Town of Berwick Council Meeting

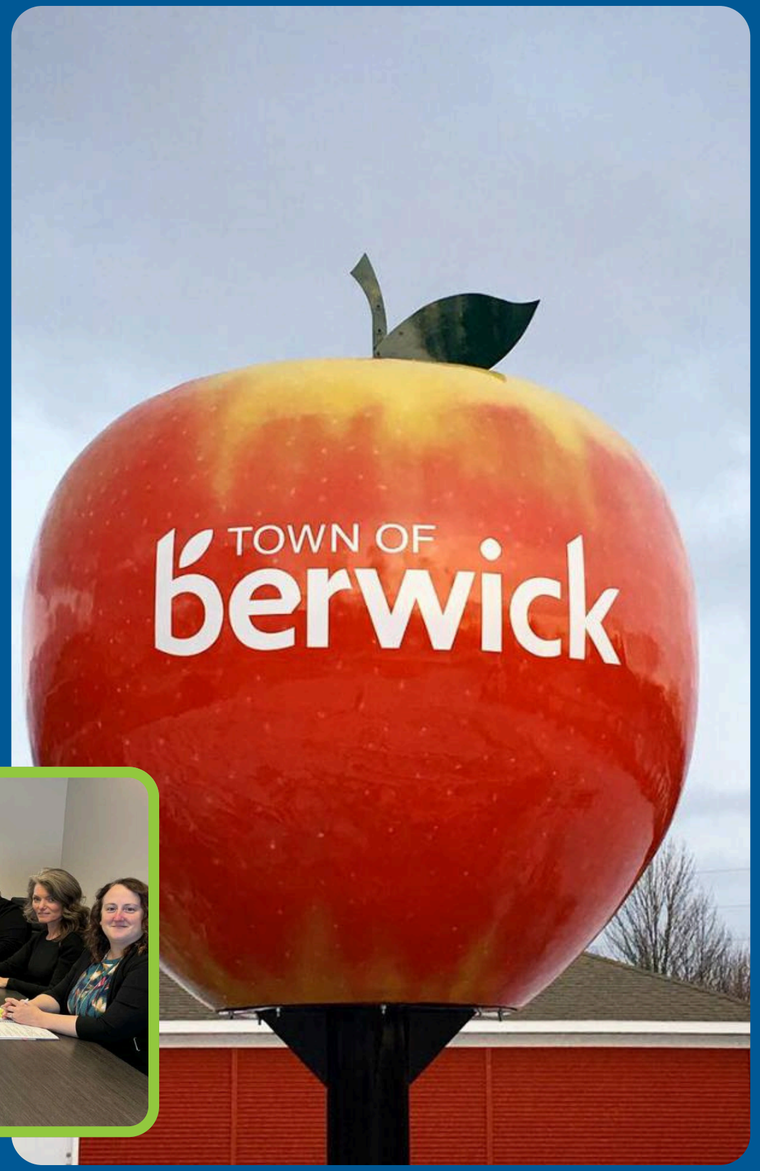
Tuesday, November 10, 2026
Town of Berwick Council Chambers
6:30 pm

AGENDA

1. **Call to Order**
2. **Approval of the Agenda**
3. **Acceptance of the Minutes**
    a. Council Meeting, October 13, 2026
4. **Presentation**
    a. Emily Boucher - ValleyREN
5. **Review of Action Items**
6. **Councillor Announcements**
7. **New Business**
    a. Election of Deputy Mayor
    b. RFD030-2026 – STORM application approval
    c. First Reading (7:30 pm)- Stormwater Management and Flooding Municipal Planning Strategy Policy Changes and Land Use Bylaw Amendments
8. **Mayor's Report**
9. **In-Camera**
    a. Contractual, Land Acquisition & Personnel
10. **Adjournment**

Valley Regional Enterprise Network

Your partner in regional economic development





Liaison and Oversight Committee (LOC) Motion





"Valley Regional Enterprise Network will provide the present-day parties with a new governance model including requested funding contributions for proposed sale of services, commencing April 1, 2027, by no later than December 1, 2026."

Restructuring Emergency Taskforce



Consisting of 5 Board Members and our senior leadership team, Valley REN established a Restructuring Emergency Taskforce following provincial cuts and initial 2-year withdrawal notices

The Taskforce developed and facilitated recommendations for the Board and LOC to look at a refined funding model and governance model to ensure long-term organizational sustainability

This new framework is designed to strengthen the important role of regional economic development through improved collaboration and alignment between public and private sector partners

Halifax Partnership Model

- The majority of regional economic development organizations in both Canada and the U.S. are either fully municipally-owned (B.C. and Quebec) or public-private models with a 50% municipal-led investment
- The Halifax Partnership has been in operation for 30 years – this model has inspired other successful regional frameworks, including: the Cape Breton Partnership, the Pictou County Partnership (IMSA), Envision Saint John

Legal Structure

Non-profit society/organization with multi-year Service-Level Agreement with Halifax Regional Municipality

Governance Structure

One governing Board of Directors, primarily private-sector led that provides two voting seats for Council Members and 5 non-voting Board Observer seats to public partners.

Funding Structure

Halifax Regional Municipality – 50%
Province of Nova Scotia – 25%
Private Sector – 25%

Public-Private Funding Model

We are not requesting an increase in municipal funding as part of our restructuring process.



Municipal & First Nation Contributions

Maintain current funding levels.

Provincial Funding

Maintain current revised funding levels.

Private Sector Investment

Corporate partnerships and program support.

External Funding

Continue pursuing grants and strategic funding opportunities on behalf of all funding partners.

Recommended Governance Model



Model

Transition from IMSA to a Non-Profit Society with multi-year Service-Level Agreements

Accountability

Accountability maintained through the Societies Act; while decreasing financial liability for funding partners

Governance

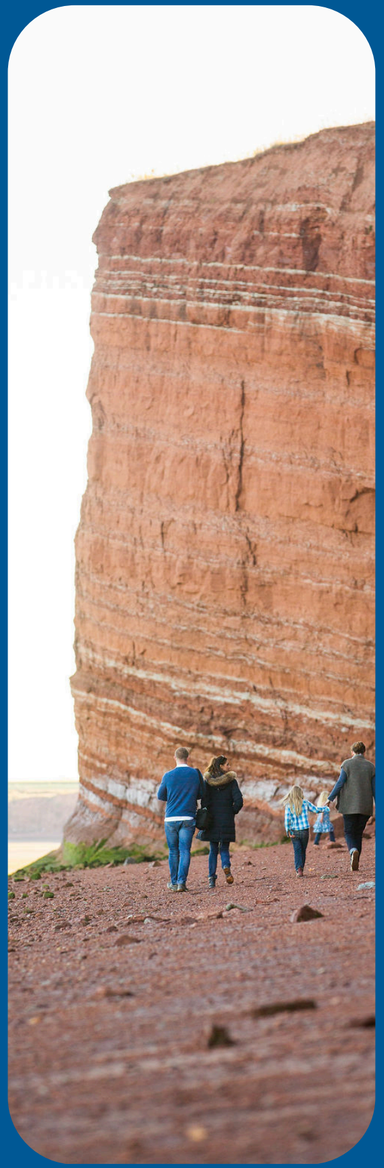
Primarily private sector led with integrated public sector Board Observers

Advantages

Preserves the role of municipalities as anchor supports, while strengthening public-private collaboration

Sale for Service - Core Services

- Business Retention and Expansion (BRE) Diagnostics, Triage, and Analysis
- Business Navigation
- Regional Coordination
- Investment Readiness Tools and Programs
- Labour Market and Immigration Advisory Services
- Connector Program
- Exploratory Regional Projects (CRE, Business Continuity, Regional Skills Hub)
- Data Portal Access and Promotion



Next Steps

- Request for Decision of Intent
- November 19th LOC Meeting
- Legal Requirements
- Timeline





Questions?





Meeting Date	Action Item	Status	Comments
2024-12-10	Reach out to other municipalities to understand how they are assessing the Code of Conduct criteria for establishing the sanctions.	**In-Progress**	The Nova Scotia Federation of Municipalities (NSFM) is currently undertaking a review of Nova Scotia's municipal Code of Conduct framework to better understand how the system has been functioning since its implementation in November 2024 and to identify opportunities for improvement. 21 FSP has been hired and a short survey focused on volume of complaints, costs and type was distributed early June. Subsequent engagement to explore more detail will occur next.
2026-09-08	Direct the Police Advisory Board to consider the use of ATVs on public streets in Berwick.	**In-Progress**	PAB supported the development of a Bylaw to allow ATVs on public streets to access the Harvest Moon Trail from homes in Berwick. The PAB requested the work begin as soon as possible. Staff have indicated that the work is not part of the 2026/27 workplan. Therefore, other initiatives would need to be deferred or the project can be scheduled for 2027/28.
2026-09-22	Establish a Land Acknowledgement for Berwick	**In-Progress**	Directed to Accessibility Committee.
2026-09-22	Establish a Respectful Acknowledgement for Berwick	**In-Progress**	Staff have drafted a Workplace Harassment Prevention Policy. The Joint Occupational Health and Safety Committee will be reviewing the policy and an implementation plan is being developed. The policy includes third-party harassment that will inform the establishment of a respectful acknowledgement for meetings, and events.
2026-10-27	Accessibility and pathway at KMCC parking lot		Recommend back to Accessibility - PW and CD to review a plan and bring back to Accessibility provide a recommendation to KMCC and Council regarding options and cost.

Town of Berwick
Report to Municipal Council
Agenda Item

Subject: Planning Advisory Committee Recommendation for First Reading Regarding Stormwater Management and Flooding Municipal Planning Strategy Policy Changes and Land Use Bylaw Amendments

From: Lauren Isabelle, Planner, Brighter Community Planning and Consulting

Date: November 10, 2026

The following recommendations for First Reading to Council are being forwarded from the Planning Advisory Committee for further discussion and action:

THAT the Planning Advisory Committee recommend that Council give First Reading and proceed to a Public Hearing for the proposed amendments to the Municipal Planning Strategy and Land Use Bylaw respecting stormwater management, the Overland Flood Risk (OFR) Overlay, and the Conservation (OS2) Zone, as attached to the October 6, 2026 staff report;

AND THAT, prior to Council's consideration of First Reading, direct written notification be provided to the 50 property owners newly affected by the proposed expansion of the Conservation (OS2) Zone and addition of the Overland Flood Risk (OFR) Overlay.

The purpose of this report is to present the proposed amendments to the Municipal Planning Strategy (MPS) and Land Use Bylaw (LUB) respecting stormwater management and flooding for Council's First Reading. Staff brought these amendments forward following the release of the CBCL Berwick Stormwater Management Plan in April 2026. The CBCL Plan provides updated information about flood-prone lands, overland flow routes, drainage constraints, and the effects of climate change that was not available when the Town's planning documents were amended in 2025.

The proposed amendments address three related matters: realigning the Conservation (OS2) Zone boundaries to reflect updated river-related flood

mapping; introducing an Overland Flood Risk (OFR) Overlay for mapped overland flood-risk areas; and establishing Town-wide stormwater management requirements for specified forms of development. Together, these changes would help ensure that future development accounts for known flood and drainage conditions, protects public safety and infrastructure, and avoids increasing stormwater impacts on neighbouring properties.

The existing MPS provides a foundation for these amendments by directing Council to apply the OS2 Zone to environmentally sensitive lands, including flood areas and watercourses, and anticipating updates to floodplain mapping. The proposed OS2 boundary would encompass both the mapped floodway and floodway fringe. Regulating both areas through the OS2 Zone reflects PAC's direction to apply conservative controls and provides a practical approach where the mapped boundaries are closely aligned, narrow, or irregular. Lands within the revised boundary would be subject to the existing restrictive development provisions of the OS2 Zone.

The proposed OFR Overlay would retain underlying zoning while adding requirements for site plan approval, floodproofing, grading, drainage, and safe access, as applicable. Development would remain possible where it satisfies both the underlying zone requirements and the additional flood-risk provisions. Separately, Town-wide stormwater management requirements would establish development thresholds for professionally prepared stormwater management plans, with technical review by the Town Engineer or designate and provision to waive the requirement where appropriate.

PAC initially considered potential approaches on May 5, 2026, and supported further consultation. In June, the Town notified 40 property owners about the initially proposed OS2 expansion and offered individual meetings and opportunities for written comments. Feedback focused on development rights, property values, insurance, financing, taxation, flood-mapping accuracy, and drainage infrastructure maintenance. Property owners generally preferred an approach that retained development flexibility while addressing flood risk. This feedback informed the revised approach using both the OS2 Zone and introducing the OFR Overlay. The Town also presented the proposed Town-wide stormwater management requirements at an industry engagement session on September 29, 2026; no questions or concerns were raised about those requirements.

PAC considered the revised amendments on October 6, 2026, and recommended that Council give First Reading and proceed to a Public Hearing, subject to additional written notification before First Reading. Updated notices were subsequently provided to affected property owners to

explain the proposed changes, identify the affected portions of their properties, and invite questions and comments. A copy of the letter is attached as Appendix A.

The proposed OS2 Zone expansion would affect 34 properties, and the OFR Overlay would affect 50 properties, for a combined count of 84 across the two amendments. This count includes 20 properties affected by both changes and therefore counted in each category. The proposed boundaries may affect only a portion of each property. In total 50 notices were mailed as certain owners had more than one affected property. As of November 3, two letter recipients had contacted the Planning Department. One asked about potential impacts on their property and home insurance. The other requested reconsideration of the proposed OS2 boundary on their property, a neighbouring property, and a Town-owned parcel to allow public recreation. Staff clarified that the OS2 Zone permits public parks, trails, and passive recreation facilities, so a boundary change would not be required for those uses, as well as related buildings, subject to a flood mitigation report.

Council must now decide whether to give First Reading and advance the proposed amendments to a Public Hearing. The amendments would establish clearer development requirements in response to identified flood and stormwater risks. A Public Hearing would provide a further opportunity for affected property owners and the broader community to comment before Council considers final adoption.

Appendix A

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October 20, 2026

RE: Proposed Flood Protection Amendments Affecting Your Property

Dear Property Owner,

This notice is to provide an update on the proposed amendments to the Municipal Planning Strategy (MPS) and Land Use Bylaw (LUB) that affect land you own. The amendments address flood risk and stormwater management based on the findings of the *2026 CBCL Stormwater Management Plan*. The plan can be viewed online at www.berwick.ca/municipal-reports.

Following public engagement, the Planning Advisory Committee considered updated amendments that would better address concerns expressed by property owners. The updated amendments include revised Conservation (OS2) Zone boundaries and the introduction of an Overland Flood Risk (OFR) Overlay. Depending on the location of your land, one or both of these changes may apply:

• **Conservation (OS2) Zone:** The revised boundaries would include mapped floodway and floodway fringe areas. The OS2 Zone places significant restrictions on development to protect environmentally sensitive and flood-prone lands.

• **Overland Flood Risk (OFR) Overlay:** Land within the overlay would retain its underlying zoning, but development would be subject to additional flood-related requirements intended to reduce flood damage and avoid worsening drainage impacts on surrounding properties.

The proposed boundaries may affect only part of a property. Receiving this letter does not mean that all of your land is affected or that development would be prohibited throughout your property. The amendments have not been adopted.

The amendments are scheduled for First Reading by Council on November 10, 2026, at 6:30 p.m. in Council Chambers. First Reading is not a Public Hearing and does not include an open opportunity for public comment.

If Council passes First Reading, a Public Hearing will be held before Council considers whether to adopt the amendments at Second Reading. The Public Hearing will provide an opportunity to speak or submit written comments.

Affected property owners will receive notice in advance of the Public Hearing. The proposed amendments, maps and supporting staff report are available online at https://tinyurl.com/Oct-6-2026-PAC-Report. You can also request a hard copy at Town Hall.

For questions about the proposal, please contact Lauren at developmentofficer@berwick.ca.

Sincerely,

Lauren Isabelle

Lauren Isabelle
Planning Department
Town of Berwick

Appendix B

Report to PAC – Municipal Planning Strategy and Land Use Bylaw Amendments Addressing Stormwater Management	
Prepared by:	Lauren Isabelle, Planner
Subject:	Stormwater Management Municipal Planning Strategy Policy Changes and Land Use Bylaw Amendments
Date:	October 6, 2026
Purpose:	PAC consideration of planning report and recommendation to Council on proposed MPS and LUB amendments addressing Berwick's Stormwater Management Plan
Recommendation:	Staff recommend that PAC provide a positive recommendation and that Council give First Reading and send to a Public Hearing the draft amendments to the MPS and LUB as attached.
Draft Motion:	THAT the Planning Advisory Committee recommend that Council give First Reading and proceed to a Public Hearing for the proposed amendments to the Municipal Planning Strategy and Land Use Bylaw respecting stormwater management, the Overland Flood Risk (OFR) Overlay, and the Conservation (OS2) Zone, as attached to the October 6, 2026 staff report; AND THAT, prior to Council's consideration of First Reading, direct written notification be provided to the seven property owners newly affected by the proposed expansion of the Conservation (OS2) Zone.

1. Purpose

This report outlines draft amendments to the Municipal Planning Strategy (MPS) and Land Use Bylaw (LUB) to address stormwater management issues. Historically, the Town has managed stormwater risks through reactive infrastructure repair. However, escalating climate volatility necessitates a strategic shift toward proactive planning controls. These amendments seek to codify flood resiliency into the development process, ensuring that land use decisions are aligned with contemporary hydrological realities.

2. Introduction

The Town of Berwick retained CBCL Limited to prepare a *Stormwater Management Plan* to assess how the Town's stormwater system is functioning, identify areas vulnerable to flooding and drainage constraints, and recommend mitigation measures to improve flood resilience while allowing future development to proceed responsibly.

The Stormwater Management Plan provides updated technical information regarding flood-prone lands, overland flow paths, open ditches, culverts, drainage constraints, localized stormwater storage areas, and potential infrastructure improvements. This information was not available when the Town's MPS and LUB were amended in 2025.

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The purpose of the proposed amendments is to update the Town's planning documents so that future development better accounts for known flood risk, stormwater constraints, overland flow routes, drainage infrastructure, and climate change. The amendments are intended to support responsible development review, protect public safety, reduce avoidable risk to private and public property, and help ensure that future development does not worsen stormwater impacts.

At the May 5, 2026, Planning Advisory Committee (PAC) Meeting, staff introduced the stormwater management issue and sought preliminary direction.

Following discussion, PAC generally endorsed that:

- The MPS and LUB should be updated using the newly mapped 1:100-year CBCL climate data as part of the Core Update;
- For flood risk areas north of Main Street, Option 2: maximum protection of properties, was the preferred approach at this time; and
- For stormwater management requirements south of Main Street, Option 1: Town-wide requirements with exceptions, should be further explored.

The next step was to undertake public consultation to gather additional information, feedback, and concerns that would help inform the draft policies.

3. Public Engagement

As part of the public engagement process, the Town contacted property owners whose lands were identified for review based on updated stormwater and flood risk information north of Main Street, near the Cornwallis River. The initial correspondence advised property owners that the Town was considering whether some lands should be rezoned to Conservation (OS2) and invited affected owners to contact staff, review the mapping, and provide comments. Staff subsequently held one-on-one meetings with interested property owners to explain that the review remained at an early stage, that no amendment had been presented to Council for decision, and that the Town was continuing to assess the most appropriate planning approach.

Consultation Element	Summary
Notification letters	40 letters mailed to property owners with property specific mapping showing proposed changes to their zoning. The letters were mailed June 9, 2026.
Meeting opportunity	One-on-one meetings offered with Development Officer at Town Hall during business hours on June 18, 2026.
Meetings held	6 meetings (5 affected property owners and 1 Planning Advisory

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	Committee member).
Additional engagement	Telephone conversations (4), emails (13), and letters (5).
Participation	17 properties contacted the Town; some property owners participated multiple times using different methods. Sometimes more than one owner of a property engaged in providing feedback.
Submission period	Written comments accepted until June 25, 2026.

The feedback received focused primarily on concerns about development rights, property value, insurance, taxation, drainage maintenance, and the accuracy of the flood mapping. Several property owners expressed concern that an expansion of the OS2 Zone would be too restrictive and could limit future residential or commercial development. Property owners also provided site-specific information about drainage ditches, culverts, road runoff, maintenance issues, and past flooding conditions.

3.1 Key Issues from the Public

During the public engagement process, insurance affordability, property values, mortgage financing and resale impacts emerged as some of the most frequently raised concerns. Residents expressed significant concerns that inclusion within the proposed mapped expansion of the OS2 Zone could increase insurance costs, reduce access to coverage, affect financing and negatively influence property values. To better understand these concerns, staff reviewed current Canadian research, policies and industry information regarding the relationship between floodplain mapping, insurance and residential property values.

3.1.1 Impacts on Insurance

During the engagement, residents continuously expressed concerns that inclusion of their properties within a mapped floodplain could increase their insurance premiums, make overland flood coverage policies unavailable and create challenges in obtaining mortgages or selling their properties.

Available case studies and evidence suggest that insurers are increasingly pricing properties according to their specific flood exposure and property characteristics rather than municipal zoning designations or planning overlays alone. In other words, mapping does not create flood risks, rather identifies and communicates existing flood hazards to property owners, insurers, lenders, developers and the Town.[1] [2] [3]

[1] Statistics Canada (2026), *Extreme weather impacts on consumers and insurers in Canada, December 2019 to December 2025: An updated analysis.*

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Statistics Canada reports that extreme weather is now one of the dominant forces reshaping Canada's home insurance market and states that insurers increasingly consider specific property characteristics, area characteristics, and flood exposure when assessing risk. The Insurance Bureau of Canada similarly reports that catastrophic weather losses have increased significantly, with insured losses reaching a record $9.4 billion in 2024 and average annual catastrophic losses increasing from approximately $400 million before 2009 to nearly $2 billion annually since 2009.[4] [5]

Regional reporting from Atlantic Canada suggests that affordability, rather than the complete absence of coverage, is becoming the more significant challenge. Insurance brokers interviewed in Nova Scotia and New Brunswick report that flood coverage often remains available, but premiums, deductibles, and policy conditions are becoming more restrictive, while postal-code based modelling may not always reflect the flood exposure of individual properties. Public Safety Canada's work on a national low-cost flood insurance program similarly recognizes that affordability challenges are concentrated in Canada's highest-risk flood areas.[6] [7]

Canadian research isolating the effect of a flood mapping update on insurance premiums remains limited. The Bank of Canada notes that flood risk analysis continues to be constrained by the availability of detailed property level data and cautions that flood risks vary considerably between individual properties. The identification of a property within a mapped floodplain does not necessarily result in the same insurance outcome, as insurers assess risk based on a range of property-specific and policy-specific factors.[8]

3.1.2 Impacts on Property Values

Property values were also identified during public engagement as a significant concern. Residents expressed fears that inclusion within a mapped floodplain could reduce resale values, affect mortgage financing, increase disclosure expectations, or make properties more difficult to market. To better understand these concerns, staff reviewed available Canadian research regarding the relationship between flood risk, floodplain mapping, and residential property values.

Available data suggests that the most significant impacts on residential property value are associated with underlying flood hazards and actual flood events rather than the publication

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[2] Thistlethwaite, Jason et al. (2017), *The Emergence of Flood Insurance in Canada: Navigating Institutional Uncertainty.*
[3] GEO.CA / Government of Canada (2026), *Flood mapping*
[4] Statistics Canada (2026), *Extreme weather impacts on consumers and insurers in Canada, December 2019 to December 2025: An updated analysis.*
[5] Insurance Bureau of Canada (2026), *New Statistics Canada report confirms extreme weather reshaping Canada's home insurance market.*
[6] Insurance Business Canada (2025), *Flood insurance is still available in Atlantic Canada – but can homeowners afford it?*
[7] Public Safety Canada (2022), *Adapting to Rising Flood Risk: An Analysis of Insurance Solutions for Canada*; see also Public Safety Canada background on the national flood insurance program.
[8] Bank of Canada (2024 / 2023), *Flood risk and residential lending* and *Climate-Related Flood Risk to Residential Lending Portfolios in Canada.*

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of flood mapping or the application of planning policies alone. While updated flood mapping may increase awareness of flood risk among purchasers, lenders and insurers, the strongest evidence of property value impacts in Canada follows extreme flooding events rather than the adoption of municipal planning overlays.[9] [10] [11]

The most relevant Canadian evidence comes from CMHC's summary of the Intact Centre on Climate Adaptation's study *Treading Water*, which examined housing market impacts following catastrophic flooding in five Canadian communities between 2009 and 2020. CMHC reports an average 8.2% reduction in final sale prices, approximately 19.8% longer time on the market, and a 44.3% reduction in listings during the six months following major flood events compared with similar communities that had not experienced flooding. The Intact Centre further notes that catastrophic flooding can reduce appraised property values, creating implications for homeowners, municipalities, lenders, insurers, and financial regulators.[12] [13]

The Bank of Canada provides additional context regarding mortgage financing. It notes that residential mortgages and home equity lines of credit are secured by the market value of homes and that reduced resale values following flood damage may increase lender exposure. The Bank identifies declining property values and longer marketing periods as important channels through which flood risk may affect residential lending portfolios.[14]

There remains considerable uncertainty regarding the extent to which the publication of updated flood mapping alone affects property values before any flood event occurs. The Canadian Climate Institute notes that improved flood-risk mapping, disclosure, and transparency are essential to informed decision-making by property owners, purchasers, lenders, and governments, while recognizing that increased transparency may have varying impacts across different communities. For Berwick, the available Canadian evidence supports the conclusion that updated flood mapping may influence market awareness over time; however, it does not support a blanket conclusion that inclusion within a mapped floodplain will automatically reduce the value of all affected properties.[15] [16]

Although Council may consider property-value concerns raised through public engagement, the potential effect of a planning amendment on the market value of individual properties is not a primary land-use planning consideration. Council's role is not to guarantee or protect individual property values, which are influenced by many factors beyond municipal control.

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[9] CMHC (2022), *Treading Water: Impact of Catastrophic Flooding on Canada's Housing Market.*
[10] Intact Centre on Climate Adaptation (2022), *Treading Water: Impact of Catastrophic Flooding on Canada's Housing Market.*
[11] Bank of Canada (2024 / 2023), *Flood risk and residential lending* and *Climate-Related Flood Risk to Residential Lending Portfolios in Canada.*
[12] CMHC (2022), *Treading Water: Impact of Catastrophic Flooding on Canada's Housing Market.*
[13] Intact Centre on Climate Adaptation (2022), *Treading Water: Impact of Catastrophic Flooding on Canada's Housing Market.*
[14] Bank of Canada (2024 / 2023), *Flood risk and residential lending* and *Climate-Related Flood Risk to Residential Lending Portfolios in Canada.*
[15] Canadian Climate Institute (2024), *Turning the tide on flood risks.*
[16] Bank of Canada (2024 / 2023), *Flood risk and residential lending* and *Climate-Related Flood Risk to Residential Lending Portfolios in Canada.*

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Council must assess whether the proposed amendments are consistent with the MPS, and in the public interest. For these amendments, the relevant considerations include public safety, protection of property and infrastructure, responsible development, and the reductions of future flood risk.

In considering the proposed amendments, staff acknowledge that potential impacts on property values are a real concern for property owners. However, property value considerations must be evaluated within the broader public interest that guides municipal planning decisions. In this context, the planning question is whether the proposed amendments provide an appropriate response to identified flood risk, including the protection of public safety, public and private property, municipal infrastructure, and long-term community resilience.

The available Canadian evidence indicates that property value impacts are more closely associated with the presence and severity of flood risk than with the municipal identification of that risk through floodplain mapping or planning policy. Floodplain mapping should therefore be understood as a tool to improve awareness of existing flood hazards and support informed land-use planning decisions that reduce future risk to the Town, residents, property, and public infrastructure.

3.2 Developers / Builders Meeting

The Town initially invited local developers, builders, and other industry professionals to attend an information session on July 21, 2026, to discuss the proposed stormwater-related amendments. Due to limited registration, the session did not proceed.

A broader industry engagement session was subsequently held on September 29, 2026, with developers, builders, and other development professionals invited to attend. As part of the session, planning staff, the Town Engineer and the Director of Public Works presented the proposed Town-wide stormwater management requirements and explained how the requirements may apply to future development. Attendees were provided an opportunity to ask questions and provide feedback. No questions or concerns were raised regarding the proposed stormwater management requirements.

The proposed expansion of the Conservation (OS2) Zone and establishment of the Overland Flood Risk (OFR) Overlay were not included in the September 29 presentation. Unlike the Town-wide stormwater requirements, these amendments apply to specific mapped areas and directly affect a more limited number of properties. Staff considered direct notification and consultation with affected property owners, together with the formal public participation process for the planning amendments, to be the more appropriate means of engagement on these proposed changes.

3.3 Additional Property Owner Notification

Public engagement undertaken in June 2026 was based on the OS2 Zone expansion being considered at that time. Since then, refinement of the proposed OS2 Zone boundary using the updated floodway and floodway fringe mapping has resulted in eight additional properties being included within the proposed OS2 Zone expansion. These properties are held by seven property owners.

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Two of the seven property owners participated in the earlier consultation process; however, the portions of their properties now proposed to be included within the OS2 Zone were not part of the area identified to them during the June consultation. Accordingly, all seven property owners should be considered newly affected by the current proposed boundary for notification purposes.

Given the more restrictive development provisions associated with the OS2 Zone, staff recommend that direct written notification be provided to all owners of properties newly affected by the current proposed boundary before Council considers First Reading. The notification would follow a similar format to the June correspondence and would include property-specific mapping, an explanation of the proposed change and its potential implications, and contact information for planning staff.

Staff do not recommend scheduling an additional formal round of one-on-one meetings. Given the limited number of newly affected owners, questions can be addressed individually by telephone, or email. If Council subsequently gives First Reading, all affected property owners will also have an opportunity to provide comments through the statutory Public Hearing process.

4. Background: Hydrological Evidence and Climate Projections

4.1 Technical Foundation

The basis for these amendments is the *2026 CBCL Stormwater Management Plan.* The study highlights that the Town's drainage relies on a centralized system of overland flow paths, open channels, and aging culverts rather than a traditional buried pipe network. Field surveys indicate that capacity is further restricted by sedimentation, largely due to the Town's sand-based winter traction policy, and dense vegetative growth in open channels.

4.2 Hydraulic Context

According to the *2021 WSP Hydraulic Study*, the Cornwallis River acts as a critical boundary condition for Town drainage. The flash flooding event of July 11, 2024, serves as a recent validation point. Technical analysis by CBCL shows that this storm exceeded a 1:100 year intensity for short durations (4 to 7 hours), even though its 24 hour total only fell between a 1:5 and 1:10 year magnitude. This confirms that "short burst" intensity, rather than total volume, is a primary driver of flood risk in Berwick.

5. Planning Discussion

5.1 Provincial Policy Context and Jurisdictional Comparison

5.1.1 Provincial Statement of Interest and Minimum Planning Regulations

The Municipal Government Act establishes Statements of Provincial Interest (SPI) to provide policy directions on matters that must be considered in municipal planning

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decisions. Municipal Planning Strategies and Land Use By-laws must be consistent with the PSI when they are being drafted or amended. The proposed amendments are primarily informed by the Nova Scotia SPI regarding Flood Risk Areas and the Province's Minimum Planning Requirements respecting flooding, climate change adaptation, stormwater management, and the protection of municipal infrastructure.

The objective of the SPI regarding Flood Risk Areas is to "Protect public safety and property and to reduce the requirement for flood control works and flood damage restoration." The statement recognizes that municipalities play a vital role in managing flood risk through land use planning by identifying Flood Risk Areas and regulating development according to the degree of flood hazard. Rather than a single regulatory approach, the Statement provides municipalities with flexibility to implement these objectives through local planning policies that reflect local community conditions and the best available technical information. The PSI distinguishes between Floodway and Floodway Fringe areas. Both zones are recognized as flood prone risk areas but represent different levels of flood hazards requiring different planning responses.

Floodways generally convey and manage floodwaters during major flood events and are intended to remain free from development because of depth, velocity and frequency of flooding. The SPI recommends limiting development within the Floodways to uses compatible with periodic flooding and prohibits placement of off-site fill. The Floodway Fringe generally represents portions of the Floodway zone that may be affected by the 1:100-year flood event, meaning a flood with an estimated 1% probability of occurring in any given year. While flood hazards are generally less severe within the Floodway Fringe, they are not absent, and the Statement recognizes that municipalities may permit development where risks can be appropriately managed. However, according to the PSIs, planning documents should prohibit uses that could pose *"a significant threat to the safety of residents if evacuation became necessary"* as well as the warehousing or production of hazardous materials. This distinction reflects the Province's risk-based planning approach to floodplain and stormwater management that allows reasonable use and development of land while protecting public safety and property.

Nova Scotia's Minimum Planning Requirement Regulations complement the SPI by identifying issues municipalities are expected to address through Municipal Planning Strategies, including flooding, stormwater management, climate change mitigation and adaptation, erosion control, fill and excavation and the protection of public infrastructure. Collectively, these requirements recognize that stormwater management is not solely an engineering consideration, but also a vital component of land use planning. Municipal planning policies should consider how development may affect drainage patterns, stormwater systems, flood hazards, neighboring properties and municipal infrastructure.

5.1.2 Jurisdictional Scan

Staff have completed a jurisdictional scan of neighbouring and comparable municipalities that regulate development within a Floodway Fringe Overlay (or equivalent) to understand how similar issues are addressed through municipal planning documents, land use bylaws, and related policies. The scan was intended to identify common regulatory approaches, assess whether the Town's proposed approach is generally consistent with municipal

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practice, and highlight any alternative tools that may be appropriate for Council's consideration. Findings from the scan are summarized below and were used to inform the recommended amendments.

Jurisdiction	Prohibited Uses	Development & Flood-proofing Requirements	Fill Restrictions
Town of Truro	Residential institutions such as hospitals, senior citizen homes, homes for special care and similar facilities where flooding could pose a significant threat to the safety of residents if evacuation became necessary; and any use associated with the warehousing or the production of hazardous materials.	Restrictions on alteration of topography to not impede drainage or flow of flood water. All main buildings and any building containing a dwelling unit must be flood proofed. Floodproofing requirements include minimum opening elevation of building, provision of a location certificate and fill slope / height.	Sources using balanced cut and fill approach, with material coming from within the Floodway or Floodway Fringe Overlay. Off-site fill only permitted for floodproofing, with provisions for grade, pad size and elevation.
Cape Breton Regional Municipality	Hospitals, long-term care facilities, and uses that store hazardous materials.	New construction or expansion elevation requirement, no basements and requires stormwater management / drainage / landscaping plan. Contrary development considered subject to hydrotechnical study showing no upstream / downstream flooding contribution or flow-pattern change.	Off-site fill only permitted for floodproofing.
Town of Kentville	Residential institutions, including hospitals, senior citizen homes,	N/A	N/A

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	homes for special care and similar uses; uses associated with production of hazardous materials.		
Town of Amherst	Residential institutions such as hospitals, senior citizen housing, homes for special care and similar safety-sensitive uses; facilities involving hazardous materials.	Main structures must be floodproofed. Contrary development considered subject to hydrotechnical study showing no upstream / downstream flooding contribution or flow-pattern change.	Off-site fill limited to floodproofing or flood-risk management.

Development regulations vary from a light regulatory approach as seen in the Town of Kentville, to a stricter regulatory approach, exemplified by the Town of Truro. These differences may be influenced by how severely these areas have experienced flooding, the capacity of planning departments as well as the age of the planning documents. Typically, planning documents that were updated since the 2023 July flooding experienced widely in the province have included more requirements for development in known flood risk areas. On July 21, 2023, parts of Nova Scotia faced severe flooding, with the hardest hit areas experiencing more than 250 mm of rain, over three months' worth, in less than 24 hours, leading to a provincial state of emergency.

6. Proposed Amendments

The proposed amendments would update the Town's MPS and LUB to address flood risk and stormwater management based on the findings of the *2026 CBCL Stormwater Management Plan*. The amendments recognize that Berwick is affected by different forms of flooding, including riverine flooding north of Main Street and overland flow, drainage constraints, ditch and culvert capacity, road overtopping and localized stormwater storage throughout the Town.

These proposed amendments differ from the approach endorsed previously by PAC. This was to better address the concerned expressed by property owners, new technical information regarding the flood mapping, input from the Town Engineer and Director of Public Works and based on a review of provincial legislation and best practices from other jurisdictions.

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6.1 Conservation (OS2) Zone Realignment

The proposed amendments would update the LUB Zoning Map to readjust the Conservation (OS2) Zone to better reflect the current flood-risk information provided by the *2026 CBCL Stormwater Management Plan.* The OS2 Zone would expand in areas newly identified within the updated floodway fringe. This realignment would replace the existing boundary with one that more closely corresponds to the best available technical information.

6.1.1 Existing Conservation (OS2) Zone

The existing Conservation (OS2) Zone is the Town's most restrictive tool for protecting environmentally sensitive lands. MPS Policy 3.34 directs Council to apply the zone to known environmentally sensitive lands, including flood areas and watercourses, where development activity should be restricted or prohibited. Policies 3.44 and 3.45 anticipate updated floodplain mapping should be revised periodically to reflect current climate modelling and that Council intends to update the areas where flood protection restrictions apply.

6.1.2 Updated Information

The *2026 CBCL Stormwater Management Plan* (available on the Town website under Municipal Reports: https://tinyurl.com/Stormwater-Management-Plan) provides more current and detailed information for this purpose. CBCL developed hydrologic and hydraulic models using targeted field survey elevations, Town GIS information, aerial imagery and surveyed or estimated dimensions and elevations for ditches, culverts, outfalls, and major overland flow routes. CBCL checked the model against expected runoff coefficients and known flood locations, including conditions reported during the July 11, 2024, storm.

The river-related mapping also accounts for the Cornwallis River as a downstream boundary condition. CBCL reviewed the 2023 Gaspereau Primary Watershed Flood Line Mapping and the 2021 WSP Berwick Hydraulic Study. It used the WSP water levels because they were slightly higher and therefore more conservative. Rather than assuming that a 1:100-year local rainfall event and a 1:100-year river level would peak at the same time, CBCL combined the greater flood extent produced by two more representative conditions: 1:100-year local runoff with a 1:5-year river level, and 1:5-year local runoff with a 1:100-year river level. This method recognizes the different response times of the large, predominantly vegetated Cornwallis River watershed and Berwick's smaller urban drainage areas, while retaining the more conservative mapped result.

CBCL separately mapped rainfall-induced overland flood-risk areas for the 1:100-year event. These overland areas may occur away from the river. A return period expresses annual probability, not a schedule: a 1:100-year event can occur more than once within a century.

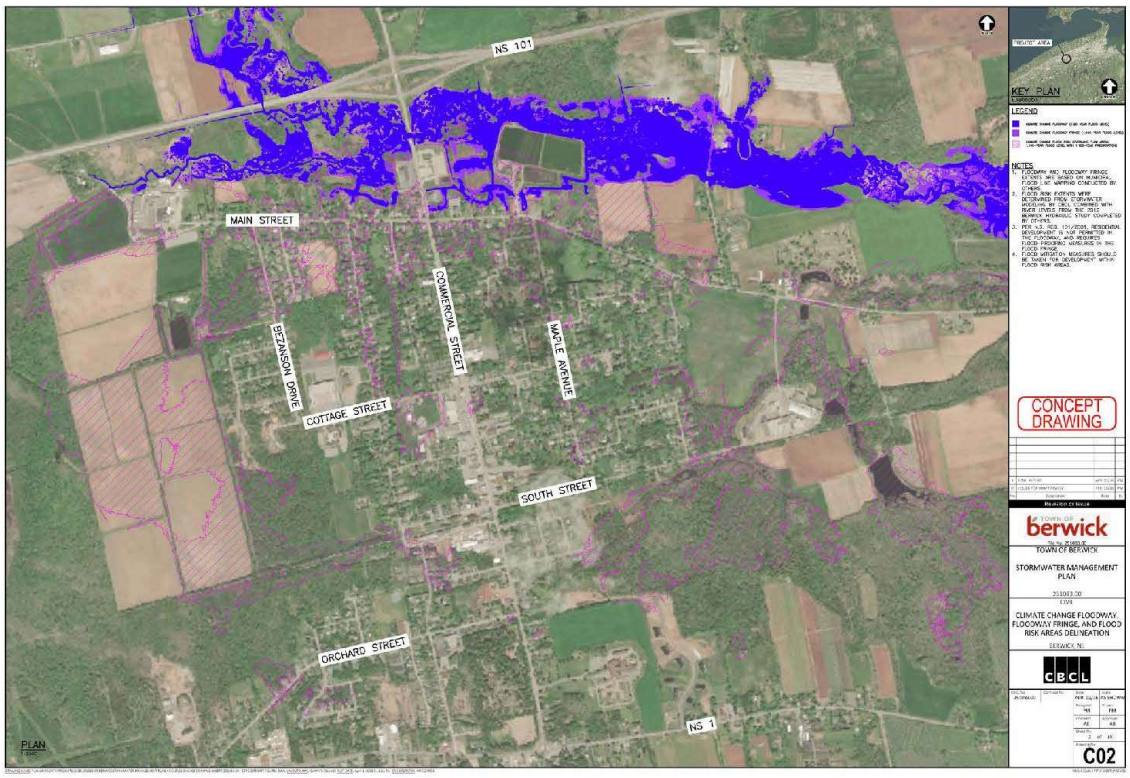


Figure 1 CBCL Floodway and Floodway Fringe mapping

6.1.3 Proposed Boundary

The proposed OS2 Zone boundary encompasses both the Floodway and Floodway Fringe identified by CBCL. The Floodway extends from the Cornwallis River to the outer limit of the mapped future climate 1:20 year river induced flood extent, representing an estimated five percent annual chance of flooding. The Floodway Fringe is an additional area between the outer boundary of the Floodway and the mapped future-climate 1:100-year river-induced flood extent, representing an estimated one per cent annual chance of flooding. Together, these areas of the river related floodplain are included within the proposed OS2 Zone. The outer boundary of the proposed OS2 Zone therefore follows the 1:100-year river-induced flood extent. Lands within the Floodway and Floodway Fringe would both be subject to the restrictive development provisions of the OS2 Zone, including the general prohibition on new structures, subject to the limited uses and exceptions permitted by the MPS and LUB.

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Figure 2 Proposed OS2 Expansion and OFR Overlay (see Appendix F for version with zoning)

Staff propose to regulate both the Floodway and Floodway Fringe through the OS2 Zone. The mapped boundaries of the two areas are closely aligned, and, in several locations, the Floodway Fringe is narrow, irregular, or crosses portions of individual properties as shown on Figure 1 above. Applying separate zones or regulatory frameworks would create complex boundaries that would be difficult for property owners to interpret and for the Town to administer consistently through the development process. A single OS2 boundary following the outer limit of the mapped 1:100-year river-induced flood extent provides a clearer and more administratively practical approach. It also reflects PAC's previous direction that a conservative level of protection should apply within the Floodway Fringe because of the identified flood risk. An approximate total of 54.59 acres would be added to the OS2 Zone under the proposed expansion, or approximately 3.4% of the Town's total area.

6.2 Overland Flood Risk (OFR) Overlay

The proposed amendments would establish an Overland Flood Risk (OFR) Overlay for lands identified by CBCL as being subject to future climate change overland flood risk. CBCL determined that combining a 1-in-100-year rainfall event with a 1-in-100-year Cornwallis River water level would produce an overly extreme estimate of potential flooding. Instead CBCL modelled a 1-in-100-year rainfall event with a 1-in-5-year river level and a 1-in-5-year rainfall event with a 1-in-100-year river level under future climate conditions. CBCL then combined the maximum water levels from both scenarios to delineate the flood-risk

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area used to create the proposed OFR Overlay. Approximately 36.82 acres would be covered by the OFR Overlay, as currently proposed.

The overlay responds to the potential for overland flooding in low-lying areas where stormwater may collect, move across the land surface, or exceed the capacity of the local drainage system during significant rainfall events.

An overlay is a planning tool that applies additional requirements to a defined geographic area without replacing the underlying zoning. Properties within the OFR Overlay would retain their existing zone, such as Residential, Gateway Mixed Use, or Residential Comprehensive Development District. The underlying zone would continue to regulate permitted uses, density, lot requirements, building dimensions, and other development standards. The overlay would add a second layer of requirements addressing flood safety, site drainage, floodproofing, and the potential effects of development on neighbouring lands and municipal infrastructure.

All uses permitted in the underlying zone would continue to be permitted within the OFR Overlay, except uses involving the regular storage or production of hazardous materials. Restricting these uses would reduce the potential for floodwaters to release or transport contaminants, creating risks to public health, property, watercourses, and the environment.

The overlay would not remove all development rights from affected properties. It would make certain development rights conditional on meeting additional requirements intended to reduce flood exposure and avoid transferring risk to other properties. Proposed development would be required to satisfy both the applicable underlying zone requirements and the OFR Overlay provisions.

6.2.1 Site Plan Approval

Development within the OFR Overlay would be subject to site plan approval. This process would allow the Development Officer to review site-specific matters that may not be adequately addressed through conventional zoning requirements alone. Depending on the nature and scale of the proposal, site plan approval could address:

- Building location and elevation;
- Site grading and drainage;
- Preservation of overland flow routes;
- stormwater storage and conveyance;
- The location and design of driveways;
- Effects on ditches, culverts, and municipal infrastructure;
- Erosion and sediment control; and
- Measures to prevent increased flooding or drainage impacts on neighbouring properties.

Site plan approval would provide a structured review process while allowing development that meets the underlying zoning and applicable flood-risk standards to proceed without a development agreement.



6.2.3 Floodproofing and Access Requirements

New main buildings, expansions of existing main buildings, and certain accessory dwelling units would be required to meet the floodproofing standards established by the Land Use By-law. These standards are intended to reduce the likelihood of floodwater entering buildings and to limit damage during significant rainfall or flooding events.

The proposed standards would include restrictions on basements, minimum elevations for building pads and well casings, and the submission of lot-grading information showing proposed elevations and overland flow routes. Where a driveway provides access to a use involving vulnerable persons or an emergency-service depot, the driveway would also be required to meet a minimum elevation and maintain the movement of drainage and overland flow.

The driveway requirement recognizes that floodproofing the building alone may not adequately protect occupants or maintain essential services. A building may remain above the anticipated flood elevation while its driveway becomes impassable, limiting evacuation or preventing access by emergency vehicles.

6.2.4 Flood Risk and Mitigation Report

The Development Officer could require a flood risk and mitigation report for proposed development within the OFR Overlay. The report would be prepared by a qualified professional at the applicant's expense and would provide site-specific information about the nature of the flood risk and the measures required to address it.

The report would need to demonstrate that the development could be safely accommodated without creating an unacceptable risk to:

- Human life or public safety;
- Public or private property;
- Municipal infrastructure;
- The environment; or
- Neighbouring lands.

This authority would allow the Town to require additional analysis where the scale, location, design, or site conditions associated with a proposal create concerns that cannot be adequately assessed through standard application information. A report would not necessarily be required for every application within the overlay.

6.2.5 Implications for Property Owners and Applicants

The proposed overlay may increase the information and professional review required for some development applications. Depending on the proposal and site conditions, an applicant may need to provide a lot-grading plan, floodproofing details, a stormwater management plan, a flood risk and mitigation report, or a hydrotechnical study. These requirements may result in additional upfront design, engineering, and review costs.

The level of information required would depend on the scale and complexity of the proposed development and the potential risks identified during the application review. These costs must be considered against the potential consequences of development that is not

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appropriately designed for existing flood and drainage conditions, including property damage, unsafe access, infrastructure impacts, and increased flooding on neighbouring lands.

Overall, the OFR Overlay is intended to allow appropriately designed development to continue while ensuring that new development accounts for known flood conditions, incorporates suitable mitigation measures, and does not increase risk elsewhere.

6.3 Stormwater Management Requirements

The proposed amendments also respond to PAC's previous discussion where there was general support to explore a Town-wide approach to stormwater management using clearly defined development triggers. Unlike the OFR Overlay, which would apply only to the mapped area, the stormwater management requirements would apply throughout Berwick when a proposed development meets one or more thresholds established in the Land Use By-law.

A Town-wide approach recognizes that stormwater management is not limited to areas identified as being at risk of flooding. Development anywhere within the Town can change how rainfall is absorbed, stored, and conveyed. Buildings, parking areas, driveways, and other hard surfaces reduce infiltration and may increase the volume and rate of runoff. Site grading and fill can also alter established drainage patterns, obstruct overland flow routes, or redirect water toward neighbouring properties, streets, ditches, culverts, and municipal stormwater infrastructure.

Retaining stormwater on-site for longer periods may also provide a secondary benefit by increasing opportunities for infiltration rather than allowing runoff to move quickly toward downstream drainage systems and the Cornwallis River. As the Town relies on groundwater wells for its water supply, measures that promote infiltration and slower release may also help support local groundwater recharge where soil and site conditions are suitable.

Under the proposed amendments, a stormwater management plan would be required for:

- A new multi unit dwelling;
- A new grouped dwelling containing three or more dwelling units;
- A new townhouse dwelling;
- A new commercial, industrial, institutional, or mixed-use main building;
- An expansion that increases the footprint of an existing commercial, industrial, institutional, or mixed-use main building by more than 50 per cent;
- The creation or expansion of a parking area containing more than four parking spaces; and
- Other development where the Development Officer, in consultation with the Town Engineer, determines that additional stormwater information is necessary.

These triggers focus on forms of development that are more likely to create substantial building coverage, parking areas, grading changes, or other impervious surfaces. They are intended to establish predictable requirements while preserving the ability to request additional information where site-specific conditions create a material drainage concern.



6.3.1 Stormwater Management Plan Requirements

A required stormwater management plan would have to be prepared and stamped by a qualified professional engineer licensed to practise in Nova Scotia. The plan would need to demonstrate, how stormwater would be managed on the development site.

Depending on the proposal, the plan may need to address:

- Existing and proposed drainage patterns;
- Pre-development and post-development runoff;
- The anticipated volume and rate of stormwater discharge;
- On-site storage, infiltration, or controlled release;
- Major overland flow routes;
- Proposed grading and finished elevations;
- The capacity and location of ditches, culverts, catch basins, and drainage outlets;
- Effects on municipal stormwater infrastructure;
- Potential impacts on downstream and neighbouring properties;
- Erosion and sediment control during construction; and
- The ownership, operation, inspection, and maintenance of private stormwater infrastructure.

The central objective would be to demonstrate that stormwater generated by the development can be safely managed without worsening existing drainage conditions or creating new adverse effects. This may require measures such as detention facilities, infiltration systems, controlled outlets, vegetated drainage features, grading controls, or other site-appropriate infrastructure.

6.3.2 Professional and Municipal Review

Stormwater management plans would be reviewed by the Town Engineer or another qualified professional acting on behalf of the Town. Technical review is necessary because the effectiveness of a stormwater system depends on site-specific factors such as topography, soil conditions, downstream capacity, drainage routes, proposed impervious coverage, and the intensity of the design rainfall event.

The requirement for professional preparation and municipal technical review would provide the Town with greater assurance that proposed systems are appropriately designed and that assumptions concerning runoff and downstream impacts are technically supportable. Applicants may be responsible for the costs associated with preparing the plan and, where authorized by the Town's fee structure, the costs of an independent technical review.

6.3.3 Ability to Waive the Requirement

The proposed provisions would allow the Development Officer, based on advice from the Town Engineer or another qualified professional, to waive the requirement for a stormwater management plan where the proposed development would not materially affect:

- The volume or rate of stormwater runoff;
- Existing drainage patterns;
- Overland flow routes;
- Municipal stormwater infrastructure; or



- Neighbouring properties.

The waiver provision is intended to ensure that the requirements remain proportionate to the anticipated effect of the development. It would avoid imposing the cost of a professionally prepared plan where sufficient information is available to determine that a proposal presents little or no material stormwater concern. The waiver would be based on technical advice rather than being granted automatically.

The proposed Town-wide requirements would incorporate stormwater considerations earlier in the development review process, when building placement, grading, parking layout, drainage systems, and other aspects of site design can still be adjusted. The requirements would also establish a more consistent process for identifying potential impacts before construction occurs.

The provisions are intended to:

- Reduce the potential for development to worsen flooding or drainage conditions;
- Protect neighbouring properties and municipal infrastructure;
- Preserve established drainage and overland flow routes;
- Improve the quality and consistency of technical information submitted with development applications;
- Clarify when professional stormwater analysis is required; and
- Support development that can be safely accommodated within the capacity of the site and the receiving drainage system.

7. Policy Analysis

The proposed amendments must be considered against the intent of the Town of Berwick MPS. The existing MPS supports measures to reduce flood and drainage risks, protect environmentally sensitive lands, manage municipal infrastructure responsibly, and require technical information where development may create flooding or stormwater impacts. It does not, however, contain detailed enabling policies tailored to the proposed OFR Overlay or the Town-wide stormwater management requirements. The proposed MPS amendments would provide this more specific policy authority, while the corresponding LUB amendments would establish the applicable regulatory requirements.

7.1 Statements of Provincial Interest

Section 2.4 of the MPS recognizes that the Municipal Government Act requires municipal planning documents to be reasonably consistent with the Statements of Provincial Interest. Two Statements are particularly relevant to the proposed amendments: Flood Risk Areas and Infrastructure.

The goal of the Statement of Provincial Interest Regarding Flood Risk Areas is:

"To protect public safety and property and to reduce the requirement for flood control works and flood damage restoration in floodplains."

The MPS notes that Berwick does not contain a designated flood risk area under the former Canada-Nova Scotia Flood Damage Reduction Program. It also recognizes that the Cornwallis River flows through the Town and that development controls are needed to

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reduce flood damage near the mapped 1-in-100-year floodplain. The MPS anticipates that flood mapping will be periodically updated to reflect current information and climate modelling.

The OFR Overlay addresses overland flood conditions identified through the *CBCL Stormwater Management Plan*. Although the overlay is not necessarily equivalent to a provincially designated flood risk area, its purpose is consistent with the broader provincial objective of protecting public safety and property and reducing future flood damage. The proposed restrictions on hazardous materials, floodproofing requirements, grading controls, elevated access requirements, and technical review provisions would reduce exposure to known flood hazards and help prevent development from increasing risk elsewhere.

The Statement of Provincial Interest Regarding Infrastructure encourages the efficient use of municipal infrastructure and consideration of infrastructure capacity when planning for development. The proposed Town-wide stormwater provisions support this objective by requiring higher-impact developments to demonstrate that runoff can be managed without overloading municipal systems or adversely affecting downstream properties.

7.1.1 Department of Municipal Affairs Preliminary Review

Staff provided the proposed planning amendments to the Nova Scotia Department of Municipal Affairs (DMA) for preliminary comment. A Senior Planner with DMA reviewed the proposed amendments from a provincial planning perspective and advised that no concerns were identified through the preliminary review that would be expected to raise issues during the Director Review process.

The Senior Planner also noted that the proposed approach achieves a balance between protecting the community from stormwater and flood damage, addressing public safety, and considering existing development rights.

This feedback is preliminary and does not constitute formal provincial approval. Any amendments adopted by Council will remain subject to the applicable provincial review and approval requirements.

7.2 Environmental and Growth-Management Direction

The MPS vision and guiding principles provide broad support for the proposed amendments. Goal 1 recognizes the relationship between natural and built infrastructure and calls for sustainable development, resilience, and environmental stewardship. Goal 3 supports responsible growth and states that development decisions should be data-driven, with infrastructure and environmental studies commissioned where necessary.

Section 2.5.1 further recognizes that Berwick contains environmentally sensitive lands and that development on or near these lands must respond to environmental constraints. It states that planning policies and regulations should reflect the need to protect public safety and respond to climate-related risks.

This direction is reinforced in Section 3.1.1, which identifies two related planning objectives:

- Protecting the natural environment from degradation caused by development; and

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- Locating development where risks from the natural environment are low.

The proposed amendments implement these objectives using current technical information. The OFR Overlay would identify lands where additional development standards are warranted, while the Town-wide provisions would address the potential for development outside the overlay to alter runoff, drainage patterns, or the performance of municipal stormwater infrastructure.

The amendments would not direct that all affected lands remain undeveloped. They would allow development permitted by the underlying zone to proceed where the identified risks can be appropriately addressed. This approach balances the MPS objectives of environmental protection, public safety, housing choice, and responsible growth.

7.3 Existing Floodplain Policies

Section 3.1.3 of the MPS provides the most direct existing policy context for the proposed OFR Overlay. The section recognizes that flooding presents risks to buildings and infrastructure and that development within flood-prone areas may reduce the ability of land to absorb or convey water, potentially increasing flooding elsewhere.

The MPS states:

"From a planning perspective, it is prudent to identify areas where flooding occurs and avoid putting people and development in areas at risk. The other reason to avoid development in flood areas is that it may reduce the ability of the land to absorb water, such as tree clearing and paving, and can lead to increased flooding elsewhere."

This direction supports the principle of applying additional development controls to lands identified through updated flood and stormwater modelling. It also supports requirements intended to preserve drainage and overland flow routes and prevent development from transferring risk to nearby properties.

Policy 3.3 enables increased watercourse buffers around waterbodies known to be at high risk of flooding. Policy 3-3A directs Council to incorporate data from the Nova Scotia Municipal Flood Line Mapping Program. These policies demonstrate Council's intent to update its planning controls as improved flood information becomes available.

Neither policy fully addresses the conditions represented by the proposed OFR Overlay. Policy 3.3 is primarily concerned with buffers adjacent to waterbodies, while overland flooding may occur away from a defined watercourse and may result from topography, surface drainage, rainfall intensity, or limited drainage-system capacity. The proposed MPS amendments are needed to clearly authorize a mapped overlay and development standards directed specifically at overland flood risk.

7.4 Conservation and Environmentally Sensitive Lands

Policies 3.43 to 3.45 establish the existing approach to flood-prone and environmentally sensitive lands:

Policy 3.43: "It shall be the intention of Council to identify known environmentally sensitive areas, including but not limited to, steep slopes, flood areas, and watercourses, where

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development activity will be restricted or prohibited and to apply the Conservation (OS2) Zone to all lands so identified."

Policy 3.44: "The Town will undertake a floodplain mapping exercise, either individually or in cooperation with other provincial or regional studies, to identify at-risk areas within the Town of Berwick. Until this study is completed, all new residential, commercial or industrial development within the Environmental Designation may require a flood risk assessment study, which shall be completed by a qualified person."

Policy 3.45: "It shall be the intention of Council, except for a limited number of institutional uses as described in the Land Use Bylaw, to prohibit the development of new structures within the Conservation (OS2) Zone. The development of any structures within the Conservation (OS2) Zone relating to institutional uses shall only be permitted subject to review and confirmation by a qualified individual that appropriate and necessary flood damage mitigation for both structure and site can be approved pursuant to Nova Scotia Department of Environment regulations."

These policies establish clear support for using mapping and professional analysis to identify and regulate flood-prone lands. They also reflect an existing planning approach based primarily on applying the Conservation (OS2) Zone and substantially restricting new structures.

The proposed OFR Overlay represents a more targeted approach. Properties would retain their underlying zoning and associated land-use permissions, but development would be subject to additional floodproofing, grading, access, site plan, and technical review requirements. This recognizes that the mapped area presents a material development constraint without necessarily concluding that all affected lands must be placed in the Conservation (OS2) Zone.

The proposed approach is consistent with the broader intent of Policies 3.43 and 3.44 because it uses current technical information to identify at-risk lands and applies additional development controls. Specific MPS amendments are required to distinguish the overlay approach from the more restrictive Conservation (OS2) Zone framework contemplated by the existing policies.

7.5 Municipal Infrastructure and Stormwater Management

Section 3.2 recognizes stormwater management as a central municipal service and identifies municipal pipes, related infrastructure, and ongoing maintenance as significant public investments.

Policy 3.30 states:

"It shall be the intention of Council that a property owner be responsible for the construction of all proposed extensions of municipal road, sanitary sewer, storm sewer, and related infrastructure for the purposes of enabling the development of private property and that all construction be in conformity with the provisions of the Town Subdivision Bylaw and related regulations and servicing specifications."

Policy 3.31 also supports studies and coordinated development of trunk wastewater, stormwater, and street infrastructure in future growth areas.

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These policies support the principle that private development should provide the infrastructure required to accommodate its servicing demands. They do not expressly establish when a stormwater management plan must accompany a development permit application or the performance standard that a plan must meet.

The proposed Town-wide requirements would address this gap by establishing predictable triggers for developments that are more likely to alter runoff or require significant grading, including multi-unit residential development, grouped dwellings, townhouses, commercial and institutional buildings, major expansions, and larger parking areas. Requiring these developments to assess stormwater at the design stage would help protect existing infrastructure and reduce the potential for private development to create a public drainage problem.

The ability to waive the requirement based on technical advice is also consistent with a proportionate approach. It would allow the Town to avoid requiring a professionally prepared plan where a development would not materially affect runoff, drainage routes, infrastructure, or neighbouring properties.

7.6 Use of Site Plan Approval

Policy 5.21 provides general support for using site plan approval:

"It shall be the policy of Council to, through the Land Use Bylaw, use site plan approval as the tool for reviewing developments that require some additional oversight or where there is a benefit to providing flexibility in the ways land use controls are implemented."

Site plan approval is appropriate for development within the OFR Overlay because the relevant considerations are site-specific. Building location, finished elevations, grading, drainage, overland flow routes, driveway design, and connections to stormwater infrastructure cannot always be assessed through uniform dimensional requirements alone.

The process would allow the Development Officer to apply the criteria established in the LUB without requiring every development in the overlay to proceed through a development agreement. This provides greater oversight than a standard development permit while remaining more predictable and administratively efficient than a discretionary Council approval.

7.7 Technical Information and Professional Review

Policy 5.24 authorizes Council to require professionally prepared information when evaluating a LUB amendment or development agreement. The proposed information includes:

- A detailed site plan;
- A site-grading plan;
- A drainage and stormwater management plan;
- Hydrological and geotechnical studies;
- Environmental studies; and
- Other studies required to assess the proposal.

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This policy supports requiring hydrotechnical, grading, drainage, and stormwater information for a development agreement application. Policy 5.23 also requires Council to consider the potential for a proposal to create flooding or serious drainage issues on the development site or in nearby areas.

7.8 General Criteria for the Proposed Amendments

Policy 5.23 requires Council to be satisfied that an amendment to the LUB:

- Is consistent with the intent of the MPS;
- Does not conflict with applicable municipal or provincial programs, Bylaws, or regulations; and
- Is not premature or inappropriate based on specified servicing, environmental, financial, and site-suitability considerations.

Of relevance, Council must consider:

"The potential to create flooding or serious drainage issues, including within the proposal site and in nearby areas."

Council must also consider municipal costs, pollution and erosion, geohazards, site grades, soil and geological conditions, watercourses, wetlands, and the adequacy of municipal services.

The proposed amendments directly respond to these considerations. They would establish a process for identifying potential flooding and drainage effects before development occurs and would enable the Town to require mitigation where warranted. This could reduce future impacts on municipal infrastructure and lower the risk that development costs are transferred to neighbouring owners or the Town.

The requirements may increase application, engineering, and construction costs for affected developments. These implications should be weighed against the public costs and private losses associated with avoidable flooding, infrastructure damage, emergency response, and retrofitting drainage systems after development has occurred. The proposed development triggers and waiver authority help ensure that the requirements remain proportionate to the anticipated impact.

7.9 Policy Analysis Conclusion

The proposed OFR Overlay, Conservation (OS2) Zone realignment and Town-wide stormwater management requirements are supported by the existing MPS objectives concerning public safety, environmental protection, climate resilience, responsible growth, and the protection of municipal infrastructure. The amendments also respond directly to the MPS direction to use current technical information when identifying and regulating flood-prone lands.

The existing MPS provides a sound policy foundation but does not fully enable all components of the proposed regulatory approach. Additional policies are required to:

- Establish the OFR Overlay as distinct from the Conservation (OS2) Zone;

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- Authorize floodproofing, grading, access, and related development standards within the overlay;
- Identify flood- and stormwater-related matters that may be regulated through site plan approval;
- Require stormwater management plans for defined forms of development throughout the Town; and
- Authorize technical reports during development-permit and site plan review.

Staff considers the proposed approach to be consistent with the overall intent of the existing MPS.

8. Recommendation and Next Steps

Staff recommends that PAC provide a positive recommendation and that Council give First Reading and send to a Public Hearing the draft amendments to the MPS and LUB as attached.

Draft motion: **THAT the Planning Advisory Committee recommend that Council give First Reading and proceed to a Public Hearing for the proposed amendments to the Municipal Planning Strategy and Land Use Bylaw respecting stormwater management, the Overland Flood Risk (OFR) Overlay, and the Conservation (OS2) Zone, as attached to the October 6, 2026 staff report;**

AND THAT, prior to Council's consideration of First Reading, direct written notification be provided to the seven property owners newly affected by the proposed expansion of the Conservation (OS2) Zone.

If PAC provides a positive recommendation, staff will present the proposed MPS and LUB amendments to Council for First Reading. If Council gives First Reading, a Public Hearing will be scheduled and notice will be provided in accordance with the *Municipal Government Act*. Council will consider the staff report, PAC's recommendation, and submissions received through the Public Hearing before deciding whether to adopt the amendments at Second Reading. If adopted, the amendments will be forwarded to the Province for the required review and will take effect following completion of the statutory approval and notice process. Council may approve, amend, or refuse the proposed amendments.

Staff already sought preliminary comment from the DMA, which did not identify any planning-related concerns expected to arise through the Director Review process.

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Appendix A

Municipal Planning Strategy: Proposed Amendments

Amend MPS Part 2 – Community Context and Vision

Addition to existing Section 2.4.2 – Flood Risk Areas

Replace:

Goal: To protect public safety and property and to reduce the requirement for flood control works and flood damage restoration in floodplains.

The Town does not contain any designated flood risk areas under the Canada-Nova Scotia Flood Damage Reduction Program. However, the Cornwallis River flows through the Town and portions of Berwick are affected by riverine flooding, low-lying lands, and stormwater constraints. The Town has also experienced recurring flooding during significant rainfall events, including flooding associated with overland flow, open ditches, culverts, road overtopping, and localized stormwater storage. In response to these ongoing flood concerns, the Town commissioned a Stormwater Management Plan.

The resulting CBCL Stormwater Management Plan (2026) provides updated technical information regarding the Town's stormwater system, flood-prone lands, drainage constraints, and potential infrastructure improvements. This Plan and the Land Use Bylaw use that information to guide development review, protect public safety, reduce avoidable risk to private and public property, and help ensure that future development does not worsen flood or stormwater impacts.

Floodplain and stormwater mapping should be reviewed periodically and may be updated as new municipal, provincial, or site-specific technical information becomes available.

Amend MPS Part 3 – Environmental Design Policies

Addition to existing Section 3.1.3 – Floodplains

Replace:

Recent extreme weather events and the CBCL Stormwater Management Plan (2026) demonstrate that Berwick must consider climate-related risks when planning for growth, infrastructure, and private development. Flooding is a natural part of a river's cycle, but it can present risks to buildings, infrastructure, public safety, and private property when development is in floodplains.

Stormwater is also a planning issue. Development can change how land absorbs, stores, and conveys water. Buildings, driveways, parking areas, roads, compact surfaces, fill, grading, and changes to ditches or culverts can increase runoff, reduce natural storage, obstruct overland flow routes, and redirect drainage onto neighbouring lands.

Council recognizes three broad stormwater and flood risk contexts in Berwick:

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1. Lands north of Main Street that are affected primarily by flood risk associated with the Cornwallis River due to 1-in-20-year and 1-in-100-year return period events;
2. Lands north of Main Street that are low-lying and where discharge can be restricted by high Cornwallis River levels; and
3. Lands south of Main Street that are affected primarily by surface drainage, overland flow, ditch capacity, culvert capacity, road overtopping, and localized stormwater storage.

Council intends to use the Land Use Bylaw, Subdivision Bylaw, Municipal Services Specifications, site plan approval, development agreements, and public infrastructure planning together to manage these risks. The intent is not to stop all development in stormwater-affected areas, but to ensure that development in known risk areas is appropriately assessed, meets applicable conditions and mitigation requirements, and does not worsen flooding, stormwater impacts, or drainage constraints.

Policy 3.3 It shall be a policy of Council to, through the Land Use Bylaw, identify and regulate lands that are subject to flood risk, stormwater constraints, overland flow routes, and drainage channels.

Policy 3.3A It shall be the policy of Council to create an Overland Flood Risk (OFR) Overlay on the zoning map of the Land Use Bylaw. Development permitted in the underlying zone may occur in this overlay, subject to Site Plan Approval and the conditions of the Land Use Bylaw.

Policy 3.3B In general, unless otherwise permitted by this plan any use associated with the production or warehousing of hazardous materials is prohibited in the Overland Flood Risk (OFR) Overlay.

Policy 3.3C It shall be a policy of Council to consider amendments to the Conservation (OS2) Zone boundaries north of Main Street where updated flood risk mapping, municipal stormwater information, or engineering review identifies that such a change is required.

Policy 3.3D It shall be a policy of Council to require, where appropriate, stormwater management plans, lot grading plans, flood risk and mitigation reports, erosion and sediment control plans, drainage easements, or other technical information where development may affect flood risk, stormwater conveyance, stormwater storage, overland flow routes, ditches, culverts, drainage channels, or municipal infrastructure.

Policy 3.3E It shall be a policy of Council to allow applicants to submit site-specific information prepared by a qualified professional where the location or extent of a mapped flood risk area, overland flow route, drainage channel, or other stormwater constraint is contested.

NEW Section 3.2.8 – Stormwater Management

Insert after Section 3.2.7 RENEWABLE ENERGY:

3.2.8 STORMWATER MANAGEMENT

The CBCL Stormwater Management Plan (2026) confirms that Berwick's major stormwater system includes overland flow paths, open ditches, culverts, channels, storage areas, and

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other drainage features. Some of these features are located on private lands but still perform important stormwater functions.

Council intends to ensure that development in known stormwater constraint areas does not worsen drainage issues, obstruct overland flow routes, block maintenance access, redirect drainage onto neighbouring lands, or interfere with public or private stormwater infrastructure.

Policy 3.46A It shall be the intention of Council to require a stormwater management plan for development that meets thresholds established in the Land Use Bylaw, including but not limited to multi-unit dwellings, grouped dwellings, townhouses, commercial development, industrial development, institutional development, mixed-use development, significant parking areas, high lot coverage, fill, grading, ditch alteration, culvert installation, culvert removal, or changes to existing drainage patterns.

Policy 3.46B It shall be the intention of Council to allow exemptions from stormwater management plan requirements where the development is minor, does not materially increase impervious surface, does not affect a mapped overland flow route or stormwater constraint, is already regulated through a development agreement or subdivision approval, or where the Town Engineer confirms that a stormwater management plan is not required.

Amend MPS Part 5 – Implementation and Review

Addition to existing Section 5.3 – Site Plan Approval

Insert after Policy 5.22:

Policy 5.22A It shall be the intention of Council that site plan approval criteria shall include requirements related to grading, drainage, stormwater management, overland flow routes, ditches, culverts, drainage easements, erosion and sediment control, maintenance of private stormwater infrastructure, and protection of neighbouring properties from adverse drainage impacts.

Land Use Bylaw: Proposed Amendments

Amend LUB Part 2 – Administration

Addition to existing Section 2.9 APPLICATION FOR DEVELOPMENT PERMIT AND DEVELOPMENT AGREEMENT

Insert after 2.9 g.:

h. A Stormwater Management Plan where required by Section 4.41.1 of this Bylaw.

Addition to existing Section 2.12 USES CONSIDERED BY SITE PLAN APPROVAL

Insert after 2.12 f.:

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f. Multiple unit dwellings from seven (7) to nine (9) units in the Residential Growth (RG) zone; and

g. Uses permitted in the underlying zone on lands located within the Overland Flood Risk (OFR) Overlay.

Amend Part 4 – General Provisions for all Zones

NEW section 4.41 – Stormwater Management

Insert after existing section 4.40 WATERCOURSE BUFFERS:

4.41 STORMWATER MANAGEMENT PLANS

4.41.1 The Development Officer shall require a stormwater management plan for the following development:

a. A new Multi Unit Dwelling;

b. A new Grouped Dwelling containing three or more dwelling units;

c. A new Townhouse Dwelling;

d. A new main commercial, industrial, institutional, or mixed-use building;

e. An expansion of a commercial, industrial, institutional, or mixed-use building that increases the existing main building footprint by more than 50 percent;

f. Creation or expansion of a parking area with more than four parking spaces; or

g. Any development where the Development Officer, in consultation with the Town Engineer, determines that additional stormwater information is required.

4.41.2 A stormwater management plan required under this Section shall be prepared and stamped by a qualified professional engineer licensed to practice in Nova Scotia and shall demonstrate, to the satisfaction of the Town Engineer, how stormwater will be managed on the property. The stormwater management plan must demonstrate that pre- and post-construction stormwater discharge will be balanced to ensure there is no negative impact on downstream properties. Following completion of the project, a certificate of compliance prepared by the engineer of record shall be submitted to the Town Engineer, confirming that the completed works have been constructed in accordance with the approved stormwater management plan.

4.41.3 Upon the advice of the Town Engineer or other qualified professional, the requirement for a stormwater management plan may be waived by the Development Officer, where it has been confirmed that the development will not materially affect stormwater runoff, drainage patterns, overland flow routes, stormwater infrastructure, or neighbouring properties.

NEW section 4.42 – Overland Flood Risk (OFR) Overlay

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Insert after new section 4.41 STORMWATER MANAGEMENT PLANS:

4.42 OVERLAND FLOOD RISK (OFR) OVERLAY

4.42.1 Uses Permitted by Site Plan Approval

The following uses shall be permitted in the Overland Flood Risk (OFR) Overlay, subject to Part 12 and all applicable requirements of this Bylaw:

a. Uses permitted in the underlying zone subject to the applicable requirements of 4.42.3.

4.42.2 Prohibited Uses

- Notwithstanding Part 4.24.1 (a) any use associated with the production or warehousing of hazardous materials shall be prohibited.

4.42.3 Floodproofing Standards

a. Every new main building, first floor accessory dwelling unit in a new detached building, and expansion of a main building shall be floodproofed in accordance with subsections b. to f.;

b. A new main building shall not contain a basement;

c. A building pad shall be constructed using fill so that the finished elevation is 6 inches above the highest flood risk elevation of the Overland Flood Risk (OFR) Overlay;

d. A lot grading plan showing elevations and flow paths shall be submitted with any application for development of a new main building or expansion;

e. The top of any well casing shall be located at least 6 inches above the highest elevation of the Overland Flood Risk (OFR) Overlay; and

f. A driveway providing access to a building containing a vulnerable use or an emergency services depot shall be constructed so that the travelled surface is at least 6 inches above the highest flood-risk elevation of the Overland Flood Risk (OFR) Overlay. The driveway shall be designed to maintain drainage and overland flow and must not increase flooding on another property.

4.42.4 Flood Risk and Mitigation Reports

The Development Officer may require a flood risk and mitigation report for any proposed development in the Overland Flood Risk (OFR) Overlay. The flood risk and mitigation report shall be prepared by a qualified professional engineer at the applicant's expense and shall demonstrate to the satisfaction of the Development Officer, or designate, that the proposed development can be safely accommodated without creating unacceptable risk to human life, property, the environment, municipal infrastructure, or neighbouring lands. Following completion of the project, a certificate of compliance prepared by the engineer of record shall be submitted to the Town Engineer, confirming that the completed works have been constructed in accordance with the approved stormwater management plan.

4.42.5 Hydrotechnical Study

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Development contrary to the above requirements in Part 4.42.3 may be permitted provided a hydrotechnical study, carried out by a qualified professional, shows that the proposed development will not contribute to upstream or downstream flooding or result in a change to flood water flow patterns.

Amend Part 5 – Residential Zone Provisions

NEW subsection criteria for 5.3.3 Uses Permitted by Site Plan Approval

Insert after d.

d. Townhouse Dwelling – 4 or Fewer Dwellings on a Lot; and

e. Uses otherwise permitted in the underlying zone on lands located within the Overland Flood Risk (OFR) Overlay, except for uses prohibited by Section 4.42.2 and subject to the applicable requirements of Section 4.42.3.

NEW subsection under 5.6 Residential Comprehensive Development District (RCDD) Zone

Insert after RCDD USES PERMITTED:

Uses Permitted by Site Plan Approval

The following uses shall be permitted in the Residential Comprehensive Development District (RCDD) Zone, subject to Part 12 and all applicable requirements of this Bylaw:

a. Single Unit Dwellings on existing lots as per the requirements of the Residential (R) Zone on lands located within the Overland Flood Risk (OFR) Overlay, and subject to the applicable requirements of Section 4.42.3.

Amend Part 6 – Commercial and Commercial/Industrial Enterprise Zone Provisions

NEW subsection 6.4.3 Uses Permitted by Site Plan Approval

Insert after 6.4.2 General Lot Requirements

6.4.3 Uses Permitted by Site Plan Approval

The following uses shall be permitted in the Commercial/Industrial Enterprise (C2) Zone, subject to Part 12 and all applicable requirements of this Bylaw:

a. Uses otherwise permitted in the underlying zone on lands located within the Overland Flood Risk (OFR) Overlay, except for uses prohibited by Section 4.42.2 and subject to the applicable requirements of Section 4.42.3.

Amend Part 7 – Gateway Mixed Use (GMU1) Zone

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NEW subsection 7.3 Uses Permitted by Site Plan Approval

Insert after 7.2 General Lot Requirements

7.3 Uses Permitted by Site Plan Approval

The following uses shall be permitted in the Gateway Mixed Use (GMU1) Zone, subject to Part 12 and all applicable requirements of this Bylaw:

a. Uses otherwise permitted in the underlying zone on lands located within the Overland Flood Risk (OFR) Overlay, except for uses prohibited by Section 4.42.2 and subject to the applicable requirements of Section 4.42.3.

Amend Part 8 - Institutional

NEW subsection 8.3 Uses Permitted by Site Plan Approval

Insert after 8.2 General Lot Requirements

8.3 Uses Permitted by Site Plan Approval

The following uses shall be permitted in the Institutional (I1) Zone, subject to Part 12 and all applicable requirements of this Bylaw:

a. Uses otherwise permitted in the underlying zone on lands located within the Overland Flood Risk (OFR) Overlay, except for uses prohibited by Section 4.42.2 and subject to the applicable requirements of Section 4.42.3.

Amend Part 13 - Definitions

Insert after Flanking Yard:

Floodproofing means a measure or combination of structural and non-structural measures incorporated into the design, construction, or alteration of a building, structure, or site to reduce or eliminate the risk of flood damage to a defined standard or elevation accepted by the Town Engineer.

Flood Risk and Mitigation Report means a report prepared by a qualified professional, at the applicant's expense, that assesses flood risk, stormwater risk, flood storage, flood conveyance, overland flow, drainage impacts, and proposed mitigation measures, and determines whether the lands can be safely used for the intended development without increasing risk to human life, property, the environment, municipal infrastructure, or neighbouring lands.

Insert after Public Park:

Qualified Professional means an individual who:

a. has relevant education, training, experience, and expertise in a profession related to the matter being assessed;

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b. is practising within the scope of that profession; and

c. where applicable, is a member in good standing of the professional body regulating that profession in Nova Scotia.

Insert after Storey:

Stormwater means water from precipitation of all kinds and includes water from melting of snow, ice, groundwater, and surface water.

Stormwater Management Plan means a combination of diagrams, documents, drawings, calculations and / or specifications, prepared and stamped by a qualified professional licensed to practice in the Province of Nova Scotia, that demonstrates how Stormwater will be managed within a property.

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Appendix B

Report to PAC – Stormwater Management Discussion	
Prepared by:	Chrystal Fuller, LPP, MCIP with input from Tim Bouter, P. Eng (Town Engineer) and Aaron Dondale (Public Works)
Subject:	Potential Stormwater Management MPS Policy changes and LUB amendments
Date:	May 5, 2026
Purpose:	Preliminary feedback on potential MPS and LUB changes

1. Introduction

The Town of Berwick retained CBCL Limited to prepare a Stormwater Management Plan to better understand the performance of the Town's stormwater system, identify flood risk areas, and develop mitigation strategies to improve flood resilience while supporting future development. The final report was issued in April 2026. The study included hydrologic and hydraulic modelling, review of existing stormwater infrastructure, targeted field surveys, Town GIS information, and public input from a consultation session held on March 24, 2025.

The CBCL report confirms that Berwick experiences recurring flooding during large rainfall events, particularly along Main Street, in low-lying areas, and in areas adjacent to the Cornwallis River. It also confirms that the Town's major stormwater system relies heavily on overland flow paths, open ditches, and culverts, and that much of this aging infrastructure does not have sufficient capacity to manage increased stormwater flows associated with climate change and development.

This report focuses on land use planning and does not ask PAC to assess the engineering merits, timing, or cost of specific capital projects. Those matters will be considered separately through Council's infrastructure planning and budgeting processes. The purpose of this report is to begin a planning discussion about whether the Municipal Planning Strategy and Land Use Bylaw should be updated so that future development better accounts for known flood risk, overland flow paths, stormwater constraints, and climate change.

This is a timely discussion. When the Town's MPS and LUB were amended in 2025, the final CBCL modelling was not available. The Town now has updated technical information that can inform whether changes should be made to the Conservation (OS2) Zone, development permit requirements, site plan approval criteria, and possible stormwater overlay areas.

2. Why stormwater management is important

Stormwater management matters because it affects residents, municipal infrastructure, public safety, environmental quality, and municipal risk.

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For residents, unmanaged stormwater can contribute to flooded basements, damaged yards, unsafe roads, blocked access, erosion, icing, sediment build-up, and conflict between neighbouring properties. Even where flooding does not enter a building, recurring nuisance flooding can affect how people use their property and how safe they feel during large rain events.

For the Town, stormwater management is an infrastructure and risk management issue. Poorly managed stormwater can damage roads, culverts, ditches, parks, trails, wastewater infrastructure, public works facilities, and private lands. It can also increase maintenance costs and create public expectations that the Town will solve drainage problems after development has already occurred.

Climate change makes this more important. The CBCL report applied climate change modelling using federal guidance and identified an overall projected rainfall increase of approximately 67 percent by 2100. This does not mean every storm will be extreme, but it does mean the Town should expect more pressure on drainage systems over time.

Stormwater is also a planning issue because development changes how land absorbs and conveys water. More buildings, driveways, parking areas, roads, compacted surfaces, and filled low areas can increase runoff and reduce natural stormwater storage. In Nova Scotia, municipal planning strategies may include policy on climate change adaptation, stormwater management and erosion control, fill and excavation, lands subject to flooding, and infrastructure.

The planning documents do not need to stop all development in stormwater-affected areas. However, they should ensure that development in known risk areas is reviewed using the best available information.

3. Summary of planning-related recommendations from the CBCL report

The CBCL report includes both infrastructure recommendations and general recommendations. The PAC's role is most directly related to the general recommendations that affect planning policy, land use regulation, development review, subdivision, and future municipal standards.

The key planning-related recommendations are summarized below.

CBCL report recommendation	Planning implication
Establish drainage easements	The report recommends drainage easements to enable legal access to key pieces of stormwater infrastructure. This has implications for subdivision approvals, development agreements, and development affecting overland flow routes.
Implement a proactive inspection and maintenance program	The report recommends a proactive maintenance program so existing stormwater assets provide maximum value. Planning documents should avoid approving development that blocks access to ditches, culverts, drainage routes, or other stormwater infrastructure.

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Expand municipal stormwater management design standards	CBCL recommends expanding municipal standards to include clear and specific stormwater quantity and quality control requirements. This is best addressed through Municipal Services Specifications, supported by MPS and LUB amendments.
Recognize the overland system	The report confirms that Berwick's major stormwater system is made up of overland flow paths, open channels, and culverts. Planning controls should recognize that these drainage routes are part of the Town's stormwater system, even where they cross private lands.
Use updated flood and stormwater information	The report provides updated information that can inform where restrictions, technical reports, or additional review should apply, especially north of Main Street and in overland flow areas south of Main Street.
Consider development restrictions in flood risk areas	The report includes a specific recommendation section on development restrictions. This supports the Town considering whether current zoning and LUB provisions should be updated now that better data is available.
Treat capital works and land use controls as complementary	The report identifies capital works such as culvert upgrades, Centennial Park detention, Horsburgh Drive channel and diversion options, Public Works floodproofing, and lifecycle renewal opportunities. These are important, but should be
	considered through capital planning rather than debated in detail through this PAC report.

The practical planning takeaway is that Berwick should move from a general approach of "stormwater should be considered" to a clearer approach where development in known risk areas must demonstrate that it will not worsen stormwater impacts or block existing drainage functions.

4. Existing planning framework

Berwick already has several planning tools that relate to flood risk, environmental constraints, and stormwater. The issue is not that the Town has no tools. The issue is whether the existing tools are specific enough now that the CBCL report is available.

The MPS includes an Environmental Designation and enables both the Recreation and Open Space (OS1) Zone and the Conservation (OS2) Zone. Policy 3.43 states that Council intends to identify known environmentally sensitive areas, including steep slopes, flood areas, and watercourses, where development activity will be restricted or prohibited, and to apply the OS2 Zone to those lands. Policy 3.44 states that the Town will undertake floodplain mapping to identify at-risk areas and that, until the study is completed, new residential, commercial, or industrial development within the Environmental Designation may require a flood risk assessment study prepared by a qualified person.

The LUB currently includes the OS1 and OS2 Zones. In the OS2 Zone, no development permit may be issued except for a limited list of uses, including cemeteries, agriculture,

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garden nurseries, public parks, trails, passive recreation facilities, wastewater treatment facilities, flood control facilities, and market gardens. The LUB states that no permanent building may be erected, added to, or altered in the OS2 Zone except buildings or structures related to sewage treatment or flood control.

The LUB also includes site plan approval criteria for certain residential, mixed-use, and commercial developments. These criteria address matters such as location of structures, parking, access, landscaping, and neighbourhood impacts, but they do not appear to include detailed criteria for stormwater, overland flow routes, grading, drainage easements, or stormwater maintenance.

The current planning documents therefore provide a foundation. The question for PAC is whether that foundation should be updated to reflect the new CBCL information.

5. Summary of best practices from other municipalities

Stormwater regulation is increasingly handled through a combination of planning policy, land use regulation, engineering standards, subdivision requirements, and maintenance obligations. No single tool does all the work.

The Nova Scotia Minimum Planning Requirements Regulations support the inclusion of MPS policies related to climate change mitigation and adaptation, stormwater management and erosion control, fill and excavation, lands subject to flooding, steep slopes, and other hazard lands. This confirms that stormwater is an appropriate planning topic where the approach is grounded in local conditions and properly implemented through municipal planning tools.

Halifax provides a useful Nova Scotia example, although Berwick would need a smaller-scale version. Halifax's Administrative Order 2020-010-OP establishes stormwater management standards for development activities. Its standards include retaining stormwater runoff from the first 10 mm of rainfall on-site, matching pre-development and post-development stormwater runoff conditions for the 1:5-year and 1:100-year return design storms, and applying stormwater quality and erosion control measures.

The Halifax example is useful because it does not rely only on general wording. It sets measurable requirements, requires technical submission where appropriate, and connects stormwater review to development activity. Berwick should not copy Halifax's approach wholesale, because Berwick's administrative capacity, development scale, and drainage system are different. However, the broader principle is applicable: MPS policy should provide authority, the LUB should identify when stormwater review is required, and technical standards should sit in municipal specifications.

The Municipality of the County of Kings provides a more directly comparable Valley example. Kings has prepared a Storm Water Management Policy that applies to all future development and recognizes that property owners are responsible for managing drainage on their own property so neighbouring properties are not negatively affected by stormwater arising from development. The policy is also careful to clarify the municipality's limited role on private property and states that municipal guidance and minimum standards do not relieve the owner of responsibility or guarantee that there will be no negative stormwater flows onto other properties.

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The Kings policy is useful for Berwick because it uses clear permit-stage triggers without requiring an engineered stormwater plan for every small development. Under the Kings approach, the Development Officer may request a Storm Water Management Plan for new multi-unit dwellings, grouped dwellings of three residential units or more, townhouses of three residential units or more, new main commercial and industrial buildings, commercial or industrial expansions of more than 50 percent of the existing main building footprint, and new development or expansions that exceed 35 percent lot coverage.

The Kings policy also includes practical exemptions. The Development Officer may exempt individual lots containing one- or two-unit dwellings, developments with less than 35 percent lot coverage, developments where drainage is regulated through a development agreement, and developments where building footprints are not proposed to expand. This is a useful model for Berwick because it balances stormwater risk management with administrative practicality.

Another useful feature of the Kings policy is the role clarity between the Development Officer and Municipal Engineer. The Development Officer requests the Storm Water Management Plan as part of the permit review, forwards it to the Municipal Engineer or designate, and issues the permit only after receiving written notification that the plan addresses drainage management on the property. The Municipal Engineer reviews the plan, may request additional information, and reviews consistency with the Municipal Services Specifications Manual, even where no municipal infrastructure is involved.

For Berwick, the best-practice lesson from Kings is that the Town can create a practical permit-stage process that does three things: places responsibility for private drainage on the property owner, gives the Development Officer clear authority to request a stormwater plan, and keeps the technical review with the Municipal Engineer rather than expecting the Development Officer to make engineering judgements.

The best practice lessons for Berwick are:

- Use the MPS to establish policy authority.
- Use the LUB to identify where and when stormwater review is required.
- Use the Subdivision Bylaw and Municipal Services Specifications for technical design standards.
- Use site plan approval and development agreements for larger or more complex projects.
- Use clear development permit triggers, such as multi-unit residential development, commercial and industrial buildings, larger building expansions, higher lot coverage, parking areas, fill, grading, ditch changes, culvert changes, and development within mapped stormwater constraint areas.
- Avoid requiring engineered stormwater plans for every small residential project unless the property is within a mapped risk area or involves material grading or drainage changes.
- Clarify that property owners remain responsible for managing drainage on their property so that neighbouring properties are not negatively affected.

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- Require professional input where the Town does not have enough information to determine whether a development will affect stormwater conveyance, storage, or downstream properties.
- Ensure the Development Officer can request the required information, but that technical review is completed by the Municipal Engineer or designate.
- Recognize that public infrastructure upgrades and private development controls are both needed. One does not replace the other.

6. Key planning tools under discussion

For clarity, this report uses the following terms:

Tool	Meaning
Conservation (OS2) Zone	A zoning tool already used in Berwick to restrict development on environmentally sensitive lands, including flood areas and watercourses.
Flood Risk Overlay	A possible new overlay that could apply to riverine flood-prone lands, particularly north of Main Street, while leaving the underlying zoning in place.
Stormwater Management Overlay	A possible new overlay that could apply to rainfall-induced flood risk areas, overland flow paths, culvert corridors, ditches, and drainage constraints, particularly south of Main Street.
Municipal Services Specifications	Technical engineering standards that can set measurable stormwater design requirements without placing all engineering detail in the MPS or LUB.
Development agreement clauses	Site-specific legal terms that can require stormwater plans, easements, phasing, bonding, as-built drawings, and maintenance obligations for larger or higher-risk projects.

The CBCL mapping provides the technical basis for further planning review. Before adoption into the LUB, the mapping should be translated into a clear planning schedule or overlay, reviewed by planning and engineering staff, and adjusted as needed so that property owners, staff, and Council can understand where additional requirements apply.

7. Discussion Point 1: Flood risk areas north of Main Street

The lands north of Main Street require focused discussion because they are affected by flood risk associated with the Cornwallis River and low-lying lands. The current MPS already recognizes that known environmentally sensitive areas, including flood areas and watercourses, may be identified and placed in the OS2 Zone, where development activity will be restricted or prohibited.

When the MPS and LUB were amended in 2025, the final CBCL modelling was not yet available. The current OS2 boundaries therefore do not appear to fully reflect the new stormwater and flood-risk information now available to the Town.

Three broad approaches are available.

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Option 1: Leave the OS2 Zone as it is

From a risk management perspective, this is the least preferred option.

Maintaining the current OS2 boundaries without further review would be administratively simple. However, the Town now has updated technical information from the CBCL report. If the planning documents are not reviewed in light of that information, the Town may face increased public safety, infrastructure, financial, reputational, and legal risk, particularly as rainfall intensity increases with climate change.

This option may be defensible only if Council concludes, after review, that the current OS2 Zone already adequately captures the affected lands and that no additional development pressure is likely. Based on the CBCL report, that conclusion does not seem supportable.

Option 2: Amend the OS2 Zone as outlined in the attached maps

This is the most precautionary approach.

Under this option, the OS2 Zone would be amended to reflect updated flood risk mapping and affected lands north of Main Street. This would provide the clearest regulatory response and would align with the existing MPS direction that known flood areas may be placed in the Conservation Zone.

The advantage of this option is clarity. It would tell landowners and developers that these lands are not intended for urban development because of flood risk and stormwater function. It would also reduce future pressure on staff and Council to consider site-specific development proposals in areas where the Town now has evidence of risk.

The disadvantage is that it may be viewed by some landowners as a significant restriction. It may also require careful communication so the public understands that the change is based on updated technical information, climate risk, public safety, and protection of municipal infrastructure.

Option 3: Apply an intermediate approach with mitigation measures

This option would update the planning documents but would not necessarily rezone all affected lands to OS2.

An intermediate approach could include one or more of the following:

Possible measure	Purpose
Expand OS2 only in the highest-risk areas	Focus the strongest restriction where risk is most clear
Create a Flood Risk Overlay	Allow existing underlying zoning to remain, while requiring flood risk review before development
Require flood mitigation reports for new development in mapped areas	Allow some flexibility while requiring professional assessment
Require flood mitigation analysis for all new development over a certain size	To have clear thresholds for when stormwater assessments are required.
Limit sensitive uses	Avoid new residential, institutional, or other vulnerable uses in higher-risk areas
Require floodproofing, grading review, or no-net-loss of flood storage	Reduce risk where development may be considered

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Require development agreement rather than as-of-right approval	Allow Council to consider site-specific mitigation, phasing, easements, and infrastructure
Allow only low-risk uses	Permit parks, trails, open space, parking, utilities, flood control, or similar uses where appropriate

This option may be attractive if Council wants to reduce risk but avoid a blanket rezoning approach. The trade-off is that it is more complex to administer and may require clearer technical criteria.

8. Discussion Point 2: Stormwater Management Requirements south of Main Street

The stormwater issues south of Main Street are generally different from the flood-risk issues north of Main Street. Many of these areas are affected by overland flow, ditch capacity, culvert capacity, road overtopping, and localized storage issues. The CBCL report identifies potential capital improvements that may reduce flood risk over time, including culvert upgrades, Centennial Park detention, Horsburgh Drive channel and diversion options, and lifecycle renewal opportunities.

Those capital improvements will need to be considered by Council through budgeting, detailed design, easements, landowner discussions, public works planning, and any required approvals. However, **it would be prudent to improve development review practices while Council considers next steps.**

The planning concern is straightforward: where the Town has information about stormwater constraints, it should avoid approving new development that worsens those constraints before public works improvements are completed. Public works improvements may reduce risk over time, but planning controls are still needed so that development does not worsen existing conditions before those improvements are completed, or in areas where residual risk remains.

Two broad options are available for PAC discussion. Both options would be supported by clear permit stage triggers and review by the Town Engineer.

Option 1: Require stormwater management plans across Town using clear development thresholds

One option is to create a Town-wide stormwater management policy, similar in concept to the Municipality of the County of Kings approach. Under this option, the requirement for a stormwater management plan would not be limited to properties within a mapped overlay. Instead, it would apply across Berwick where development meets defined thresholds.

This approach recognizes that stormwater issues are not always confined to mapped flood-risk or overland-flow areas. Site grading, increased lot coverage, parking areas, commercial and industrial development, and larger residential projects can create stormwater impacts even outside an overlay area. A Town-wide approach would also be simpler to explain in some respects because the same basic trigger would apply throughout the Town.

Potential Town-wide triggers could include:

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- new multi-unit dwellings;
- grouped dwellings or townhouse developments of three units or more;
- new main commercial or industrial buildings;
- expansions of commercial or industrial buildings over a defined threshold;
- development exceeding a defined lot coverage threshold;
- creation or expansion of significant parking areas;
- development involving fill, grading, ditch alteration, culvert installation, culvert removal, or changes to existing drainage patterns; or
- any development where the Development Officer, based on advice from the Town Engineer, determines that additional stormwater information is needed.

This option could also include exemptions for low-risk development, such as individual lots containing one- or two-unit dwellings, minor additions that do not materially increase impervious surface, development already regulated through a development agreement, or development where the Municipal Engineer confirms that a stormwater management plan is not required.

Option 2: Require stormwater management plans within a mapped Stormwater Management Overlay

Under this option, the Town would create a Stormwater Management Overlay for mapped stormwater constraint areas, particularly south of Main Street. Within that overlay, the Town could require a stormwater management plan for development that meets defined thresholds, such as:

- development creating more than two dwelling units;
- new commercial, industrial, institutional, or mixed-use development;
- creation or expansion of parking areas;
- development involving fill, grading, ditch alteration, culvert installation, culvert removal, or changes to existing drainage patterns; or
- development that may affect a mapped overland flow route, ditch, culvert, drainage easement, or stormwater storage area.

This approach would focus the stormwater management plan requirement on areas where the CBCL report or Town information identifies known drainage constraints. It would avoid applying the same level of review to every property in Town, while still requiring better information before development proceeds in areas where stormwater risk is already known.

A Stormwater Management Overlay would not necessarily prohibit development. It would require development in mapped areas to demonstrate that it will not worsen stormwater impacts, block overland flow, redirect drainage onto neighbouring properties, or interfere with stormwater infrastructure.

Common elements under either option

Whether the Town chooses a Town-wide threshold approach, an overlay-based approach, or some combination of the two, the same general principles should apply.

Stormwater management requirements should be based on clear triggers. A unit-count threshold, such as more than two dwelling units, is useful but not sufficient on its own.

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Some lower-unit developments, large parking areas, commercial uses, or grading and fill projects may have greater stormwater impacts than a small triplex. For that reason, any final approach should combine unit count with other triggers, including impervious surface, lot coverage, parking area creation or expansion, fill, grading, ditch changes, culvert changes, and location within a mapped flow path.

The Town should also reserve the ability to exempt applications from the requirement where:

- relevant capital improvements have been completed;
- the Town Engineer confirms that the development does not affect a mapped overland flow route or stormwater constraint;
- the development is minor and does not materially increase impervious surface;
- adequate stormwater controls have already been approved through subdivision, site plan approval, or development agreement; or
- updated mapping or engineering review shows that the property is no longer within an area of concern.
- Exemptions should be based on written confirmation from the Town Engineer or Municipal Engineer. This would provide clarity for the Development Officer, applicants, and property owners.

Potential stormwater requirements under either option could include:

Requirement	Purpose
Stormwater management plan for development over defined thresholds	Ensures technical review before approval
Lot grading plan	Helps prevent drainage being redirected onto neighbouring properties
Protection of overland flow paths	Avoids blocking the major drainage system
No obstruction of ditches, culverts, drainage channels, or easements	Maintains existing conveyance
Erosion and sediment control during construction	Reduces construction-related impacts
Maintenance plan for private stormwater facilities	Avoids future failure of private systems
Town Engineer o review	Keeps technical judgement with qualified engineering staff, not solely the Development Officer

For PAC discussion, the key choice is whether Berwick should begin with a Town-wide threshold approach, an overlay-based approach, or a hybrid approach that applies Town-wide triggers while also imposing additional requirements in mapped stormwater constraint areas.

9. Questions for PAC to consider

The purpose of this section is to identify the main policy choices. Detailed wording can be prepared later if PAC and Council support the general direction.

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- Does PAC agree that the MPS and LUB should be reviewed and potentially amended in response to the CBCL Stormwater Management Plan?
- Should the planning amendments address only mapped flood-risk areas, or should they also address broader stormwater management issues across Town, including overland flow paths, open ditches, culverts, drainage easements, channels, and storage areas?
- For lands north of Main Street, should Council consider expanding the OS2 Zone, creating a Flood Risk Overlay, or using a combination of both to manage development in higher-risk areas?
- In the highest-risk areas north of Main Street, should new urban development, particularly new residential development, be restricted or prohibited, while allowing lower-risk uses such as parks, trails, open space, utilities, flood control works, or similar uses?
- Should Berwick require stormwater management plans Town-wide for certain developments, only within mapped Stormwater Management Overlay areas, or through a hybrid approach?

If PAC supports further work, staff could prepare a more detailed amendment package for Council's consideration. Potential changes could include:

Planning document	Potential change
MPS	Add policies recognizing stormwater management as part of infrastructure planning, climate adaptation, public safety, and development control
MPS	Add policy support for mapping and regulating Stormwater Management Areas
MPS	Update OS2 policies to reflect the CBCL report and current flood risk mapping
LUB	Amend the OS2 Zone boundaries based on updated mapping, subject to Council direction
LUB	Add a Flood Risk Overlay for areas north of Main Street if Council prefers a flexible approach

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LUB	Add a Stormwater Management Overlay for mapped overland flow and stormwater constraint areas south of Main Street
LUB	Add stormwater management plan triggers for development over two units within mapped overlay areas
LUB	Add stormwater management plan triggers for commercial, industrial, institutional, mixed-use, parking area, fill, grading, ditch, and culvert-related development
LUB	Add provisions restricting obstruction of overland flow paths, ditches, culverts, drainage easements, and stormwater storage areas
LUB	Update site plan approval criteria to include grading, drainage, stormwater, maintenance, and easements
Subdivision Bylaw	Require stormwater plans, drainage easements, and protection of overland flow routes for new subdivisions
Municipal Services Specifications	Add technical stormwater standards based on the CBCL recommendations and accepted municipal practice
Development agreement templates	Add standard clauses for stormwater plans, easements, phasing, bonding, as-built drawings, and maintenance

10. Proposed next steps and timeline

If PAC supports further work, the next step would be to move from general policy direction to draft planning amendments. The proposed process would include PAC review, landowner and public consultation, preparation of detailed amendments, and Council's formal public hearing process.

The following preliminary timeline is suggested:

Step	Timing	Purpose
PAC Meeting #1	May 5	Introduce the CBCL Stormwater Management Plan from a planning perspective, review potential MPS and LUB amendment directions, and receive preliminary PAC feedback.
Landowner and public consultation	June	Meet with affected landowners and the broader public to explain the CBCL findings, discuss potential changes to the OS2 Zone and proposed Stormwater Management Overlay areas, and hear concerns before detailed amendments are finalized.

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Draft detailed amendments	June	Prepare draft MPS and LUB amendments based on PAC feedback, public input, staff review, engineering input, and the CBCL mapping. This may include draft policy language, overlay mapping, OS2 boundary changes, site plan criteria, and stormwater management plan triggers.
PAC Meeting #2	July	Review draft amendments and consultation feedback. PAC may recommend that Council proceed, revise the draft, defer, or seek additional information.
First Reading	September	Council considers First Reading of the proposed MPS and LUB amendments. If First Reading is given, the amendments proceed to the formal public hearing process.
Public Hearing and Second Reading	October / November	Council holds the statutory Public Hearing, considers public submissions, and decides whether to approve, amend, or refuse the proposed amendments at Second Reading.

This timeline is intended to allow enough time for landowner discussion before formal amendments are advanced. That is important because some of the potential changes may affect development expectations on private lands, particularly north of Main Street and within any proposed stormwater overlay areas.

The June consultation should be designed to be practical and plain-language. The goal should not be to debate engineering calculations in detail, but to help landowners understand:

- what the CBCL report identified;
- what the Town is considering from a planning perspective;
- how the proposed changes could affect development applications;
- what options are available for the OS2 Zone north of Main Street;
- what a potential Stormwater Management Overlay south of Main Street could require;
- how exemptions or technical reviews may work; and
- how public works improvements and planning controls would work together.

The amendment drafting should also include a technical review of the CBCL mapping before it is placed into the LUB. The mapping may need to be translated into a clear planning schedule or overlay that can be understood by landowners, staff, PAC, and Council. Where possible, boundaries should be clear enough to administer at the development permit stage.

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11. Preliminary conclusion

The CBCL Stormwater Management Plan gives Berwick better information than it had when the MPS and
LUB were amended in 2025. The Town now has a stronger technical basis to consider changes to the OS2 Zone north of Main Street and to introduce a potential Stormwater Management Overlay south of Main Street.

The planning issue is not whether Council should immediately construct every capital improvement identified in the CBCL report. That is a separate infrastructure and budgeting discussion.

The planning issue is whether Berwick should continue approving development under the current planning framework, or whether the MPS and LUB should be updated so that known stormwater risks are considered before development occurs.

The recommended direction for discussion is:

- Consider amendments to the OS2 Zone or a Flood Risk Overlay north of Main Street.
- Consider a Stormwater Management Overlay south of Main Street.
- Consider requiring stormwater management plans for development over two units within mapped overlay areas, unless exempted by the Town.
- Include additional triggers for commercial, industrial, institutional, mixed-use, parking area, fill, grading, ditch, and culvert-related development.
- Add LUB provisions to protect overland flow paths, ditches, culverts, stormwater storage areas, and drainage easements.
- Update site plan approval criteria to address stormwater management more directly.
- Prepare or update Municipal Services Specifications so that stormwater management expectations are clear, measurable, and technically reviewable.
- Proceed with a staged process that includes PAC review on May 5, landowner and public consultation in June, detailed amendment drafting, a second PAC review in July, First Reading in September, and a Public Hearing and Second Reading in October or November.

This approach would allow Berwick to support growth while reducing avoidable stormwater risk. It would also give staff, developers, residents, and Council clearer expectations about what is required in areas where the Town now has evidence of flood or drainage constraints.

Sources reviewed

- CBCL Limited. Berwick Stormwater Management Plan, Final Report, Project No. 251083.00, April 2026.
- Town of Berwick. Municipal Planning Strategy, 2025 version provided for review.
- Town of Berwick. Land Use Bylaw, 2025 version provided for review.
- Municipality of the County of Kings. Storm Water Management Policy, Policy DBS-03-006, Development & Building Services,

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- Nova Scotia. Minimum Planning Requirements Regulations, made under the Municipal Government Act.
- Halifax Regional Municipality. Administrative Order 2020-010-OP, Respecting Stormwater Management Standards for Development Activities.

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Appendix C

WHAT WE HEARD REPORT
Property Owner Engagement
Proposed Conservation (OS2) Zone Expansion
Lands North of Main Street, Town of Berwick

SECTION 1. Executive Summary

The Town of Berwick (the Town) experiences recurring flooding during large rainfall events, particularly along Main Street and in low-lying areas adjacent to the Cornwallis River. The Town retained CBCL Limited to prepare a Stormwater Management Plan, which among other goals, was intended to identify flood risk areas. The final study was submitted to the Town in April 2026. This additional technical information, including the mapped future flood extent under a climate change storm scenario, impacting areas north of Main Street, created a clear planning obligation for the Town to consider whether existing land use permissions need to change to reduce the risk to people, buildings, access, neighbouring properties, drainage systems, and municipal infrastructure. In the floodway fringe area, the planning objective is not simply to restrict land use, but to ensure that public safety, infrastructure protection, flood storage, overland flow routes, emergency access, and long-term climate resilience are properly considered before new development, expansions, site alteration, or intensification occurs.

Staff presented a report to the Planning Advisory Committee (PAC) on May 5, 2026, outlining potential Municipal Planning Strategy (MPS) and Land Use Bylaw (LUB) approaches to better address flood risk and stormwater management using the updated technical information. The report presented three potential approaches for managing flood risk on lands north of Main Street, including maintaining the existing Conservation (OS2) Zone, expanding the OS2 Zone to reflect the updated flood mapping (Option 2), or implementing a more flexible flood risk overlay approach. Following its discussion, the PAC supported targeted public engagement with property owners.

The Town mailed notification letters to 40 property owners. The letter informed property owners that the Town is reviewing stormwater and flood risk information for lands north of Main Street near the Cornwallis River and is considering whether portions of some properties should be rezoned to Conservation (OS2). Its purpose was to explain why the review is happening, what Conservation (OS2) zoning could mean for future development, clarify that existing uses and buildings can continue, and invite property owners to ask questions, meet with a Development Officer on June 18, 2026, and submit comments by June 25, 2026 before any formal Municipal Planning Strategy or Land Use By-law amendment is considered by Council.

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Seventeen properties participated through meetings, telephone calls, emails and written submissions. Feedback showed overwhelming concern regarding the initially proposed expansion of the Conservation (OS2) Zone. The most common concerns related to property value, future development rights, insurance, taxation, flood mapping accuracy, maintenance of stormwater infrastructure, and the need for clearer information about the planning process.

SECTION 2. Summary of Public Engagement

The Town contacted property owners about a possible expansion of the

Conservation (OS2) Zone on lands north of Main Street, near the Cornwallis River. The letter explained that the Town had completed a Stormwater Management Plan and was reviewing updated information about flood risk, drainage, low-lying lands, ditches, culverts, and overland flow routes.

The letter also explained that no final decision had been made and that any change to the Municipal Planning Strategy and Land Use By-law would require public notice, an opportunity for public input, and a decision by Council (see letter in appendix A – please note that the actual letters each included a map of the individual properties which have not been provided for privacy reasons).

Following the letter, property owners were invited to meet with planning staff to discuss the review, ask questions, identify concerns, and provide property-specific information.

Consultation Element	Summary
Notification letters	40 letters mailed to property owners with property specific mapping showing proposed changes to their zoning. The letters were mailed June 9, 2026.
Meeting opportunity	One-on-one meetings offered with Development Officer at Town Hall during business hours on June 18, 2026.
Meetings held	6 meetings (5 affected property owners and 1 Planning Advisory Committee member).
Additional engagement	Telephone conversations (4), emails (13), and letters (5).

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Participation	17 properties contacted the Town; some property owners participated multiple times using different methods. Sometimes more than one owner of a property engaged in providing feedback.
Submission period	Written comments accepted until June 25, 2026.

SECTION 3. Themes

Overall, the feedback shows that property owners are not opposed to the Town considering flood and stormwater risk. However, they want the Town to avoid an approach that removes development potential or identifies their lands as being prone to flooding. The strongest message was that property owners want a flexible, site-specific approach that considers actual conditions on the ground, existing drainage problems, and avoids any new planning controls.

Development rights

What We Heard	Key Takeaway
• Concern about loss of development rights. • Existing residential and commercial zoning should generally remain. • Preference for more flexible planning tools. • Concern over dwelling being considered non-conforming use. • Questions about if specific uses would be permitted.	Property owners overwhelmingly viewed rezoning land to Conservation (OS2) as too restrictive and concerns were about limiting future development potential.

Property value, insurance, taxation and financing

What We Heard	Key Takeaway

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• Concern about reduced resale value. • Concern about inability to sell a property if identified in area prone to flooding. • Concern about mortgages and ability to renew, as well as rates. • Questions about loss of existing insurance coverage. and cost of insurance. • Questions about taxes. • Some requested compensation if impacts occur or property values decrease.	This was by far the most common feedback, particularly property value, ability to sell in the future, insurance and taxation.

Existing stormwater infrastructure

What We Heard	Key Takeaway
• Requests to improve ditches, culverts, drainage channels and maintenance before rezoning. • Belief that infrastructure contributes to flooding.	Many comments focused on existing ditches, culverts, pipes, and drainage channels that property owners believe are not being adequately maintained.

Accuracy of mapping

What We Heard	Key Takeaway
• Questions regarding flood modelling, historical flooding, climate assumptions and property-specific conditions. • Concern over data used in modelling, including how recent and accurate it was. • Requests to review updated grades and recent site changes. • Desire for case-by-case review instead of broad rezoning e.g. "ground-truthing". • Requests to exclude properties.	Some property owners questioned whether the mapping reflects actual site conditions, local flooding history, and drainage problems caused by nearby roads, ditches, culverts, or neighbouring properties.

Requests for additional information

What We Heard	Key Takeaway
• Requested copies of CBCL Stormwater Management Plan and maps. • Requests for area of impact and satellite imagery with the proposed zoning on specific properties.	Several property owners wanted more detailed information about their own lands and others wanted to review for themselves the data used to create maps showing the potential rezoning on their property.

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Planning process

What We Heard	Key Takeaway
• Questions regarding permitted uses, overlay option, timelines, public meetings, propertyspecific impacts and alternatives. • Questions regarding if the Town has the authority to rezone the lands. • Concern that the amendment process is long and time consuming for the Town.	There was a strong desire to understand exactly what would be happening and when, as well as other options.

Mitigation rather than rezoning

What We Heard	Key Takeaway
• Support for berms, drainage improvements, and engineering solutions. • Requests for improved maintenance of existing stormwater infrastructure.	Many comments suggested that a broad OS2 rezoning would be too conservative. Property owners were more open to an approach that manages risk without zoning changes.

Trust and communication

What We Heard	Key Takeaway
• Some found the notification letter concerning or impersonal. • Requested clearer explanations and continued communication. • Assertions the Town was attempting to rid get of responsibility or liability. • Questions regarding why homes were allowed to be constructed there before.	Property owners wanted clearer information about the planning process, timelines, future opportunities to comment, and what the Town is now considering.

SECTION 4. Conclusions

The engagement process demonstrated significant concern regarding the initial concept of expanding the Conservation (OS2) Zone. While respondents generally supported reducing flood risk and improving stormwater management, they preferred approaches that retain reasonable development flexibility while addressing flood risk through appropriate planning controls, infrastructure improvements, engineering solutions and better information. The comments summarized in this report will assist staff, the Planning Advisory Committee and Council when considering future recommendations.

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Appendix D

Property Owner Notification Letter

DATE

«Addressee»

«AddressLine1»
«AddressLine2»
«City», «Province» «Postal Code»

RE: Proposed Conservation (OS2) Zoning for Your Property

Dear «Name»,

The Town of Berwick is reviewing new stormwater and flood risk information for lands north of Main Street, near the Cornwallis River.

The Town recently completed a Stormwater Management Plan. The plan looked at how water moves through Berwick during large rain events, including through ditches, culverts, low-lying areas, and overland flow routes. It also considered how heavier rainfall may place more pressure on the Town's drainage system over time.

Based on this updated information, the Town is considering if some lands north of Main Street should be rezoned to the Conservation (OS2) Zone to better reflect known flood risk. A portion of your property is included in the area being reviewed and under consideration to be rezoned to the OS2 zone. Please see the attached map, which shows the part of your property that may be affected.

Why is the Town considering this change?
Flooding and stormwater are important planning issues. Large rain events can affect basements, yards, roads, driveways, parking areas, access, ditches, culverts, and neighbouring properties. For commercial properties, flooding can also affect customers, employees, deliveries, utilities, and business operations.

The purpose of this review is not to suggest that there is an immediate danger to your property. It is also not intended to stop you from continuing to own or use your land. The purpose is to use the Town's updated information before new development occurs, so that future decisions do not make flooding, drainage, or infrastructure problems worse for property owners, neighbouring lands, or the broader stormwater system.

What could the OS2 Zone mean?
The Conservation (OS2) Zone is used for lands where development should be limited because of environmental conditions, flood risk, watercourses, or similar constraints. If the OS2 Zone is applied to part of your property, future development options may change in that area. It is important to know that existing uses and buildings can continue. The proposed change is mainly about how future development, new buildings, expansions, or changes to land may be reviewed in areas where flood risk has been identified.

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To give you a better understanding of the change, please note that the current OS2 Zone permits uses such as:

- Agriculture,
- Garden nurseries,
- Market gardens,
- Public parks, trails, passive recreation facilities,
- Cemeteries,
- Wastewater treatment facilities, and flood control facilities.

As part of this review, the Town is also considering whether some flexibility should be included for lower-risk development, such as certain non-residential buildings or structures, expansions to existing residential buildings, driveways, or other limited development where flood risk can be appropriately managed and the risk to people and property is less.

What happens next?
For this change to take effect, the Town would need to amend its Municipal Planning Strategy and Land Use By-law. That process would include public notice, an opportunity for public input, and a decision by Council.



The Town wants to hear from affected property owners. If you have questions, would like to discuss the proposed rezoning, or want to better understand how this may affect your property, please contact Lauren Isabelle at 902-6987526 or developmentofficer@berwick.ca.

You may also book a time in advance to meet with Lauren at Town Hall (open 8:30am-4pm) on June 18th, 2026 to discuss your property and review the attached map. Please provide all written comment submissions by June 25th, 2026.

Sincerely,

Lauren Isabelle

Lauren Isabelle
Planning Department
Town of Berwick

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Appendix E

Property Owner Submissions

From: [redacted]
To: Development Officer
Subject: [redacted]
Date: June 12, 2026 12:48:17 PM

Hi Lauren

Our questions

- Are you aware of:
  - Any property tax implications for [redacted] remainder?
  - Any insurance implications for [redacted] remainder?
  - Any property value implications for [redacted] remainder?
- Land use on [redacted] in Os2 area:
  - Sheds, greenhouses, pole barn, stable?
  - Solar Panels (personal use)?
  - Tiny Homes?
- Land use on [redacted] remainder in OS2r:
  - Farmed field?
  - sheds, shelters, fences?
  - water treatment - tertiary or expansion of pond systems?
  - Tiny Homes?
  - Solar Panels (personal use)?
  - Solar farm (Berwick electric)?
- What is the planned zoning (and long term use) for the [redacted] remainder, north of the River to the highway (Residential, OS2, solar farm expansion, waste water treatment)?

[redacted]

On 2026-06-12 9:39 a.m., [redacted] wrote:

> Thanks Lauren
>
> We'll get back to you with our questions.
>
> [redacted]

TOWN OF berwick

June 15, 2026

To: Mayor Mike Trinacity
Members of Berwick Town Council
C.A.O. Jen Boyd
Town of Berwick, Nova Scotia

From: [redacted]
[redacted] Street
[redacted] Nova Scotia

Dear Mayor Trinacity and Town Councillors:

On Friday, June 12, 2026, I received a very impersonal and disturbing letter from Lauren Isabelle, Planning Department, Town of Berwick. The letter and attached map concern our property on Main Street, Berwick. A copy of her correspondence is enclosed.

Perhaps your present Planning Department is not aware that previous Councils went through a great deal of time, effort, and energy to rezone that area to allow for commercial and residential development. The proposed conversation to rezone our property once again, this time to OS2, is designed to discourage any future commercial or residential development of this area. Does the Town of Berwick have the liberty to rezone private property?

As you are aware, the land use by-law amendment is long and time consuming and, in this situation would be detrimental to development.

We have supported many events in the Town of Berwick, and it goes without saying how positively progressive the Town of Berwick has been in recent years. Unfortunately, the robotic form of Lauren Isabelle's letter contradicts the Town of Berwick's welcoming atmosphere that your community has worked so hard and successfully to create.

Thank you for reading and addressing my letter and I look forward to your written response.

[redacted]

C.C. Jen Boyd, C.A.O.

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From: [redacted]
To: Development Officer
Subject: Conversation
Date: June 20, 2026 3:04:50 PM

I understand the issue. So how am I to get confirmation that my property will be worth less because of this? Less TAX would be a start I am trying to sell my property. So what do I tell the buyer! I think the town needs to consider current land owners! No one is going to invest wet lands without compensation

From: [redacted]
To: Development Officer
Subject: Proposed zone changing
Date: June 20, 2026 3:19:45 PM

Hi Lauren,

I think it's way to early to suggest a zone changing since the town just started to agree that yes stormwater is a issue. I've been living at [redacted] street since 2010 and we always had a event in the the fall and early spring but the song title that we got from the town was ' Act of God', the last event was July 2024 witch was a first for me being so early.

Wy don't you give the town a chance to fix were it needs to be fix according to what the engineer presented to us last fall before even thinking of changing the zoning unless it's one way to get away from your responsibilities and by that I mean 'there's nothing we can do for you you live in a flood zone. Do you really think that when the house was built in 1863 that they chose that location knowing it was a flooding zone... of course not the flooding is caused partially by the construction of the 101, the streets specially Main being going up and up every time new asphalt is added, poor drainage ditch and culverts or lack of it and bad housing planning from previous councils I'm talking 50 years ago and more.

Houses on Main are worth on average probably between $500,000 to $700,000 if you go ahead with this it's like putting a tag on the house 'don't buy me I'm in a flood zone cause by humans' you would be lucky to get $300,000 and I'm not even talking about insurance we already can't even get flooding insurance for most of us unless you are willing to pay $10,000 + a year.

The town already knows where the water hot spots are and where not to give construction permits if It's going to affect the rest of the town, really on engineer firm that specialize on stormwater mitigation to avoid lawsuits in the future.

[redacted]
[redacted] street
Berwick

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Development Officer Town Of Berwick

MS Lauren Isabelle June 20th 2026

In reply to the letter sent to me Dated June 5th, 2026 on the proposed rezoning of our property located at [redacted] there are a few questions that I would like answered from your department before any agreement would come from this rezoning.

First thing is your attached drawing of the proposed change does not give any measurements of the lot that you wish to rezone and what proportion of our land will be lost to any future development of the property and possibly making this property unsaleable in the future.

The financial implications of a possible decrease in property value due to the rezoning of an area within the property could far outreach any improvement in stormwater management plan that you are proposing to help the Town. An additional issue that may arise from this proposal could put a financial burden on this property and other adjoining properties with a yearly increase of property insurance due to it being a partial flood zone area. Another question that would need to be answered if this proposed rezoning would go through is there be any insurance providers willing to insure properties with this zoning in place. In the event of the property were to be de-valued due to this change in zoning is it fair to assume the property tax from the Town would also be decreased by the amount that it has been decreased in value.

As one deliberates this problem that has come to our attention a question seems to come to mind is that this might be an attempt to possibly clear the Town from any further claims against them for water or flooding incidents of the future as the proposed future zoning is going to be conservation and classed as a flood zone so each of the property owners are left on their own to deal with any problems that arise from a flood .

On a more positive note in the past year after the so called " once in a 100 year flood "happened approx. 2 years ago I have done extensive work on our property with equipment clearing the ditch and shaping a small short term holding area in the open ditch that runs through the property to better handle water when large rains occur , an offer was verbally made to cost share this project with the Town through the public works department at the time, I never received any feed back so eventually went ahead on my own with personal funding to help remedy the water situation during flooding .This water comes from over the south west end of Town and drained on to our property before entering lands to the north of our rear property boundary .To the best of my knowledge there is no formal agreement between the property owners past and present to allow the Town to drain water from another area on to a property not owned by Town. One would think that simple common sense thinking within the parties involved and not study after study on this problem of storm water could be solved, the solution does not have to be a masterpiece of a project but one that simply works in time when needed and maintained with a preventative and cost -effective maintenance of all storm water routes for the future.

If you would like to discuss this process in more detail I would like to do so you may contact me by email or in person for future discussions. I would like to be kept informed on this matter as the Town goes through this process that it has started. My contact numbers E-mail [redacted] or cell [redacted]

[redacted]

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From: [redacted]
To: Development Officer
Cc: [redacted]
Subject: Proposed Conservation (OS2) zoning
Date: June 23, 2026 10:04:56 AM
Attachments: [redacted]40ce84b2-5f2e-4e75-83e3-7ff289e71e38_ff187c9e-1c32-49d8-95cc-decdc452d45b.png

Hi Lauren,

Thank you for the notification of the proposed rezoning of our land. I attended the public meeting regarding the stormwater and understood the Town's challenges and the potential solutions.

After review of the [redacted] land that is proposed to be rezoned, we have some concerns. First, I believe it would be good for someone to come to our property to ground truth the area as some of these areas have changed with recent construction. In addition, there is some land that is higher and contains predominantly upland vegetation and we believe would not be impacted by stormwater retention and therefore could be excluded from the proposed rezoning. This land is important to [redacted] as we have discussed potential future development on this piece of land to help accommodate our growing business.

In your letter, it indicated that there are permitted uses for this land if it is rezoned. I would be interested to understand the definitions of some of these land uses to determine what development could take place. For example, Agriculture. Would [redacted] be considered agriculture and therefore any development we initiated would be covered by being Zoned Agricultural.

Please let us know when the public meeting may be taking place or if we could potentially have discussions prior to that event.

Thank you for your time.

[redacted]

[redacted]

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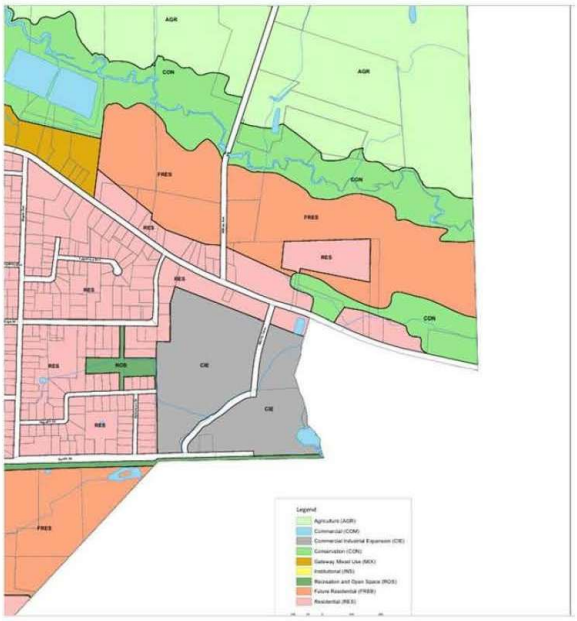
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I went in to speak to Lauren Isabell on June 18th

After thinking further on this matter, I would like to know and understand a little more about the Town of Berwicks stormwater management plan and how this is affecting us?

I would like to see the historical data of this area, the river has always run through here and it is around .5 of a mile away (700m). Has there been any reports over the last 100 years of major flooding up towards Main Street especially the area where my house is built? I am guessing that since planning permission was given in 2020/21 for this area, there wasn't anything historical then, I understand that looking forward there are many environmental changes that might happen as the report from CBCL mentions. In the May 5th Planning Advisory Committee minutes it does note that there is a projected increase in rain fall of 67% by 2100 and it does say that not every storm will be extreme and that the Town should expect more pressure on drainage systems over time. This doesn't necessarily mean that our property needs to be rezoned to an OS2 conservation zone. I believe that what it does mean is that the town does need to look into a plan to try and stop major flood damage happening to property and land in the town.

As you can see from the 2023 map below the are along Main Street is designated RES (residential) the darker orange behind is designated as FRES (Future Residential Development) and I agree wholeheartedly that this should be rezoned to a OS2 conservation zone, but not the RES areas where people already live.



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I like the fact that the property below and around the Cornwallis River will be designated as an OS2 conservation zone, restricting building and residential expansion. Can I suggest that our property [redacted] Street along with [redacted] Street are left out of this rezoning and remain as residential zone. Any future buildings will need to have planning permission and that each application is checked on its own merit by the town of Berwick and Kings County and declined based on the information you now posses. Couldn't potential future builds be controlled by limiting permits opposed to re zoning.

We bought our house in good faith that due diligence had been taken that the land our house was built on was land that was safe as a residential area, we paid good money to purchase this property and have become part of this growing community. We pay our taxes to assist the town to manage their financial responsibility and we are positive part of the community, I don't think we should be penalised by this plan.

Re-zoning our property creates a problem for us and future owners of [redacted] Street and our neighbours.

- It will affect the price of our house, lowering the re-sale value especially as traditional mortgage lenders will often refuse to finance a property on restricted-use land like OS2 zone. Buying an OS2-zoned property to build or maintain a permanent residence is highly risky and often illegal unless you successfully apply for rezoning.
- Being in an OS2 zone would mean that if our property burns down or is heavily damaged, we may not be legally permitted to rebuild it, causing a loss of everything we have worked for over our lives and a change in our insurance premium to cover this.
- To insure a house on an OS2 Conservation zone, is highly conditional. In Nova Scotia municipalities (such as Berwick), OS2 zoning designates land for public parks, conservation, and flood control, meaning a residential home may be a legal non-conforming use needing If the house was built before the OS2 zoning bylaws were put in place, it is grandfathered in. Standard insurance policies usually cover these, but you may need an underwriter to review the risk. Flood and Environmental Risk: Because OS2 zones often encompass floodplains or conservation areas, insurers will heavily scrutinize environmental hazards. Standard home insurance does not cover overland flooding and will need a specialized overland water or comprehensive flood endorsement.

When the Planning Advisory Council next meets, I would like them to take into consideration the above points and the effect this would have on our life here in Berwick which will also affect the lives of our family here in Berwick especially our four Grandchildren who are a part of the growing community here.

A few other questions I have :

- If this rezoning does go ahead will the town offer us compensation for the financial losses, we will incur due to the changes proposed?
- The report by CBCL has applied climate change modelling using federal guidance and identified an overall projected rainfall increase of approximately 67 percent by 2100. This does not mean every storm will be extreme, but it does mean the Town should expect more pressure on drainage systems over time. I would like to see and understand what the Town is putting in place to stop flooding of the properties in existence in the areas that might be affected. There is

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nothing saying that any of this will come to fruition, it is just a projection and many things can change over the next 100 years, doing your due diligence and making informed decision is an admiral thing, but is the percentage of likely hood high enough to warrant rezoning residential properties?

- What creates the barrier to stop the other properties from flooding around and along Main Street and Willow that [redacted] don't have.
- I would like a better explanation of the "Overlay" that was mentioned in my discussion with Lauren Isabell
- If the area is at risk of flooding, what is proposed to be done to solve the issue? Even if it is rezoned there still need to be a plan, when I went to the meeting with regards to the Stormwater project this part of Main Street wasn't mentioned. What options are being considered to remedy this potential issue? Is the flooding in question predicted to be from the river or town water run off during heavy rain? Both? Neither?
- There is already a water ditch/trench/dyke at the bottom of our, regular maintenance of this would be of benefit for all concerned, as it would assist to alleviate any future and protentional water problems. Is this in the plan to be maintained? I haven't seen or heard from other long-time residence that this gets done.

From: [redacted]
To: Development Officer
Subject: RE: Proposed Conservation Zoning
Date: June 23, 2026 7:01:30 PM

Hello
I talked to Lauren Isabelle the other day and have more questions about the Zoning.
1 How many homes are affected with the new zoning?
2 When was the study done by CBCI and can I have copy or the link for the full Study?
3 How accurate is the study. There is land around my property that is lower than my land but not in the flood zone?
4 What was the motivation or what prompted the study to be done?
5 What is the benefit of the proposed zone change? Who will benefit from this change?
6 If the area is at risk for flooding, what is proposed to be done to solve the issue other than just zoning it as a flood area? What options are being considered to remedy this potential issue? I the flooding in question predicted to be from the river or town water run off during heavy rain? Both? Neither?
7 What alternatives are there to rezoning the properties? There will most definitely be negative repercussions of having our property zoned as a flood zone (lower property value, issues getting full insurance cover or increased insurance costs if coverage is still possible, challenge getting financing for mortgage or financing if sell property).
8 This sudden potential rezoning will limit the use of our property. We loose autonomy on what we can do on our land.
9 Why is the rezoning needed? Couldn't potential future builds be controlled by limiting permits as opposed to re zoning?

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[redacted] Street
Berwick NS

Dear Berwick Zoning Department ,

I received your letter which proposed rezoning of parts of our property from Residential to Conservation. Your letter states this is as a result of the flood study conducted by the town and that the rezoned properties fall within the 1:100 year return period. I work [redacted] who are quite involved in coastal flooding and hydrodynamic modelling. We are cited as having built the hydrodynamic model for the Minas Basin in the Dillon report from which the 1:100 year return period you're using comes.

I have been talking with the town since my moving here in 2015 and especially since the July 11th 2024 rainfall event and the start of Aaron Dondale's tenure as head of public works. We have collaborated on cleaning out and streamlining the pathway for water to evacuate from the town drainage which empties on the NE corner of [redacted] Street. As a result water has been able to effectively make it to the river channel and backups of town drainage onto this property have not occurred. I am highly appreciative of the effort the town has put forward in this regard.

When the rain fell on July 11th 2024 (now used as the benchmark storm in this part of the valley) I was out taking pictures and recording high water levels. The next day Aaron and I were the ones who discovered the two blocked 8' culverts on Commercial Street, blocked by stone dumped as the foundations for the temporary bridge. This blockage caused a severe chokepoint at the old bridge (which was still in place) and was a contributing factor to the overtopping of Commercial Street between the bridge and the intersection with Main Street.

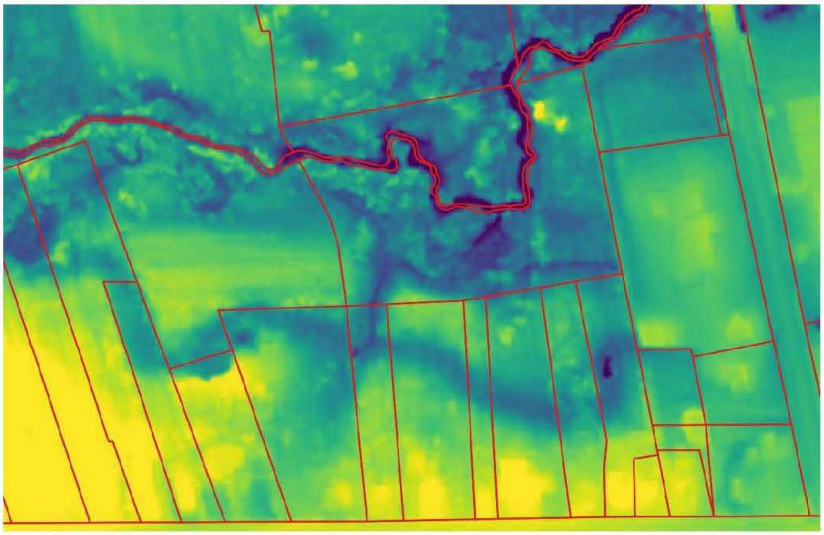
The next day I sat down and for a few days built a 1D hydrodynamic model of the town. I used the Cambridge river gauge to infer flow and was able to fairly accurately simulate the event. I made maps of the results which made their way into the hands of Don Clarke (mayor at the time) and Aaron. A meeting was held on our property and ideas were exchanged. Over the course of more meetings with residents of NW Main Street there was a commitment to cleaning out the current drainage.

Plans for the future of this drainage and the general flooding problem of these properties were waylaid until a storm water management study could be completed. This study has concluded and the results are in, though not officially accepted by council yet. This study is lacking one key analysis I am going to seek to provide. Nowhere has it been asked what reasonable measures could be put in place to protect residential properties from flooding relating to the Cornwallis drainage area.

I have upgraded my model to 2D and run a simulation using both the standard elevation model and one edited with some minor earthworks (mainly on town property) that I propose would mitigate the 1:100 year return period from impacting properties from [redacted] Street to the new Farmer's Market on the corner of Commercial and Main Street. I have used open source software to generate these results and would freely offer both these and my time to the town in furthering this idea or other flood related solutions.

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Study Area

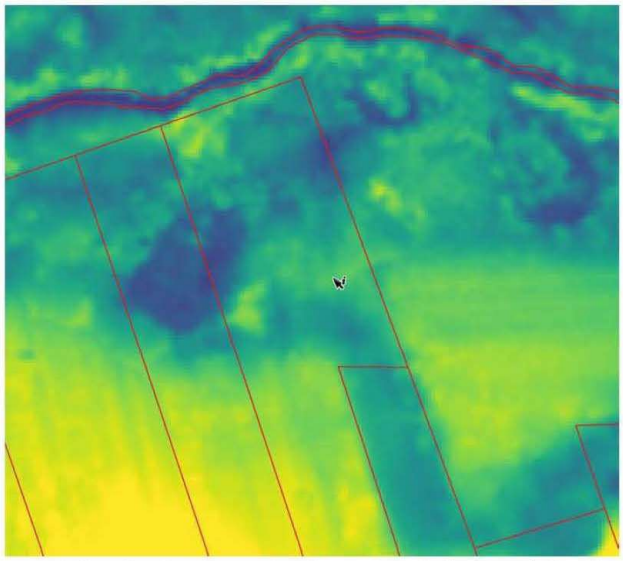


Our focus area - from [redacted] to the corner of Main and Commercial

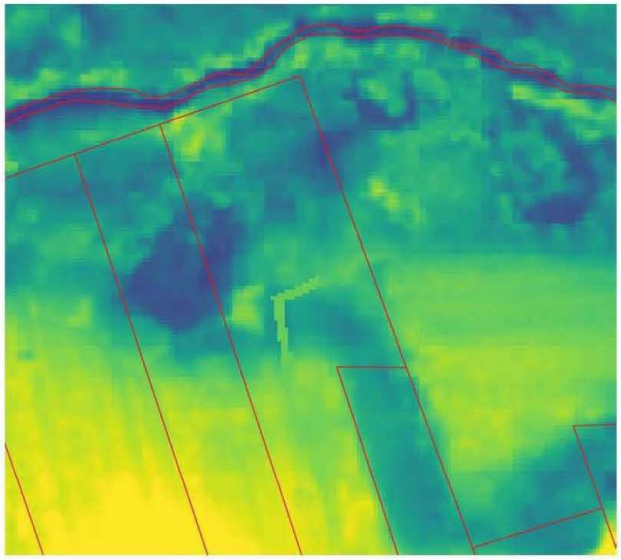
As you can see in the elevation model pictured above there is a slight (~1-1.25m) depression which runs from a small swampy area at the backs of [redacted], through to the the town drainage at the back of [redacted] Street, an over to the middle of [redacted] Street. This area is connected to the river floodplain only during extreme weather events (such as July 11th 2024, or similar though lesser 1:100 year events) by three channels. Two of these channels cross over the boundary of town owned property (PID 55236673) and would require small berms be made, one allowing for the town storm drainage to pass though (more on that later). The third would be along a woods trail maintained behind [redacted] Street. This trail perfectly bisects the low area at a convenient point. Each of these berms would require minimal height (0.75-1m) excluding the town drainage area which would be slightly deeper at 1.5m to the bottom of the current drainage channel.

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[redacted] - In Focus



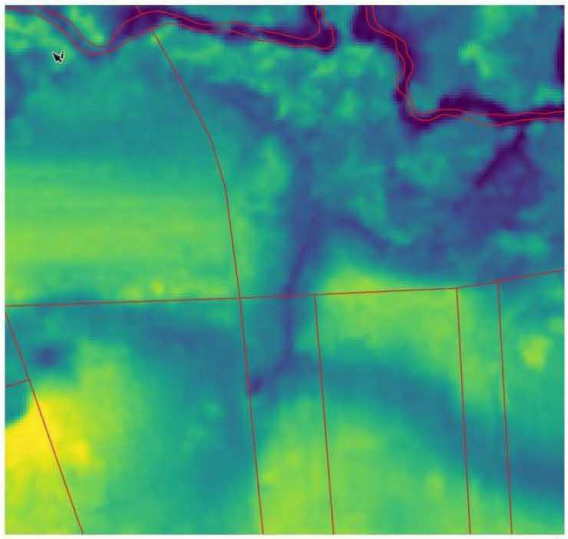
The existing elevation, focused on the north end of [redacted] Street in the center



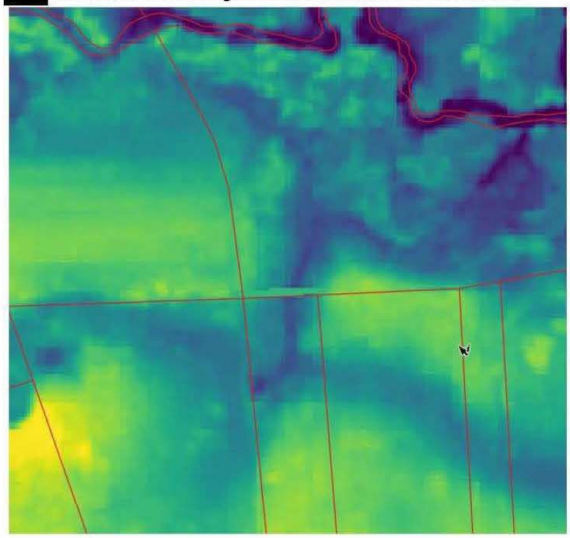
My proposed berm bringing total elevation up to 27m CGVD2013

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[redacted] Street - In Focus

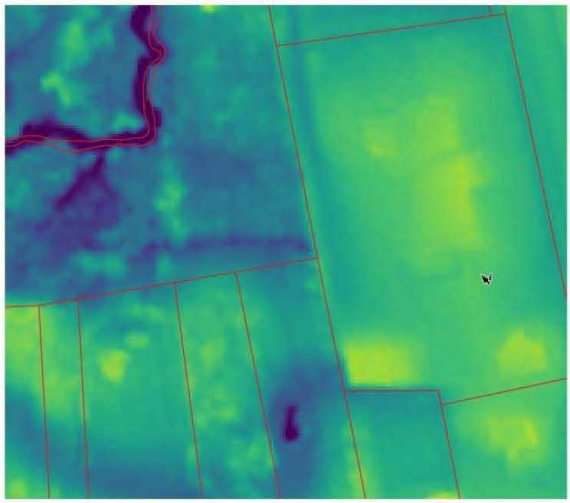


The existing elevation focused on the drainage channel exiting [redacted] Street onto [redacted] Street before exiting onto town owned PID 55236673

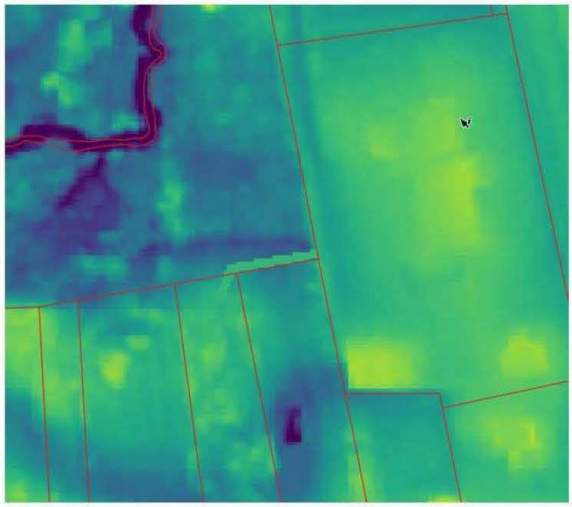


My proposed modification, a berm across the drainage channel to coincide with upgrading (and extending) the drainage across my property

[redacted] Street - In Focus



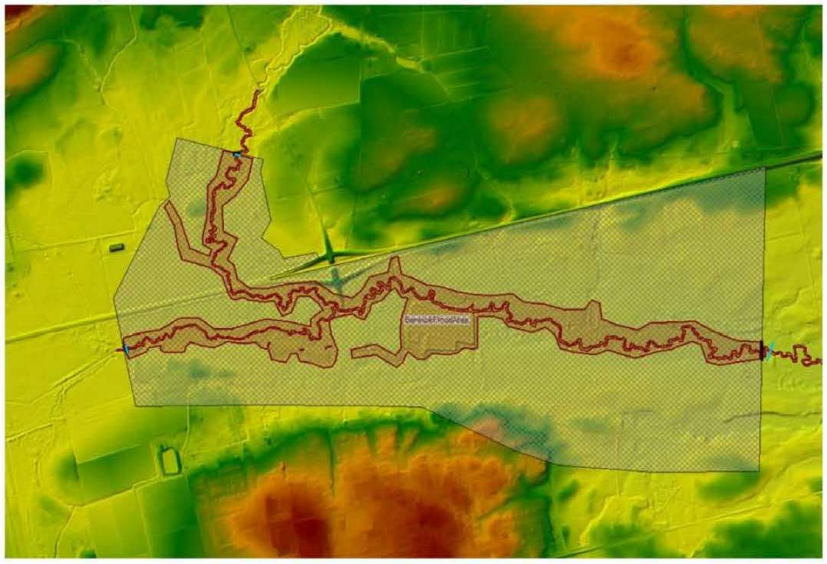
Original elevation focused on the rear of [redacted] Street bordering on town owned PID 55236673



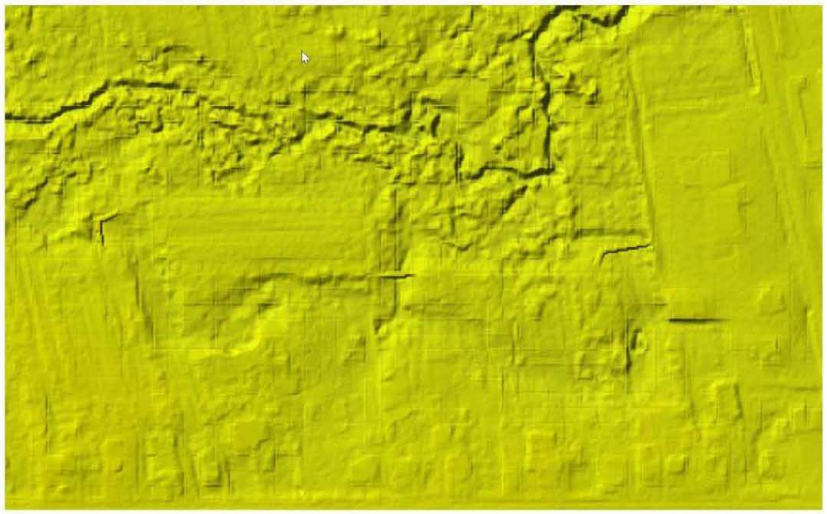
My proposed modification at the rear of [redacted] Street bordering on town owned PID 55236673

The Hydrodynamic Model

Using HECRAS v6.5 I have run both a 1D and 2D model for the town of Berwick, including a section to the north to include Rand Brook up to where it crosses under HWY 360. The mesh is 5m cells for the entirety of the flood area, with a refinement area of 1m cellsize covering the floodplain of both the Rand Brook and Cornwallis and the proposed berms as well as the area behind them which floods under severe events. Because this solution is mainly designed to reduce the impact of river flooding it does not include modeling for the higher parts of town. Putting together a larger more comprehensive model would be something I would love to be a part of for the town. Having a hydrodynamic model and someone who knows how to utilize/modify it would be an amazing way to analyze solutions for drainage and flooding issues.



The Results of Three Berms



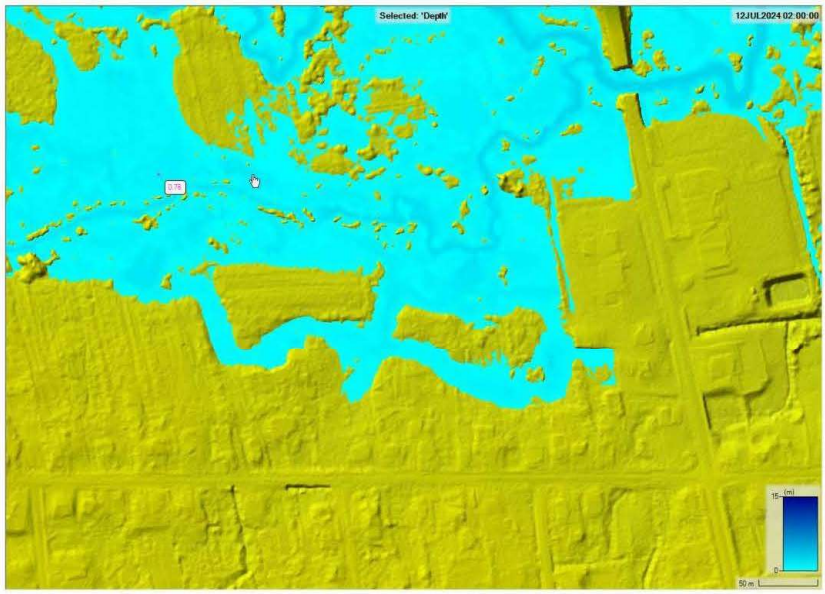
As is more evident in the color shaded relief (seen here by their linear features) are the three proposed berms

I have run the model with flow similar to the July 11th 2024 flow recorded by the Cambridge river gauge in Waterville. I have split the flow roughly evenly between the two rivers, though in that event I suspect much more was a result of the Rand Brook carrying the monumental rains which occurred in Black Rock. Further refinement of this model would be excellent, and I intend on doing so in the future. Further refinements would include things such as including town drainage infrastructure, extending the model to town limits and beyond, adding precipitation events, and so on.

When running the model without berms we get the expected flood extent; I will include a picture here but the model is much more interesting to watch in motion as flood waters rush in and recede (I was going to embed a gif but I think this may be viewed printed more likely than not).

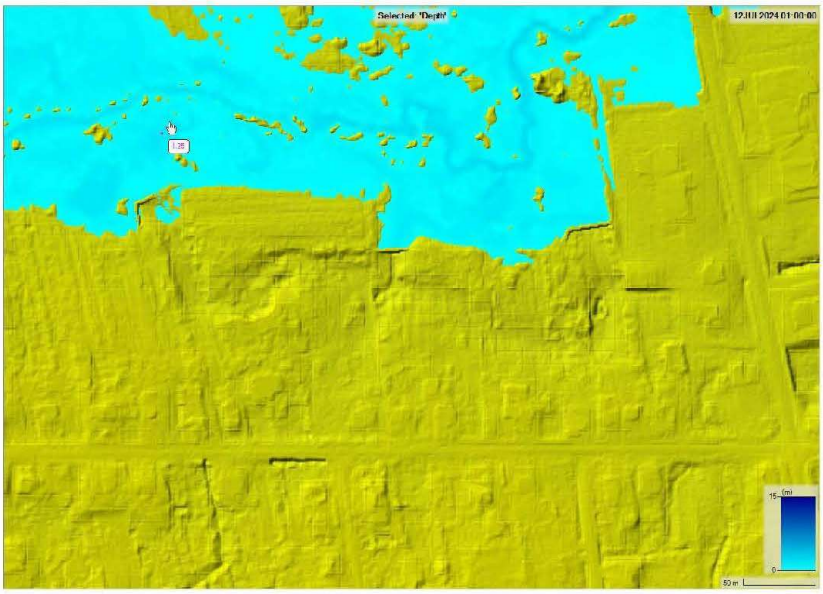
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Unmodified Elevation



As can be seen the depression behind the properties [redacted] Street to [redacted] Street conducts water from the river through the rear of all the properties.

Bermed Areas



As can be seen here, an event with flow similar to the July 11th 2024 rain event is held (almost entirely) back by the 3 small berms which protects the rear of the whole string of properties on West [redacted] This may not be the optimal design of these berms, perhaps aiming for some slightly higher points to tie them in to may buy us some extra protection for not too much effort. I have done this work quickly in order to get my response in on time but hope to refine the designs working with the town.

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Conclusions

The stormwater study recently completed by CBCL for the Town of Berwick makes many recommendations about infrastructure and pathways to manage stormwater runoff being conducted to the river. This survey unfortunately lacks recommendations as to how to manage the rare occasions which cause the river to back up onto properties along Main Street. I would like to help fill this void. I think the town owes the residents of Main Street an evaluation of ways to mitigate river incursion onto properties. I can't claim to be able to fix every flooding issue in Berwick, nor may many of them be cost allowable to fix. I do believe the flooding situation behind [redacted] Street to [redacted] Street has a solution worth exploring.

My recommendation would be for myself to spend some more time refining designs of the berms, hopefully in coordination with Aaron and other members of the town, and land on a set of designs that promise maximum protection to residents without becoming cost prohibitive. To that end I have a few suggestions that I think could keep costs down and add more flood mitigation benefits. The material used to make these berms could be sourced from the town owned PID 55236673. This could be in widening the current drainage ditch to even more effectively convey water to the river, or excavated in a dedicated retention pond on that parcel. This could possibly be done with town owned equipment (excavator, trucks) as opposed to being contracted. Because these dykes would only see water in extreme events the opportunity exists to use more available materials to create a vegetated berm with grasses adding structure to the soil used to create these berms.

Having lived on Main Street for more than a decade now I can tell you that the residents love the town just as much as any other. This rezoning has the potential to leave them feeling abandoned by the town without ever having explored if their properties really fell on the natural floodplain of the river, or if they were simply vulnerable during extreme events. I believe I have shown that protecting these properties from even a 1:100 year event is within reach of the available budget and resources of the town. I sincerely hope to hear from you and that this proposal is considered before zoning decisions are made. My contact information is:

Cellphone: [redacted]
Email: [redacted]

On a slight side note, the elevation model used to build the hydrodynamic model being used to generate the 1:100 year floodplain is 7-6 years old now. Is there a plan for rezoning when groundworks have changed the elevation and been raised above the flood line? I have done so with my garage which currently falls in this new conservation zoning and has an open building permit and would be well above the 1:100 year line now, it is roughly level with the footings of my house; is there a clear path forward for given circumstances such as these? I believe there are a few properties in this proposed zoning that have been built up well within the last 7-6 years since the elevation model was collected.

From: [redacted]
To: Development Officer
Subject: Proposed OS2 zoning
Date: June 25, 2026 7:21:45 PM

Hi Lauren,

I am emailing you in regards to the letter my wife snd I received last week. We live at [redacted] Street in Berwick.

We oppose the rezoning of our property. There is no benefit for us or anyone to agree to this as this will affect our properties value.

I also am very disappointed that this seems to be a result of us, as residents, complaining that the town wasn't doing what they were supposed to for storm water mitigation.

Is there information that we are missing that would show us the benefit of the town changing our properties zoning?

Thanks for your time,

[redacted]

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From: [redacted]
To: Development Officer
Subject: Fwd: my letter to town
Date: June 25, 2026 11:59:02 PM

---------- Forwarded message ---------
From: [redacted]
Date: Thu, Jun 25, 2026, 12:10 p.m.
Subject: my letter to town
To: [redacted]

To whom it may concern,

While I recognize the importance of addressing flood risks, preserving green spaces, and limiting development in areas that could exacerbate flooding, the proposed rezoning map appears to be more of a liability-management exercise than a plan that serves the best interests of the entire community.

The CBCL report did not adequately address how flood risks associated with the river can be mitigated. When I purchased my home, the bylaws I received indicated that the Town was responsible for managing and mitigating flood risks related to the river. During discussions of the report, CBCL engineers stated that the Town is not responsible for controlling what happens within the river itself. While I agree that we cannot control the river, if it is being used as a channel for stormwater and sewer discharge, then the Town should be responsible for properly maintaining those systems and addressing the impacts associated with them.

[redacted]his letter has provided maps and supporting information that demonstrate practical and responsible approaches to mitigating river-related flood risks. These examples illustrate that there are options available beyond rezoning that deserve consideration.

While I agree that greater responsibility should be taken regarding future development, I am also concerned that zoning exceptions can be made when they provide a financial benefit to the Town. Although increasing revenue and supporting economic growth are important objectives, I fear that we are not taking a sufficiently holistic approach to long-term planning. We need to place greater emphasis on incorporating conservation zones throughout the community. What happens uphill inevitably affects what happens downhill. If we continue expanding the downstream catchment area through ongoing development, there may eventually be no residential homes left on the very street where this town began.

This issue originally arose from a straightforward request to maintain a stormwater management system that runs through [redacted] Street, crosses adjacent private property, and ultimately drains onto Town-owned land before entering the river. Despite multiple attempts to work with the Town, that request was met with significant resistance, and the consistent response was that a flood study needed to be completed first.

Following the appointment of a new Public Works Director and after a devastating 1-in-100-year flood event, the Town finally undertook the basic task of clearing an existing stormwater channel that had been neglected for more than a decade. Achieving even this minimal level of

TOWN OF berwick

maintenance required substantial effort, community involvement, and persistent advocacy. Once the work was completed. residents were again told that no further action could be taken until the flood study was finalized.

While completing the study was a reasonable and necessary step, the study has now been completed. Yet the first major action proposed by the Town is rezoning, which appears focused on reducing legal liability rather than implementing meaningful flood mitigation measures. This approach creates a sense of diminished trust and raises concerns about the Town's commitment to pursuing practical solutions. It also has real consequences for residents, including potential reductions in property values, increased insurance costs, and the perception that the Town is not exercising due diligence in addressing the underlying causes of flood risk.

Rezoning alone does not address the underlying causes of flooding, nor does it demonstrate a commitment to protecting existing residents from future risks. Before moving forward with measures that may reduce property values and increase financial burdens on homeowners, I respectfully ask that the Town present a comprehensive plan outlining what flood mitigation measures will be implemented, how they will be prioritized, and what responsibility the Town is prepared to assume in addressing the issues identified by the flood study.

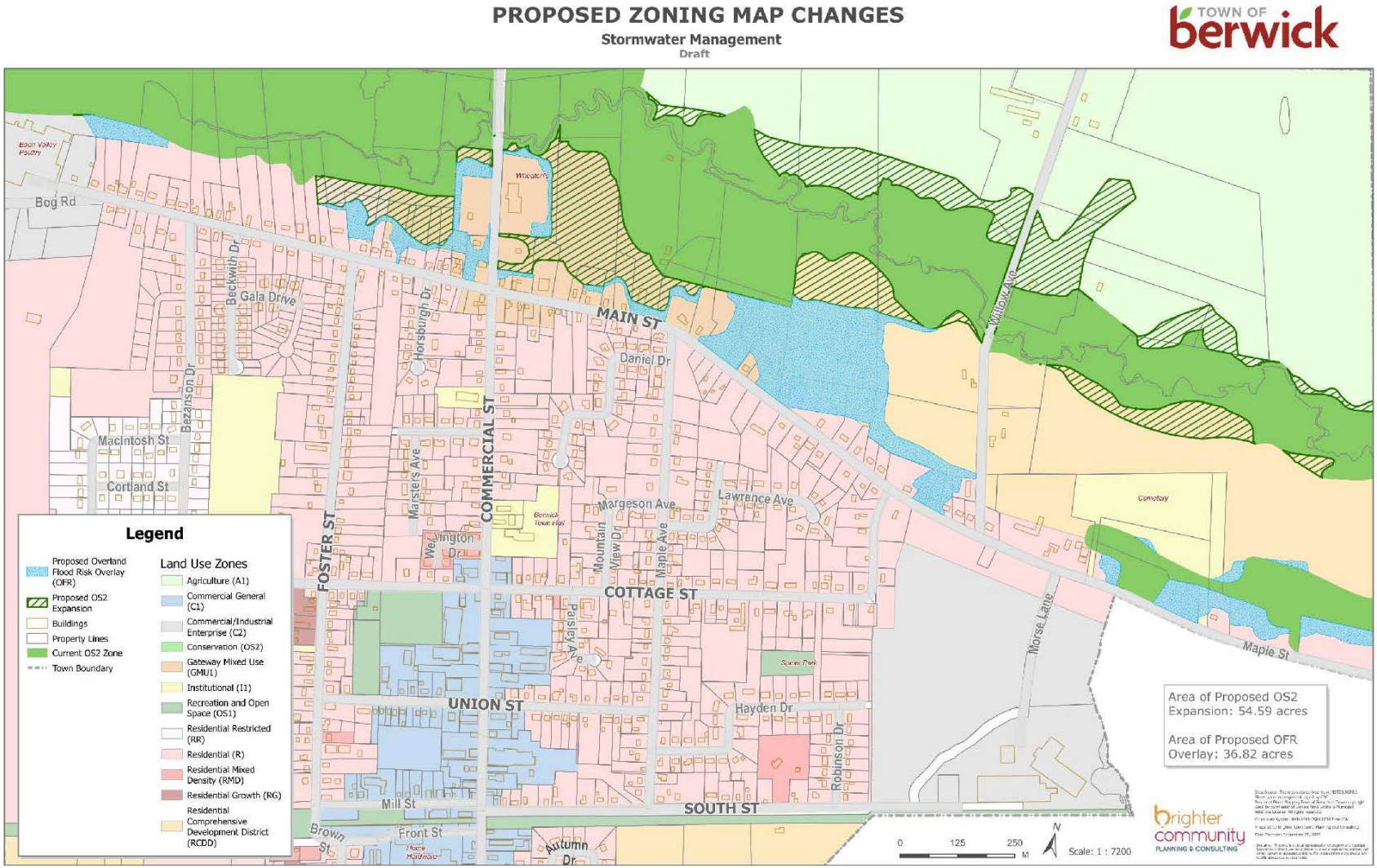
Respectfully,

[redacted]

[redacted]st. Berwick

[redacted]

Appendix F


PROPOSED ZONING MAP CHANGES
Stormwater Management
Draft
TOWN OF berwick
Bog Rd
Beckwith Dr
Gala Drive
Bezanson Dr
Horsburgh Dr
MAIN ST
Daniel Dr
Killiow Ave
Macintosh St
Cortland St
FOSTER ST
Masters Ave
COMMERCIAL ST
Margeson Ave
Lawrence Ave
Mountain View Dr
Maple Ave
COTTAGE ST
Parsley Ave
Morse Lane
Maple St
Hayden Dr
Robinson Dr
UNION ST
Mill St
SOUTH ST
Brown St
Front St
Autumn Dr
Cemetery
Legend
Proposed Overland Flood Risk Overlay (OFR)
Proposed OS2 Expansion
Buildings
Property Lines
Current OS2 Zone
Town Boundary
Land Use Zones
Agriculture (A1)
Commercial General (C1)
Commercial/Industrial Enterprise (C2)
Conservation (OS2)
Gateway Mixed Use (GMU1)
Institutional (I1)
Recreation and Open Space (OS1)
Residential Restricted (RR)
Residential (R)
Residential Mixed Density (RMD)
Residential Growth (RG)
Residential Comprehensive Development District (RCDD)
Area of Proposed OS2 Expansion: 54.59 acres
Area of Proposed OFR Overlay: 36.82 acres
0
125
250
M
N
Scale: 1 : 7200
brighter community
PLANNING & CONSULTING