on # of students (not an issue for well over a decade) there is potential for the Town’s $ commitment to reach $40 K a year if two new students are awarded the bursaries annually. As we get a sense of uptake based on the proposed criteria, this will have to be monitored.

7) REFERENCES TO COUNCIL STRATEGIC PLAN AND TOWN REPORTS

The proposed amendments support the Council Goal of Social Equity.

8) COMMUNICATION REQUIREMENTS

The decision of Council will be communicated to Acadia Advancement.

9) ALTERNATIVES

Council can choose not to support the proposed amendments, or can alter them.

Nova Scotia Firefighters Benevolent Fund
16B King Street
Box 1147
Lunenburg
Nova Scotia
B0J 2C0
www.nsfbf.com

Mayor Wendy Donovan
Town of Wolfville
359 Main Street
Wolfville N.S. B4P 1A1

17 February 2021

Dear Mayor Donovan,

Please allow me to introduce the Nova Scotia Firefighters Benevolent fund.

The Nova Scotia Firefighters Benevolent Fund (NSFBF) was formed by a group of well-established and like-minded Lunenburg County firefighters who have witnessed many fellow firefighters suffer from serious illnesses and debilitating firefighting related injuries.

The NSFBF founding members, who come from all walks of life with diverse backgrounds, have joined together to establish a common mission:

"To provide financial assistance to firefighters and their families during times of acute crisis."

Our purpose was to establish a fund that will provide financial resources and practical assistance to support any firefighter in Nova Scotia. All firefighters – career, paid-on-call, volunteer, provincial, federal, indigenous – are eligible. As far as we are concerned a firefighter is a firefighter, we are all family.

Despite various successful government initiatives, such as the NS Line-Of-Duty Death Benefit and the presumptive cancer benefits provided to firefighters through our health-care system, most firefighters are left without a safety net should they get injured in the line of duty or suffer a personal or family health crisis. Many firefighters do not have the required health insurance, the financial means to accommodate additional expenses such as weekly travel to a specialist for treatment or hotel stays.

This gap is where the NSFBF aims to provide support to firefighters who are going through difficult times. Funds provided will immediately help to cover many of the firefighters' out-of-pocket expenses, such as fuel, food, or

accommodation when they must travel great distances for appointments with health-care providers which are not provided by government initiatives.

All firefighters receive this funding anonymously and at the request of their Department Chief through an application process We are a registered Nova Scotia Charity with the Registrar of Joint Stocks and have obtained our CRA approval.

Needless to say, financial assistance is the basis of any worthwhile support team. We aim to raise a significant amount of money this year to help provide the much-needed support for firefighters and their families that is currently missing. We would ask that you think of this organization during your budget deliberations this year. As a charitable organization, we would ensure media releases and Social media marketing are used to its fullest potential to promote your generous donation. If an application is required to be considered for a grant, please contact myself.

In the meantime, please feel free to look at our website (www.nsfbf.com), or through our Facebook account or contact me directly at 902-541-9008 for more information.

Sincerely,

M D Walton

Martin Walton
President
Nova Scotia Firefighters Benevolent Fund
martin.walton@nsfbf.com

Amanda Brown

Subject: FW: Response to Saltwire 5G article & Fwd: Presentation to Kings County councillors
Attachments: C4ST-Factchecks-GoC-websites final.doc; Engaging MP about 5G_APPENDICES_FINAL.doc; Engaging MPs about 5G_FINAL.doc; Fact-Checker_Appendices final.doc; KingsCo-March8-2021-article-follow-up2.pdf

From: Andrea SW
Sent: March 8, 2021 10:01 PM
To: Janny Postema; councillors@countyofkings.ca
Cc: Glen Pavelich frank; Town Council <towncouncil@wolfville.ca>
Subject: Response to Saltwire 5G article & Fwd: Presentation to Kings County councillors

Dear Janny, Mayor Muttart, and King's County Councillors (and please forward to Chad West, your IT manager):

In response to the recent article in SaltWire entitled "Exploring 5G – County of Kings examines next generation wireless after call for moratorium."

It was good to see a big article on 5G in the SaltWire (March 3 issue) but it was rather frustrating that the Kings County IT Manager, Chad West, didn't follow up on any of the many, many sources we provided during our presentation to council on January 19th. Therefore, the misinformation about the harmlessness of non-ionizing radiation was once again perpetuated in the mainstream media.

On February 3rd we sent you Canadians for Safe Technology (C4ST) fact-check document regarding some of the very statements cited by West, showing them to be inaccurate and misleading, to the point of being "misinformation."

Nonetheless, we are glad to hear that Kings County Council intends to continue educating itself on this vital matter.

To assist you with that, Frank Clegg, who responded to the recent article suggests that council set up a Zoom consultation with him. As you can see from the message below, he has also appended the various Fact Checking documents for Canada's outdated and insufficient "Safety Code 6" guidelines.

For your convenience and records we are also attaching a copy of our response and Frank Clegg's to this email.

Other Recent Resources FYI:

- Maclean's article: Threats to security, health, public infrastructure—and other potential costs of Canada's 5G rollout. https://www.macleans.ca/opinion/threats-to-security-health-public-infrastructure-and-other-potential-costs-of-canadas-5g-rollout/%22%20%5Ct%20%22_blank) -by David Zarnett.
- Open letter to Elon Musk: https://stop5ginternational.org/open-letter-to-elon-musk-spacex/
- Open letter on 5g: https://ehtrust.org/dr-devra-davis-and-environmental-health-trust-open-letter-on-5g/
- The 5G communication system - Expect skin and general health problems by Hugo Schooneveld: https://tinyurl.com/yxf4pseq
- Blog post by Dariusz Leszczynski, PhD, DSc: https://betweenrockandhardplace.wordpress.com/2021/02/21/censorship-in-plain-sight-by-the-mainstream-news-media/

March 20th is a Global Day of protest on these critical health issues.

We'll be handing out information at Clock Park in Wolfville at noon on that day. Please join us.
https://valleyevents.ca/78352

Yours sincerely,

Andrea and Glenda

p.s. As an additional point of interest, we've learned of a local entrepreneur interested in making an educational video on 5G. Let us know if you'd like the contact info.

---------- Forwarded message ---------
From: <frank@c4st.org>
Date: Wed, Mar 3, 2021 at 9:35 PM
Subject: Presentation to Kings County councillors
To: <glenpavelich@gmail.com>, <andrea.schwenke.wyile@gmail.com>
Cc: C4ST - Wendy C <wendyc@c4st.org>

Glenda and Andrea,

Congratulations on your presentation to the County of Kings council and subsequent article.

https://www.saltwire.com/news/provincial/exploring-5g-county-of-kings-examines-next-generation-wireless-after-call-for-moratorium-559030/

The comments made by West reported in the article are very old and most can be refuted by our document *C4ST Fact-checks Government of Canada Webpages Regarding Health Risks and Wireless Technologies, including 5G.*

https://www.appel5gappeal.ca/eng/fact-checker.php

I have attached the word version of this document, so you can cut and paste as well as another document recently created *Engaging MP's about 5G.*

My apologies if you are already familiar with these documents.

It is encouraging to see the Mayor state the next step is for council in addressing 5G technology is to continue its education on the file. If you think we can help in that process (perhaps a zoom call into council), please let us know. thx...f

Frank Clegg
CEO

Canadians For Safe Technology

Keep your family safe from wireless radiation – See how at www.C4ST.org

http://www.facebook.com/c4st.org

C4ST Fact-checks Government of Canada Webpages Regarding Health Risks and Wireless Technologies, including 5G

(January 2021)

BACKGROUND:

Currently, the Government of Canada (GoC) provides assurances on its webpages that exposures to radiofrequency (RF) energy (=radiation) from 5G technologies and from everyday wireless devices such as cell phones and cell tower antennas are safe.

Canadians for Safe Technology (C4ST) has fact-checked some of these statements and found them to be inaccurate and misleading to the point of being "*misinformation.*"

Full rollout of 5G technologies will greatly increase exposure to RF radiation, because many more cellular antennas are required for the vast number of new devices. 5G technologies introduce new frequencies (millimetre waves) not previously widely used for wireless communications, as well as frequencies common to pre-5G technologies (2G, 3G, 4G and LTE).

Users and bystanders are exposed to RF radiation from antennas built into devices such as: cell phones, tablets, and laptops; wireless printers; smart wearables; wireless earpieces, headphones, and goggles; smart appliances; and many other wireless-enabled objects. **Whether or not they are using a wireless device, everyone is exposed to RF radiation.** Wireless "*coverage*," "*signals*" or "*connections*" are RF radiation emissions from antennas attached to cell towers, buildings, utility poles; Wi-Fi access points; and security system equipment.

The GoC relies on Health Canada's Safety Code 6 (2015)[1,2] with the stated goal to ensure that RF radiation exposure limits will keep Canadians safe. Innovation, Science and Economic Development (ISED)[3] has adopted Safety Code 6 guidelines, for compliance requirements for RF emitting wireless devices and equipment. No guideline or regulation addresses environmental effects on other mammals, birds, insects, vegetation and natural processes.

C4ST responds to the GoC website statements and provides scientific evidence that Safety Code 6 (2015) is not protective of the health of Canadians, and that a moratorium on 5G is essential to prevent additional widespread risks to our health.

C4ST and many Canadian groups launched an **"Urgent Appeal to the Government of Canada to Suspend 5G Rollout"** which we are asking all Canadians to sign.

For more information see: **"Engaging your Member of Parliament (MP) about 5G."**[4]

STATEMENTS ARE FROM THE FOLLOWING GOVERNMENT OF CANADA (GoC) WEBSITES:

1. HEALTH CANADA

1) Cell phones, cell phone towers and other antenna installations

https://www.canada.ca/en/health-canada/services/health-risks-safety/radiation/everyday-things-emit-radiation/cell-phones-towers.html

2) Fact Sheet – What is Safety Code 6?

https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/radiation/fact-sheet-what-safety-code-6.html

2. INNOVATION, SCIENCE AND ECONOMIC DEVELOPMENT (ISED) – previously INDUSTRY CANADA (IC)

Radiofrequency Energy and Safety

https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11467.html

C4ST RESPONSES TO SOME OF THE INACCURATE AND MISLEADING GoC WEBSITE STATEMENTS ARE ORGANIZED AS FOLLOWS:

Canadians for Safe Technology (C4ST) respectfully disagrees with the following statements on Government of Canada (GoC) webpages, and we offer clarifications and corrections based on expert knowledge and peer-reviewed science.

Reading Tip: To move easily between the main text of the C4ST responses and the "References and Endnotes" at the end of the document, merely double-click on the small superscript numbers.

1. HEALTH, 5G TECHNOLOGIES AND SAFETY CODE 6

Questionable Health Canada and ISED Website Statements

#01. *Safety Code 6 protects "those using 5G technologies."*

#02. *Safety Code 6 protects everyone exposed to radiofrequency EMF [electromagnetic fields].*[5]

C4ST Response

C4ST Response to GoC Statements #01 and #02:

These statements are inaccurate and misleading, for two reasons:

1) **No long-term human or environmental safety testing of 5G technologies has been reported.**

   Health Canada is turning a blind eye to the science and deaf ear to the warnings of scientists, medical doctors and other experts that 5G technologies have not been tested for harmful biological effects.[6,7] C4ST's position is that 5G rollout should be halted until scientists who are independent of industry influence demonstrate that 5G technologies are safe for Canadians.[8,9]

   5G will use millimetre frequencies, in addition to many of the same frequencies already in use (2G, 3G,4G and LTE). The science on the effects of exposure to millimetre frequencies on biological systems is sparse. Most studies have looked at only one frequency in the millimetre range and not the complex RF mixtures that 5G technologies will emit.

   Two recent literature reviews published in peer-reviewed journals analyzing the scientific evidence on the biological effects of 5G frequencies both concluded that there is not enough known about these 5G millimetre frequencies to assure safety.

   - The review by Dr. Myrtill Simkó and Dr. Mats-Olof Mattson (2019) from Sweden identified 94 relevant studies, with 80% of the *in vivo* studies and 58% of the *in vitro* studies showing biological effects. They concluded, *"The available studies do not provide adequate and sufficient information for a meaningful safety assessment."*[10]
   - The review by Finnish researcher Dr. Darius Leszczynski (2020) on skin and skin cells concluded, "*the scientific evidence concerning possible effects of millimeter-waves on humans is insufficient to devise science-based exposure limits and to develop science-based human health policies."*[11]

Furthermore, considering that many 5G technologies are still in development, Health Canada cannot possibly assure safety for biological effects of these complex technologies. Health Canada's basis for its statement on safety is based only on temperature simulations.

2) **Safety Code 6 (2015) is outdated. It does not protect the health of Canadians from RF radiation emitted by pre-5G technologies (cell phones, cell tower antennas, Wi-Fi, etc.).**

These points are elaborated on in the Sections below.

2. HEALTH RISKS

Questionable Health Canada or ISED Website Statements

#03. *Based on the available scientific evidence, there are no health risks from exposures to the low levels of radiofrequency EMF [electromagnetic fields] emitted by cell phones and antenna installations.*

C4ST Response

C4ST Response to GoC Statement #03:

This is an inaccurate statement. There is indisputable evidence that there are serious health risks from exposure to radiofrequency EMF (RF radiation) at and below the maximum exposure limits in Safety Code 6 (2015). C4ST responds to this and related statements under the following headings: cancer, sperm and DNA damage, children and cell phones.

2.1 HEALTH RISKS - CANCER

Questionable Health Canada or ISED Website Statements

#04. *The scientific evidence does not support a link between exposure to radiofrequency EMF and cancer at the levels permitted by Canadian exposure guidelines.*

#05. *In 2011, the International Agency for Research on Cancer (IARC), which is part of the World Health Organization, classified radiofrequency electromagnetic fields as possibly carcinogenic to humans (Group 2B), based on an increased risk for glioma, a malignant type of brain cancer, associated with wireless phone use. However, the vast majority of research to date does not support a link between RF energy exposure and cancers in humans.*

#06. *While there have been some studies reporting an increase in incidence of brain cancer among long-term, heavy cell phone users, other studies conducted in many countries around the world, including studies assessing brain cancer trends among large populations, do not find changes in brain cancer incidence. This is despite widespread use of cell phones over the past 25 years.*

#07. *The Safety Code 6 limits for human exposure to RF energy are designed to provide protection for all age groups, including children, on a continuous (24 hours a day/seven days a week) basis.*

C4ST Response

C4ST Response to GoC Statements #04 and #05:

These are inaccurate and misleading statements. Experts maintain that a "*known human carcinogen*" classification is the appropriate classification. This is the same category as asbestos and cigarette smoke. Below are two high-quality published papers supporting our statement. For more studies, see: *http://c4st.org/wp-content/uploads/2020/05/Supplemental-Material-for-Suspend-5G-Canada-Appeal.pdf*

1) The publication "**Cancer epidemiology update, following the 2011 IARC evaluation of radiofrequency electromagnetic fields (Monograph 102)"**[12] states, *"When considered with recent animal experimental evidence, the recent epidemiological studies strengthen and support the conclusion that RFR [RF Radiation] should be categorized as carcinogenic to humans (IARC Group 1)*." Dr. Anthony Miller, lead author on this paper, a Canadian MD epidemiologist, has been awarded the Medal of Honour by the World Health Organization's International Agency for Research on Cancer (IARC) and in 2019 was named a Member of the Order of Canada.

2) In "**Comments on the US National Toxicology Program Technical Reports on Toxicology and Carcinogenesis Study in Rats Exposed to Whole-Body Radiofrequency Radiation at 900 MHz and in Mice Exposed to Whole-Body Radiofrequency Radiation at 1,900 MHz**," the authors conclude, *"Based on the Preamble to the IARC Monographs, RF radiation should be classified as carcinogenic to humans, Group 1."*[13] The research published by lead author Dr. Lennart Hardell and his team provided key evidence for IARC's decision in 2011 to designate RF radiation as a Class 2B, "*possible"* human carcinogen.[14]

Radiofrequency radiation is slated to be re-evaluated by IARC. A recent IARC report (pages 148-149)[15] summarizes more recent evidence, and states that the science is ready for evaluation and is a "*high priority.*"

C4ST Response to GoC Statements #05 and #06:

These are misleading and inaccurate statements. Many studies and reports show increased brain cancer. C4ST is not suggesting that *all* increases are *only* caused by exposure to RF radiation; however, it must be considered as a substantial contributor, not dismissed:

1) The incidence of neuro-epithelial brain cancers has significantly increased in all children, adolescent, and young adult age groups from birth to 24 years in the United States.[16,17]
2) A sustained and statistically significant rise in glioblastoma multiforme across all ages has been described in the UK.[18]
3) The incidence of several brain tumors is increasing at statistically significant rates, according to the 2010–2017 Central Brain Tumor Registry of the U.S. (CBTRUS) dataset.[19]
    - There was a significant increase in incidence of radiographically diagnosed tumors of the pituitary from 2006 to 2012.[20]
    - Meningioma rates have increased in all age groups from 15 through 85+ years.
    - Nerve sheath tumor (Schwannoma) rates have increased in all age groups from age 20 through 84 years.
    - Vestibular Schwannoma rates, as a percentage of nerve sheath tumors, have also increased from 58% in 2004 to 95% in 2014.

4) Canadian data indicates a doubled risk of a rare brain cancer for those with more than 558 lifetime hours' use of a cell phone.[21] (Over 20 years, that would be less than 5 minutes per day.)
5) A multicenter case-control study in France concluded, "*These additional data support previous findings concerning a possible association between heavy mobile phone use and brain tumours*".[22]
6) A 2020 review and meta-analysis has found "*evidence that linked cellular phone use to increased tumor risk."*[23]
7) A just published study on thyroid cancers in Nordic countries[24] concluded, *"These results are in agreement with recent results on increased thyroid cancer risk associated with the use of mobile phones ...."*

Furthermore, a 2020 review and meta-analysis found that RF radiation exposure *"significantly increased risk of breast cancer."*[25]

The Government of Canada webpages state that *"the vast majority of research to date does not support a link between RF energy and cancers in humans."* As any reliable scientist will tell you, science is not like a hockey game where the most points win. The quality of the studies is key, and rigorous methods are used to grade quality and to pool results. When high-quality studies show harm, as in this case, then this must be addressed. The risks of cancer and exposure to RF energy (=radiation) are affecting Canadians today, and the sooner Health Canada acknowledges this and revises Safety Code 6, the sooner the health of Canadians will be adequately protected.

2.2 HEALTH RISKS - SPERM AND DNA DAMAGE

C4ST Response to GoC Statement #03:
The evidence is indisputable that having a wireless device (such as a cell phone) next to the body poses risks for sperm damage and DNA damage at everyday levels of exposure.[26,27] Numerous studies also demonstrate harms from exposure to cell antenna installations.[28,29]

2.3 HEALTH RISKS - CHILDREN

C4ST Response to GoC Statement #07:
Children are not little adults. All of the "*safety*" information in Safety Code 6 is based on "*models,*" not real children. The modelling for cell phone safety is based on a 200-pound (91 kg) mannequin and tests only for temperature changes[30]—not for any of the biological effects such as DNA damage. A study showing RF radiation penetrates into deeper brain structures in children than in adults was conducted by Dr. Claudio Fernandez et al. (2018).[31] Dr. Tom Butler has summarized some of the studies about why children's health is of particular concern.[32]

2.4 HEALTH RISKS - CELL PHONES

C4ST Response to GoC Statement #06:
ISED is apparently disregarding Safety Code 6 limits even though it has adopted these guidelines for compliance purposes. Safety Code 6 (2015) states clearly that its established Specific Absorption Rate (SAR) limits for safe exposure to devices such as cell phones *"shall not be*

exceeded."[33] However, a recent ISED webpage update states that exceeding Safety Code 6 is acceptable because it includes a 50 times safety margin. The *CBC Marketplace* episode **"The Secret Inside Your Cellphone"**[34] showed that when held against the body, exposure levels are 3 to 4 times above maximum limits in Safety Code 6. In France, measurements of radiation from cell phones demonstrated over 90% of the phones tested exceeded the safety standards.[35]

3. SAFETY CODE 6 (2015)

3.1 SAFETY CODE 6 - ESTABLISHED ADVERSE EFFECTS

Questionable Health Canada or ISED Website Statements

#08. *There have been thousands of scientific studies carried out to evaluate the safety of radiofrequency EMF. In fact, the evidence from these studies establishes two adverse health effects that can occur at levels above the Canadian limits:*

- *tissue heating (such as the warming of your skin)*
- *nerve stimulation (which can cause a tingling sensation in your skin)*

C4ST Response

C4ST Response to GoC Statement #08:

The thousands of studies referenced above also include high-quality studies that show adverse health effects at or below Canadian limits. Ambient and commonly encountered levels of RF radiation are scientifically demonstrated to cause or contribute to cancers,[36,37,38,39] sperm damage,[40] reproductive harms,[41] learning and memory deficits,[42] and neurodegenerative, cellular and genetic damage.[43,44, 45 ,46,47,48]

If the evidence is so strong that the only adverse effects are heating and nerve stimulation, then this information should be available to the public, e.g., on GoC webpages.

The relationship between tissue heating and harm from RF radiation was first proposed in the 1920s.[49] There is substantial evidence that heating due to exposures exceeding the limit for temperature rise in Safety Code 6 is not a threshold for harm to tissues.

The nerve stimulation reported by Health Canada in Safety Code 6 relates to the lowest part of the RF range which is not presently in widespread use for wireless communications. Therefore, the general public does not experience much exposure to these frequencies.

A growing number of RF radiation exposed Canadians experience immediate and debilitating health problems (that could be prevented) such as headaches, irregular heartbeats, cognitive difficulties and insomnia, resulting in poor quality of life.[50] **All Canadians are susceptible to developing such health issues, unless their ever-increasing exposure to RF radiation is curtailed.**

3.2 SAFETY CODE 6 - METHODS TO MONITOR THE SCIENTIFIC LITERATURE

Questionable Health Canada or ISED Website Statements

#09. *Health Canada scientists consider all peer-reviewed scientific studies and consider many different potential health effects including thermal, non-thermal and biological effects.*

#10. *Canadians are protected from the cumulative effects of RF energy when Safety Code 6 is respected.*

#11. *Health Canada continues to monitor all domestic and international scientific evidence on radiofrequency EMF and health. Should new scientific evidence emerge to demonstrate that exposure to radiofrequency EMF at levels below the Canadian limits is a health concern, the Government of Canada would take action to protect the health and safety of Canadians.*

#12. *When developing the exposure limits in Safety Code 6, Health Canada scientists consider all peer-reviewed scientific studies and employ a weight-of-evidence approach.*
There are criteria that scientists use in order to establish scientific evidence for the existence of an adverse health effect. The evidence needs to be reproducible to ensure the results were not random or due to other factors. The evidence needs to be consistent across studies; for example, the evidence is stronger if different types of studies (epidemiology and laboratory) point to the same conclusion. The evidence needs to be evaluated in its totality, meaning that both positive and negative results are evaluated on their own merit and then evaluated as a whole. Finally, the evidence needs to be generally accepted by the broader scientific community.

#13. *There are thousands of studies on the health effects of RF radiation. You can access many of them through the following links:*

- *International Commission on Non-Ionizing Radiation Protection - publications*
- *EMF Portal*
- *Electromagnetic field literature search engine*

C4ST Response

C4ST Response to GoC Statements #09, #10, #11 and #12:

These are misleading statements. When Health Canada says it has "*considered*" studies, this seems to mean it may have looked at them but disregarded the results—general statements are made but no specific reasons for rejection provided. Health Canada has never published a systematic review that meets international standards[51] of transparent searching, data extraction, scientific synthesis and weighing of the evidence, nor a risk assessment based on measured and projected exposures, nor even a list of which studies it has considered. It seems the most Health Canada is willing to do is provide links to other agencies or organizations that also rely on the premise from the 1920s[52] that RF exposures cannot harm if there is no excessive heating of tissue within 6 minutes.

Health Canada provides no definition of "*consider*" or "*considered."* Although hundreds of high-quality studies show harm below maximum exposure limits (that, according to Health Canada, should be safe), none of these studies and none of their results have been incorporated into Safety Code 6.

Well over 200 peer-reviewed studies[53] published since the last revision of Safety Code 6 (2015) describe harmful effects of (RF) radiation on human health below Safety Code 6 limits. These 200 studies are discussed in the *CBC Marketplace* episode "**The Secret Inside Your Cellphone**."[54]

In 2015, during Parliamentary health committee hearings, Health Canada was asked to provide its rationale for ignoring the science in 140 studies omitted[55] from both the Royal Society of Canada's review and its own. The entire response (Appendix A) lacked any details. The Rationale document that Health Canada used to justify the changes (and lack of changes) did not mention these studies.[56] A summary of the omitted studies is in Appendix B.

The published paper "**Risks to Health and Well-Being From Radio-Frequency Radiation Emitted by Cell Phones and Other Wireless Devices**"[57] summarizes the strong evidence that there are health effects from exposures to low levels of RF radiation, below Safety Code 6 maximum limits. Furthermore, a systematic review and meta-analysis published in 2020 also supports that there are tumor risks with prolonged exposure to cell phone emissions.[58]

When new information becomes available, the proper scientific approach is to study and analyze the results to ensure a current premise is still correct. Health Canada appears to take the opposite approach and look for ways to dismiss any new evidence that challenges its underlying assumptions of Safety Code 6. In this case, Health Canada shows complete disregard for the $30 million US National Toxicology Program study with more than 2,000 rodents that showed clear evidence of cancer and DNA damage—despite the fact that this study passed through peer-review *three* times before publication.

Currently there are two main schools of thought among scientists and other experts who work in this field. There is a high degree of consensus within each group but not between the groups.

One group, including Health Canada and many scientists funded by the technology industry, remains firmly entrenched in the one hundred year old paradigm[59] that radiofrequency/ microwave radiation must heat to cause harm, and clings to this 1920s assumption to support the current (inadequate) guidelines.

Safety Code 6 was first published in 1979 and was based on the premise that if RF energy (=radiation) did not heat, it would not harm living tissue. Since then, Safety Code 6 limits have remained based on temperature change considerations.

The other group, consisting mainly of those who conduct work independent of industry influence, maintains that harm can occur at non-heating (non-thermal) levels. The findings in research published by these scientists and physicians demonstrate mechanisms and adverse outcomes from RF radiation exposures at low levels of exposure. Many of these experts treat and educate people to regain their health. Health Canada and other "*authoritative bodies"* and agencies in countries noted in the GoC webpages dismiss the findings in these studies.

Health Canada states that it will not take action before evidence is generally accepted by the broader scientific community. The broader scientific community, including those with vested interests, is obviously deeply divided on this issue. See more on this in Section 3.3. Just as with historical contested science on health effects of lead, asbestos, smoking, persistent organic pollutants and other concerns, a consensus may not be reached in the near future.

Questions are: on which side of history the Government of Canada will rest; how long it takes to learn "**Late Lessons from Early Warnings**."[60]

Given the enormous implications for public health and the strong science indicating health risks, it makes common sense to take precautionary measures. One action would be to post cautions on the GoC websites regarding health risks of wireless technology (such as cell phones, baby monitors and other wireless RF emitting devices) and to halt wireless 5G rollout (focusing on fibre to the premises, FTTP) until public health safety can be assured.[61]

C4ST response To GoC Statements #11 and #12:

A "*weight of evidence approach*" for determining conclusions requires transparency regarding both the evidence and how it is weighed. There are scientific standards for this process.[62] Over the years, scientists and other Canadians have repeatedly asked Health Canada to publish its scientific references and analyses of them. Health Canada fails to provide that information.

Health Canada's process to update Safety Code 6 (in 2015) was deeply flawed.[63,64] Health Canada has never completed a proper review of the scientific evidence according to international standards.[65] In fact, to the best of our knowledge, Health Canada still does not use appropriate systematic reviewing software tools to catalogue research, extract data and compile relevant data in order to perform proper analyses. If it did, then why do we not see this information on Health Canada websites?

254 world-recognized scientists from 44 nations have appealed to the World Health Organization and the United Nations for standards that are more protective regarding RF radiation.[66] These scientists have published more than 2,000 studies on electromagnetic fields, including RF radiation, in the peer-reviewed literature.

Health Canada's lack of systematic review and research capacity—the ability to thoroughly monitor and update research syntheses—results in it being a laggard rather than a leader in public health.

C4ST response to GoC Statement #13:

Two of the website links provided at the GoC websites are to organizations that adhere to the 1920s paradigm[67] upon which the first 1979 Safety Code 6 was based, namely that RF radiation must heat to cause harm. Section 4 (below) discusses industry's influence on the International Commission on Non-Ionizing Radiation Protection (ICNIRP).

The third link, EMF Portal (University of Aachen, Germany), can be very useful for finding RF radiation publications.

Two omissions from the GoC websites are the Australian based ORSAA database[68] (a non-governmental scientific team) and Electromagnetic Radiation Safety [69] (hosted by Dr. Joel Moskowitz, School of Public Health, University of California, Berkeley). Those are excellent resources to identify studies relevant to wireless radiation and health and the environment. C4ST has provided an overview summary of key peer-reviewed, published papers on our "**Suspend 5G Canada Appeal**" webpage.[70]

3.3 SAFETY CODE 6 - AUTHORITATIVE BODIES

Questionable Health Canada or ISED Website Statements

#14. *The limits in Safety Code 6 are science-based exposure limits that are consistent with the science-based standards used in other parts of the world, including the United States, the European Union, Japan, Australia and New Zealand.*

#15. *The International Commission on Non-Ionizing Radiation Protection is referenced as an authority.*

#16. *To protect your health and safety, Health Canada scientists:*

- *Contribute to international efforts such as the World Health Organization EMF Project to assess potential health risks from radiofrequency EMF*

C4ST Response

C4ST Response to GoC Statement #14:

The science-based exposure limits referred to are based on temperature only. China, Russia, Italy and Switzerland have safety standards 50 times safer than Canada's for RF radiation exposures from equipment such as cell tower antennas.[71]

C4ST Response to GoC Statement #15:

Some of the biases and conflicts of interest in agencies that are involved in making recommendations for safe levels of RF radiation are discussed in the peer-reviewed paper by Frank Clegg et al. (2020).[72] The *"capture"* of the US Federal Communications Commission (FCC) has been well documented.[73]

The International Commission on Non-Ionizing Radiation Protection (ICNIRP) is a private non-governmental organization based in Germany. New expert members can only be elected by members of ICNIRP. Many ICNIRP members have ties to the industry that must adhere to ICNIRP guidelines. The guidelines are of huge economic and strategic importance to the military, telecommunications/Information Technology (IT) and power industries.[74]
The published paper "**Not entirely reliable: Private scientific organizations and risk regulation. The case of electromagnetic fields***"*[75] outlines many reasons why governments should view critically any recommendations made by private organizations such as ICNIRP. More recently, a report was released by two members of the European Parliament about the conflicts of interests within ICNIRP.[76]

C4ST Response to GoC Statement #16:

ICNIRP has a substantial influence on the World Health Organization's International EMF Project as many of the key members are in both bodies.[77]

3.4 SAFETY CODE 6 - SAFETY MARGINS

Questionable Health Canada or ISED Website Statements

#17. *Exposure to RF energy below the Canadian limits is safe. The limits are set far below the threshold (at least 50-fold safety margin) for all known established adverse health effects. Health Canada has incorporated several tiers of precaution into the limits to ensure safety, including a conservative threshold for the occurrence of adverse health effects, the use of worst-case exposure scenarios and an additional safety margin beyond the threshold.*

Even a small child, following continuous exposure from multiple sources of RF energy, would not experience adverse health effects provided that the exposure limits set in Safety Code 6 are respected.

C4ST Response

C4ST Response to GoC Statement #17:

This statement is inaccurate. There is ample science to demonstrate that RF energy (=radiation) is not safe below maximum exposure limits in Safety Code 6.

For clarity, terms will be discussed in the order they appeared in the above statements.

RF energy

This term can be used interchangeably with RF radiation for cell phone, cell antenna and 5G frequencies and health discussed in this document. It took decades for health authorities to act on the science that ionizing radiation (energy), e.g., X-rays, can cause cancer. Science is also telling us that non-ionizing radiation (energy), such as RF radiation from cell phones, can cause a wide range of health effects, including cancer. See Section 1.0. HEALTH RISKS.

Tiers of precaution

At first, this sounds highly precautionary, until the reader realizes that all of it is only based on temperature. In "*tiers*," the only biological effect incorporated is heating of tissue that can be dissipated within 6 minutes. As a result, there is inadequate protection for Canadians.

continued on next page

Safe

There are two concerns regarding Health Canada's use of the word "*safe*." First, this use of "*safe*" is not consistent with terms used in the regulation of other potential toxicants. Health Canada's claim that a regulated exposure (in this case, to RF radiation) is "*safe*" is (unacceptably) different from the norm, which should be stated as "*poses acceptable risks when used according to the directions*." Second, the incorrect use of the word "*safe*" leads to over-assurance that engenders complacency, diminishes the perceived importance of hazards, and fosters unsafe behaviours.

Established adverse health effects

Health Canada references known, established, adverse effects, with reference only to consequences of over-heating of tissues. "*Established*" thus presents a logical fallacy. The much lower RF radiation exposure thresholds for effects observed by RF radiation researchers challenge, on solid scientific grounds, the stronger exposures permitted by Health Canada. Intermittent harms and incapacitation must be avoided. Temporary effects during activities such as driving a car, or climbing stairs or a ladder, pose risks to individuals as well as others. Other agents such as drugs are not regulated to avoid only the most serious, irreversible and readily observable acute effects. Health Canada's process also disregards critical, subtle, long-term toxicities, as well as established synergisms with other toxicants.

For example, experiments may demonstrate an acute effect in particular individuals, at which point the argument is whether the established effect is adverse. Health Canada has taken the unrealistic stance that a reversible effect is generally not adverse because it is not permanent. As a result, individuals who experience non-permanent debilitating symptoms are left unprotected by Safety Code 6.

As ambient and unavoidable levels of RF radiation are increasing, and are projected to increase substantially with 5G, the portion of the population that is suffering daily is increasing. Effects that are initially reversible may become permanent in the long run, due to the cumulative effects of exposure, meeting Health Canada's definition of an adverse effect. Health Canada must re-assess its operational use of the word "*adverse*."

Safety margins

There are two major concerns with the 50-fold safety margin under Safety Code 6. The baseline is not sound; and furthermore, a 50-fold is not a large margin of extrapolation *("safety factor")*. Health Canada regulates other toxicants, such as pesticides, using extrapolation factors much greater than 50-fold; typically, many hundreds-fold. In addition, the investigation for the *CBC Marketplace* episode **"The Secret Inside Your Cellphone"**[78] found that for cell phones held against the body, exposure levels are 3- to 4-fold *above* maximum exposure limits in Safety Code 6. In France, measurements of radiation from cell phones demonstrated over 90% of the phones tested exceeded the safety standards.[79]

Effect on children

The assurances of no adverse health effects on children are based on temperature estimations. Health Canada has conducted no safety testing on children (Appendix C). See Section 2.3 for more on health risks of RF radiation and children.

3.5 SAFETY CODE 6 - RESEARCH

Questionable Health Canada or ISED Website Statements

#18. *To protect your health and safety, Health Canada scientists:*

- *Conduct research on the potential health effects of radiofrequency EMF (electromagnetic exposures).*

C4ST Response

C4ST Response to GoC Statement #18:

This statement is misleading, as the reader would assume that Health Canada has conducted original research on frequencies that are of high relevance to Canadians, namely present-day cell phone, wireless network antenna and Wi-Fi emissions, and future 5G. **Health Canada has not.**

Among the RF radiation publications by Health Canada since 1983 (Appendix C), original research that examines the effects of non-thermal (non-heating) effects is sparse. Of the studies on biological effects, there are no original research studies on Wi-Fi (2.45 GHz) or on 5G millimetre frequencies. Both of these frequency types are of concern to Canadians.

Some of these concerns and unaddressed questions are outlined in the Auditor General Environmental Petitions.[80]

Health Canada did conduct studies on one frequency, 1.9 GHz, that is relevant to cell phone and some other wireless device exposures, but it must be remembered that RF radiation exposures from wireless devices are complex and studying one frequency is not adequate to determine *"safety"* of complex technologies using pulsed signals of multiple frequencies.

Also of concern, there are no Canadian studies on possible adverse effects of living near cell towers even though numerous studies from elsewhere demonstrate adverse effects.[81,82,83]

4. INNOVATION, SCIENCE AND ECONOMIC DEVELOPMENT (ISED) BIAS: AN EXAMPLE

C4ST Comment

An example of bias in reporting has been noted for Innovation, Science and Economic Development (ISED).

In its July 2019 decision to release millimetre wavelengths for 5G, ISED noted concerns about health impacts were submitted by nine Canadian civil society organizations and 237 individuals. The details of those submissions are not publicly available online.[84] However, favourable comments provided by commercial interests within an unpublicized Addendum are available to the public on an ISED webpage.[85]

5. 5G TECHNOLOGIES AND COVID-19

Health Canada and ISED Website Statements

#19. *A* recent addition to the Government of Canada websites states:
Misinformation and opinions on the health risks from exposure to radiofrequency EMF are increasing on social media and on the internet. Most recently, there have been claims linking the deployment of 5G networks to the novel coronavirus (COVID-19). There is no scientific basis for these claims. The World Health Organization (WHO) and the International Commission on Non-Ionizing Radiation Protection have also communicated this message.

C4ST Response

C4ST Response to GoC Statement #19:
C4ST agrees that there is no scientific cause and effect linking deployment of 5G and the development or spread of the coronavirus.

6. MISINFORMATION ON GOVERNMENT OF CANADA WEBPAGES ABOUT SAFETY OF WIRELESS COMMUNICATIONS RF RADIATION, INCLUDING 5G

C4ST Comment

Given the "*misinformation,*" i.e., misleading and inaccurate statements on the Health Canada and Innovation, Science and Economic Development (ISED) webpages, the Government of Canada should define what process is in place to assure the accuracy of information posted on its websites, and require the appropriate Ministers to undertake the necessary corrections, as misinformation harms public health.

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[2] Health Canada's Safety Code 6 (2015) recognizes only two "*established, adverse*" health effects from exposure to RF radiation: tissue heating with exposure to radiofrequencies in the higher range; and nerve stimulation at the lowest radiofrequencies. These lower frequencies are not presently in widespread use for wireless communications. C4ST's comments refer to the higher frequencies where tissue heating is the only recognized adverse effect.

[3] Previously called Industry Canada.

[4] Canadians for Safe Technology (2020). **Engaging Your Member of Parliament (MP) about 5G. C4ST's Suggestions & Facts You Can Use to Reply to Your MP Regarding the Suspend 5G Canada Appeal.** http://docs.c4st.org/PubEngage/Take-Action-Tools/Engaging-MPs-about-5G.pdf

[5] Health Canada's Safety Code 6 (2015) defines electromagnetic radiation as *"A form of energy emitted by accelerating electric charges, that exhibits wave-like behaviour as it travels thorugh space."*
A Government of Canada webpage says, "*Radiofrequency electromagnetic fields (EMF) are a type of non-ionizing electromagnetic radiation found on the electromagnetic spectrum covering the range of frequencies below 300 GHz. Radiofrequency EMF are invisible waves that travel through space and exert force on charged particles. These waves have been used for many years to transmit information between an antenna and a device without the use of wires."* [https://www.canada.ca/en/health-canada/services/health-risks-safety/radiation/types-sources/radiofrequency-fields.html [Accessed 12 Dec 2020] Note: the frequency range covered by Safety Code 6 is 3 kHz to 300 GHz.

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We've made it easier for you to give your MP another chance to understand risks posed by wireless radiation and to show they care about our health.

Engaging Your Member of Parliament (MP) about 5G:

C4ST's Suggestions & Facts You Can Use to Reply to Your MP Regarding the *Urgent Appeal to Suspend the 5G Rollout*

(January 2021)

On May 14th, 2020, Canadians for Safe Technology (C4ST) and groups across Canada launched the ***"*Urgent Appeal to the Government of Canada to Suspend the 5G Rollout and to Choose Safe and Reliable Fibre Connections."*** Signing the Appeal includes an option to email the signer's Member of Parliament (MP), informing the MP about the signature and the Appeal, and asking for the MP's position on the issue.

Whether your MP replied to you about the Appeal, or not, this document contains well-researched material that you can use to follow up.

Send a letter or email based on one of the examples in Appendix A of this document. Postage is free for letters sent by regular mail to:

Name of your Member of Parliament
House of Commons, Ottawa, Ontario, Canada K1A 0A6

To find your MP's name and contact information, including the email address, enter your postal code here: https://www.ourcommons.ca/Members/en.

The following pages contain some of the most common statements made by MPs to their constituents, organized by topic to help you to find what you need. For each statement, we propose a possible reply, as well as questions that you could ask.

To search for a specific statement that your MP made to you, enter at least two words or a portion of the statement here:_____

If this document does not include statements you received from your MP, please email us a copy of his or her response to info@appel5Gappeal.ca. We will be updating this resource and will be glad to suggest a response.

Internet access is a government priority, so this is the time to act!

Get a conversation going with your MP about the health risks from exposure to 5G and other sources of wireless radiation.

The goal is to get your MP engaged and educated on this important issue so he or she will take positive, decisive action.
See Appendix B for suggested actions your MP can take.

For more information, see C4ST's report:
"**Stop Wireless 5G until Health Canada's Safety Code 6 is Fixed: A Guide to Why and How**"

TABLE OF CONTENTS
& STATEMENTS MADE BY MEMBERS OF PARLIAMENT (MPs) IN THEIR RESPONSES TO CONSTITUENTS

Member of Parliament (MP) statements are grouped into categories that match sections in the **"Urgent Appeal to the Government of Canada to Suspend the 5G Rollout and to Choose Safe and Reliable Fibre Connections"** and are numbered *#A01* to *#C53*. Following each set of statements are C4ST's suggested replies and questions.

Many of the statements made by our MPs seem to have been taken directly from the websites of **Health Canada** and **Innovation, Science and Economic Development (ISED)**. These websites themselves contain inaccurate and misleading information. For more information, see **"C4ST Fact-checks Government of Canada Webpages Regarding Health Risks and Wireless Technologies, including 5G."**

Sources to support C4ST's suggested replies and questions are in the "References" section. Simply double-click on the superscript (small) number to view that item in the list of references, and then to return to the main text click the reference number.

A) APPEAL ITEM: FIBRE-OPTIC INFRASTRUCTURE

FIBRE-OPTIC CABLE

If your MP said:

#A01 *Fibre-optic cable is the best and most reliable way to get high speed internet.*

Your possible reply

If your MP supported fibre-optics and other wired connections, congratulate him or her.

Ask your MP

How will you work to support fibre and wired solutions instead of wireless technologies?

If your MP did not mention fibre-optic connections:

Let him or her know that fibre-optic connections have been shown to be superior to wireless connections and should be used as an alternative to the tens of thousands of cell network antennas and millions of fixed wireless devices planned to be installed across Canada. Anything stationary should be connected with wires so that there are no emissions of harmful radiofrequency radiation. Wired connections are safer, faster, more reliable, more energy efficient, more secure and in the long term more economical.

Ask your MP

Would you please comment on why fibre-optic and other wired connections to the premises (FTTP) were not included in your reply?

Ask your MP

There is an urgent need to bridge the digital divide. There are real long-term benefits of using fibre instead of wireless in remote regions. This paper shows how this could work:

"Fiber optic breakthrough could beat 5G for rural internet access"
https://www.inverse.com/article/61909-a-fiber-optic-breakthrough-could-bring-superfast-internet-to-remote-areas.

How can the significant funding being made available to improve rural connectivity be directed to extend Internet fibre cable access?

B) APPEAL ITEM: CANADIANS' HEALTH AND THE ENVIRONMENT

CANADIANS' HEALTH

SAFETY CODE 6 AND SAFETY MARGINS

Background information:
Limits called *"Safety Code 6"* are set by Health Canada for radiofrequency (RF) radiation exposures of federal workers and other people in federally controlled facilities.[1]

The federal ministry Innovation, Science and Economic Development (ISED) has adopted Safety Code 6 limits for compliance for all RF radiation-emitting devices commercially available in Canada, including cell network antennas (attached to towers and elsewhere), cell phones, Wi-Fi equipment, smart utility meters, baby monitors, cordless phones and other wireless devices.

More stringent guidelines are nevertheless in place. For example, the City of Toronto Board of Health adopted a *Prudent Avoidance Policy on Siting Telecommunication Towers and Antennas* – at levels 100 times more protective than Safety Code 6.[2] School boards, municipalities, hospitals and privately owned buildings may also designate *WiFi-free zones* and *PDO areas (Personal Devices Off)* in order to protect their students, staff, patients and clientele.

There are two main limits (guidelines) in Safety Code 6 (2015):

1) Power Density:
   For emissions from:
   a) equipment at a distance of more than 0.2 metres (8 inches), such as Wi-Fi routers, antennas on cell towers and on non-tower structures, or
   b) equipment and devices operating at frequencies above 6 GHz, such as 5G technologies that use millimetre waves, both at a distance and close to the body.
   Power density can be measured with special meters as Watts per square metre (W/m^2).
2) Specific Absorption Rate (SAR):

   For emissions below 6 GHz, from devices used close to the body (less than 0.2 metres or 8 inches).

   SAR is the energy absorbed by a cube of tissue 1 cm x 1 cm x 1 cm,[3] expressed in Watts/kilogram (W/kg). SAR applies to emissions from cell phones, tablets and wearables such as smart watches. SAR levels for commercially available devices can be found in the *"fine print"* of the user's instruction manual, and online.

To understand how Health Canada can claim that Safety Code 6 is protective, even for children exposed to wireless radiation 24/7, it is critical to know that:

- **Health Canada's guidelines are based only on heating/thermal effects***. As long as tissue does not experience elevated temperatures and heating can be dissipated by the body within 6 minutes, Health Canada says it is "*safe*." All other adverse effects documented by hundreds of high-quality studies under non-heating conditions are not taken into account.
- **Health Canada uses averaging, so "*peaks*" or "*spikes*" are diluted over a time span.** All wireless communication devices, including cell phones, cordless phones, Wi-Fi, most smart meters and cell antennas, emit **pulsed RF radiation**. Pulsed fields have been found to be more biologically active than non-pulsed fields in many studies.

* Health Canada acknowledges two types of adverse effects: **tissue heating** for frequencies used by wireless communication devices and antennas, and **nerve stimulation** for very low radiofrequencies (below 10 MHz) which are not generally used for telecommunications devices. Devices that fall into the latter category include some wireless charging devices and metal detectors.

If your MP said:

#B01 *Rest assured that our regulatory framework provides safeguards for the health of Canadians. Innovation, Science and Economic Development Canada (ISED) has adopted Health Canada's Safety Code 6 as the Canadian radiofrequency exposure limits for wireless devices and their associated infrastructure.*

Your possible reply

There are two main reasons why a moratorium on 5G rollout is needed:

- 5G technologies have not been tested for health safety for long-term exposures.
- Safety Code 6 (2015) is outdated and inadequate.

Scientists, medical doctors and other experts are repeatedly warning us that the scientific evidence indicates harms (cancer, sperm damage, reproductive harms, learning and memory deficits, and neurodegenerative, cellular and genetic damage) from exposure to radiofrequency radiation.[4,5]
Further rollout should be halted until scientists independent of industry influence recommend that these technologies are safe for the public.[6]

If your MP said:

#B02 *Many international studies on this issue have concluded that effects associated with exposure to RF energy depend on the frequency range. Our government is committed to protecting the health and safety of Canadians from environmental risks, including those posed by overexposure to RF energy. As such, we have established RF exposure limits to prevent frequency side effects from occurring.*

Your possible reply

- The consensus reached by medical doctors and scientists independent of industry influence is that there should be a moratorium on 5G deployment.[7,8]
- Health Canada's Safety Code 6 (the exposure guidelines for human exposure to RF radiation) does not protect Canadians' health[9,10,11,12] nor does it address environmental safety. Canada's guidelines for exposure to cell network antenna emissions lag behind those of many other countries.[13] Health Canada's process to update Safety Code 6 (2015) was deeply flawed,[14,15] and exposure limits are based on the now disproven premise from the 1920s[16] that RF radiation causes harm only at exposure levels that result in heating that cannot be dissipated within 6 minutes (see Safety Code 6 for details about the heating criteria[17]). Hundreds of high-quality peer-reviewed scientific publications describe biological effects and harms with exposures far below Canada's limits—in humans, plants, laboratory animals and tissues, and wildlife such as birds and pollinators.[18,19,20,21,22,23]
- The World Health Organization's International Agency for Research on Cancer (IARC) classified radiofrequency radiation as a *"possible"* human carcinogen in 2011. Since that time, more high-quality, peer-reviewed, published studies in both animals and humans support a re-classification as a *"known"* human carcinogen.[24,25] Tobacco smoke and

asbestos are in this category. A 2019 IARC report summarizes this evidence and states that RF radiation is a high priority for re-evaluation of its classification.[26]

- Major insurance bodies, such as Swiss RE and Lloyd's (formerly Lloyd's of London), will not provide insurance against health effects of radiation from wireless telecommunications. They have done their own monitoring of the scientific evidence and have concluded that insuring against damages from electromagnetic fields, including RF radiation, is too high a risk.[27]

If your MP said:

#B03 *To protect the public, these limits, which also cover the frequency ranges that will be used by 5G devices and associated infrastructure, are set far below the threshold—an at least 50 fold safety margin—for all known established adverse health effects.*

Your possible reply

Safety Code 6 limits for RF radiation are designed to avoid excessive heating of tissue (thermal effects). A 50-fold safety margin is a low margin of exposure compared with 300-fold or much greater margins of exposure set for chemicals. Furthermore, biological effects from RF radiation that are associated with adverse outcomes, e.g., DNA damage and oxidative stress, occur at much lower exposure levels, some lower by hundreds- or thousands-fold, without significant heating. DNA damage and oxidative stress can lead to a wide range of adverse health outcomes, including cancer and neurological disorders such as Alzheimer's.

If your MP said:

#B04 *They [Safety Code 6 guidance levels] provide protection for all age groups, including children, 24 hours a day, 7 days a week.*

Your possible reply

Extensive scientific evidence shows harm from 2G, 3G and 4G technologies. 5G uses these as well as additional frequencies called millimetre wave technology. There has been no testing to ensure that 5G technologies are safe for humans and the environment.[28,29]

To meet SAR compliance requirements, all manufacturers test their devices on a model that is based on a 200 pound (91 kilogram) male that does not take into account that children are more vulnerable to RF radiation.[30,31] Each device is tested individually, i.e., regardless that real-world exposure is often simultaneously to emissions from more than one device. There is no evaluation of the effects on health when several devices are in a classroom, lecture hall, home or office setting (for example: cell phone, Wi-Fi router and cordless phone, or living near a cell tower or across from a small cell antenna on a utility pole). The last published report of measurements of power levels by the federal government in a simulated (empty) classroom-type setting was in 2012.[32] Technologies and use behaviours have since changed.

If your MP said:

#B05 *The limits set out in Safety Code 6 are designed to protect people from all forms of exposure including continuous exposure.*

Your possible reply

In addition to the scientific evidence showing harm from 2G, 3G and 4G technologies, 5G uses millimetre wave technology. There has been no testing to ensure that 5G technologies are safe for humans and the environment.[33,34]

To meet SAR compliance requirements, all manufacturers test their devices on a model that is based on a 200 pound (91 kilogram) male that does not take into account that children are more impacted by RF radiation.[35,36] Each device is tested individually, although real-world exposure is often to simultaneous emissions from more than one device. There is no evaluation of the effects on health when several devices are in a classroom, lecture hall, home or office setting (for example: cell phone, Wi-Fi router, cordless phone, tablets and computers for various family members, or living near a cell tower or adjacent to a small cell antenna on a utility pole). The last published report of measurements of power levels by the federal government in a simulated (empty) classroom-type setting was in 2012.[37] Technologies and uses have since changed.

If your MP said:

#B06 *Safety Code 6 is reviewed on a regular basis in order to ensure that it continues to provide protection against all known adverse human health effects of radiofrequency fields.*

Your possible reply

Safety Code 6 (2015), updated from Safety Code 6 (2009), is overdue for revision. The scientific evidence upon which Safety Code 6 (2015) was based covered a few publications from 2013 with the majority having been published before 2012.[38] There have been a number of significant scientific findings since then. Prominent Canadian MD, cancer epidemiologist and former advisor to the World Health Organization Dr. Anthony B. Miller has outlined the evidence for classifying radiofrequency radiation, including 5G frequencies, as a *"known"* human carcinogen[39] based on newer studies. Tobacco smoke and asbestos are classified as *"known"* human carcinogens.

Safety Code 6 was first published in 1979 and limits have not undergone any substantial changes since then. It was, and still is, based on the now disproven premise from the 1920s[40] that tissue cannot be harmed without heating.

Ask your MP

Given that there is much scientific evidence that limits on cell phone emissions levels are outdated and inadequate, as laid out in the lawsuit launched in the USA against the Federal Communications Commission,[41] and that Canadian and USA safety limits for cell phone exposures are similar, will you please find out why Safety Code 6 (2015) has not been revised based on effects that occur at non-heating levels well below Health Canada's safety limits? Also, please advocate for Safety Code 6 (2015) to be revised.

Ask your MP

Given that the current version of Safety Code 6 (2015) was largely based on science published before 2013, when is the next planned update for Safety Code 6? Will Health Canada commit, for the first time, to meet the international standards for review of scientific evidence? This requires rigorous scientific methods, transparency, full public consultation from initial scoping throughout the process and health-protective precautionary interpretation of findings.[42]

Ask your MP

Health Canada claims to use a *"weight of evidence"* approach. This approach entails several steps. Where can Canadians view the systematic compilation of evidence tables, with the grading, meta-analyses and weighing of the evidence?

Ask your MP

In the absence of Health Canada's systematic review of the evidence, will Health Canada take action on the basis of up-to-date independent systematic reviews by academic experts, published in the peer-reviewed literature? If Health Canada will not take action, what are the reasons for not doing so?

Ask your MP

What response, if any, did Health Canada provide to the more than 50 Canadian medical doctors[43] and more than 50 international scientists[44] who have written to Canada's Minister of Health calling for more protective wireless radiation limits, especially for children?

C4ST's supporting information

Health Canada is well aware that there is substantial, strong scientific evidence that radiofrequency/microwave radiation can cause harm even when there is no heating of tissue.[45] Neither Health Canada nor any of the authorities it looks to for guidance have provided any studies showing safety of exposure to 5G technology emissions over the long term.[46,47]

HEALTH CANADA'S MONITORING OF THE SCIENTIFIC LITERATURE

If your MP said:

#B20 *Our government continuously monitors the research and scientific literature on the health effects of RF exposure to ensure that Canadian limits are consistent with the current scientific consensus to prevent potential adverse health effects.*

Your possible reply

Canadian limits are <u>not</u> consistent with the current scientific consensus regarding health effects of RF exposure.[48] Canadian and USA limits are similar. According to Joel Moskowitz, Ph.D., Director, Center for Family and Community Health, School of Public Health, University of California, Berkeley, "*The majority of scientists who study RF radiation effects now believe that current RF radiation national [USA] and international safety standards are inadequate to protect our health. More than 240 scientists from 44 countries who have published over 2,000 papers in professional journals on electromagnetic fields (EMF) and biology or health have signed the* ***International EMF Scientist Appeal***[49] *which calls for stronger safety standards and health warnings."*[50]

Contrary to its website statement, Health Canada's process to *"continuously monitor the research and scientific literature on the health effects of RF exposure"* fails to meet the test of international standards.[51] This requires rigorous scientific methods, transparency, full public consultation from initial scoping throughout the process and health-protective precautionary interpretation of findings. Health Canada has never completed a proper review of the scientific evidence that meets international standards, nor has it published any of its analyses.

Ask your MP

Please provide a list of studies Health Canada is using to justify that Safety Code 6 protects us from emissions from 5G technologies. Please provide the author, title and scientific journal where this information is provided. Please do not refer me to the World Health Organization's EMF-Project or the International Commission on Non-Ionizing Radiation Protection (ICNIRP). These agencies are heavily influenced by industry.[52,53,54,55]

Ask your MP

We know that some of the largest re-insurance companies, such as Lloyd's and Swiss Re, are averse to insuring for damages as a result of wireless radiation exposures. As the impacts of the radiation from wireless technology become manifest, who will be liable for increased healthcare costs, lost productivity arising from adverse health effects, security and privacy breaches, damage to the environment and risks to safety and property including those resulting from degraded weather forecast accuracy?

Ask your MP

Given the assumption Health Canada and ISED make that Safety Code 6 covers 5G, is Health Canada currently collecting and reviewing scientific data with respect to the higher frequencies to be used for 5G? Would you please ask the Minister of Health for a list of these studies and send me a copy? Please specify that it is the original scientific studies you would like to see and not links to other agencies or to the World Health Organization's EMF-Project.

Ask your MP

There have been numerous studies showing adverse impacts on the health of people living near cell network antennas.[56,57,58] Would you please ask that studies (radiation surveys) be conducted before antennas are installed in neighbourhoods so that, if and when antennas are installed, scientifically sound comparisons can be made?

C4ST's supporting information

Industry-funded studies find harm less frequently than non-industry-funded studies[59] and in some cases can suppress results from studies showing harm.[60,61] Adverse effects were summarized by Levitt and Lai in 2010.[62] Neither Health Canada nor any "*authoritative body*" that it looks to for guidance has addressed this in a meaningful way. A study conducted in 2017, after the latest revision of Safety Code 6 (2015), found blood abnormalities and DNA damage in people living close to cell network antennas (base stations).[63]

HEALTH CANADA'S RESEARCH AND LONG-TERM STUDIES

If your MP said:

#B30 *Health Canada administers the Radiation Emitting Devices Act, which governs the sale, lease and importation of radiation emitting devices in Canada.*

Your possible reply

There are no standards applicable to cell phones or other wireless communication devices under the Radiation Emitting Devices Regulations.[64,65] In Canada, the regulation of cell phones and other wireless communication devices is the responsibility of Innovation, Science and Economic Development Canada (ISED), under the *Radiocommunication Act*.[66]

Health Canada's Safety Code 6[67] (the exposure guidelines for human exposure to RF radiation) does not protect Canadians' health[68,69,70,71] nor does it address environmental safety. Canada's guidelines for cell antenna emissions lag behind those of many other countries.[72] Health Canada's process to update Safety Code 6 (2015) was deeply flawed,[73,74] and exposure limits are based on the now disproven premise from the 1920s[75] that RF radiation causes harm only at exposure levels that result in heating. Hundreds of peer-reviewed scientific publications describe biological effects and harms with exposures far below Canada's limits—in humans, plants, laboratory animals and wildlife such as birds and pollinators.[76,77,78,79,80]

Health Canada's process to monitor "*scientific literature on the health effects"* fails to meet the test of international standards.[81] This requires rigorous scientific methods, transparency, full public consultation from initial scoping throughout the process and health-protective precautionary interpretation of findings. Health Canada has never completed a proper systematic review of the scientific evidence that meets international standards.

If your MP said:

#B31 *In addition, the Department's mandate regarding human exposure to radiofrequency (RF) electromagnetic energy from wireless devices includes carrying out research into possible health effects, monitoring the scientific literature related to such effects on an ongoing basis, and developing RF exposure guidelines, commonly referred to as Safety Code 6. Safety Code 6 sets recommended limits for safe human exposure to electromagnetic fields in federally regulated industries and workplaces.*

Your possible reply

Health Canada's Safety Code 6[82] (the exposure guidelines for human exposure to RF radiation) does not protect Canadians' health[83,84,85,86] nor does it address environmental safety. Canada's guidelines for cell antenna emissions lag behind those of many other countries.[87] Health Canada's process to update Safety Code 6 (2015) was deeply flawed,[88,89] and exposure limits are based on the now disproven premise from the 1920s[90] that RF radiation causes harm only at exposure levels that result in heating. Hundreds of peer-reviewed scientific publications describe biological effects and harms with exposures far below Canada's limits—in humans, plants, laboratory animals and wildlife such as birds and pollinators.[91,92,93,94,95]

Health Canada's process to monitor "*scientific literature on the health effects"* fails to meet the test of international standards.[96] This requires rigorous scientific methods, transparency, full public consultation from initial scoping throughout the process and health-protective

precautionary interpretation of findings. Health Canada has never completed a proper review of the scientific evidence that meets international standards.

Ask your MP

Please provide a list of studies Health Canada is using to justify that Safety Code 6 protects us from 5G technology. Please provide the author, title and scientific journal where this information is provided. Please do not refer me to the World Health Organization's EMF-Project or the International Commission on Non-Ionizing Radiation Protection (ICNIRP). These agencies are heavily influenced by industry.[97,98,99,100]

Ask your MP

Given the assumption Health Canada and ISED make that Safety Code 6 covers 5G, is Health Canada currently collecting and reviewing scientific data with respect to the higher frequencies to be used by 5G? Are there any plans to do so; and if not, why?

Ask your MP

If Health Canada has the necessary skills (epidemiology, biology and systematic research) to monitor the relevant scientific literature for today's common RF radiation exposures, then why is that information not on its website?

C4ST's supporting information

Over the past 11 years, Safety Code 6 has been re-examined twice, resulting in only minor revisions. The process was flawed,[101,102] and the now disproven premise from the 1920s[103] that there can be no harm without significant heating remains as the basis to determine safety of wireless devices such as cell phones and network antennas. After each of these revisions of Safety Code 6 was published, hearings were held by the Parliamentary Standing Committee on Health (HESA). Both times HESA made a number of recommendations for more protective approaches and standards in Safety Code 6.[104] None have had any substantive implementation.

During the 2010 Parliamentary hearings on Safety Code 6, Health Canada representatives stated that long-term studies were important. The only study the Director General of Health Canada cited indicating safety was the "*Danish*" study. This study was deeply flawed, as the Director General briefly alluded to. Health Canada has conducted no long-term studies and has conducted no studies on possible adverse effects of living close to a cell tower. Evidence was heard in Parliamentary HESA hearings in 2010 and 2015 that Canadians were reporting adverse effects from wireless radiation.[105,106,107,108,109,110,111,112] Further evidence was presented in 2014 when Health Canada conducted public consultations during the latest review of Safety Code 6.[113] The only recent study by Health Canada addresses the effects of heating (Appendix C), which is not useful to examine non-thermal effects.[114]

HOW CANADA COMPARES TO THE REST OF THE WORLD

If your MP said:

#B40 *Our approach to RF exposure safety is among the most stringent in the world.*

Your possible reply

When it comes to exposure limits for cellular network antennas and devices that are more than 0.2 metres (8 inches) from our bodies, such as Wi-Fi, smart meters and baby monitors, this statement is false. China, Russia, parts of Italy and Switzerland have limits up to 50 times safer than Canada's, according to data from the World Health Organization.[115]

For exposures to devices that are held close to our bodies, such as cell phones, the statement may be true in theory, but falls short in real life for many cell phone models. ISED is turning a blind eye to the fact that some popular cell phones exceed safety standards/guidelines.[116] Similar violations have been uncovered elsewhere,[117,118] and in some cases legal actions have been launched by advocacy groups in France[119] and the USA.[120]

Ask your MP

Given that the CBC program *Marketplace* reported that cell phones as used by Canadians do not comply with Safety Code 6 guidelines,[121] what validation and verification has ISED conducted to ensure that Canadians are not exposed to RF radiation levels that exceed Safety Code 6 guidelines?

Ask your MP

Other than cell phone radiation emissions that breach Safety Code 6 (2015) safety limits, when else has a federal regulator stated that it is acceptable to exceed the guidelines that they are tasked with enforcing?

Ask your MP

What initiatives are planned to ensure that Canadians are aware of the *"fine print"* in their device manuals,[122] advising that a minimum distance must be kept between the cell phone and head or body to meet Health Canada safety guidelines? How is the Government of Canada ensuring that users respect the distance requirements indicated by the manufacturer? What initiatives are planned to ensure that testing for Safety Code 6 compliance is conducted for the ways devices are commonly used?

Ask your MP

What incentives are given to industry by the government to encourage the design and sale of information technology products that incorporate best-practices to prevent, eliminate or minimize RF radiation exposures?

C4ST's supporting information

- **Canada: CBC TV *Marketplace* program episode "The Secret Inside Your Cellphone"** *https://www.google.com/search?client=firefox-b-d&q=the+secret+inside+your+phone*
- **France: Phonegate** *https://www.phonegatealert.org/en*
- **USA: *Chicago Times* "We tested popular cellphones for radiofrequency radiation. Now the FCC is investigating."** *https://www.chicagotribune.com/investigations/ct-cell-phone-radiation-testing-20190821-72qgu4nzlfda5kyuhteiieh4da-story.html*

If your MP said:

#B41 *Our practices and guidelines remain consistent with other parts of the world who are moving towards the 5G network.*

Your possible reply

China, Russia, parts of Italy and Switzerland have limits up to 50 times safer than Canada's, according to data from the World Health Organization.[123] Nations and communities worldwide are resisting 5G rollout[124] because 5G technologies have not had any health safety testing for long-term exposures.[125,126]

Ask your MP

Given that China, Russia, parts of Italy and Switzerland have guidelines that are 50 times safer than Canada's, and that Brussels (Belgium), parts of Italy and Switzerland have put a halt to the rollout of 5G until more is known about possible adverse effects, what is Health Canada's plan to investigate why these countries are providing better protection to their citizens?

GOVERNMENT OF CANADA WEBSITE

If your MP said:

#B50 *The Government of Canada responded to misinformation regarding 5G technology currently circulating on the internet. In early May, the Government launched a website dedicated to giving Canadians the facts about radiofrequency energy and safety. You can review that information clicking here (http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11467.html).*

Your possible reply

Unfortunately, this website and other Government of Canada webpages dedicated to this issue contain misinformation, including incorrect and misleading statements.

For information to use in your reply, see "C4ST Fact-checks Government of Canada Webpages Regarding Health Risks and Wireless Technologies, including 5G."

Ask your MP

Given the misleading and incorrect statements on the Government of Canada's webpage *http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11467.html* will you determine what process is in place to ensure the accuracy of information posted on the GoC webpages and ask the appropriate Minister to make the necessary corrections?

C4ST's supporting information

C4ST's comprehensive and well referenced report, **"C4ST Fact-checks Government of Canada Webpages Regarding Health Risks and Wireless Technologies, including 5G,"** identifies many of the misleading and inaccurate statements made on the Government of Canada's federal ministries' webpages of Health Canada and Innovation, Science and Economic Development.

THE ENVIRONMENT

So far, no MP has commented on the environment.

Your possible reply to MP's lack of response

RF radiation affects plants and animals, including birds and pollinators.[127, 128] There is no environmental assessment for, and no protection against, RF radiation in the ***Canadian Environmental Protection Act*** **(CEPA)**. CEPA amendment is on the current Minister's mandate and was in the Speech from the Throne, so please ensure that attention is given to the submissions and recommendations noted in the ENVI report, that RF radiation be included in the amended CEPA.[129]

Wireless networks have a much larger carbon footprint than wired networks. When all factors are considered, wireless technology is a major contributor to global climate change.[130] These factors include: the embodied energy used to make the many 5G and smart technology devices, the energy needed to charge these wireless and cellular devices, the energy used to power the antennas (transmitters and receivers) that send and receive signals and data, as well as the energy used to store data in servers.[131]

Ask your MP

Given that peer-reviewed and published papers show evidence of environmental harms to birds, pollinators, trees and other species; that there are no guidelines for the protection of wildlife from RF radiation; and that the Government of Canada report, **"Healthy Environment, Healthy Canadians, Healthy Economy: Strengthening the *Canadian Environmental Protection Act*, 1999"** has recommended that the literature documenting adverse effects in wildlife, including pollinators, submitted to it should be reviewed,[132] would you please ask the Minister of the Environment and Climate Change what is being done to establish adequate RF radiation guidelines to protect the environment, including wildlife?

Ask your MP

Tens of thousands of low-orbit satellites will be transmitting radiofrequency radiation to all parts of the Earth within one year. What is being done to determine whether there will be any adverse effects on individual species and on ecosystems, as well as on weather forecasting and astronomy, and to protect against these effects?

Ask your MP

On October 15, 2020, the Canadian Radio-television and Telecommunications Commission (CRTC) approved SpaceX's application to provide low-orbit satellite Internet to rural Canadians. SpaceX already has U.S. Federal Communications Commission approval to launch 12,000 low-orbit satellites to provide wireless Internet service to every inch of the planet. Thousands more are planned. The CRTC seems to be approving these without consulting the public. What will you do to ensure the public is fully informed and consulted?

C) APPEAL ITEM: PROCESS FOR CANADIANS TO HAVE A DECISIVE SAY IN CELL ANTENNA INSTALLATIONS

CONSULTATIONS WITH THE PUBLIC ABOUT SMALL ANTENNA AND LARGE CELL TOWER INSTALLATIONS

TERMS OR ABBREVIATIONS USED IN THIS SECTION

- **ISED:** Canada's Ministry of Innovation, Science and Economic Development (formerly called Industry Canada)*
- **Land-use authority (LUA):** any local authority that governs land-use issues and includes a municipality, town council, regional commission, development authority, township board, band council or similar body**
- **Proponent:** anyone who is planning to install or modify an antenna system**

** The responsible Minister is called the Minister of Innovation, Science and Industry.*
*** from the Government of Canada's "Guide to Assist Land-use Authorities in Developing Antenna System Siting Protocols"*

If your MP said:

#C01 *Telecom companies must consult openly and transparently with communities on all towers.*

Your possible reply

It is not correct that public consultations are required for all towers. It is true that telecommunications companies must consult the land-use authority (LUA), such as a municipal government, regarding new cell tower siting and notify the public within a radius that is 3 times the height of the proposed tower, but there are important exclusions for other cell antenna installations.

In fact, the ISED Client Procedures Circular CPC-2-0-03, Section 6 explicitly allows exclusions of antennas on non-tower structures such as *"buildings, water towers, lamp posts, etc."*

According to the default process as outlined by this circular, there is no requirement for notice or consultation regarding the deployment of antennas on "*non tower structures*," or the addition of antennas to a given tower, when the height of the current structure is not increased by more than 25%.[133] Public consultations are not required if a cell "*tower*" is less than 15 metres and is for non-commercial purposes. **This means that citizens will not be consulted when the many "*small cell*" antennas required for 5G are placed close to our homes, schools, hospitals and workplaces** unless the LUA has a local antenna siting policy in place that requires otherwise.

Regarding installations that do require notification, this process is run by the telecommunications company proposing the tower and has been continually shown to be inadequate, according to residents who have been affected.

If your MP said:

#C02 *Consultations are required to be held with communities on all newly established commercial tower installations (regardless of height).*

Your possible reply

It is not correct that public consultations are required for all towers. It is true that telecommunications companies must consult land-use authorities (LUA), e.g., municipal governments, regarding new cell tower siting and notify the public within a radius that is 3 times the height of the proposed tower.

In fact, the ISED Client Procedures Circular CPC-2-0-03, Section 6 explicitly allows exclusions of antennas on non-tower structures such as *"buildings, water towers, lamp posts, etc."*

There are currently no regulations requiring any notification for the installation of "*small cell*" antennas on a current structure if the height of the current structure is not increased by more than 25%.[134] There is also no requirement for notice or consultation regarding height increase or addition of antennas to a given tower if the height is not increased by more than 25%.[135]

Public consultations are not required if a cell "*tower*" is less than 15 metres and is for non-commercial purposes.

This means that citizens will not be consulted when the many "*small cell*" antennas 5G requires are placed close to our homes, schools, hospitals and workplaces.

If your MP said:

#C03 *Antenna systems must be deployed in a manner that considers the local surroundings and most importantly, public input.*

Your possible reply

It is not correct that public consultations are required for all towers. It is true that telecommunications companies must consult municipal governments regarding new cell tower siting and notify the public within a radius that is 3 times the height of the proposed tower.

In fact, the ISED Client Procedures Circular CPC-2-0-03, Section 6 explicitly allows exclusions of antennas on non-tower structures such as *"buildings, water towers, lamp posts, etc."*

There is no requirement for notice or consultation regarding the deployment of antennas on "*non tower structures*," or the addition of antennas to a given tower, when the height of the current structure is not increased by more than 25%.[136] Public consultations are not required if a cell "*tower*" is less than 15 metres and is for non-commercial purposes. These regulations mean that citizens will not be consulted when the many "*small cell*" antennas 5G requires are placed close to our homes, schools, hospitals and workplaces.

In regard to local input, ISED states, *"Radiocommunication antennas need to be strategically located to satisfy specific technical criteria and operational requirements. Therefore, there is a limited measure of flexibility in the placement of antennas and proponents are constrained to some degree."*[137] Land-use authorities, municipalities and the public, if they take the initiative, can suggest alternate sites but the telecommunications companies may not agree and may insist on the site they want. In fact, ISED representatives have stated that since the telecom companies have paid for the spectrum, they are entitled to fill in any *"white spots"* in their networks. An example where the public's request was overridden is Charlottetown, PEI. See HESA 2010 Hearings.[138]

The main role of land-use authorities, e.g., municipalities, is to provide concurrence (agreement) or non-concurrence (non-agreement). If a land-use authority, e.g., municipality, disagrees with the proposed siting of a tower, the LUA does so by writing a "letter of *non-concurrence*." A municipality can also pass motions, as occurred in Ontario and Québec (more details in C4ST's guide **"Stop Wireless 5G until Health Canada's Safety Code 6 Is Fixed: A Guide to Why and How"**). A municipality can also ensure that the public is informed about the process, e.g., the City of Winnipeg's Public Engagement Process.[139] It can refuse to have antennas placed on its controlled property unless there are already by-laws and agreements in place that prevent refusal.

When local surroundings are mentioned, these procedures apply only to commercial antennas on towers and monopoles—not to antennas on "*non-tower*" structures.

If your MP said:

#C04 *There are procedures in place to address reasonable and relevant concerns raised in these consultations.*

Your possible reply

1) There are currently no regulations requiring any notification for the installation of a small cell antenna on an existing structure if the height of that structure is not increased by more than 25%.[140]
2) In addition, ISED's Dispute Resolution Process specifically excludes written requests or concerns from the general public regarding cell antenna placement.[141]
3) Inappropriately, health concerns are not deemed *"reasonable and relevant"* (nor are the potential impacts on property values or municipal taxes).[142]
4) The results of these *"public consultations"* (which are carried out by the telecommunications companies themselves rather than an unbiased third party) are not made available to the public.
5) Regardless of the outcome of the consultation, permission is generally granted to the telecom company to install its antennas; the Minister of Innovation, Science and Industry has the authority to deny a telecom's request but will not do so if the concerns are health-related.
6) Limitations inherent to 5G technology mean that deployment will require a much greater cell density, every 100 metres according to some estimates. (Each cell site, cell tower or cellular base station contains many antennas.[143]) In order for the 5G network to work, 5G small cell antennas must be installed close to the 5G devices with which they will wirelessly communicate. To be close to our homes, schools and places of work, many small antennas will be attached to utility poles, such as light posts, telephone and hydro poles, and other existing structures.

If your MP said:

#C05 *Innovation, Science and Economic Development Canada's policy for siting antenna towers is outlined in Client Procedures Circular (CPC-2-0-03), Issue 5, entitled: Radiocommunication and Broadcasting Antenna Systems.*

Your possible reply

Land-use authorities, e.g., local municipalities, can have their own policies where broader public consultations are required, including for small cell antennas. However, there are strict guidelines and parameters within which the land-use authority must operate.[144,145]

If your MP said:

#C06 *The main objective of the procedures is to facilitate an open and transparent process that promotes the continued expansion of wireless technologies and services, while at the same time ensures that the associated infrastructure is deployed responsibly.*

Your possible reply

The consultation process has not been shown to be transparent nor open. Most of the time, consultation is not required because it is considered to be of "*minimal impact*" by ISED[146]— even though Canadian residents, who will be exposed 24/7 and are aware of the health risks, disagree.

If your MP said:

#C07 *Sharing of existing infrastructure must be ruled out before a new structure is proposed.*

Your possible reply

While it is true that mandatory tower and site-sharing conditions apply,[147] sharing of infrastructure (poles/towers/buildings) will not reduce the number of antennas from multiple carriers , and therefore will not reduce the amount of radiation close to homes. Each telecommunications company will require its own full 5G coverage for everyone on the street.

If your MP said:

#C08 *Innovation, Science and Economic Development Canada takes an active role and is available throughout all steps of the process to clarify the antenna siting procedures, to explain the roles and responsibilities of the parties and to answer any questions concerning options or alternatives.*

Your possible reply

ISED is available to support the telecommunication companies, not the general public.[148] ISED's Client Procedures Circular **"CPC-2-0-03 — Radiocommunication and Broadcasting Antenna Systems"** clearly assigns the responsibility of dealing with the public to proponents and local land-use authorities (LUAs). In fact, ISED's Dispute Resolution Process specifically excludes written requests from the general public.[149]

Ask your MP

Can you ask the Minister of Innovation, Science and Industry (ISED) to update ISED's policy for siting antenna towers as outlined in Client Procedures Circular CPC-2-0-03, Issue 5, entitled: **"Radiocommunication and Broadcasting Antenna Systems"** to remove the 15 metre exclusion for public consultation/notification for non-commercial towers?

Ask your MP

Would you, as my elected representative, write to the Minister of Innovation, Science and Industry to support our Appeal for full, open and transparent public consultations on the installation of small cell antennas on all structures, regardless of height or existing infrastructure? If this is something you do not wish to do at this time, what other information do you, as my elected representative, need to act on this?

Ask your MP

Given that for towers that are 30 metres or more in height, proponents of an antenna system must place a notice of public consultation in a local community newspaper, please write to the Minister of Innovation, Science and Industry asking to require this same level of notification for all towers of all heights.

Ask your MP

Public consultation is not required for *"non-commercial"* purposes. Besides for Amateur Radio Operations (ham radio operations), what could these non-commercial purposes be? Is ISED involved in the licensing?

MONITORING OF EMISSIONS

If your MP said:

#C50 *ISED maintains a market surveillance program and routinely audits antenna installations and devices to verify compliance.*

Your possible reply

While ISED has developed standards to monitor RF radiation emitted by cell tower antennas, small cell antennas, and Wi-Fi and Bluetooth devices, this department appears to conduct little, if any, monitoring activity. It is our understanding that the industry self-monitors and that ISED's role is largely administrative. Calls to ISED to measure specific locations have been refused since *"there aren't enough resources available."*

All radiofrequency-emitting devices—whether they are cell tower antennas, small cell antennas, cell phones, cordless phones, or Wi-Fi and Bluetooth devices such as tablets, laptops, baby monitors, wireless printers/keyboards/mice, gaming consoles, virtual reality headsets, wearables, "*smart*" appliances and utility meters—are each tested individually and approved by ISED. There is no procedure, process nor authoritative body that measures the cumulative effect of simultaneous exposures to emissions from more than one device. It must also be remembered that these tests only look at heating—not any of the biological effects documented in many high-quality studies.[150]

Models used to prove that wireless devices meet ISED and Health Canada's Safety Code 6 guidelines are based on an exposure duration of 6 minutes and whether heat is dissipated within this time. There is no testing, evaluation or monitoring of 24 hours per day, 7 days per week (24/7) exposure.

The guidelines in Health Canada's Safety Code 6, which ISED relies on to regulate the radiation from wireless devices, were first established in 1979. The frequency range used was from 3 kHz to 300 GHz. To automatically assume 5G devices in this frequency range are safe is unacceptable, especially since there has been no health safety testing on long-term exposures to 5G's millimetre waves.[151,152]

If your MP said:

#C51 *Innovation, Science and Economic Development Canada (ISED) has adopted Health Canada's Safety Code 6 as the Canadian RF exposure limits for wireless devices and their associated infrastructure. Wireless devices must meet the RF exposure requirements at all times and be certified before they can be sold in Canada. Anyone who manufactures, imports, distributes, sells or leases wireless devices in Canada must comply with ISED's regulations.*

Your possible reply

While ISED has developed standards to monitor RF radiation emitted by cell tower antennas, small cell antennas, and Wi-Fi and Bluetooth devices, this department appears to conduct little, if any, monitoring activity. It is our understanding that the industry self-monitors and that ISED's role is largely administrative. Calls to ISED to measure specific locations have been refused since *"there aren't enough resources available."*

All radiofrequency-emitting devices—whether they are cell tower antennas, small cell antennas, cell phones, cordless phones, or Wi-Fi and Bluetooth devices such as tablets, laptops, baby monitors, wireless printers/keyboards/mice, gaming consoles, virtual reality headsets, wearables, "*smart*" appliances and utility meters—are each tested individually and approved by ISED. There is no procedure, process nor authoritative body that measures and assesses the cumulative effect of simultaneous exposures to emissions from more than one device. It must also be remembered that these tests determine levels only aimed to prevent excessive heating—not any of the biological effects documented in many high-quality studies.

Models used to prove that wireless devices meet ISED and Health Canada's Safety Code 6 guidelines are based on an exposure duration of 6 minutes and whether heat is dissipated within this time. There is no testing, evaluation or monitoring of 24 hours per day 7 days per week (24/7) exposure.

The limits in Health Canada's Safety Code 6, which ISED relies on to regulate the radiation from wireless devices, were first established in 1979. The frequency range used was from 3 kHz to 300 GHz. To automatically assume 5G devices in this frequency range are safe is unacceptable, especially since there has been no health safety testing on long-term exposures to 5G's millimetre waves.[153,154]

If your MP said:

#C52 *Health Canada monitors radiation emissions emitted by RF electromagnetic energy, which is used in various electronic devices such as cell-phones and Wi-Fi, as well as broadcasting and cell phone towers. They have deemed that if 5G radiation emissions do not exceed exposure limits, there is no threat to public health.*

Your possible reply

While ISED has developed standards to monitor RF radiation emitted by cell tower antennas, small cell antennas, and Wi-Fi and Bluetooth devices, this department appears to conduct little, if any, monitoring activity. It is our understanding that the industry self-monitors and that ISED's role is largely administrative. Calls to ISED to measure specific locations have been refused since *"there aren't enough resources available."*

All radiofrequency-emitting devices—whether they are cell tower antennas, small cell antennas, cell phones, cordless phones, or Wi-Fi and Bluetooth devices such as tablets, laptops, baby monitors, wireless printers/keyboards/mice, gaming consoles, virtual reality headsets, wearables, "*smart*" appliances and utility meters—are each tested individually and approved by ISED. There is no procedure, process nor authoritative body that measures the cumulative dose or effects of simultaneous exposures to emissions from more than one device. It must also be remembered that these tests determine levels only aimed to prevent excessive heating—not any of the biological effects documented in many high-quality studies.

Models used to prove that wireless devices meet ISED and Health Canada's Safety Code 6 guidelines are based on an exposure duration of 6 minutes and whether heat is dissipated within this time. There is no testing, evaluation, monitoring or regulation based on effects of 24 hours per day 7 days per week (24/7) exposure.

The guidelines in Health Canada's Safety Code 6, which ISED relies on to regulate the radiation from wireless devices, were first established in 1979. The frequency range used was from 3 kHz to 300 GHz. To automatically assume 5G devices in this frequency range are safe is unacceptable, especially since there has been no health safety testing, particularly of long-term exposures to 5G's millimetre waves.[155,156]

To meet compliance requirements, all manufacturers use a model that is based on a 200 pound (91 kilogram) male that does not take into account that children are more impacted by RF radiation than adults.[157,158] These models do not account for exposure 24 hours a day, 7 days a week (24/7). In addition, each type of device is tested individually. There is no evaluation of the effects on health from several devices operating at the same time in a classroom, lecture hall, home or office setting. The last test of power density levels in a simulated (empty) classroom-type setting was in 2012,[159] and technologies and usage behaviours have since changed.

If your MP said:

#C53 *The current Canadian limits already cover the frequency ranges that are used by 5G devices and antenna installations. Similar to current wireless devices and installations, 5G devices will need to meet RF exposure requirements before they can be sold in Canada. Antenna systems operators using 5G technology will continue to have the same RF exposure compliance obligations. Furthermore, compliance with RF exposure requirements will continue to be an ongoing obligation.*

Your possible reply

While ISED has developed standards to monitor RF radiation emitted by cell tower antennas, small cell antennas, and Wi-Fi and Bluetooth devices, this department appears to conduct little, if any, monitoring activity. It is our understanding that the industry self-monitors and that ISED's role is largely administrative. Calls to ISED to measure RF radiation at specific locations have been refused since *"there aren't enough resources available."*

All radiofrequency-emitting devices—whether they are cell tower antennas, small cell antennas, cell phones, cordless phones, or Wi-Fi and Bluetooth devices such as tablets, laptops, baby monitors, wireless printers/keyboards/mice, gaming consoles, virtual reality headsets, wearables, "*smart*" appliances and utility meters—are each tested individually before approval by ISED. There is no procedure, process nor authoritative body that measures the cumulative effect of simultaneous exposures to emissions from more than one device. It must also be remembered that the current Canadian limits only apply to heating—not any of the biological effects documented in many high-quality studies.

Models used to prove that wireless devices meet ISED and Health Canada's Safety Code 6 limits are based on an exposure duration of 6 minutes and whether heat is dissipated within this time. There is no testing, evaluation or monitoring of 24 hours per day 7 days per week (24/7) exposure.

The guidelines in Health Canada's Safety Code 6, which ISED relies on to regulate the radiation from wireless devices, were first established in 1979. The frequency range used was from 3 kHz to 300 GHz. To automatically assume 5G devices in this frequency range are safe is unacceptable, especially since there has been no health safety testing on long-term exposures to 5G's millimetre waves.[160,161]

Ask your MP

Is it true that ISED conducts only desk audits of cell antenna emissions? Files available from the Open Data portal for Spectrum Authorization* are not consistent with the meta-data provided,** and do not appear to include ground-truthed measured values. Consistent with Canada's Open Data policy, would you request that ISED provide access to the measurements that ISED has made of emissions from cell towers and from wireless devices?

* https://open.canada.ca/data/en/dataset/508040d7-6fa9-46e4-afbc-aa61f3ca317e

** http://www.ic.gc.ca/engineering/SMS_TAFL_Files/tafl_description_ltaf.pdf

Ask your MP

Given industry projections of 500 billion wirelessly connected objects by 2030[162] (that averages to more than 50 wireless devices per person[163]), what activities are being undertaken to model and

to measure radiofrequency radiation exposures in the workplace and in public and private spaces due to cellular services, Wi-Fi and the "*Internet of Things*"?

Ask your MP

How can the public request investigations and access data describing exposures, particularly the peak exposures at various frequencies and modulations, e.g., of school children using wireless devices in close quarters and with a high and constant level of data transmission?

Ask your MP

Wireless devices are approved based on compliance of emissions from a single device operating individually in isolation. In the real world, numerous devices are operated simultaneously, so will you, as my elected MP, ask what plans ISED has to start monitoring the aggregate/cumulative levels from many devices, such as in a classroom, lecture hall or office setting?

Ask your MP

Given that there will be additional radiation from tens of thousands of low-orbit satellites, how will RF radiation be monitored and cumulative effects be determined? How is coordination to monitor the cumulative effects being conducted between ISED (regulator of devices and antennas) and the Canadian Radio-television and Telecommunications Commission (CRTC), which licenses Low Earth Orbit satellites?

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APPENDIX A:
Example letters

EXAMPLE 1 - SHORTER LETTER

Dear MP _____,

Thank you for your response to my message about the importance of the **"Urgent Appeal to the Government of Canada to Suspend 5G Rollout in Canada and to Choose Safe and Reliable Fibre Connections"** that was sent to you after I signed it. http://c4st.org/5Gappeal/

My impression from your response was that you may have not fully understood the main points in the Appeal.

[Add here whatever statement your MP had in his or her email to you, and add a reply. See the C4ST suggestions of possible replies for ideas and questions on what to put here.
If your MP only sent an acknowledgement of receipt of your email, we suggest you send something like the following.]

1) What actions are you taking to ensure that we have safer wired connections, e.g., fibre-optic cables, instead of the wireless radiation that will be emitted by the *"small cell"* antennas being placed close to our homes?

2) What actions are you taking to have Health Canada's Safety Code 6 (2015) updated to include the many studies showing adverse non-heating effects, including *"clear evidence of carcinogenic activity*"? Safety Code 6 guidelines are based on the now disproven premise that heating from exposure to radiofrequency radiation must occur before there is harm to living tissue.

3) What actions are you taking to promote more meaningful local input into the installation of cell network antennas, whether on towers or on "*non-tower"* structures?

[Please, also ask for one or more items from Appendix B – Possible actions your MP can take on your behalf.]

Thank you for your attention to this important and urgent matter. Would it be possible to meet with you to discuss this further?

Sincerely,
[your name and contact information, including your postal code]

(**Note**: *A representative from C4ST would be glad to join you and your MP by phone or videoconference for a meeting.*)

EXAMPLE 2 - LONGER LETTER

Thank you for your response to my message about the importance of the **"Urgent Appeal to the Government of Canada to Suspend 5G Rollout in Canada and to Choose Safe and Reliable Fibre Connections"** that was sent to you after I signed it. *http://c4st.org/5Gappeal/*

My impression from your response was that you may have not fully understood the main points in the Appeal.

[Add here whatever statement your MP had in his or her email to you, and add a reply. See the C4ST suggestions of possible replies for ideas and questions on what to put here.
If your MP only sent an acknowledgement of receipt of your email, we suggest you send something like the following.]

1. Fibre-optic connections to the premises are superior to wireless 5G.

The first point in the Appeal was that fibre-optics is a superior choice for a variety of reasons. Many of wireless 5G's promises can be better met by using entirely wired/cabled systems that are faster and more data secure than 5G, more economical in the long run and definitely safer because they do not emit harmful radiofrequency radiation.

Would you please tell me how you and your party are advancing this as preferable to wireless connections?

2. Health Canada's guidelines are outdated and inadequate.

In 2011, the World Health Organization-International Agency for Research on Cancer (WHO-IARC) classified the radiofrequency radiation emitted by cell network antennas and cell phones as a Group 2B possible carcinogen. WHO-IARC has now called for RF radiation to be re-evaluated based on animal studies showing *"clear evidence of carcinogenicity*." More than 30 studies conducted at low intensity levels show DNA damage.

A second branch of the World Health Organization is the International EMF Project. This entity is heavily influenced by the wireless industry. These ties have been examined by two members of the European Union as well as by scientists who are independent of industry.

Will you please share this information with the Minister of Innovation, Science and Industry, as well as with the Chair and Members of the House of Commons Standing Committee on Health (HESA), and ask them to delay the rollout of 5G until this re-evaluation is conducted, and until Health Canada conducts a review of the literature on the non-cancer effects of radiofrequency radiation, such as sperm damage? This review must use international standards for scientific review.

3. Need for local bodies to determine the siting of cell antennas.

Presently, the "*small"* cellular antennas being placed close to people's homes and workplaces do not require public consultation or notification because they are deemed by Innovation, Science and Economic Development (ISED) to be *"non-tower structures."* Residents who are being exposed to wireless radiation 24/7 should have a say as to whether and where antennas are placed.

Don’t you agree?

Regulations have been changed once and they can be changed again. In 2014, ISED (then Industry Canada) modified the CPC 2-0-03 so that public consultation is required for antennas used for commercial purposes on poles less than 15 metres in height. This is in addition to the requirement for public consultation for antennas placed on new big (macro) towers.

What will you do to have regulations changed to improve public notification and to require public consultation for antennas placed on non-tower structures?

What steps will you take to ensure that citizens have a meaningful say in the placement of cell network antennas in their neighbourhoods and elsewhere?

[Please, also ask for one or more items from Appendix B – Possible actions your MP can take on your behalf.]

Thank you for your attention to this important and urgent matter. Would it be possible to meet with you to discuss this further?

Sincerely,
[your name and contact information, including your postal code]

(**Note**: *A representative from C4ST would be glad to join you and your MP by phone or videoconference for a meeting.*)

APPENDIX B:
Possible actions your Member of Parliament (MP) can take on your behalf

IMMEDIATE ACTIONS

1. Promote the use of fibre-optics as preferable to wireless in discussions in caucus and elsewhere.
2. Ask the federal Minister of Innovation, Science and Industry (ISED) to immediately halt the rollout of 5G.
3. Ask the Minister of ISED to immediately halt the auction of 5G spectrum until a full analysis is conducted.
4. Ask the Minister of ISED to publish on Open Government webpage (https://open.canada.ca/en) all measurements regarding the emissions from cell network antennas in Canada.
5. Ask the Minister of Health to provide to you the specific scientific publications and weight of evidence analysis that it uses to deem 5G as safe for human long-term exposures, and that it be published for the general public on its website.
6. Ask the Minister of Health to implement the Parliamentary Standing Committee on Health (HESA) 2015 recommendations.
7. Ask the Chair of HESA to have the scientific evidence of radiofrequency radiation's harm that has been published since 2015 reviewed by an independent panel of experts that should report back to HESA within one year; to have the 12 recommendations from the HESA 2015 report updated; and to have Health Canada report back to the HESA Committee in time for concrete action to be taken before the next federal election.
8. Sponsor an e-petition put forward by a constituent (you), e.g., opposing the rollout of 5G. Note: the MP does not have to agree with what is in the e-petition but does need to agree to sponsor it. C4ST can help draft a petition.
9. Arrange to have a meeting with the constituent (you); if you wish, a representative from C4ST will be glad to join you (by phone or videoconference).
10. Ask the Minister of the Environment and Climate Change to implement Recommendation 62 of the Report of the Standing Committee on Environment and Sustainable Development "Strengthening the Canadian Environmental Protection Act"[1] ("The Committee recommends that Health Canada and Environment and Climate Change Canada conduct studies on the effects of electromagnetic radiation on biota, review the adequacy of the current guidelines provided in Safety Code 6 and report their findings back to the Committee.")
11. Ask your MP to write a letter to a Minister on your behalf. This will often get a quicker response than a letter written by you, with the added benefit that your MP will see the response.

[1] Schulte D. (2017). **Report: Healthy Environment, Healthy Canadians, Healthy Economy: Strengthening the Canadian Environmental Protection Act, 1999**, Report #8 of the Standing Committee on Environment and Sustainable Development (42-1) - **House of Commons of Canada**, 80. https://www.ourcommons.ca/DocumentViewer/en/42-1/ENVI/report-8/

LONG-TERM ACTIONS.

1. Take actions to ensure that all communication devices and networks in Canada that can be wired, will be wired.
2. Get commitment from the Minister of Health to engage an unbiased panel to revise Safety Code 6 (2015) based on the international standards of literature review. The 2015 version was a revision of Safety Code 6 (2009). Given the evidence found in major studies since then, another review of Safety Code 6 (2015) is overdue.
3. Lobby for local control over siting of cell network antenna infrastructure and emissions.
4. Assign oversight of the health effects of wireless radiation on the health of Canadians to the Public Health Agency of Canada.
5. Ask for a review of the process the Canadian Radio-television Telecommunications Commission (CRTC) uses to approve satellite orbits and/or emissions over Canadian territories.

APPENDIX C:

List of publications of research conducted by Health Canada on radiofrequency radiation-electromagnetic fields, since 1983

Obtained from Health Canada August 4, 2020.

	Year	Study
1.	1983	Stuchly MA, Repacholi MH, Lecuyer DW. Operator exposure to radiofrequency fields near a hyperthermia device. Health Phys. 1983, 45(1):101-107.
2.	1983	Stuchly MA, Repacholi MH, Lecuyer DW, Mann RD. Radiofrequency emissions from video display terminals. Health Phys. 1983, 45(3):772-775.
3.	1987	Stuchly MA. Proposed revision of the Canadian recommendations on radiofrequency-exposure protection. Health Phys. 1987, 53(6):649-65.
4.	1991	Stuchly MA, Kozlowski JA, Symons S, Lecuyer DW. Measurements of contact currents in radiofrequency fields. Health Phys. 1991, 60(4):547-557.
5.	1999	Thansandote A, Gajda GB, Lecuyer DW. Radiofrequency radiation in five Vancouver schools: exposure standards not exceeded. CMAJ. 1999, 160(9):1311-1312.
6.	2002	McNamee JP, Bellier PV, Gajda GB, Miller SM, Lemay EP, Lavallée BF, Marro L, Thansandote A. DNA damage and micronucleus induction in human leukocytes after acute in vitro exposure to a 1.9 GHz continuous-wave radiofrequency field. Radiat Res. 2002, 158(4):523-533.
7.	2002	McNamee JP, Bellier PV, Gajda GB, Lavallée BF, Lemay EP, Marro L, Thansandote A. DNA damage in human leukocytes after acute in vitro exposure to a 1.9 GHz pulse-modulated radiofrequency field. Radiat Res. 2002, 158(4):534-537.
8.	2002	Gajda GB, McNamee JP, Thansandote A, Boonpanyarak S, Lemay E, Bellier PV. Cylindrical waveguide applicator for in vitro exposure of cell culture samples to 1.9-GHz radiofrequency fields. Bioelectromagnetics. 2002, 23(8):592-598.
9.	2003	McNamee JP, Bellier PV, Gajda GB, Lavallée BF, Marro L, Lemay E, Thansandote A. No evidence for genotoxic effects from 24 h exposure of human leukocytes to 1.9 GHz radiofrequency fields. Radiat Res. 2003, 159(5):693-697.
10.	2005	Moulder JE, Foster KR, Erdreich LS, McNamee JP. Mobile phones, mobile phone base stations and cancer: a review. Int J Radiat Biol. 2005, 81(3):189-203.
11.	2006	Chauhan V, Mariampillai A, Gajda GB, Thansandote A, McNamee JP. Analysis of proto-oncogene and heat-shock protein gene expression in human derived cell-lines exposed in vitro to an intermittent 1.9 GHz pulse-modulated radiofrequency field. Int J Radiat Biol. 2006 May;82(5):347-54.
12.	2006	Chauhan V, Mariampillai A, Bellier PV, Qutob SS, Gajda GB, Lemay E, Thansandote A, McNamee JP. Gene expression analysis of a human lymphoblastoma cell line exposed in vitro to an intermittant 1.9 GHz pulse-modulated radiofrequency field. Radiat Res. 2006, 165(4):424-429.
13.	2006	Qutob SS, Chauhan V, Bellier PV, Yauk CL, Douglas GR, Berndt L, Williams A, Gajda GB, Lemay E, Thansondote A, McNamee JP. Microarray gene expression profiling of a human glioblastoma cell line exposed in vitro to a 1.9 GHz pulse-modulated radiofrequency field. Radiat Res. 2006, 165(6):636-644.
14.	2007	Chauhan V, Mariampillai A, Kutzner BC, Wilkins RC, Ferrarotto C, Bellier PV, Marro L, Gajda GB, Lemay E, Thansandote A, McNamee JP. Evaluating the biological effects of intermittent 1.9 GHz pulse-modulated radiofrequency fields in a series of human-derived cell lines. Radiat Res. 2007, 167(1):87-93.
15.	2007	Chauhan V, Qutob SS, Lui S, Mariampillai A, Bellier PV, Yauk CL, Douglas GR, Williams A, McNamee JP. Analysis of gene expression in two human-derived cell lines exposed in vitro to a 1.9 GHz pulse-modulated radiofrequency field. Proteomics. 2007, 7(21):3896-905.
16.	2007	McNamee JP and Bellier PV, "Cytogenetic and Carcinogenetic Effects of Exposure to Radiofrequency Radiation" In: "Chromosomal Alterations: Methods, Results and Importance in Human Health. Obe, Günter; Vijayalaxmi (Eds.) 2007, XXIV, 515 p." Springer-Verlag, Heidelberg, Germany (ISBN:9783540714132).
17.	2009	McNamee JP, Chauhan V. Radiofrequency radiation and gene/protein expression: a review. Radiat Res. 2009 Sep;172(3):265-87.
18.	2012	Wasoontarajaroen S, Thansandote A, Gajda GB, Lemay EP, McNamee JP, Bellier PV. Dosimetry evaluation of a cylindrical waveguide chamber for unrestrained small rodents at 1.9 GHz. Bioelectromagnetics. 2012 Oct;33(7):575-84.
19.	2012	Wasoontarajaroen S, Thansandote A, Gajda GB, Lemay EP, McNamee JP, Bellier PV. Cylindrical waveguide electromagnetic exposure system for biological studies with unrestrained mice at 1.9 GHz. Health Phys. 2012 Sep;103(3):268-74
20.	2016	McNamee JP, Bellier PV, Konkle AT, Thomas R, Wasoontarajaroen S, Lemay E, Gajda GB. Analysis of gene expression in mouse brain regions after exposure to 1.9 GHz radiofrequency fields. Int J Radiat Biol. 2016 Jun;92(6):338-50.
21.	2019	Gajda GB, Lemay E, Paradis J. Model of steady-state temperature rise in multilayer tissues due to narrow-beam millimeter-wave radiofrequency field exposure. Health Physics. 2019. DOI: 10.1097/HP.0000000000001036 https://journals.lww.com/health-physics/fulltext/2019/09000/model_of_steady_state_temperature_rise_in.4.aspx

APPENDIX A: The entire analysis of the 140 studies omitted by Health Canada, and the Royal Society of Canada during latest revision of Safety Code 6. Source: Health Canada. See Appendix B for a summary and complete references of the 36 studies considered by Health Canada to be "in-scope" and met quality standards for risk assessment (RA).

Total # Papers Submitted by C4ST (140 without duplicates)

By C4ST Category	# submitted by C4ST	# (in scope)	# with sufficient quality for inclusion in RA	
Cancer	9	6	6	
Generic Damage	14	13	2	
Infertility	14	13	1	
Dev./Learn./Behavior	30	24	7	*one paper excluded, not English/French
Brain/Nervous System	44	42	13	*one paper excluded, not English/French
Eye	6	5	2	
Cardiovascular	4	4	2	
EHS	8	3	1	
Biochemical	65	58	16	*two papers excluded, not English/French
	194	168	50	(See Note 1)

Note 1: many papers listed in the categories above are duplicates and appear in more than one category.

Total # of unique (in-scope, sufficient quality) technical references submitted by C4ST, with duplicates removed = 36.
Health Canada has evaluated these studies and does not consider them to impact on the previously identified thresholds for established adverse health effects, basic restrictions or derived reference levels in SC6 (2015).

List of "in-scope" technical references submitted by C4ST that meet quality standards for RA

Year	Authors
2010	Ammari, M., Gamez, C., Lecomte, A., Sakly, M., Abdelmelek, H. & De Seze, R.
2010	Augner, C., Hacker, G.W., Oberfeld, G., Florian, M., Hitzl, W., Hutter, J. & Pauser, G.
2009	Bas, O., Odaci, E., Kaplan, S., Acer, N., Ucok, K. & Colakoglu, S.
2010	Belyaev I, Markova E, Malmgren L.
2012	Bouji, M., Lecomte, A., Hode, Y., de Seze, R. & Villégier, A.S.
2013	Byun, Y.H., Ha, M., Kwon, H.J., Hong, Y.C., Leem, J.H., Sakong, J., Kim, S.Y., Lee, C.G., Kang, D., et al.
2011	Carballo-Quintás, M., Martínez-Silva, I., Cadarso-Suárez, C., Alvarez-Figueiras, M. et al.
2013	Cervellati, F., Valacchi, G., Lunghi, L., Fabbri, E., Valbonesi, P., Marci, R., Biondi, C. & Vesce, F.
2010	Céspedes, O., Inomoto, O., Kai, S., Nibu, Y., Yamaguchi, T., Sakamoto, N., Akune, T., Inoue, M., et al.
2014	Coureau, G., Bouvier, G., Lebailly, P., Fabbro-Peray, P., Gruber, A., Leffondre, K. et al.
2009	Dahmen, N., Ghezel-Ahmadi, D. & Engel, A.
2013	Deshmukh, P.S., Megha, K., Banerjee, B.D., Ahmed, R.S., Chandna, S., Abegaonkar, M.P. et al.
2010	Divan, H.A., Kheifets, L., Obel, C. & Olsen, J.
2011	Esmekaya, M.A., Ozer, C. & Seyhan, N.
2014	Furtado-Filho, O.V., Borba, J.B., Dallegrave, A., Pizzolato, T.M., Henriques, J.A. et al.
2010	Grigoriev, Y.G., Grigoriev, O.A., Ivanov, A.A., Lyaginskaya, A.M., Merkulov, A.V., Shagina, N.B., et al.
2011	Hardell, L., Carlberg, M. & Mild, K.H.
2013	Hardell, L. & Carlberg, M.
2013	Hardell, L., Carlberg, M., Soderqvist, F. & Mild, K.H.
2014	Liu, K., Li, Y., Zhang, G., Liu, J., Cao, J., Ao, L. & Zhang, S.
2013	Loos, N., Thuróczy, G., Ghosn, R., Brenet-Dufour, V., Liabeuf, S., Selmaoui, B., Libert, J.P. et al.
2012	Lu, Y., Xu, S., He, M., Chen, C., Zhang, L., Liu, C., Chu, F., Yu, Z., Zhou, Z. & Zhong, M.
2014	Lv, B., Chen, Z., Wu, T., Shao, Q., Yan, D., Ma, L., Lu. K. & Xie, Y.
2010	Lyaqinskaja, A.M., Grigoriev, Y.G., Osipov, V.A., Grigoriev, O.A. & Shafirkin, A.V.
2014	Maaroufi, K., Had-Aissouni, L., Melon, C., Sakly, M., Abdelmelek, H., Poucet, B. & Save, E.
2014	Maskey, D. & Kim, M.J.
2012	Megha, K., Deshmukh, P.S., Banerjee, B.D., Tripathi, A.K. & Abegaonkar, M.P.
2012	Misa Agustiño, M.J., Leiro, J.M., Jorge Mora, M.T., Rodríguez-González, J.A., Jorge Barreiro, F.J., et al.
2013	Moretti, D., Garenne, A., Haro, E., Poulletier de Gannes, F., Lagroye, I., Lévêque, P. et al.
2012	Nazıroğlu, M., Çelik, Ö., Özgül, C., Çiğ, B., Doğan, S., Bal, R., Gümral, N., et al.
2013	Ni, S., Yu, Y., Zhang, Y., Wu, W., Lai, K. & Yao, K.
2010	Sonmez, O.F., Odaci, E., Bas, O. & Kaplan, S.
2014	Souza, Lda C., Cerqueira, Ede M. & Meireles, J.R.
2013	West JG, Kapoor NS, Liao S-Y, Chen JW, Bailey L, Nagourney RA.
2014	Valbonesi, P., Franzellitti, S., Bersani, F., Contin, A. & Fabbri, E.
2013	Zhang, Y., Yao, K., Yu, Y., Ni, S., Zhang, L., Wang, W. & Lai, K.

APPENDIX B: Studies considered by Health Canada to meet quality standards for risk assessment but for which it does not provide a rationale for excluding the findings when setting Safety Code (2015).

Summary of potentially harmful effects documented in thirty-six (36) studies which Health Canada determined to be "in scope" for Safety Code 6 Risk Assessment (see minutes of House of Commons, Standing Committee on Health: HESA, 54, 2nd Session, 41st Parliament, 24 March 2015).

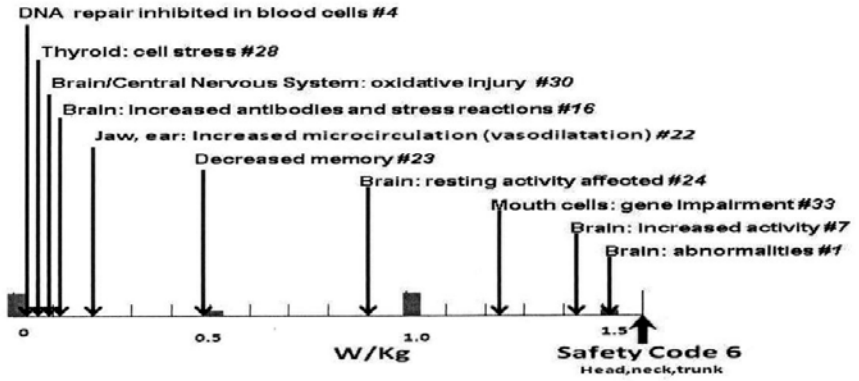
These studies are in the C4ST "140 omitted studies" report submitted to Health Canada, 15 July 2014. None are in Safety Code 6 Rationale (2015) nor in the Royal Society of Canada's Expert Panel report (2014) nor in any of their "Authoritative Reviews". All studies are in the cell/mobile phone frequency range of 900MHz to 2450 MHz, except #26 (2573 MHz) and some in IV. Specific Absorption Rate (SAR) levels were taken from the original papers and from EMF Portal http://www.emf-portal.de/

 # indicates the number of the reference on the next page.

I. Epidemiological-type studies (6), Case report (1), Literature review (1), Laboratory tests (1):

CONDITION	FINDINGS
Brain cancer: #17,18 Swedish case-control studies [note: Hardell et al. recently published a further study]	Dr. Hardell now recommends a World Health Organization, International Agency on Cancer Research (WHO/IARC) Group 1, ***known*** carcinogen classification [along with asbestos and cigarette smoke]. Dr. Hardell's work was used by the WHO/IARC to reach a near unanimous Group 2b, ***possible*** carcinogen classification in 2011.
Brain cancer: French case-control study #10	Higher cancer incidence among earliest and heaviest mobile phone users; findings are consistent with Hardell's group's work
Breast cancer: #35	USA case report of four (4) young women with no familial history of breast cancer in the precise location where they tucked their cell phones in their bras
Acoustic Neuroma: #19 Benign tumour on 8th cranial nerve	Confirmation of previous studies of an association with mobile/cordless phone use
Infertility: #21	Review found adverse effects. Conclusion: "... men should not keep mobile phone in their trouser pockets or near testicles to avoid potential harmful effect..."
Children: Attention Hyperactivity Deficit Disorder (ADHD) #6	Association with mobile phone use among children with higher lead levels
Children: 7 years in age #13	Behavioural problems associated with prenatal exposure
Electrohypersensitivity (EHS):#11	Laboratory tests: thyroid and liver dysfunction, chronic inflammation

II Biological effects below Safety Code 6 SAR for the head, neck and trunk (1.6 W/kg): Human, animal and cell culture studies



III Biological effects below Safety Code 6 SAR for whole body (0.08) W/kg: Human, animal and cell culture studies

%SC6	BIOLOGICAL EFFECTS	%SC6	BIOLOGICAL EFFECTS
1%	Brain: single strand DNA breaks #12	21%	Thyroid: cell stress #28
1%	Brain: oxidative stress, cognitive impairment, inflammation #27	38%	New born decreased body weight, effects on biochemistry #15
20%	Brain nerve development: increase in damaged cells #3	63%	Brain: dopamine and serotonin changes, impaired behaviour # 25
20%	Brain: cell loss, decrease in Purkinje cells #32	75%	Liver: DNA strand breaks #15

IV Other studies

Other studies (n=10): All >SC6. All showed effects. #5, 8, 9, 14, 20, 26, 29, 31, 34, 36.

Thirty-six (36) studies Health Canada determined to be "in scope" for Safety Code 6 Risk Assessment. See previous page for a summary of the potentially harmful effects reported in these studies.

Name of first author, title, journal and country of first author (in brackets).

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1. Ammari (2010). **GFAP [Glial Fibrillary Acidic Protein] expression in the rat brain following sub-chronic exposure to a 900 MHz electromagnetic field signal.** *International Journal of Radiation Biology*, **(France)**
2. Augner (2010). **Effects of Exposure to GSM Mobile Phone Base Station Signals on Salivary Cortisol, Alpha-Amylase, and Immunoglobulin A.** *Biomedical and Environmental Sciences.* **(Austria)**
3. Bas (2009) **900 MHz electromagnetic field exposure affects qualitative and quantitative features of hippocampal pyramidal cells in the adult female rat.** *Brain Research.* **(Turkey)**
4. Belyaev (2009). **Microwaves from Mobile Phones Inhibit 53BP1 Focus Formation in Human Stem Cells Stronger than in Differentiated Cells: Possible Mechanistic Link to Cancer Risk.** *Environmental Health Perspectives.* **(Sweden)**
5. Bouj (2012). **Effects of 900 MHz radiofrequency on corticosterone, emotional memory and neuroinflammation in middle-aged rats.** *Experimental Gerontology, 47*(6). **(France)**
6. Byun (2013**). Mobile phone use, blood lead levels, and attention deficit hyperactivity symptoms in children: a longitudinal study.** *PloS One.* **(Korea)**
7. Carballo-Quintás (2011). **A study of neurotoxic biomarkers, c-fos and GFAP after acute exposure to GSM radiation at 900 MHz in the picrotoxin model of rat brains.** *Neurotoxicology.* **(Spain)**
8. Cervellati (2013). **17-β-estradiol counteracts the effects of high frequency electromagnetic fields on trophoblastic connexins and integrins.** *Oxidative Medicine and Cellular Longevity.* **(Italy)**
9. Céspedes (2010). **Radio frequency magnetic field effects on molecular dynamics and iron uptake in cage proteins.** *Bioelectromagnetics,* **(Japan)**
10. Coureau (2014). Mobile **phone use and brain tumours in the CERENAT case-control study.** *Occupational and Environmental Medicine* **(France)**
11. Dahmen, (2009). **Blood laboratory findings in patients suffering from self-perceived electromagnetic hypersensitivity (EHS).** *Bioelectromagnetics.* **(Germany)**
12. Deshmukh (2013**). Detection of Low Level Microwave Radiation Induced Deoxyribonucleic Acid Damage Vis-à-vis Genotoxicity in Brain of Fischer Rats.** *Toxicology International* **(India)**
13. Divan (2010). **Cell phone use and behavioural problems in young children.** *Journal of Epidemiology & Community Health.* **(USA-Denmark data)**
14. Esmekaya (2011). 900 **MHz pulse-modulated radiofrequency radiation induces oxidative stress on heart, lung, testis and liver tissues.** *General Physiology and Biophysics*. **(Turkey)**
15. Furtado-Filho (2014). **Effect of 950 MHz UHF electromagnetic radiation on biomarkers of oxidative damage, metabolism of UFA and antioxidants in the livers of young rats of different ages.** *International Journal of Radiation Biology* **(Brazil)**
16. Grigoriev (2010). **Confirmation studies of Soviet research on immunological effects of microwaves: Russian immunology results.** *Bioelectromagnetics.* **(Russia)**
17. Hardell (2013a). **Using the Hill viewpoints from 1965 for evaluating strengths of evidence of the risk for brain tumors associated with use of mobile and cordless phones.** *Reviews on Environmental Health.* **(Sweden)**
18. Hardell (2011). **Re-analysis of risk for glioma in relation to mobile telephone use: comparison with the results of the Interphone international case-control study.** *International Journal of Epidemiology.* **(Sweden)**
19. Hardell (2013). **Pooled analysis of case-control studies on acoustic neuroma diagnosed 1997-2003 and 2007-2009 and use of mobile and cordless phones.** *International Journal of Oncology.* **(Sweden)**
20. Liaginskaia. (2010). **[Autoimmune processes after long-term low-level exposure to electromagnetic fields (the results of an experiment). Part 5. Impact of the blood serum from rats exposed to low-level electromagnetic fields on pregnancy, foetus and offspring development of intact female rats].** *Radiatsionnaia biologiia, radioecologiia / Rossiĭskaia akademiia nauk* **(Russia)**
21. Liu (2014) **Association between mobile phone use and semen quality: a systemic review and meta-analysis.** *Andrology*. **(China)**
22. Loos (2013). **Is the effect of mobile phone radiofrequency waves on human skin perfusion non-thermal?** *Microcirculation* **(France)**
23. Lu (2012). **Glucose administration attenuates spatial memory deficits induced by chronic low-power-density microwave exposure.** *Physiology & Behavior.* **(China)**
24. Lv (2013). **The alteration of spontaneous low frequency oscillations caused by acute electromagnetic fields exposure.** *Clinical Neurophysiology: Official Journal of the International Federation of Clinical Neurophysiology*. **(China)**
25. Maaroufi (2013). **Spatial learning, monoamines and oxidative stress in rats exposed to 900MHz electromagnetic field in combination with iron overload.** *Behavioural Brain Research.* **(France)**
26. Maskey (2010). **Effect of 835 MHz radiofrequency radiation exposure on calcium binding proteins in the hippocampus of the mouse brain.** *Brain Research.* **(South Korea)**
27. Megha (2012**). Microwave radiation induced oxidative stress, cognitive impair[illegible]c and inflammation in brain of Fischer rats.** *Indian Journal of Experimental Biology.* **(India)**
28. Misa Agustiño (2012). **Electromagnetic fields at 2.45 GHz trigger changes in heat shock proteins 90 and 70 without altering apoptotic activity in rat thyroid gland.** *Biology Open* **(Spain)**
29. Moretti (2013). **In-vitro exposure of neuronal networks to the GSM-1800 signal.** *Bioelectromagnetics* **(France)**
30. Nazıroğlu (2012). **Melatonin modulates wireless (2.45 GHz)-induced oxidative injury through TRPM2 and voltage gated Ca(2+) channels in brain and dorsal root ganglion in rat.** *Physiology & Behavior.* **(Turkey)**
31. Ni (2013). **Study of oxidative stress in human lens epithelial cells exposed to 1.8 GHz radiofrequency fields.** *PloS On* **(China)**
32. Sonmez (2010). **Purkinje cell number decreases in the adult female rat cerebellum following exposure to 900 MHz electromagnetic field.** *Brain Research.* **(Turkey)**
33. Souza (2014). **Assessment of nuclear abnormalities in exfoliated cells from the oral epithelium of mobile phone users.** *Electromagnetic Biology and Medicine.* **(Brazil)**
34. Valbonesi (2014). **Effects of the exposure to intermittent 1.8 GHz radio frequency electromagnetic fields on HSP70 expression and MAPK signaling pathways in PC12 cells.** *International Journal of Radiation Biology* **(Italy)**
35. West (2013). **Multifocal breast cancer in young women with prolonged contact between** their breasts and their cellular phones. *Case Reports in Medicine*. **(USA)**
36. Zhang (2013). **Effects of 1.8 GHz radiofrequency radiation on protein expression in human lens epithelial cells.** *Human & Experimental Toxicology.* **(China)**

APPENDIX C: List of publications of research conducted by Health Canada on radiofrequency radiation-electromagnetic fields, since 1983. Obtained from Health Canada August 4, 2020.

	Year	Study
1.	1983	Stuchly MA, Repacholi MH, Lecuyer DW. Operator exposure to radiofrequency fields near a hyperthermia device. Health Phys. 1983, 45(1):101-107.
2.	1983	Stuchly MA, Repacholi MH, Lecuyer DW, Mann RD. Radiofrequency emissions from video display terminals. Health Phys. 1983, 45(3):772-775.
3.	1987	Stuchly MA. Proposed revision of the Canadian recommendations on radiofrequency-exposure protection. Health Phys. 1987, 53(6):649-65.
4.	1991	Stuchly MA, Kozlowski JA, Symons S, Lecuyer DW. Measurements of contact currents in radiofrequency fields. Health Phys. 1991, 60(4):547-557.
5.	1999	Thansandote A, Gajda GB, Lecuyer DW. Radiofrequency radiation in five Vancouver schools: exposure standards not exceeded. CMAJ. 1999, 160(9):1311-1312.
6.	2002	McNamee JP, Bellier PV, Gajda GB, Miller SM, Lemay EP, Lavallée BF, Marro L, Thansandote A. DNA damage and micronucleus induction in human leukocytes after acute in vitro exposure to a 1.9 GHz continuous-wave radiofrequency field. Radiat Res. 2002, 158(4):523-533.
7.	2002	McNamee JP, Bellier PV, Gajda GB, Lavallée BF, Lemay EP, Marro L, Thansandote A. DNA damage in human leukocytes after acute in vitro exposure to a 1.9 GHz pulse-modulated radiofrequency field. Radiat Res. 2002, 158(4):534-537.
8.	2002	Gajda GB, McNamee JP, Thansandote A, Boonpanyarak S, Lemay E, Bellier PV. Cylindrical waveguide applicator for in vitro exposure of cell culture samples to 1.9-GHz radiofrequency fields. Bioelectromagnetics. 2002, 23(8):592-598.
9.	2003	McNamee JP, Bellier PV, Gajda GB, Lavallée BF, Marro L, Lemay E, Thansandote A. No evidence for genotoxic effects from 24 h exposure of human leukocytes to 1.9 GHz radiofrequency fields. Radiat Res. 2003, 159(5):693-697.
10.	2005	Moulder JE, Foster KR, Erdreich LS, McNamee JP. Mobile phones, mobile phone base stations and cancer: a review. Int J Radiat Biol. 2005, 81(3):189-203.
11.	2006	Chauhan V, Mariampillai A, Gajda GB, Thansandote A, McNamee JP. Analysis of proto-oncogene and heat-shock protein gene expression in human derived cell-lines exposed in vitro to an intermittent 1.9 GHz pulse-modulated radiofrequency field. Int J Radiat Biol. 2006 May;82(5):347-54.
12.	2006	Chauhan V, Mariampillai A, Bellier PV, Qutob SS, Gajda GB, Lemay E, Thansandote A, McNamee JP. Gene expression analysis of a human lymphoblastoma cell line exposed in vitro to an intermittant 1.9 GHz pulse-modulated radiofrequency field. Radiat Res. 2006, 165(4):424-429.
13.	2006	Qutob SS, Chauhan V, Bellier PV, Yauk CL, Douglas GR, Berndt L, Williams A, Gajda GB, Lemay E, Thansondote A, McNamee JP. Microarray gene expression profiling of a human glioblastoma cell line exposed in vitro to a 1.9 GHz pulse-modulated radiofrequency field. Radiat Res. 2006, 165(6):636-644.
14.	2007	Chauhan V, Mariampillai A, Kutzner BC, Wilkins RC, Ferrarotto C, Bellier PV, Marro L, Gajda GB, Lemay E, Thansandote A, McNamee JP. Evaluating the biological effects of intermittent 1.9 GHz pulse-modulated radiofrequency fields in a series of human-derived cell lines. Radiat Res. 2007, 167(1):87-93.
15.	2007	Chauhan V, Qutob SS, Lui S, Mariampillai A, Bellier PV, Yauk CL, Douglas GR, Williams A, McNamee JP. Analysis of gene expression in two human-derived cell lines exposed in vitro to a 1.9 GHz pulse-modulated radiofrequency field. Proteomics. 2007, 7(21):3896-905.
16.	2007	McNamee JP and Bellier PV, "Cytogenetic and Carcinogenetic Effects of Exposure to Radiofrequency Radiation" In: "Chromosomal Alterations: Methods, Results and Importance in Human Health. Obe, Günter; Vijayalaxmi (Eds.) 2007, XXIV, 515 p." Springer-Verlag, Heidelberg, Germany (ISBN:9783540714132).
17.	2009	McNamee JP, Chauhan V. Radiofrequency radiation and gene/protein expression: a review. Radiat Res. 2009 Sep;172(3):265-87.
18.	2012	Wasoontarajaroen S, Thansandote A, Gajda GB, Lemay EP, McNamee JP, Bellier PV. Dosimetry evaluation of a cylindrical waveguide chamber for unrestrained small rodents at 1.9 GHz. Bioelectromagnetics. 2012 Oct;33(7):575-84.
19.	2012	Wasoontarajaroen S, Thansandote A, Gajda GB, Lemay EP, McNamee JP, Bellier PV. Cylindrical waveguide electromagnetic exposure system for biological studies with unrestrained mice at 1.9 GHz. Health Phys. 2012 Sep;103(3):268-74
20.	2016	McNamee JP, Bellier PV, Konkle AT, Thomas R, Wasoontarajaroen S, Lemay E, Gajda GB. Analysis of gene expression in mouse brain regions after exposure to 1.9 GHz radiofrequency fields. Int J Radiat Biol. 2016 Jun;92(6):338-50.
21.	2019	Gajda GB, Lemay E, Paradis J. Model of steady-state temperature rise in multilayer tissues due to narrow-beam millimeter-wave radiofrequency field exposure. Health Physics. 2019. DOI: 10.1097/HP.0000000000001036 https://journals.lww.com/health-physics/Abstract/publishahead/Model_of_Steady_state_Temperature_Rise_in.99916.aspx#pdf-link

March 8th, 2021

To: Kings County Council as a Whole

Cc:

- Wolfville Council as a Whole
- Chad West (please forward)
- Frank Clegg

Dear Janny, Mayor Muttart, and King's County Councillors:

In response to the recent article in the SaltWire entitle "Exploring 5G – County of Kings examines next generation wireless after call for moratorium."

It was good to see a big article on 5G in the SaltWire (March 3 issue) but it was rather frustrating that the Kings County IT Manager, Chad West, didn't follow up on any of the many, many sources we provided during our presentation to council on January 19th. Therefore, the misinformation about the harmlessness of non-ionizing radiation was once again perpetuated in the mainstream media.

On February 3rd we sent you Canadians for Safe Technology (C4ST) fact-check document regarding some of the very statements sited by West, showing them to be inaccurate and misleading, to the point of being "misinformation."

Nonetheless, we are glad to hear that Kings County Council intends to continue educating itself on this vital matter.

To assist you with that, Frank Clegg, who responded to the recent article suggested that council set up a Zoom consultation with him. As you can see from the message below, he has also appended the various Fact Checking documents for Canada's outdated and insufficient "Safety Code 6" guidelines.

Frank Clegg's letter and attachments:

March 3rd, 2021

Glenda and Andrea,

Congratulations on your presentation to the County of Kings council and subsequent article.

https://www.saltwire.com/news/provincial/exploring-5g-county-of-kings-examines-next-generation-wireless-after-call-for-moratorium-559030/

The comments made by West reported in the article are very old and most can be refuted by our document *C4ST Fact-checks Government of Canada Webpages Regarding Health Risks and Wireless Technologies, including 5G.*

https://www.appel5gappeal.ca/eng/fact-checker.php

I have attached the word version of this document, so you can cut and paste as well as another document recently created *Engaging MP's about 5G.*

My apologies if you are already familiar with these documents.

It is encouraging to see the Mayor state the next step is for council in addressing 5G technology is to continue its education on the file. If you think we can help in that process (perhaps a zoom call into council), please let us know.

thx...f

Frank Clegg , CEO Canadians For Safe Technology

Keep your family safe from wireless radiation – See how at www.C4ST.org | http://www.facebook.com/c4st.org

(Blind links instead of attachments for your convenience: C4ST-Factchecks-GoC; Fact-Checker Appendices; Engaging-MP-about-5G_APPENDICES; Engaging-MPs-about-5G)

Other Recent Resources:

- Maclean's article: Threats to security, health, public infrastructure—and other potential costs of Canada's 5G rollout. https://www.macleans.ca/opinion/threats-to-security-health-public-infrastructure-and-other-potential-costs-of-canadas-5g-rollout/%22%20%5Ct%20%22_blank) - by David Zarnett.
- Open letter to Elon Musk: https://stop5ginternational.org/open-letter-to-elon-musk-spacex/
- Open letter on 5g: https://ehtrust.org/dr-devra-davis-and-environmental-health-trust-open-letter-on-5g/
- The 5G communication system - Expect skin and general health problems by Hugo Schooneveld: https://tinyurl.com/yxf4pseq
- Blog post by Dariusz Leszczynski, PhD, DSc: https://betweenrockandhardplace.wordpress.com/2021/02/21/censorship-in-plain-sight-by-the-mainstream-news-media/

March 20th is a Global Day of protest on these critical health issues.

We'll be handing out information at Clock Park in Wolfville at noon on that day. Please join us. https://valleyevents.ca/78352

Yours sincerely,

Andrea and Glenda

From: Andrea SW
To: Town Council
Subject: 5G moratorium follow up
Date: February 12, 2021 12:46:56 PM
Attachments: Feb12-2021-LtrWolfvilleCouncil.pdf

Dear Mayor Donovan and Wolfville Councillors,

Attached please find our letter in response to the 5G report at the last Committee of the Whole meeting.

Sincerely,
Andrea and sixteen others, most of whom are copied on this email. Those who aren't are related to those who are copied, so can receive replies through their connections.

Friday February 12th, 2021

Mayor Donovan and Wolfville Councillors,

We listened to Tuesday February 2nd's Committee of the Whole report on 5G implementation with disappointment and frustration. We were hopeful that there would be a thoughtful discussion and consideration of the growing and internationally wide-spread health concerns surrounding the implementation of this as yet unproven (from the standpoint of human and ecological safety) technology. Yet, the health implications were never raised. This leaves us wondering whether Council has thoroughly informed itself on these.

We would ask that you consider a new resource posted on the Canadians For Safe Technology website in January 2021: **Fact Checks Health Canada's Safety Code 6**

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We look forward to your reply, and we offer our help in devising a means of bringing greater awareness of these vital matters to area residents.

Yours truly,

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Ann Booth (Wolfville)
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Joel Huntley* (Scot's Bay)
Barb Lake* (Kentville)
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*a few of the many local people with Microwave Sickness, aka Electrosensitivity (ES/EHS)
**this person knows of others in the area who have Microwave Sickness/ES

Attachments:

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- Checklist for Antenna Siting Protocols

For resources see:

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- http://cqlpe.ca/pdf/Model_Resolution.pdf
- Landmark case against the FCC – January 25, 2021 *Following the opening arguments Honorable Judge Robert L. Wilkins* states **–** *"I'm just going to be very upfront with why I am inclined to rule against you"*

Further, given Council's commitment to mitigating energy use and the emissions spurring climate change, we remind you of the impending role of 5G in worsening rather than improving our planetary situation.

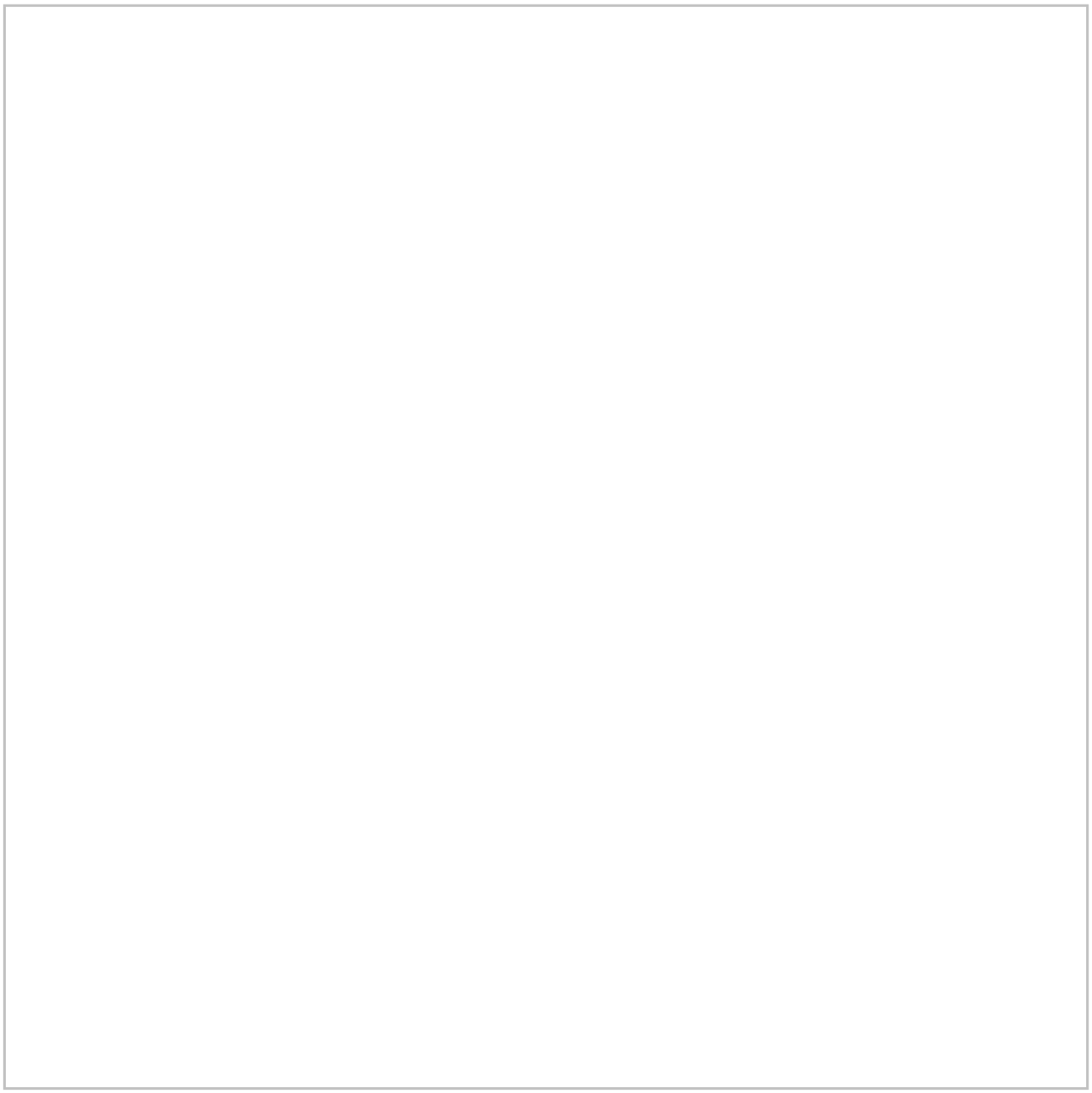
- Explanation of the grave concerns and environmental devastation that 5G will cause
    - https://stop5ginternational.org/wp-content/uploads/2021/02/Open-Letter-to-David-Attenborough-Regarding-Participation-in-the-Green-Planet-VR-App.pdf
- Our Internet Footprint: Letters to Greta (14 so far)
    - https://www.ourwebofinconvenienttruths.com/letters/
- What is not widely acknowledged is that the development of the latest generation telecommunication networks (both from space and from Earth) already has a profound impact on radio-astronomical observations (at all sub-bands): with LEO satellite fleets it is feared that the situation will become unbearable.
    - https://astronomersappeal.wordpress.com

From: Andrea SW
To: omar; Town Council
Subject: Fwd: Screening of "The Need to Grow" March 13 in Wolfville
Date: March 12, 2021 12:45:47 PM

Hello Wolfville Council and Omar,
Sorry for the very late notice on the screening of this film tomorrow, but given all the work you are doing to consider how to help our local area and the planet, this is likely of interest. There is still room in the theatre at present, if any of you can make it--please try to register by noon tomorrow if so!

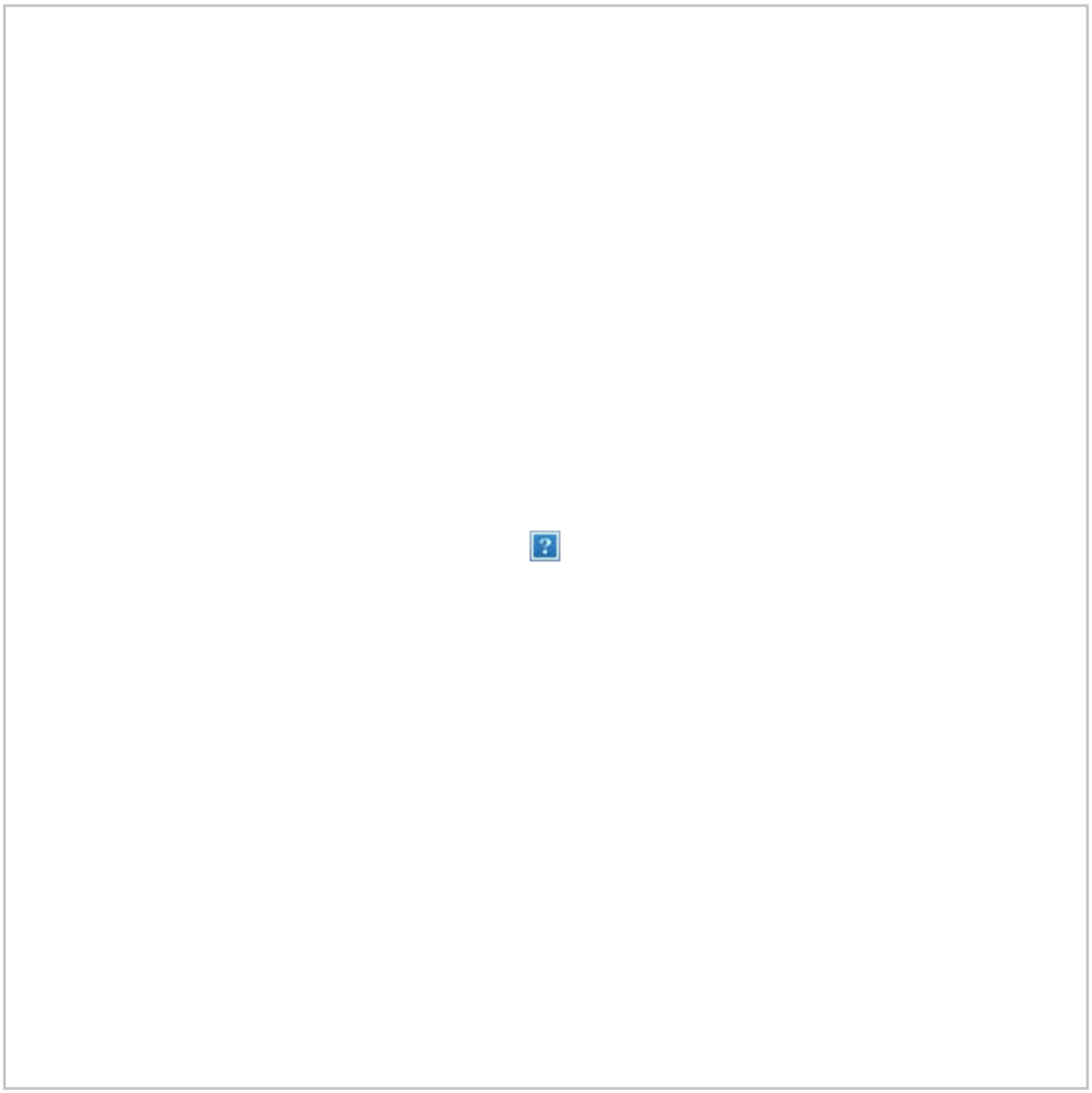
I also wanted to draw your attention to this Letter to Greta on the topic of photovoltaics--it's important to carefully track what is presented as clean tech as lots of it (like 5G) says one thing and does quite another: https://www.ourweb.tech/letter-16/
Cheers,
Andrea

---------- Forwarded message ---------
From: **Transition Wolfville Area** <>
Date: Tue, Mar 2, 2021 at 11:29 AM
Subject: Screening of "The Need to Grow" March 13 in Wolfville
To: <>



Invites YOU to private screening of *The Need to Grow!*

We have a number of Events and Projects Coming Up, (Spring Equinox 5G awareness, Gardening Workshops with Marilyn Cameron, A LocaVision Poetry Post Project) so you'll be hearing more for us again very soon…



4 pm on March 13th at the Al Whittle Theatre, Wolfville.
(If there is enough interest, we'll do a second screening at 7pm)

"Emotional, scientific, compassionate, inspiring, heart-wrenching—The Need To GROW is all of that. No human being on this planet should miss this film."-*SOVAS, Society of Voice Arts and Sciences*
https://grow.foodrevolution.org/

Cost: We are not selling tickets or charging admission but do obviously need to cover the cost of the theatre rental ($170 with tax). *This screening is a Fundraiser*. Any additional money collected will go towards renewing our website and spring projects.

Post-Screening Discussion: We have invited a few local farmers to respond to the film in order to begin a post-film conversation and initial brainstorming about how we might collectively act in response to what we've learned. Let us know if you or someone you know might like to join this panel of respondents. We are of course counting on comments from the audience! (More details about Gardening, Great Garlic, and backyard chickens workshops on the last two weekends in March to follow soon).

In order to be sure we have enough interest to proceed with this screening, we need to ***pre-register attendance by March 10th.***
Physical Distancing is still required in the theatre. To comply with Covid protocols we'll need to know if you are coming solo or in a group of two or more as this will affect seating capacity. You are welcome to invite along friends and family. We'll be in touch again if we open a second screening.
Please register here if you plan to attend------:
The Need to Grow @ Al Whittle: March 13th, 4pm

Film synopsis:

With an estimated 60 years of farmable soil left on Earth, The Need To GROW offers an intimate look into the hearts of activists and innovators in the food movement - an 8 year old girl challenges the ethics of a beloved organization - a renegade farmer struggles to keep his land as he revolutionizes resource efficient agriculture - and an accomplished visionary inventor faces catastrophe in the midst of developing a game-changing soil regeneration technology.

The Need To GROW delivers alarming evidence on the importance of healthy soil - revealing not only the potential of localized food production working with nature, but our opportunity as individuals to help regenerate our planet's dying soils and participate in the restoration of the Earth.

From:	Andrea SW
To:	Kody Blois; Wendy Donovan
Cc:	
Subject:	Re: (FW:)5G and Health Canada
Date:	February 17, 2021 6:53:23 PM
Attachments:	D49E2EEB3F0945D9AA9EED2D22C7BC75[2044860].jpg

Dear Wendy,

Thank you for your reply and for sending on Kody's predictably disappointing standard reply. At least you got an answer, which I never have (from either government representative). Nor has the Federal government had the courtesy to respond to the 5G Appeal launched last May. As clearly stated in our presentation and our materials, what Health Canada says is NOT RELIABLE because they are a CAPTURED agency. I refer you again to the thorough fact checking that they have been put through by independent (read not paid off by industry) scientists, posted on the Canadians For Safe Technology website in January 2021: **Fact Checks Health Canada's Safety Code 6**

There will be an online meeting about this document next Wednesday the 24th at 7:30 pm with Frank Clegg and Wendy Coburn. I can apprise anyone who is interested in attending of the information needed to do so.

Big Telecom lobbies the Federal government once or twice a day. There is big money involved in selling off broadband spectrum. And this is going to cost all of us on the planet our lives if something doesn't change dramatically very soon.

I really hope that at least one Councillor will have the courage to put a request on the table. At the very least the town needs to take a stand and make it clear to all the big powers that we know what they are doing to our health and our privacy and that we will not stand for it. When enough of us do that, they will start to pay attention. And if we just back off, they'll roll on over us. The Federal Government isn't listening to anyone on this matter so we need to take a stand at the local level and band together. Other Canadian municipalities have taken the lead. Let us join them and know that we have taken every step we could to do the right thing. And we have provided you with a document that is full of ideas about steps that CAN be taken. The province too could take steps.

We welcome all offers of help in staging and participating in the next International day of protest against 5G on March 20th. Too many people continue to be ignorant of the dangerous environment they and their (grand)children live in. If Council joins us in a concerted education program, then there will soon be a much greater clamouring for change.

I have copied both Kody and Keith. Here's hoping they start taking this matter more seriously very soon and exerting the necessary pressure to have attention brought to these matters. There are many more dangers to our health than the single one everyone is focused on at present.

In encouraging news, there is a recent article in Macleans pointing out many of the same concerns we have: Threats to security, health, public infrastructure—and other potential costs of Canada's 5G rollout - byDavid Zarnett.

With passionate sincerity,
Andrea

On Wed, Feb 17, 2021 at 1:50 PM Wendy Donovan <WDonovan@wolfville.ca> wrote:

Andrea as noted in my earlier email here is the response that I received back from MP Kody Blois in response to my recent enquiry.

Mayor Wendy Donovan

Town of Wolfville

p 902-698-6342 | f 902-542-4789 | e wdonovan@wolfville.ca
wolfville.ca

From: Blois, Kody - M.P.
Sent: February 11, 2021 4:03 PM
To: Wendy Donovan
Subject: RE: 5G and Health Canada

Dear Mayor Donovan,

Please see the attached letter about Health Canada's assessment of 5G technology.

Sincerely,

Kody

—

Kody Blois, M.P.

Kings–Hants

1-888-585-0550

From: Wendy Donovan <WDonovan@wolfville.ca>
Sent: January 26, 2021 11:16 PM
To: Blois, Kody - M.P. <Kody.Blois@parl.gc.ca>
Cc: Oonagh Proudfoot <OProudfoot@wolfville.ca>; Jodi MacKay <JMacKay@wolfville.ca>; Wendy Elliott <WElliott@wolfville.ca>; Isabel Madeira-Voss <imadeira-voss@wolfville.ca>; Jennifer Ingham <jingham@wolfville.ca>; Mike Butler <mbutler@wolfville.ca>; Erin Beaudin <EBeaudin@wolfville.ca>
Subject: 5G and Health Canada

Good Evening Kody;

The Town of Wolfville council has received a number of emails and delegations speaking against installations of 5G wireless service in our area. Concerns are health related and I expect you are familiar with them.

We will receive a staff overview in the coming weeks but do understand that this is an issue within federal jurisdiction. One of the early pieces of information we have been provided is that Health Canada has noted that there is no evidence of health related harms.

I expect we will continue to receive concerns from residents and understand 5G is being rolled out in Nova Scotia. It would be helpful in our response if we had some information about how Health Canada arrived at their position. I anticipate there must be any number of recent, expert, perhaps peer-reviewed studies that contribute to their knowledge. Ideally some of these would be longitudinal studies.

I would be most grateful if you could provide or direct me to a summary of the grounding for Health Canada's position. As noted we understand this is beyond our jurisdiction. However, as we do have residents asking us to declare a moratorium on 5G understanding the rationale for Canada's position will be very helpful.

I look forward to hearing from you, and hope you are keeping well.

All the Best

Wendy

Mayor Wendy Donovan

Town of Wolfville

p 902-698-6342 | f 902-542-4789 |

e wdonovan@wolfville.ca

From:	Andrea SW
To:	Town Council
Cc:	
Subject:	Re: 5G moratorium follow up
Date:	February 12, 2021 10:50:26 PM
Attachments:	Feb12-2021-LtrWolfvilleCouncil-2.pdf

Dear Mayor Donovan and Wolfville Council,

I see that I mistakenly BCC'ed the signatories rather than copying them so that you could keep them in the loop about further developments on this 5G file, so I am correctlng my error. In the meantime two others have signed on, so I've updated the letter, now signed by 18 people.
Wishing you all a good long weekend,
Andrea

On Fri, Feb 12, 2021 at 12:46 PM Andrea SW <> wrote:

> Dear Mayor Donovan and Wolfville Councillors,
>
> Attached please find our letter in response to the 5G report at the last Committee of the Whole meeting.
>
> Sincerely,
> Andrea and sixteen others, most of whom are copied on this email. Those who aren't are related to those who are copied, so can receive replies through their connections.

Friday February 12th, 2021

Mayor Donovan and Wolfville Councillors,

We listened to Tuesday February 2nd's Committee of the Whole report on 5G implementation with disappointment and frustration. We were hopeful that there would be a thoughtful discussion and consideration of the growing and internationally wide-spread health concerns surrounding the implementation of this as yet unproven (from the standpoint of human and ecological safety) technology. Yet, the health implications were never raised. This leaves us wondering whether Council has thoroughly informed itself on these.

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    - https://astronomersappeal.wordpress.com

From:	Barbara Blanchard
To:	Re: 5G moratorium follow up
Cc:	February 17, 2021 4:32:54 PM
	D49E2EEB3F0945D9AA9EED2D22C7BC75[2036114].jpg
Subject:	
Date:	
Attachments:	

Well, what a disappointment that council has no concern for their own health and wellbeing.

Barb

On Wednesday, February 17, 2021, 01:48:13 PM AST, Wendy Donovan <wdonovan@wolfville.ca> wrote:

Dear Andrea and Group;

Town Council has received your email of Friday, February 12th. I know I speak for all of Council when I say we appreciate that this situation is of great concern to you. That said, it unfortunately doesn't change the reality that we cannot address issues for which we have no authority. Certainly the Town could develop a policy to control installation of 5G small cells and larger towers on Town property, in other words not to allow installation at ground level or buildings that are the property of the Corporation of the Town of Wolfville (which should not be confused with property that is simply within the Town). If a councillor wishes to bring forward that option for discussion they may do so and all of Council has been provided with the appropriate form and process should one of them wish to bring that forward. However, as the polls and lines are not Town property and municipalities can not impede communication providers from accessing their property e.g., the poles and lines, I expect that ultimately such a policy would not achieve your objective.

As I am sure you have done as well, I did reach out to Kody Blois, our MP, sharing your concerns. I will forward his response although I expect it is consistent with what you have already received.Certainly if you have not I would encourage you to reach out to Kody Blois, and our Provincial MLA Keith Irving. Both have some jurisdiction with respect to this issue that the Town does not.

Sincerely

Mayor Wendy Donovan

Town of Wolfville

p 902-698-6342 | f 902-542-4789 | e wdonovan@wolfville.ca
wolfville.ca

From: Andrea SW
Sent: February 12, 2021 10:50 PM
To: Town Council
Cc:
Subject: Re: 5G moratorium follow up

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From:	Dani Nadeau
To:	Town Council
Subject:	SUPPORT DELIVERING COMMUNITY POWER / APPUI ENVERS LA CAMPAGNE VERS DES COLLECTIVITÉS DURABLES
Date:	March 15, 2021 3:35:00 PM
Attachments:	image001.jpg image002.jpg EMarchRequest for Support for Delivering Community Power_E.pdf Mailing informations for SUPPORT DELIVERING COMMUNITY POWER_E2.pdf resolutionSUPPORT DELIVERING COMMUNITY POWER_E2.pdf Coordonéés pour APPUI ENVERS LA CAMPAGNE VERS DES COLLECTIVITÉS DURABLES_F2.pdf FMarsRequest for Support for Delivering Community Power_F.pdf resolution APPUI ENVERS LA CAMPAGNE VERS DES COLLECTIVITÉS DURABLES_F2.pdf

Sir, Madame,

Attached is a letter from our National President, Jan Simpson, as well as a resolution that may be adopted by your council.

Our *"Delivering Community Power"* campaign is on the rise and fits perfectly into a just and inclusive post-COVID revival that will benefit all communities. Canada Post and its network of 6,400 post offices needs to offer more.

Already more than 1,000 municipalities across the country have adopted a resolution to this effect. We are putting a lot of pressure on the federal government and your support will be invaluable.

If you need more information or have any questions about our campaign, please feel free to contact me and I will be happy to help.

Please accept my best regards.

Scott Gaudet
Delivering Community Power
Campaign Coordinator- Atlantic Region
sgaudet@cupw-sttp.org
(782)640-5619

Monsieur, Madame,

Vous trouverez ci-joint une lettre de notre présidente national, Jan Simpson, ainsi qu'une résolution qui pourrait être adoptée par votre conseil.

Notre *campagne « Vers des collectivités durables » est* à la hausse et s'inscrit parfaitement dans un renouveau post-COVID juste et inclusif qui profitera à toutes les communautés. Postes Canada et son réseau de 6 400 bureaux de poste doivent en offrir davantage.
Déjà plus de 1 000 municipalités à travers le pays ont adopté une résolution à cet effet. Nous mettons beaucoup de pression sur le gouvernement fédéral et votre appui sera inestimable.

Si vous avez besoin de plus amples renseignements ou si vous avez des questions au sujet de notre campagne, n'hésitez pas à communiquer avec moi et je serai heureux de vous aider.

Veuillez accepter mes meilleures salutations.

Scott Gaudet
Vers des collectivités durables
Coordonnateur de campagne - Région de l'Atlantique
sgaudet@cupw-sttp.org
(782)640-5619

cupw•sttp

377, rue Bank Street,
Ottawa, Ontario K2P 1Y3
tel./tél. 613 236 7238 fax/téléc. 613 563 7861

March, 2021

Subject: Request for Support for Delivering Community Power

Dear Municipal Leaders,

In 2016, the Canadian Union of Postal Workers, with a coalition of allies, launched *Delivering Community Power* – a visionary program for Canada Post to confront climate change, promote better access to expanded services, bring financial inclusion to unbanked and underbanked communities, and address other social inequalities – all by making the most of our existing public postal service network.

Today, while progress has been made on many of the initiatives in the vision, the situation has become more urgent. Effects of climate change are deadly and are affecting nearly every part of society all around the world. The COVID-19 pandemic has revealed the need for a more equal, more resilient society that prioritizes the health of our must vulnerable neighbours and loved ones, *before* profit. We are relying more than ever on the internet to connect people and to do our business, but rural residents are getting second-class service.

The continuing decline of letters combined with a dramatic rise in parcels from e-commerce makes it plain to see: the postal service has to adapt to a new reality. This is a great opportunity to address multiple problems at once, with a valued public infrastructure that connects everyone in their own community.

Please consider proposing the attached resolution to have your municipality endorse the campaign for expanded services, financial viability, climate action, and – all through leveraging our public postal system. The time is now!

Thank you for your support!

Jan Simpson
National President
Canadian Union of Postal Workers

//dn cope 225

MAILING INFORMATION

Please send your resolution to: Anita Anand, Minister of Public Services and Procurement, Rm 18A1, 11 Laurier Street Phase III, Place du Portage, Gatineau, QC, K1A 0S5

Please send copies of your resolution to:

Jan Simpson, President, Canadian Union of Postal Workers, 377 Bank Street, Ottawa, Ontario, K2P 1Y3

Your Member of Parliament. You can get your MP's name, phone number and address by calling 1-800 463-6868 (at no charge) or going to the Parliament of Canada website: https://www.ourcommons.ca/Members/en

Please save this document using the name of your organization or municipality in the document's name.

//dn cope 225

SUPPORT DELIVERING COMMUNITY POWER

Whereas there is an urgent need for banking services among the unbanked or underbanked, given that thousands of villages and rural municipalities do not have a bank branch and more than 900 municipalities have expressed their support for postal banking;

Whereas thousands of Canadians do not have access to affordable high-speed Internet, and the federal government has long promised to bridge the rural broadband gap;

Whereas urgent action is needed to establish a robust network of electric vehicle charging stations;

Whereas to achieve carbon-neutral targets by 2050, Canada Post must greatly accelerate the electrification of its fleet;

Whereas the extensive network of post offices in our communities can provide a wide range of services as community hubs;

Whereas Canada Post's letter carriers and RSMCs can check-in on vulnerable residents to help keep us in our homes longer as we age;

Whereas Canada Post must play its part for a more equitable post-pandemic recovery;

Whereas "The Way Forward for Canada Post," the report of the 2016 federal public review of the postal service, recommended that Canada Post expand services and adapt its services to the changing needs of the public;

Whereas the Canadian Union of Postal Workers has advanced *Delivering Community Power*, a vision of the post-carbon digital-age postal service that address the above needs and more;

Be it resolved that endorse *Delivering Community Power*, and write to the Honourable Anita Anand, Minister for Public Services and Procurement, with its rationale and a copy of this resolution.

From:	David Daniels
To:	Town Council
Cc:	Erin Beaudin
Subject:	Devour Capital Request
Date:	February 5, 2021 3:19:49 PM

Dear Council Members:

I am in the process of reviewing concerning the Devour request for funds.

I have a few initial comments and requests concerning process.

First, it would be very helpful if the Town could make available a "time" table of contents that enables a person who is listening to the recording to find the place in the recording where a particular discussion occurs.

I know Kings County does this.

Here is a link to an example.

https://www.countyofkings.ca/upload/All_Uploads/Council/Meeting_Documents/COTW/2021/2021-01-19%20COTW/agenda/2021-01-19%20COTW%20Agenda%20Package.pdf

It would also be helpful if the agenda package included page numbers besides the items on the actual agenda. Again, like a table of contents.

Second, there was reference in the January 12th recording, in response to a question posed by Councillor Butler, to a report issued by NS Communities, Culture and Heritage office that calculated the economic impact of the 2019 Devour Festival. Reference was made to economic impacts in Devour's presentation.

There was reference to a business plan for the proposed project in the January 14th COW meeting.

Have these documents, and any others relied upon by council to make its decision, been placed on-line or in some other way been made available to the public?

Third, I was unable to locate a copy of the RFD for the Devour project in either the January 14, 2021 COW agenda package or minutes. (The minutes refer to Devour RFD as No. 004-2021 and the Agenda refers to the Devour RFD as No. 005-2021.)

Thank you,

David A. Daniels

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https://www.countyofkings.ca/upload/All_Uploads/Council/Meeting_Documents/COTW/2021/2021-01-19%20COTW/agenda/2021-01-19%20COTW%20Agenda%20Package.pdf

It would also be helpful if the agenda package included page numbers besides the items on the actual agenda. Again, like a table of contents.

Second, there was reference in the January 12th recording, in response to a question posed by Councillor Butler, to a report issued by NS Communities, Culture and Heritage office that calculated the economic impact of the 2019 Devour Festival. Reference was made to economic impacts in Devour's presentation.

There was reference to a business plan for the proposed project in the January 14th COW meeting.

Have these documents, and any others relied upon by council to make its decision, been placed on-line or in some other way been made available to the public?

Third, I was unable to locate a copy of the RFD for the Devour project in either the January 14, 2021 COW agenda package or minutes. (The minutes refer to Devour RFD as No. 004-2021 and the Agenda refers to the Devour RFD as No. 005-2021.)

Thank you,

David A. Daniels

Questions concerning the Capital Request – Devour! The Food Film Fest

The following appears on page 6 of the business plan:

> *Devour! has designated charities of choice including the Community Food Centres of Canada, Nourish Nova Scotia, and the Wolfville Area Food Bank.*

What does a "*designated charity of choice*" mean?

In the Summary – Capital Request - Devour! The Food Film Fest (the "Summary") Mr. Howell responded to questions.

The first question concerns ownership of the subject property.

Mr. Howell states that "we will sign a lease . . ." It is unclear what entity Mr. Howell is referring to when he says "we".

What entity will be purchasing the property from Mr. Lindsay and Ms. Campbell?

Will the Town solicitor have the right to review any documents that will require the transfer of the real property from Mr. Lindsay and Ms. Campbell to a Devour! entity?

Will the eventual owner be a registered charity?

The applicant has also requested a graduated tax accommodation in accordance with s. 71C of the MGA. I understand that the Town will consider that request separately and not at this time.

When Mr. Lindsay and Ms. Campbell transfer the property to the new entity, will certain portions of the property that are now designated commercial for property tax purposes become tax exempt under s. 71 of the MGA? And if portions of the property do become tax exempt, how much tax revenue will the Town lose?

The second question in the Summary concerns a possible memorandum of understanding (MOU) between the Town and the owner (and subsequent owner?) of the building.

The Town should request that as part of the MOU, the Town will be able to hold large meetings/hearings at the facility.

The applicant for a capital grant must explain why the grant request "*is aligned with Council's Strategic Plan."* See Town Policy No. 710-003.

The Town's Strategic Plan, 2017 – 2021, lists "affordability" as the first of the Town's listed "principles". Under "*Improving Quality of Life for All" is listed "To foster economic independence, inclusion and dignity through more affordable and diverse housing options*."

According to the documents submitted by Slow Motion Food Film Fest Society, the building that has been purchased as part of the project includes seven residential apartment units. A rough calculation based upon figures provided indicates that the monthly rent for the units is approximately $700.00.

If these units are moderately (affordably?) priced, then the Town should include in the MOU provisions that would limit the amount rents may be increased over time and would prevent the elimination of these rental units.

In the material provided there was reference to MOUs signed with Acadia University and NSCC. Will Acadia University and/or NSCC being contributing any funds to the project?

Has funding for the project been requested from the Town of Windsor or the County of Kings? If not, why not?

The seventh topic/questions in the Summary ask about the funding requested from the Town in relation to funding from the Provincial and Federal Governments.

In response the applicant states: *"Wolfville stands to gain the most economic and socio-cultural benefits from this project, so must have some 'skin in the game.' So, yes the simple answer is that the town must be seen by funders to be behind it, not just from a supporter point of view."* Would a $50,000.00 contribution be

sufficient to demonstrate that the Town has “skin in the game” and is “behind” the project?

Will granting of the requested graduated tax accommodation demonstrate the Town’s commitment to the project?

The applicant states that in the past 75% of the economic impact from the Devour! Film Festival (?) has benefitted the Town.

As regards funding the project, the issue is not the economic impact resulting from the film festival itself, but the benefits derived from the proposed Devour! Studios? Are there projected figures on the economic impact from the operation of the Devour! Studios both within and without Wolfville?

The applicant has not explained how it arrived at the $100,000.00 figure as the requested amount. The applicant also did not answer the question “what happens to Devour! Studios if the [Town’s] funding is . . . . at a lower level[?].

Respectfully,

David A. Daniels

From:	David Daniels
To:	Town Council
Cc:	Erin Beaudin
Subject:	Town Strategic Plan
Date:	February 15, 2021 3:24:43 PM
Attachments:	Coomments and Qs Strat Plan 1a .docx

Dear Council Members:

Please accept the attached comments and questions concerning the Town's proposed Strategic Plan.

Respectfully,

David A. Daniels

February 15, 2021

Dear Council Members:

Please accept the following comments and questions concerning the proposed Town's Strategic Plan.

The RFD 006-2021, under the topic Discussion, states in part:

> *On December 16th, Council met to review the existing Strategic Plan, community priorities and policies in the newly adopted Municipal Planning Strategy and to discuss the feedback provided by residents and businesses during the election campaign.*

I reviewed the Meeting Calendar, Town Council Meetings and COW meetings on the Town's website and was unable to find any reference to a December 16, 2020 meeting. Perhaps it's there and I did not look in the rights places.

The following paragraph appears in the Discussion section:

> *3. Most words to describe the town e.g., inclusive, accessible, socially responsive have been removed, not that these elements are not part of the Town but because they, along with many other attributes, are written into the Town's DNA through policy and practice and expectation. The term socially responsive in* (sic) *was not used, although it was mentioned by several councillors in the initial discussion. There is concern that this term could lead us to move into, or be expected to move into, areas that are not part of the Town's core and legislated responsibilities e.g., into areas that are of Provincial responsibility. The absence of that term should not be understood to suggest the Town is not a socially responsible player, nor that the Town would not support socially responsive initiatives. Rather there is concern that including the term as a principle might make it more difficult to step back when Council is asked to take an initiative outside our mandate.*

In the past when I've written about Council decisions I've quoted portions of the then existing Strategic Plan and argued that the decision was not consistent with the Plan.

If Council decisions are to be guided by the principles of inclusivity, accessibility or social responsibility, then it should say so in the Strategic Plan. These

principles are discussed in the staff's RFD. However, a reference to these principles in the RFD is different from including them in the Plan itself.

Reference to being socially responsible was left out of the Plan because of a concern that the use of the term could lead the Council into areas beyond the *"Town's core and legislated responsibilities"*. What are the Town's core and legislated responsibilities?

Most of the powers a municipality has are delegated to it by the MGA.

Section 2 of the MGA states:

> *Purpose of Act*
>
> *The purpose of this Act is to (a) give broad authority to councils, including broad authority to pass by-laws, and to respect their right to govern municipalities in whatever ways the councils consider appropriate within the jurisdiction given to them; (b) enhance the ability of councils to respond to present and future issues in their municipalities; and (c) recognize the purposes of a municipality set out in Section 9A. 1998, c. 18, s. 2; 2019, c. 19, s. 1.*

Section 9A of the MGA states:

> *Purposes of a municipality*
>
> *9A The purposes of a municipality are to (a) provide good government; (b) provide services, facilities and other things that, in the opinion of the council, are necessary or desirable for all or part of the municipality; and (c) develop and maintain safe and viable communities*.

Section 14A of the MGA states:

> *Interpretation of powers*
>
> *14A The powers conferred on a municipality and its council by this Act must be interpreted broadly in accordance with the purpose of this Act as set out in Section 2 and in accordance with the purposes of a municipality as set out in Section 9A. 2019, c. 19, s. 3.*

It is not clear from the relevant sections of the MGA that acting in a socially responsible manner is somehow beyond the core or legislative responsibilities of a municipality. The term "socially responsible" is similar to the terms "social

equity" and "community wellness" both of which are listed as Strategic Directions in the Plan.

The Strategic Plan lists five principles that are to guide the Council's work.

1. *Sustainability: Decisions will be made with a view to long-term viability of the Town and its sectors.*

2. *Transparency: Decisions will be made openly and in public.*

3. *Accountability: Council is responsible for decisions and their impact. Decisions are a function of the whole of Council.*

4. *Well-Communicated: Council decisions and the processes leading to decisions will be well communicated using the media and mediums available to ensure the decision processes are shared.*

5. *Evidence-Based: Decisions will be based on factual evidence, the importance an issue is to the community, and other realities of our community life.*

> *2. Transparency: Decisions will be made openly and in public.*

In the context of the functioning of a municipal government, what is the difference between "openly" and "in public"? You may wish to explain or give examples.

Section 22 of the MGA states, in part:

> *Open meetings and exceptions*
>
> *22 (1) Except as otherwise provided in this Section, council meetings and meetings of committees appointed by council are open to the public.*
>
> *(2) The council or any committee appointed by the council may meet in closed session to discuss matters relating to (a) acquisition, sale, lease and security of municipal property; (b) setting a minimum price to be accepted by the municipality at a tax sale; (c) personnel matters; (d) labour relations; (e) contract negotiations; (f) litigation or potential litigation; (g) legal advice eligible for solicitor-client privilege; (h) public security.*

> *(3) No decision shall be made at a private council meeting except a decision concerning procedural matters or to give direction to staff of, or solicitors for, the municipality. . . .*

In light of the requirements of the MGA, is there a need to include in the Town's Strategic Plan as a principle that Council decisions will be made in public?

"Transparency" may have other meanings beyond making decisions in public and if so, the Council may wish to include them in the Plan.

(I found Michael Schudson's 2016 book The Rise of the Right to Know, especially ch. 8, informative on the issue of transparency.)

The fifth guiding principle is "Evidence-Based."

> *Decisions will be based on factual evidence, the importance an issue is to the community, and other realities of our community life.*

Why were the factors "importance of an issue" and "*other realities of our community life*" in decision making included under the rubric of "*evidence based*"? Is the Plan saying that answers to the questions of what is important to the community and determining the realities of community life will be based on evidence?

Perhaps it would make more sense to include as a separate sixth principle the second and third factors listed in the fifth principle.

Not included in the five principles that are to guide the Council's work is an explicit reference to public engagement in the decision making process.

The fourth principle, "well-communicated", talks about making the public aware of Council's decisions and the processes leading up to the decisions. But awareness of the process and decisions is not the same thing as the need to get public input.

I am aware that public participation is required by the MGA when municipalities are making certain kinds of decisions and that the Town has policies mandating and describing how the public input may occur. However, Council may wish to consider including general language in the Town's Strategic Plan that public engagement is an important principle in the Council's decision making process.

The Council's selection of its Priority Initiatives is an important decision. It will likely have impacts upon how Town funds are expended and how staff time is allocated.

How were the priorities selected? "*Council's Priority Initiatives are initiatives that a majority of Council members heard in the community as priorities."*

Is there information about whom the council members spoke to in the community? Is there a numerical breakdown of the conversations and what was said? How many homeowners spoke or wrote to the elected council members? What about the number of business owners or renters or visitors? Were reasons given by the individuals spoken to to support their priority initiative choices?

Rather than relying upon what may be primarily anecdotal evidence, perhaps the Town should carry out a systematic and open inquiry asking residents, the university, visitors and business owners what the Town's Priority Initiatives should be?

Respectfully,

David A. Daniels

From: dst
To: Town Council
Subject: Dogs Running Free - through our backyard
Date: March 10, 2021 7:09:25 PM

Our property is beside Reservoir Park. March 9th at approximately 5:00 we had a man in our backyard looking for his dog. This time he was with an SPCA officer. Last time he was looking for his dog he was not with an officer. We were happy that this time the man was accompanied with an SPCA officer but the officer was much more concerned about the dog being lost, than respecting our privacy.

The last time the man was in our backyard to gather his dog my husband was outside and picked up both of our small children until the owner gained control of the dog. My husband expressed his concern with having a unknown dog and a unknown man in our backyard. The man stated it was ‘good for our children to be exposed to dogs’.

Having unknown people randomly enter our backyard and having unknown dogs in our backyard is disturbing to us as a family.

Our children should be able to play in the backyard without any stranger having an excuse to enter our property.

We, as parents, know that children can be quickly maimed by dogs.

As parents, we should be able to decide where, when and what person or dog our children are exposed to. Especially on our own property.

We expect that our children can be safe and free from strangers and dogs in our backyard.

As the entrance to the park says, 'dogs are running free'. Much too free.

Please see 'dogs running free' as an issue and solve the problem.

Why does the "right" for dog owner's to let their dogs free surpass our right to have our children safe from strangers and their dogs in our own back yard?

**** Before this email got sent**** another dog that was much larger and heavier than our children bounded though our backyard until it's owner found it and retrieved it.

From: Irmgard Lipp
To: Town Council; Wendy Donovan
Subject: 5G Moratorium
Date: February 17, 2021 11:02:58 PM

Dear Mayor Donovan,

Dear Wolfville Councillors,

I feel I also have to express my disappointment about councils decision to simply drop the 5G issue – dropping it as if you never received any information about the health and safety concerns surrounding this technology.

Did you ever read my letter in support of the proposed moratorium, sent January 15 - about 5G Conferences in Europe, about thousands of very concerned scientists, researchers, medical professionals, and tech people all over the world pleading with governments to slow things down until the safety of it has been established?

Why Health Canada and the Department of Innovation, Science and Industry have been ignoring all this, is any ones guess (and one can become very cynical contemplating this question.)

That's why we have to work up from the local level. Communities have to band together, declare a moratorium and let the Ministers know that the "Precautionary Principle" is still alive in Canada.

You have been given the information to verify the facts as presented to you by Andrea, so you can form an objective opinion. An opinion that is NOT influenced by the simple truth that we want and think we NEED this technology, therefore it MUST be safe. We do think, we should be able to trust the industry and the government, weelll??? We have been duped by both in the past, because more money and more influence trump everything. Just think about the issues in the last century, and how long it took governments to address them: DDT, Asbestos, Big Pharma, Big Oil (denial and lies about Climate Change), Big Tobacco. New laws and policy changes didn't come about until there were undeniably serious health consequences and dead bodies. When it comes to the telecommunications industry, it is said that they use the same tactics the tobacco industry used to confuse consumers and the bureaucrats. This is 2021, they are now that much more sophisticated. One thing must be obvious to everybody: People and their activities are nothing but a very lucrative trough of data to these companies.

Wireless is much easier to hack into. Why are we not concerned about our privacy and safety when everything is connected 24/7?

Wireless can consume up to 100 x more electricity. Why are we not concerned about this, when we know we have to reduce our energy foot print?

It is an established fact that non-thermal radiation affects cell-structures in some ways. The use of wi-fi gadgets and therefore exposure to EMFs has gone up exponentially. No generation of young people has ever been bombarded with such relentless exposure to unnatural

radioactive waves. So why are we not concerned how this will affect our kids ?

South of our Canadian border they are now talking a lot about “... bringing people back to facts, back to science ...” Let’s do that here as well with regards to this issue. Let’s look at the facts (and I mean facts researched by independent scientists) on both sides of the spectrum. Even if it were 50 / 50, wouldn’t that be enough reason NOT to give the tech & telecommunication companies free range to get any idiotic wireless product on the market and NOT to continue the deployment of 5G until proven safe? (By idiotic products I refer to wireless diapers, baby soothers, and tablets for toddlers, but also the condoned 5 hours of wi-fi exposure in schools 5 days/week for our kids – only possible because of the inadequacies of Safety Code 6) Wouldn’t it be a “reasonable” request by citizens from their representatives to “play it safe”, adhere to the “Precautionary Principle”, declare a moratorium and ramp up the research instead?

It’s on us to make that demand, and we do need your informed participation to get it done.

Please, work with us on this issue.

Irmgard Lipp

From:	kevin.gildart
To:	Kelton Thomason
Cc:	Devin Lake; Town Council
Subject:	New Tourism Welcome Centre
Date:	February 23, 2021 9:43:44 AM

Good morning Kelton.
I was pleased to read in allNS.com this morning about the progress of the new Tourism Pavilion.
As with any construction project, even at the best of times, there are challenges. Adding C-19 considerations, and the task becomes far more daunting.
Congratulations as you move toward opening day of a long needed upgrade in this vital segment of Wolfville's economic infrastructure.
Kevin Gildart

From:	Wolfville Children"s Centre
To:	Town Council
Subject:	WCC Annual General Meeting via ZOOM
Date:	March 11, 2021 3:12:32 PM
Attachments:	2020 ANNUAL REPORT.pdf

Dear Mayor Donovan and Councilors

On behalf of the Wolfville Children's Centre Board of Directors, it is my pleasure to provide you with a ZOOM invite for our upcoming Annual General Meeting.

I am attaching the 2020 Annual Report should you be interested in learning about how our year transpired in the midst of a pandemic.

Due to the state of emergency called almost one year ago, childcare centres as you may know, were closed for a 12 week period. the WCC did not gather for its AGM scheduled for March 31, 2020 as most of the province was in a state of lockdown. A full year later and we are still in a state of emergency and not required to hold an AGM. However, the board felt it important to not have another year go by without inviting families and community to take part in its election process and to reflect on WCC's accomplishments and operations.

If you are interested in attending virtually, please contact me and a link will be sent for you.

Regards

Laurie St Amour
Executive Director
Wolfville Children's Centre

ANNUAL REPORT

2020

WOLFVILLE CHILDREN'S CENTRE

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Wolfville NS

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"CARING FOR OUR FUTURE"

Contents

March 2021

Chairperson's Message

On behalf of the Board of Directors I am pleased to present the 2020 annual report of the Wolfville Children's Centre (WCC).

2020 was a unique year at the centre. The Provincial Government closed all childcare centres from March 17-June 15, 2021. Centres were limited initially to reopening at 50% capacity. Our afterschool program capacity was reduced from 21 children to 15. Notwithstanding these challenges I am pleased to report that the Centre is in great financial shape and that our educators have not been financially harmed by the closure/lower capacity. Both the provincial and federal governments have supplied funding that has allowed us to pay our staff, meet our expenditures and to implement the many changes needed to adapt to the COVID-19 protocols.

Thanks to my fellow board members who continue to represent the WCC constituency in an outstanding manner. Thanks particularly to our retiring board member, Jean Kelly, who most recently has served as board treasurer – Thank-you Jean! I want to welcome John Smith back to the board and I also want to welcome Jean Lusk to the board. John and Jean will join the re-offering members; Tanya Surette (who has graciously offered to serve as chair), Scott Landry (secretary), Cindy Rivard (treasurer), Joyce Kerr, Gina Haverstock, Stephen Schneider and Stephanie Beckers. 2021 will be another challenging year and we are fortunate to have such a strong and capable board.

Because of COVID-19 protocols we have been unable to allow volunteers to give their time to the Centre. We look forward to the time when their valuable assistance can again be accepted.

Thanks as always to the outstanding professionalism exhibited by the caregivers employed by the centre. 2020 is a great validation of the commitment our educators and staff exhibit on an ongoing basis.

Thanks to Alice Taylor who, as our Assistant Director, wears many hats, bookkeeper, educator, manager and support person to our Director. She is an invaluable member of the team.

This is my last report (and I mean it this time). I have truly enjoyed serving on the WCC board and a big part of that enjoyment has come from working our Executive Director, Laurie St. Amour. It is with mixed emotions that I congratulate Laurie on her decision to retire from the Centre. She has given her all to the Centre for over 30 years and she will be sorely missed. We all truly wish Laurie the best in her future endeavors.

Mike Townsend

Board Chair

I. History and Programs

Wolfville Children's Centre (WCC) is an organization oriented to the needs of children: aware that each child needs love, acceptance, and knowledge in order to thrive and grow into caring, confident individuals. The Centre maintains the philosophy that EVERY child is entitled to quality care.

The Centre is a non-profit registered charity. Its programs include care and education for children aged 18 months to 12 years. Included in these programs and supported in funding through the Department of Education and Early Childhood Development (DEECDS) are children with identifiable special needs.

Wolfville Children's Centre began operation in the Student Union building of Acadia University in 1972. Students with small children organized a parent cooperative to assist each other in continuing their education while raising their families.

Shortly after opening, the need for more space and affordable childcare prompted the co-operative to seek a registered charitable status, hire a fully trained staff and recruit board members from within its parent group and the community at large. In 1974, the centre relocated and expanded its services to include infant and school age care. Students and low-income families were now able to obtain assistance with their daily fees through the Department of Community Services. (now under the Department of Education and Early Childhood Development Services: DEECDS) The Centre was designated with 40 subsidized spaces to enable families to access childcare from the community and surrounding areas. Today, a "portable" subsidy program exists; families may choose the centre they wish to have their child enrolled and be provided with assistance for their fees.

3 relocations in the next 30 years with many changes to its programs, WCC presently provides care and education to forty-four (44) children ages 18 months to 5 years in a multi-age (family grouping style) setting. Afterschool care is provided for up to twenty-one (21) children in grades Primary to six in an off-site location. In total, sixty-five (65) children attend its program daily.

Multi-age or "family" groupings combine children 18 months to 5 years with a maximum group size of 12 children with 2 educators. Care is taken to keep siblings together as well as balance age groups and gender. This grouping benefits all ages; in particular, children with special needs as there is no obvious distinction in levels of development. Positive social interactions occur more frequently in a setting of varying ages and developmental stages; there is an observed reduction in aggressive behaviours, particularly with toddlers, due to a more language enriched environment.

A full-time resource specialist is on staff to support families of children with identifiable special needs. Routine based program plans (RBPs) are co-developed with families, often with an intervention team to assist with the implementation of these plans. WCC supports families by referrals to intervention agencies and establishes a "bridge" with public schools, enabling a smooth transition. Support is also available to children in the school-age program.

In 2009, Wolfville Children's Centre became "property owners." This 20-year goal was realized through a $175,000 loan/grant from DEECDS ($43,750 payable over 10 years at 1% interest) and a $100,000 reduction in purchase price from the Eastern Kings Memorial Health Foundation (EKMHF). Community, board members, and staff finalized the purchase with fundraising and donations totaling $25,000. The Centre completed its financial responsibility in October 2019, when the mortgage was "paid in full".

In 2010, the Centre received a $50,000 repairs and renovation loan/grant from DEECDS ($12,500 payable over 5 years at 1%). This funding was used to insulate the ceiling/roof; the balance of the cost ($20,000) was funded through the Centre's building account and individual donations.

Since 2012, all windows have been replaced and upgraded to an energy efficiency level; again, WCC was fortunate to have the capital funds to complete the work.

In the fall of 2015, the afterschool program relocated to a former multi-purpose room located in the lower level of the Student Union Building of Acadia University. WCC had come "full circle" and once more has a program offered on campus as it did in 1972!

In 2017, WCC celebrated 45th years! We celebrated with a community theatre production of well-loved Robert Munsch stories, an open house, and a commemorative cookbook.

In 2019, a further grant of $50,000.00 was given to all non-profit childcare centres to upgrade and update facilities' needs. WCC chose to install a heat-pump system throughout the centre to assist with both cooling and heating in an energy efficient fashion. The cost for this project totalled $30,000.00. Other upgrades included a new oil tank, classroom sink/cupboard and kitchen counter replacement.

2020 proved to be one of the most challenging years the WCC has ever experienced; the world-wide pandemic known as COVID-19 "shut down" all nations and forever changed the human experience. The province of Nova Scotia shut down all public schools and childcare on March 15, 2020, with centres opening again at a 50% capacity in June. To date, WCC has yet to recover full enrolment as has been its typical status for over 30+ years.

2020 also saw the pre-primary program begin at Wolfville Elementary as well as to many other schools/communities that would "feed into" the enrolment of Wolfville Children's Centre. The impact of less "older" children is felt in all of the multi-age classrooms resulting in a more toddler-based program demanding an energy that educators are challenged to sustain in an 8 hour work day.

Over 2,000 children have benefitted from early learning and childcare since the Centre opened in 1972.

2020 Enrolment Statistics

Work force and students (Other than Acadia University)	69%
Acadia University (Students, Faculty, Administrative, etc.)	25%
Socialization	4%
Special Needs/Agency referrals	2%
Families receiving subsidy	22%

II. Individual Needs

At Wolfville Children's Centre, early learning and childcare is provided in a relaxing environment where children are offered group learning activities and individual interactions delivered by a fully credentialed, permanent staff. The environment is "child friendly" with children supported through structured and "free play" activities. These activities and experiences assist in the further development of essential life skills and brain development. Learning is promoted in all areas of development: intellectual, emotional, social and physical. Educators encourage and support individual expression, confidence, and self-esteem with the goal of enticing a life-long joy of learning.

The multi-age environment enables individual growth through leadership opportunities for "older" children and a language enriched environment for "younger" children.

III. Relationship with the Community

In addition to providing quality childcare, the Wolfville Children's Centre:

1) Provides a learning environment for students of Early Childhood Education.
2) Provides Acadia students and community members with an opportunity to volunteer their services to its programs. The Centre has associations with organizations seeking volunteer and/or paid positions for intellectually challenged adults.
3) Provides referrals to agencies specializing in supporting children and families.
4) Participates in annual fund-raisers for outside causes (Canadian Cancer Society, Muscular Dystrophy, Wolfville Foodbank, etc.).
5) Introduces children to their community through visits to local organizations (fire station, post office, grocery store and pharmacies).
6) Provides interaction with community members (visits to local nursing and assisted living homes).
7) Provides a transition from early childhood education and care to public school.
8) Provides a safe environment for children at risk (referrals from Family & Children's Services).

Wolfville Children's Centre is an important part of the community.

IV. Future

Maintaining a level of high quality in all its programs is an ongoing commitment of staff and Board. Other goals of the upcoming year(s) include:

1) To continue with an outdoor playground enhancement plan
2) Public education about the services and benefits of early childhood education through involvement in promotions such as National Child Day, open houses, etc.
3) Opportunities for community involvement on the Board of Directors.
4) Continuation of resource and support to families on topics related to child development, counseling, and other support agencies.
5) Continuation of programs that include children of all abilities, cultures, and family dynamics.
6) Advocacy for increased core funding through federal and provincial channels to stabilize and enhance the operation of quality care; not merely to meet licensing requirements.
7) Advocacy for a publicly funded, not-for-profit, community based national childcare system.
8) Securing a permanent facility arrangement for the Afterschool program.

**** Due to the pandemic, the Society was not brought together for an Annual General Meeting due to the State of Emergency called in March 2020. The meeting minutes of 2019 remain as part of the 2020 Annual Report. ****

WOLFVILLE CHILDREN'S CENTRE
2019 ANNUAL GENERAL MEETING
WU Welcome Centre

Date: Tuesday, March 26, 2019 at 6:30 pm at Wu Welcome Centre at Acadia University

Present: Mike Townsend, Alice Taylor , Jean Kelly, Oonagh Proudfoot, Stephanie Bekkers, Scott Landry, Gillian Mainguy, Laurie St. Amour, Alice Taylor, Gina Haverstock, Town of Wolfville Wendy Donovan (Wolfville Councillor), Suzanne Stewart, Lisa MacDonald, Tess Etienne, Brea Moreau, Amy Hiltz, Sam Huphman, Nicole Askew, Katie MacDonald, Patti and Zach Ryan, Leah Warner, Andrea MacLean, Temma Frecker, Nicole Ross, Allison Carey, Agnieszka Hayes, Cindy Rivard.

Regrets: Stephen Schneider, Acadia Student Union Manager Ian Morrison, MLA Keith Irving

1. Mike Townsend called meeting to order at 6:30 pm

1a. Introductions & Acknowledgement of Special Guests:
- Mike acknowledged the attendance of Suzanne Stewart (on WCC board for 20 years) and Town of Wolfville Councillor Wendy Donovan

2. Recognition of Staff:
   c. Mike thanked Gillian Mainguy and Oonagh Proudfoot for their dedication and service to the board over the past number of years. Mike presented them with a card and some flowers.
   d. Mike formally thanked the staff and expressed how appreciative the board was for all their hard work.
   e. Laurie also asked the staff to introduce and provide a background regarding their training and years with WCC. Laurie then acknowledged all the wonderful educators at WCC and thanked them for their dedication and service to the centre and the children within our community.

3. Approval of Agenda – **Moved by Jean Kelly and seconded by Cindy Rivard. Motion carried.**

4. Approval of 2018 Annual General Meeting's Minutes: **Moved by Oonagh Proudfoot and seconded by Agnieszka Hayes. Motion carried.**

5. Business Arising:

a. Pre-Primary Program: Mike spoke with Keith Irving recently; he and Laurie met with Keith in December 2018 regarding the impact a pre-primary will have when Wolfville School is named. It is not certain if this will happen in the upcoming school year (2019/20), and if not, it will be the following year (2020/21) as a definite. Laurie answered a question related to how the WCC would be impacted (there will be families who will withdraw their children from any number of regions given that schools will be offering in the upcoming two years and yes, there will be a drop in the number of 4-year old's attending). Due to the centre already being equipped for multi-age groupings in the 3 of 4classrooms, the adjustment will be with respect to programming rather than enrolment.

It may be necessary to convert classroom #4 into a multi-age "friendly" environment (change table, additional toilet/sink, etc.) but not for the immediate future.

6. Business Presentation and Motion to accept the Wolfville Children's Centre 2018 Annual Report: **Moved by Oonagh Proudfoot and seconded Gina Haverstock. Motion carried.**

7. Presentation and Motion to accept the 2018 Year End Financial Statements as prepared by TC Jones, Chartered Accountants: **Moved by Gillian Mainguy and seconded by Jean Kelly. Motion carried.**
   a. The financials are reviewed statements but not formally audited which would be timely and costly. Mike spoke to page 2 of the financial report: profit and loss. 2018 was a good year financially; however, that was "on the backs of" staff who had to cover additional time and responsibilities due to unavailability of substitutes and qualified staff. Mike acknowledged and thanked all the educators within the WCC. Being "in the black" for 2018 is allowing the center to transfer $10,000 from the operating account to the building/capital account increasing it to @ $60,000. Mike also said the WCC has applied for an upgrade grant of $50,000 for an oil tank replacement, air exchange removal, kitchen countertop replacement, exterior lighting upgrade and heat pump/ air conditioning system.

8. Presentations:

Allison Carey (Primary Teacher at Wolfville School)

- Allison has been teaching primary for almost 20 years and she has 17 students in her class this year and 22 last year. She highlighted that routine (e.g., bedtime) and healthy snacks is very important. There is 60 minutes of reading per day in grade primary and there is still lots of play time from Primary to Two.
- Almost all of the children showing up to the Wolfville School know the alphabet, are able to write their name and are generally quite prepared.
- Gillian asked what parents can do to help with the transition of getting them ready for school. Allison noted some of the following: how to zipper their jackets and pants, being toilet trained, being able to open or easily access snacks, practising re-packing their lunches, pencil grip (described how to properly grip a pencil), sneakers with no laces. The students do not get any computer time in her classroom (her personal preference) but there are chrome books available at the school.
- Parents should continue to be a "teacher" even after the children start school. Allison talked about the benefits of having a child starting primary at a later date if they have the option. The student has a much better experience (e.g. leaders, helpers) when they start primary at an older age (five instead of four years old).

9. Presentation of New Slate of Board Members for 2019/20:

Mike Townsend	- Chairperson (community representative)
Gina Haverstock	- Vice chairperson (parent representative)
Jean Kelly	- Treasurer (community representative)
Scott Landry	- Secretary (parent representative)
Stephanie Bekkers	- Parent/Community representative
Cindy Rivard	- Parent Representative
Stephen Schneider	- Parent representative
Nicole Ross	- Community representative

Motion made to accept slate of board members. **Moved by Agnieszka Hayes and seconded by Alice Taylor. Motion carried**

10. New Business:
    a) **Program discussion (license status, grants, curriculum, health & safety, staff):** Laurie said the centre is in full compliance and spoke about the various grants the centre can apply for. She spoke about the costs associated with running the centre (e.g., equipment, parking, cleaning, etc.), replacing 32 windows, reinsulating the centre ($70,000 with a $50K of this coming from a grant)). Laurie talked about the grants and how a receipt of them requires a cap on what the parent fees can be or how much they can be increased by on a yearly basis. Laurie also spoke about the various fundraising initiatives that have and continue to take place to support the WCC. There was a question about how to handle children talking about fires. Laurie explained how they do a fire drill once a month and highlighted some of the things (fire safety lessons) they reinforce with the children (stay low to the ground, do not go back in to get your shoes, etc.) that may result in a child speaking about it often at home in a way to work through feelings about emergencies.
    b) **Parent committee/volunteer opportunities:** The WCC has a full slate of directors for the upcoming year. The two new board members are Cindy Rivard and Nicole Ross and the two board members leaving are Oonagh Proudfoot and Gillian Mainguy. Parents were encouraged to become involved in projects (like the 45th anniversary cookbook), be active in helping out with excursions and fundraisers for Muscular Dystrophy, Terry Fox Walk, etc.
    c) **Neighbours Helping Neighbours:** Laurie provided an overview of this event and reminded everyone that it is taking place on Sunday, March 31st from 12:30-3:00 pm. This is a group of Acadia Students who want to help non-profit organizations and the community at large.
    d) **Farmer's Market table for selling cookbooks in April:** Laurie said they are looking for parents who would be willing to oversee a table where they could provide information on the WCC and also sell the cookbooks that were printed last year. Laurie said it would be nice to have 4-6 parents helping out with this initiative.
    e) **Quality Matters Parent/Board/Staff survey results:** Mike spoke to the summary that Stephen Schneider provided earlier this year and said that we had over 48 responses (approx. 50% return) from the online survey, which is considered excellent participation. Laurie explained the Quality Matters Initiative in more detail and what the mandate was from the province. Mike also thanked the board, staff members and parents for filling out the surveys.
    f) **Barho Family Tragedy:** Tess Etienne commented that the WCC raised $165 for the Barho Family who lost 7 children to a house fire in Halifax.

11. Date of Next Annual General Meeting: Tuesday March 31st, 2020 at 6:30 pm

12. **Motion to Adjourn made by Tess Etienne at 7:51 pm.**

Respectfully submitted

Scott Landry
Board Secretary
Wolfville Children's Centre

ADMISSIONS REPORT

WCC compiles a wait list each year; priority is given in the following order:

a) Referrals from agencies for emergency and/or developmental intervention
b) Siblings of children who are already in care
c) Children of working or studying families
d) Full-time versus part-time children
e) Socialization

Families may choose from a part-week to full-week option of childcare. 103 children were involved in the various levels of care and education during 2020.

The centre operated for 9 months due to the closure of childcare March-June. The significant drop in enrolment affects the overall averages for the calendar year. The centre experienced an overall enrolment of $57% to its typical 90%.

AVERAGE DAILY ATTENDANCE	**Per Month**	**Licensed Capacity**	
Multi-age program:	**24**	**44**	**55% ****
Afterschool program	**10**	**21**	**48% ****
ADMISSIONS FOR YEAR:	**19**		
WITHDRAWALS FOR YEAR:	**41**		

Should there be unusual and extreme challenges with a child transitioning into care; the Executive Director may call upon board members to form an ad hoc committee to be apprised of the situation. A team meeting to explore strategies may be developed to assist the child to continue.

FACILITY REPORT

A “fixed” property committee was established in 2011 to research the age and status of the facility, its furniture, fixtures, and equipment to develop plans for upkeep and replacement.

A building expense budget of $8,000 is allocated annually to address aging mechanical equipment (plumbing, water heaters, etc.). At the end of any fiscal year if this amount is not used in its entirety, the balance may be transferred to the centre’s “capitol account” to hold against future building considerations. Many thanks to Ann denOuden, a former board member/treasurer for her significant financial contributions both during and after her participation with WCC. $61,946.05 is presently in the capitol account which includes a $51,946.05 one-year GIC.

See below for details on capitol expenditures for the year ended December 31, 2020:

Earnscliffe Ave. Building Expenses

Playground fencing/sail cloth repair	$ 6,081.00
Stove/microwave/countertop replacement	$ 1,621.00
Plumbing/lighting/heating replacement & repairs	$ 662.00
Total building costs	**$ 8,364.00**

FUNDING/GRANTS REPORT

Quality Improvement Grant (QIG):

• Multi-age program (Earnscliffe Ave)	$ 87,588.00
• Afterschool program (Student Union Building)	$ 17,776.00
Total	**$105,364.00**

Program Support Funding (PSF):

• Multi-age program	$38,400.00
• Afterschool program	$ 4,300.00
Total	**$42,700.00**

Inclusion Support Grant (ISG):

• Multi-Age program (Earnscliffe Ave)	$24,458.00
• Afterschool program (SUB)	$14,058.00
Total	**$38,515.00**

The combined ISG totals listed above are used to implement and support individual children and programs primarily through resource/support staffing, program equipment, resources, and professional development. The centre currently has two (2) positions: a full-time resource specialist and a part-time support person for the afterschool program. Since reopening after the 12-week closure of childcare; an additional support position was created to assist with maintaining ratio in cohorts, extra cleaning/disinfecting, etc. As a result, two of the three grants were reduced by 10 days, due to the board/staff decision to delay opening to ensure that staff were emotionally as well as technically prepared to deliver the high quality of care and education that families have come to know and expect from WCC.

To receive any the above grants, a centre must in full compliance with the Day Care Act and Regulations as well as agree to “cap” the amount charged to families for daily/ monthly fees in accordance with provincial/regional averages.

The Centre was very fortunate to receive a one-time **$50,000 Program Enhancement Grant** in 2019 to address issues pertaining to energy, accessibility, materials/equipment, and renovations. The centre completed the balance of the items listed below. ($10,056.00)

- Installation of stainless-steel counter tops in the kitchen
- Replacement and relocation of oil tank
- Installation of heat pumps in all rooms to augment both cooling and heating of building
- Replacement/upgrade of exterior after-hours lighting
- Removal of non-functioning air exchange units
- Installation in classroom #4 of utility sink and counter/cupboards

PROGRAM REPORT

Staff encourage children's interests through a process known as Emergent Curriculum. Children are observed at play; teachers take note of their interests of the day/week/month. They then research ideas, activities, materials, and experiences that expand on those observations or community events. For example, we are talking about "Healthy Hearts" and take turns listening to each other's hearts with a paper towel tube and will add a doctor's kit to the dramatic play and talk about taking care of our bodies by exercise, healthy foods, and rest. Documentation panels (photographs) are put up in classrooms and hallways regularly to further support learning through recall and language recognition.

"**Capable, Confident, and Curious: Nova Scotia's Early Learning Curriculum Framework is based on the concept of the Image of the Child which says that everyone's personal Image of the Child is influenced by their own experiences, biases, and knowledge. This framework's Image of the Child sees children as curious, creative, full of potential, capable, and confident. It values and honours children for who they are today, and for who they will become. It also values how all children's families, cultures, and communities influence on and contributions to children's learning and development."**

WCC also incorporates holidays, community events and weather in program plans. These include winter, snow and ice, Chinese New Year, Valentine's Day, Groundhogs and Shadows, Healthy Hearts, St. Patrick's, Spring, Easter, Mother's Day, Father's Day, Fall, Halloween, Remembrance Day and Feelings, Christmas and Holidays Around the World.

It is very important to have predictability in the daily program. Young children respond best within a dependable and predictable time structure; they gain a sense of security from knowing "what comes next". Activities include music and movement, science and nature, language, literacy, dramatic or "pretend" play, sensory, fine motor, and manipulatives to support cognitive development, art and creativity, construction, multicultural activities and conflict resolution.

Interaction between children and adults, conflict resolution/mediation and specific activities to enhance expression of emotions (Taming the Dragon, Peace in the Classroom, Zones of Regulation, Learn Not to Burn, etc.) are important building blocks for assisting children while navigating "life lessons".

Due to Covid-19 restrictions, fieldtrips and special events looked much different. We did manage to be quite creative and still maintain relationships with our community!

Field Trips:

Wolfville Nature Trails
Quiet Park
Clock Tower Skate Park
Wolfville School Playground
Peace garden on Main St. (Heritage building)

Parent Participation

- Communication with families is delivered through casual daily conversations, eight-week child assessment reports and six-month progress reports, monthly newsletters, email, and the parent message board.
- Parents attended one (1) virtual meeting in 2020, the orientation meeting for new and returning families. Although we were not able to be in person, there was great conversation regarding the COVID protocols as well as program discussion. The centre created a Family Connections FaceBook page in March to connect children and families with others during the "lock-down" of childcare in Nova Scotia from March 16 to June 15, 2020. When the centre reopened, the page was left "open" to further assist in communicating and displaying what the children are involved in as families are not permitted in the building. Daily "take away" information sheets were also instituted to support family communication and involvement.

- The playground work that was to be initiated through the Quality Matters goal set by the parent committee was "put on hold" due to the pandemic; however, 6-7 parents were helpful in spreading pea gravel and sand in areas that required it. Another playground section (the front and side of the north side) was created for the dual purpose having a separate play area due to COVID, but also as an area that would give much needed shade in the summer months. Temporary fencing to separate the 4 classroom cohorts was installed in late July.
- In October, a few families from the parent committee along with 5 or 6 Acadia students had a Fall cleanup of the playground and surrounding yard. Many thanks everyone!

Special Events:

- Vesey Seeds $ 355.00
- Our Terry Fox walk (Little Fox Run) was held in September. $85 raised for cancer research (**Since hosting our first Terry Fox School Run in 1992, WCC has contributed $6,822.47 to cancer research in Canada!)**
- Graduation books for 22 children
- Parent meetings: October Orientation Meeting (via ZOOM)
- Food bank collections for local community
- Nashwaak Valley Farm visit here at the centre
- Outside caroling at Wickwire Assisted Living and The Wolfville Nursing Home
- Christmas Cards sent to the residents of both
- Christmas & 100th birthday cards sent to Veterans

Program & Equipment Purchases ($ 5,328.00)

- Arts and Crafts supplies
- Annual garden/playground supplies (seeds, soil, sod, fencing, etc.)
- Cameras for each room
- Graduation/portfolio books
- Pea gravel
- Playground sand
- Photo development/documentation panels
- Sensory equipment (sand, baking soda/vinegar, cornstarch, playdoh materials)

FUNDRAISING/ DONATIONS REPORT

WCC continued with fundraisers from the past; flowers and bulb sales through Veseys Seed, as well as continued with the 45th Anniversary WCC Cookbook campaign,

Due to the pandemic, the Gaspereau Art Market could not hold their events; subsequently we did not receive a donation this year from the door proceeds. As always, a special thank you to Barb and Brian Robinson, interested community members, for their continued financial support.

Parent/Community Cash donations	$ 1,948.00
In-kind donations (IT, A/S fridge discount)	$ 550.00
Cookbook sales	$ 165.00
Veseys Seeds	$ 355.00
Class Photos fundraiser	$ 278.00
Total	**$ 3,281.00**

PERSONNEL REPORT

All permanent educators have Level I, II, or III classification credentials in Early Childhood Education. Staff are knowledgeable and sensitive in determining the developmental needs of young children. Important factors of growth are met through thoughtful planning of activities, observations of children at play and making use of resources in the community. A minimum of 12 professional development hours, in addition to monthly staff meetings, provide an ongoing approach to Early Childhood Education and Care. Regular off-floor classroom planning time ensures co-educators can collaborate on enhancement to curriculum development.

Along with an established salary base wage (with additional compensation for years of service, responsibility levels, etc.), the centre offers a 50% co-pay group medical/dental plan, a 50% co-pay, registered savings plan (RSP), six (6) annual paid sick days that can generate in to a 22-day sick bank, and a generous vacation time policy.

During this time of COVID, staff has also been given a 14 day "bank" to use when testing and/or sickness or quarantining must take place.

1. STAFF (as of December 31, 2020)

Status	Program	Ratio	Employees/Contracts
7 Full-time Educators	18 months-5 years	1:6	Isheh Al Masri Katie McDonald Amy Hiltz Tracy Davidson Tara Smith Cynthia Urtubia Viviane Pereira
1 Special Needs Resource Specialist (18 months-12 years)			Sam Huphman Tess Etienne***
1 Special Needs Support position (afterschool)			Jessica Stoddard
1 After School Teachers	5-12 years	1:11	Alice Taylor**
1 Executive Director			Laurie St. Amour**
1 Assistant Director/Afterschool teacher			Alice Taylor**
1 Cook			Melissa Whitehead
1 Cleaner (sub-contract)			Chris Paul

- *All educators have approved classification for working in NS childcare*
- *** denotes certification through the Nova Scotia Certification Council of Early Childhood Educators*
- ****This support position was created due to the protocols and restrictions pertaining to Covid-19*

2. Professional Development $ 3475.00

WCC has embarked over the past few years on more of a centre-specific journey for offering/providing professional development. This change has led to further enhance and support a quality work environment. Staff are actively participating in team-oriented activities and strategies for their own growth and development that will not only benefit them professionally but expands to include their personal well-being and care. **During this time of COVID, emphasis and opportunities for team building reached an unprecedented level where the focus on emotional well-being both during and after the closure of WCC. It was also the team's first experiences with virtual professional development.**

Heidi Kalyani and Bruce Diennes, consultants for community empowerment, personal growth and development, engaged the team during the months of April into June. These involved both individual and group participation using ZOOM as well as an outdoor day-long professional development (to keep the physical distancing protocols). Expansion of "Dropping Anchor in the Midst of an Emotional Storm" continued to support staff through effectively identifying stress triggers and the root causes of stress. Through guided activities staff explored avenues for releasing stress (meditation, sensory relaxation techniques for example) as well as sharing personal techniques.

In addition to these events, staff are given the opportunity to sign up for evening and weekend courses provided through the Dept. of Education, Early Years Branch. These included Curriculum Framework modules 1-8. These were presented virtually.

The NSCC, Kingstec Campus, presented their annual professional development, Health and Wellness in the Early Years also in a virtual format over a two-week span on evenings and weekends.

It is the intention of the Board to further support professional development by allowing one working day per year to be set aside. The day has been determined to be the Monday after Easter Sunday; this year to be held on April 5/21.

3. SUMMER STUDENT GRANT $ 3928.00

Student Career Skills Development Program: Funding was provided by Canada Summer Jobs Program to hire a student for the summer months. Amber Eggertson, was accepted as a first year ECE student for Kingstec Community College. She assisted the afterschool program for 8 weeks during July and August.

4. VOLUNTEERS

Acadia University (various programs)	0
Special Needs	1
Community members	1
Total volunteers	**2**

An initiative through Acadia university having students to reach out to the community called Neighbours helping Neighbours was postponed due to Covid restrictions.

5. STUDENT PLACEMENTS

Nova Scotia Community College (Kensey Konings & Amber Eggertson)	2

Additional Staff Notes:

- Dot Paul has been on a medical leave since December 2017; she resigned her position December 1, 2020 due to continued health challenges. She will be missed!!! She would have celebrated her 20th anniversary this December!
- Melissa Whitehead celebrated her 20th anniversary as our cook in October!
- Tara Smith returned from maternity leave October 1, 2020
- Tess Etienne was hired late September 2020 to fill an additional support position to assist during the COVID restrictions.
- Chris Paul, the cleaner, retired his position and left December 31, 2020
- Nichole Askew left for maternity leave on March 6, 2020; Isheh Al Masri replaced her June 1, 2020.

BOARD OF DIRECTORS
2020-2021

Executive Positions:

Chairperson ..... Mike Townsend (Community Representative) *

Vice-Chair ..... Gina Haverstock (Parent Representative)

Secretary ..... Scott Landry (Parent representative)

Treasurer ..... Jean Kelly (Community Representative) *

Other Members of Council:

……Stephen Schneider (Parent Representative)

…… Cindy Rivard (Parent Representative)

……Stephanie Bekkers (Community Representative)

……Tanya Surette (Parent Representative)

……Joyce Kerr (Community Representative)

2021 Outgoing members:

*Mike Townsend, chairperson

*Jean Kelly, treasurer

Committees:

Finance	Mike Townsend	Jean Kelly
	Laurie St. Amour	
Admissions	Laurie St. Amour	Alice Taylor
Parent	Gina Haverstock	Scott Landry
	Stephen Schneider	Cindy Rivard

From:	Rosemary Feener
To:	Town Council
Subject:	Wed. March 10th Re: Live Zoom "Comments" at Meeting of 26th Feb/21
Date:	March 10, 2021 7:54:12 AM

Dear Mayor Donovan and Council Members,

I wonder if anyone actually takes note of the **Comments** made online during council meetings? I have received no acknowledgment of mine!

I made three during the session on Feb. 26 @8:30 am--the last one in reply to a councillor's comment about the congestion at the 4-way Stop on Main Street being only problematical on a few occasions during the summer--such as the Devour Food/Film Festival! I strongly disagree!

I have lived on (East) Main Street, Wolfville for 3 1/2 years. Over this time, I can observe traffic flow from the convenience of my shaded front porch and I have noticed that traffic has greatly increased over this time. It has become obvious to me that **every weekend during the Summer/Fall season**, traffic on Main Street, proceeding West towards the downtown core, is **backed up as far as Blomidon Inn**, due to the **congestion at the 4-way Stop**, Main at Gaspereau!

I am pleased to follow the public sessions of Wolfville Town Council via Zoom and I do take an interest in the affairs of my Town!

Thank you for your consideration, and I look forward to your reply!

Regards,
Rosemary Feener

From: Rosemary Feener
To: Town Council
Subject: Wed. March 10th 2nd PS to Email about Congestion @ 4-Way Stop
Date: March 10, 2021 8:07:55 AM

Dear Mayor and Council Members,

Further to my email just sent, I forgot to add that it is often difficult **to exit my driveway** and turn on to Main Street, in either direction, **during summer/fall weekends,** due to the traffic backup!

Also, when I have friends coming to visit at this time period, I now ask them to **avoid Main Street, Wolfville**, altogether and come to my home, via the Ridge Road, exiting via Gaspereau Ave., down to Pleasant St., and then East to Sherwood Drive--and finally down to Main Street below St. John's Anglican Church, in order to avoid being tied up in traffic on Main Street, Wolfville! (These instructions have come due to the frustration expressed by visitors to my home who have frequently complained it took them 20 minutes or more to navigate Main Street Wolfville, coming into Town via Greenwich Corner!)

Sincerely,
Rosemary Feener--concerned citizen

From: Shasta Grant
To: Town Council
Subject: International Women"s Day campaign features
Date: February 16, 2021 3:01:19 PM

Hello to all Town Council members,

My name is Shasta and I am a student in the community development program at Acadia. I am working with a few classmates on a social media campaign directed at Acadia students for International Women's Day. The campaign will showcase and celebrate the stories and work of diverse local women and empower local women-owned businesses.

I was wondering if any women from the Town Council would be open to being featured in one of these posts, which would include a photo and a few short interview questions. The info can be collected over Zoom, email, or in person, whichever you prefer.

Looking forward to hearing from you!

Thanks,
Shasta Grant

From: Thomas Clahane
To: Town Council RE: 5G moratorium follow up
Cc: February 17, 2021 5:18:13 PM
image001.jpg
Subject:
Date:
Attachments:

In fact, very disappointing. It appears that council is arguing that they have NO power that can be exercised. I have been told that this is not so, but I don't have the absolute proof that they are wrong. If it exists, in a demonstrable statute or precedent, can anyone point me to it, please?

In the attachment to our letter to council was a "Creating a Proactive Antenna Siting Protocol and Small Cell Licensing Agreement" cqlpe.ca/pdf/Protocol_Small_Cell_licensing_Agreement.pdf

Are we being told Council cannot do this? Does anyone know a municipality that has successfully done this? It seems in Wendy's response that they are saying they don't have authority to pass 1.1 below.

1.1 Permit Required. No small cell installation shall be constructed, erected, modified, mounted, attached, operated or maintained within the Town on or within any public right-of-way without the issuance of a permit. No approval granted under this chapter shall confer any exclusive right, privilege, license or franchise to occupy or use the public right-of-way of the Town for delivery of telecommunications services or any other purpose.

Confused,

Tom

Well, what a disappointment that council has no concern for their own health and wellbeing.

Barb

On Wednesday, February 17, 2021, 01:48:13 PM AST, Wendy Donovan <wdonovan@wolfville.ca> wrote:

Dear Andrea and Group;

Town Council has received your email of Friday, February 12th. I know I speak for all of Council when I say we appreciate that this situation is of great concern to you. That said, it unfortunately doesn't change the reality that we cannot address issues for which we have no authority. Certainly the Town could develop a policy to control installation of 5G small cells and larger towers on Town property, in other words not to allow installation at ground level or buildings that are the property of the Corporation of the Town of Wolfville (which should not be confused with property that is simply within the Town). If a councillor wishes to bring forward that option for discussion they may do so and all of Council has been provided with the appropriate form and process should one of them wish to bring that forward. However, as the polls and lines are not Town property and municipalities can not impede communication providers from accessing their property e.g., the poles and lines, I expect that ultimately such a policy would not achieve your objective.

As I am sure you have done as well, I did reach out to Kody Blois, our MP, sharing your concerns. I will forward his response although I expect it is consistent with what you have already received.Certainly if you have not I would encourage you to reach out to Kody Blois, and our Provincial MLA Keith Irving. Both have some jurisdiction with respect to this issue that the Town does not.

Sincerely

Mayor Wendy Donovan

Town of Wolfville

p 902-698-6342 | f 902-542-4789 | e wdonovan@wolfville.ca
wolfville.ca

From: Andrea SW
Sent: February 12, 2021 10:50 PM
To: Town Council
Cc:
Subject: Re: 5G moratorium follow up

Dear Mayor Donovan and Wolfville Council,

I see that I mistakenly BCC'ed the signatories rather than copying them so that you could keep them in the loop about further developments on this 5G file, so I am correctlng my error. In the meantime two others have signed on, so I've updated the letter, now signed by 18 people.

Wishing you all a good long weekend,

Andrea

On Fri, Feb 12, 2021 at 12:46 PM Andrea SW <> wrote:

> Dear Mayor Donovan and Wolfville Councillors,
>
> Attached please find our letter in response to the 5G report at the last Committee of the Whole meeting.
>
> Sincerely,

Andrea and sixteen others, most of whom are copied on this email. Those who aren't are related to those who are copied, so can receive replies through their connections.