APPENDIX E

CORRESPONDENCE ATTACHMENTS

BLUE MOUNTAIN -BIRCH COVE LAKES REGIONAL PARK REGIONAL PLAN SUPPLEMENTARY SUBMISSION

July, 2021

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INTRODUCTION

The 2022 HRM Regional Plan is challenged to meet Regional Council's declared Environmental Strategy as the HRM Charter contains significant restrictions on what it can mandate in the Regional Plan.

The 2006 and 2014 Regional Plans and the 2018 Halifax Green Network Plan are replete with policies regarding the building of livable communities by optimizing the integration of the Halifax Regional Municipality's amazing natural assets. However, the Nova Scotia Utility and Review Board has made it clear that many of these policies take a back seat to the specific policies key to supporting any particular development under consideration.

Its genesis lies in the limitations imposed in the HRM Charter. To address this, in 2018, following recommendations made in the Halifax Green Network Plan, HRM asked the Province for a couple of changes to its Charter, and, more recently, the Friends of BMBCL asked for additional Charter changes to support efforts to allow HRM planners to better balance the decision-making between development and sustainability. There is no indication whether the Province intends to move forward on the changes.

Because of the existing legislative framework, the mandated Regional Plan policies centre around new development related infrastructure costs and HRM's efforts to minimize these costs by directing development to projects with the least cost to HRM. This is proving to be at the expense of growing HRM in an optimal way to ensure its attractiveness to residents and newcomers alike. All of which is at the expense of ensuring HRM is distinguishing itself from other communities, affecting its ability to retain its attractiveness to newcomers. often a key reason for newcomers moving to HRM.

The following pages address both the macro and micro issues of the Regional Plan as they impact the short and long term future of the Birch Cove-Blue Mountain Regional Park. As the document is largely directed to the HRM Regional Plan team, it contains numerous specifics that can be hard to follow without reference to the documents and pages noted. This introduction is simply intended as an overview to help the reader understand the fundamental issue at play.

No.	RECOMMENDATION SUMMARY
1.	That the following HRM Charter amendments be made: 1. HRM continue to vigorously pursue an amendment to s.235 as per HGNP Action #18 and as already requested by Council by letter to the Province dated December 2018. 2. Amend s.237 to allow a 5-year window rather than the existing 1-year window for HRM to decide on the acquisition of lands zoned for public use. 3. An amendment leveling the playing field between environmental and development policies in the Regional Plan. And that the applicable land use bylaws be amended pursuant to s.235(5)(p) of the HRM Charter: 4. To facilitate HRM enforcement of development related provincial legislation so that there is a unified jurisdiction enforcement process.
2.	That HRM reaffirm its commitment to acquiring the buffer lands within the conceptual park area shown in the 2014 Regional Plan (Map 11) and the Dakin Drive concept.
3.	That any revision of lands identified as being targeted for acquisition only be further revised at such time as a park management plan or concept plan is prepared jointly by park land owners and/or land managers through an open and transparent planning process and with benefit of input from stakeholders, including the Friends of BMBCL and the public.
4.	That the Regional Plan emphasize the imperative of a best practices approach for the creation of a major wilderness park with a 31 km+ perimeter including decisions on park accesses.
5.	That HGNP Action #31 be adopted and followed and the Growth Centre list start with brownfield and infill sites rather than greenfield sites such as the BMBCL Regional Park.
6.	That the Hwy 102 West Corridor lands be removed from the Growth Centre list with a correlating change to Map 2, Generalized Future Land Use Map, as there is sufficient developable land available until at least the next RP review.

7.	That consideration be given to the use of environmental protection zone designation for the wetlands lying between Hwy 102 and the shores of Susie, Quarry, Washmill, and Little Kearney Lakes, with protection objectives being carefully coordinated with the planning of any permitted development of adjoining or nearby lands.
8.	That HRM consider "downstream" taxpayer impact costs including watercourse remediation costs as part of its secondary planning approval process.
9.	That the equivalent of the River-Lakes Secondary Planning Strategy for Planning Districts 14 & 17 Policy RL-22 providing for no net phosphorus, be adopted for lands within the watershed of the BMBCL Regional Wilderness Park.
10.	That the stormwater systems in new developments be required to be designed to minimize the long-term effect of development on receiving watercourses as recommended by AECOM.
11.	That **(1)** HRM conduct a review of the effectiveness and cost of available treatment technologies for phosphorus, salt and sediment. **(2)** That natural filtration not be permitted as a means of addressing construction siltation and that instead federal highway construction standards be required. **(3)** That installation of CBS units be mandatory to address road salts and hydrocarbons; alternatively, road salts and hydrocarbons be addressed through an equivalency system. **(4)** A credit system be developed for investments in stormwater quality private sector investments.
12.	That construction duration easily measured turbidity standards be set and that any applicable development agreement provide that the HRM Engineer may shut down a project until such time as the turbidity situation has been rectified.
13.	That every effort be made to adopt policies in accordance with HGNP Action #6.
13.	That the Subdivision By-law be amended to (1) use the development altered high water line as the line from which buffers and setbacks are measured; and (2) require that both the developer-altered highwater line and the setback or buffer therefrom be permanently marked by survey pins.

15.	That HRM add a policy statement in the Regional Plan in opposition to the construction of Hwy 113.
16.	That the necessary work on wildlife corridors be undertaken as part of the 2022 Regional Plan review.
17.	That Table 2-3 be updated to reflect that currently NSE&CC/HRM/NSNT have land management responsibility in their respective areas of BMBCL
18.	That consideration be given to including Nova Scotia Nature Trust lands within Protected Area Zones and policy E-7 amended to so provide.
19.	That HGNP Map 5 be considered when considering changes that would impact the BMBCL Regional Park.
20.	That HRM consider incorporating key performance indicators into the Regional Plan such as: ➢ New planning enabling provisions sought by HRM and enacted by the province. ➢ Number of access points officially confirmed ➢ Number of access points developed ➢ Number of acres/hectares of land added (s. 2.1.3 of 2006 RP) ➢ Number and length of trails constructed ➢ Number of water quality surveys conducted ➢ Establishment and marking (i.e. signage) of park boundaries (s. 2.1.3 of 2006 RP) ➢ Reduction in siltation caused turbidity events ➢ Stormwater quality controls

PART I – Need for Better Planning Tools

This section addresses recommended amendments to the HRM Charter that bear directly on the ability of HRM to successfully establish the Blue Mountain-Birch Cove Lakes (BMBCL) Regional Park.

In a February 6, 2021 Chronicle Herald article, Jim Vibert concluded with the following:

> *For generations, politicians have been claiming to balance environmental and economic considerations and for generations economic considerations carried more weight and, almost invariably, the day.*
>
> *That's changing in more enlightened jurisdictions, where the existential threat from continued environmental degradation has sunk in, and where they've discovered that there are new economic opportunities to be found in protecting the planet.*

This was followed in the March 2021 issue of Halifax Chamber of Commerce Business Voice in an article about the Blue Mountain Birch Cove Lakes (BMBCL) regional wilderness park with a quote from Mayor Savage:

> *"Businesses like the idea that we invest in and protect greens," says Mayor Savage. "We have urban wilderness areas that are very special and not something that everybody has, so it's really good for the business community as it is for the entire community."*

Halifax has long recognized a stronger community is achieved through a balancing of development and community livability needs. But in its implementation, the development policies dominate with the environmental and community livability opportunities taking a back seat. This is reflected in the testimony of long-term HRM Sr. Planner, Gary Porter (retired), wherein the UARB in its 2004 Governor's Brook decision observed:

> *With respect to the environmental policy, he told the Board that he would put the environmental provisions as a lesser policy than the policies we talked about earlier."*[1]

[1] Appeal by Williams Lake Conservation Company, 2004 NSUARB 109, see also RP Policy 8.2

The Mayor and many others regularly point toward the superior level of livability as one of HRM's strongest and distinguishing economic assets. Once the assets that provide a superior level of livability are gone, they are gone forever.

A 2016 article by Alexa MacLean of Global News stated:

> *More than 1,000 acres of developer-owned land in the area has yet to be purchased by the city, even though in the 2006 Regional Municipal Planning Strategy, the municipality committed to creating a regional park at Blue Mountain Birch Cove Lakes.*
>
> "*Our goal is to buy as much land as we can, protect that and make sure there's no development on the lakes," Savage said.*

The upcoming Regional Plan is key in making this happen. But there is periodic reference to the lack of legislative tools to meet expectations – which expectations have been to a certain extent supported by the ecological/natural asset related policies that permeate the Regional Plan and its related documents.

This subject was raised by Councillor Lovelace at the May 21, 2021 meeting of the CP&ED Standing committee where she asked for a paper on legislative limitations to help councillors and the public especially in relation to waterways and wilderness areas. Staff indicated that the Open Space paper was a first attempt to articulate this issue.[2] The Open Space paper, "Planning Tools for Protecting & Conserving Lands" references 3 options relevant to BMBCL: (1) acquisitions, (2) Environmental Conservation Zone, and (3) Open Space & Natural Resource Designation where it addresses habitat protected by federal or provincial legislation, trail and greenway networks, wetlands, environmentally sensitive areas, and natural corridors. There are significant limitations in these options including the cost and timing of acquisitions.

The Friends of BMBCL recommend the HRM Charter be amended to give equal standing and priority to policies relating to ecological/natural assets, parks and community livability opportunities through further legislative options, including:

1. Council in December 2018 asked the Province for a Charter amendment that would implement HGNP Action #18. No public information has been

[2] Kate Green, May CP&ED meeting

provided on the position of the Province on the matter 2.5 years later other than a provincial acknowledgement to the request in February 2019.

2. The Purcell's Cove Backlands, the Sandy Lake-Sackville River Association, Friends of BMBCL and the SL-SRA Coalition have all asked the Province for an amendment to s.237 of the Charter allowing HRM to have a 5 year window to consider whether private sector land should be acquired for park/public purposes. For decades, the one year time limit has been raised by HRM staff to explain why private sector land can not be zoned for park purposes [presumably this is a recognition of the fact that a one year time span for a decision is not practical]. HRM has never lent its support to this amendment in the face of repeated requests.

3. A Charter amendment providing substance to environmental policies and creating a level playing field in the development decision-making process should be sought. Presently, the environmental policies are, for all practical purposes, meaningless when applied to any property where development is permitted. The "to be considered" style policies raise expectations. It takes careful parsing of the language and experience with the operation of such policies to understand the limitations arising from the language employed. The common use of the word "considered" as the operative word in a policy means little in practical terms when considered against a policy which permits development.

   The average reader would assume that if a policy is to be "considered", such "consideration" would routinely have an impact on the decision-making on any applicable development; whereas, such is not the case. The use of language not easily understood in the context employed is a disservice to the community. The HRM December 2020 HGNP update contains a long list of where HGNP policies have been considered in the development process but no example where any "considered" policy had an impact.

   If no effort will be made to secure enabling provisions that will make the environmental policies effective, then the language employed should be changed so that the average reader is aware that conflict between the environmental policies and the development proposed will be resolved in favour of the development.

4. HRM Charter Section 235(5) provides

> (5) Where a municipal planning strategy so provides, a land-use by-law may
>
> (p) prohibit development on land that
>
> (vi) is located in an area where development is prohibited by …. an enactment of the Province;

S. 235(5) allows HRM to include in its decision-making a violation of legislation such as the Endangered Species Act or the Environment Act. To do so would reduce red-tape allowing for a more centralized review of the applicable provisions when considering a development application. Jurisdictional issues have been on the table for some time as an issue in a achieving a coordinated approach to dealing with environmental issues, in particular water issues.

The Regional Plan is an opportunity to address some of these jurisdictional issues.

Therefore, the Friends of BMBCL recommend the following HRM Charter amendments:

1. **HRM continue to vigorously pursue an amendment to s.235 as per HGNP Action #18 and as already requested by Council by letter to the Province dated December 2018. And that the applicable land use bylaws be amended further to s.235(5)(p) of the HRM Charter.**
2. **Amend s.237 to allow a 5 year window rather than the existing one year for HRM to decide on the acquisition of lands zoned for public use.**
3. **An amendment which would level the playing field between environmental and development policies in the Regional Plan.**
4. **To facilitate HRM enforcement of development related provincial legislation so that there is a unified jurisdiction enforcement process.**

PART II – BMBCL Regional Park Specific Issues

This section addresses concerns of the Friends of BMBCL specific to BMBCL Regional Park.

A Map 11 versus Dakin Drive Map

That portion of the BMBCL Regional Park northwest of the proposed Hwy 113 does not contain provision for buffer lands for the provincial wilderness area[3].

The Honourable Margaret Miller, as Minister of the Environment, on June 30, 2016 wrote Mayor Savage noting that:

> *The concept for this regional park, as outlined in HRM's 2006 and 2014 Regional Plans, was developed in cooperation with the Province, and reflected principles outlined in the 2006 Blue Mountain-Birch Cove Lakes Assessment Study.*
>
> *In 2009, the Province designated Crown lands within this conceptual regional park under the Wilderness Areas Protection Act as Blue Mountain-Birch Cove Wilderness Area. We recognized that this designation would contribute to HRM's planned regional park, with the understanding that HRM would seek to acquire adjacent private lands in the Birch Cove Lakes area to complement the role of the Provincial wilderness area within the regional park.*
>
> *…….*
>
> *Nova Scotia Environment last worked with HRM on this initiative in 2012, leading up to an HRM consultation on a revised regional park concept that delineated back-country and front country areas of the proposed park. …….*
>
> *By protecting Blue Mountain-Birch Cove Lakes Wilderness Area, the Nova Scotia Government made a major investment in safeguarding lands associated with HRM's proposed regional park to support a healthy and prosperous municipality and province. I sincerely appreciate the challenge of acquiring lands around Birch Cove Lakes, and the need to consider both development and regional park interests. However I wish to encourage HRM to continue to pursue the vision for the regional park, as outlined in HRM's*

[3] Conceptual Area Map, Map 11

> *regional plan, with due consideration given to the broad societal and environmental benefits associated with that vision, and the implications of HRM decisions on the protection and management of Blue Mountain-Birch Cove Lakes Wilderness Area."*

Assuming HRM continues to endorse the park concept – designated wilderness + HRM buffer lands - presented by HRM to the public on May 30, 2012, the proposed buffer lands northwest of the proposed Hwy 113, as shown on the Dakin Drive map, should be included in the Map 11 Conceptual Park area map.

Recommendation # 2

It is recommended that HRM reaffirm its commitment to acquiring the buffer lands within the conceptual park area shown in the 2014 Regional Plan (May 11) and the Dakin Drive concept.

Recommendation #3

It is recommended that any revision of lands identified as being targeted for acquisition only be further revised at such time as a park management plan or concept plan is prepared jointly by park land owners and/or land managers through an open and transparent planning process and with benefit of input from stakeholders, including the Friends of BMBCL and the public.

B Access Points

Poorly located or incorrectly sized access points relative to the park management requirements can have unfortunate impacts on what is intended as a national quality urban wilderness park.

The BMBCL Information Report before council on July 21, 2020, stated:

> *As subdivision development is occurring, planning is needed to further contemplate the park and its accesses while the Municipality continues with its acquisition program.*

Currently no acquisitions by HRM are known to be in play, except through what the future may hold relative to subdivision approvals and the corresponding 10% open space allocation provisions.[4]

[4] July 21, 2020 HRM Information Report

The creation of a regional urban wilderness park of between 7,500 and 10,000 acres through a developer-driven (i.e. Design by Developer (DBD)) approach would result in a comprehensive and effective park design with optimally located access points only through serendipity. In other words, this approach is entirely inappropriate for a project of this size.

Recommendation #4

Friends of BMBCL recommend that the Regional Plan emphasize the imperative of a best practices approach to park planning and design processes for the creation of such a major wilderness park, including decisions on park accesses around its 31 km+ perimeter, and on interim park development and management in light of increasing levels of park access and visitation.

C Hwy 102 West Corridor

The 335 acres that constitute the Hwy 102 West Corridor, together with 765 acres of the Annapolis lands, constitute the heart of the BMBCL Regional Park. It is from the lakes within this area that the reference in the name to Birch Cove Lakes is derived.

The 2014 Municipal Planning Strategy (MPS) began by setting out its vision at p.9 including the following statement:

> *(a) Vision*
>
> *HRM's vision for the future is to enhance our quality of life by fostering the growth of healthy and vibrant communities, a strong and diverse economy, and sustainable environment.*[5]

The MPS cites 7 supporting Regional Plan Principles of that Vision[6] including:

- *Preserves and promote sustainability of cultural, historical and natural assets;*
- *Supports the Regional Centre as the focus for economic, cultural and residential activities;*
- *Manages development to make the most effective use of land, energy, infrastructure, public services and facilities, and foster healthy lifestyles;*

[5] RMPS p.9
[6] RMPS p9

- *Ensures opportunities for the protection of open space, wilderness, natural beauty and sensitive environmental areas;*

These stated principles are followed by supporting Objectives [7] under the topic Environment, Energy and Climate Change including:

2. *Foster a land management and community design approach which integrates preservation of lands of ecological, cultural and environmental significance; lands suited for renewable resource extraction; and lands suited for parks, trails and corridors which provide recreational and educational opportunities;*

The foregoing is but a small example evidencing that the MPS is replete with comments, policies and commitments regarding environmental stewardship being at the centrepoint of decision-making. This guidance and direction was followed by the adoption of the 2018 Halifax Green Network Plan (HGNP) - an important step toward making the referenced vision, principles and objective a reality.

However, it is apparent that development decisions are not being approved as intended in line with said RP policies and comments, and HGNP guidelines. As Vibert notes, the concern is that the development approvals approach, being taken by HRM, remains "business as usual" with natural asset imperatives taking a back seat to other decisions including:

- business park expansions,
- responses to secondary planning requests,
- development decisions made on the basis of the cheapest means of providing engineered infrastructure
- progress on achieving a whole community design beyond the integration of built infrastructure.

(b) Master Planning

In an effort to plan strategically, HRM moved to embrace the concept of master planning through both the 2006 and 2014 regional plans. This has worked with respect to built infrastructure but not well in respect of optimization of natural assets.

[7] RMPS p.10

(c) Secondary Planning Principles

The southern boundary of the BMBCL Regional Park encompasses some of the most important acreage of the entire BMBCL Regional Park. It is that portion of the park closest to the largest and densest population area.

RP Policy S-2 states that any decision to proceed with secondary planning should be framed by the 7 principles in Section 4 of the Regional MPS. Principles 3 and 6 state:

> 3. *Preserves and promotes sustainability of cultural, historical and natural assets.*
> 6. *Ensures opportunities for the opportunities for the protection of open space, wilderness, natural beauty and sensitive environmental areas.*

Both align with HGNP Action Item 6:

> *6. Amend the RP to emphasize the importance of identifying and protecting environmental sensitive areas during master neighbourhood planning exercises (secondary planning).*

In contrast, the developer's primary argument for its Hwy 102 West Corridor application for secondary planning is infrastructure related - ease of connection to existing infrastructure and reduced infrastructure cost to HRM as compared to other developments.

Friends of BMBCL suggests that the application meets neither principle #3 nor # 6; instead, the proposed development destroys open space, destroys wilderness, destroys wetlands, and destroys environmentally – sensitive areas. It removes the opportunity for HRM's own central wilderness park, a once in forever opportunity. It eliminates the existing division between two growth centres – Bayer's Lake Business Park and Bedford West - and it runs the two together guaranteeing a sprawl look and feel to the community. It negatively impacts what is a major community livability asset in attracting economic growth – convenient access to natural assets – and negatively impacts landscape (i.e. ecological) connectivity as highlighted in the HGNP.

(d) Growth Centre list

Hwy 102 West Corridor is on the Growth Centre list immediately after Sandy Lake. But should it be? HGNP Action #31[8] states:

> *Amend the Regional Plan to prioritize the redevelopment of brownfield sites and other underdeveloped urban infill sites ahead of undisturbed greenfield sites.*

Re HGNP Action #31, the 2020 HGNP Progress Report notes that: In progress: • Supported by Action 23 of HalifACT. • To be completed as part of the ongoing Regional Plan review.

There are no brownfield sites on the 2014 Growth Centre list nor any infill sites as the 2018 HGNP post-dates the 2014 Regional Plan. Until the Growth Centre list is amended to add brownfield and infill sites to the beginning of the list, BMBCL Regional Park should not be on a Growth Centre list in the Regional Plan.

The idea of RP Growth Centres is that there are to be centres of development, not just string/sprawl development. If all development between Growth Centres is endorsed simply because a developer sees an opportunity and HRM limits its consideration to whether it constitutes an easy and cost effective infrastructure connection, that undermines the concept of Growth Centres as a result of the design-by-developer(DBD) approach.

Recommendation #5

Friends of BMBCL recommend that HGNP Action #31 be adopted and followed and the Growth Centre list start with brownfield and infill sites rather than greenfield sites such as the BMBCL Regional Park.

(e) Secondary Planning S-2

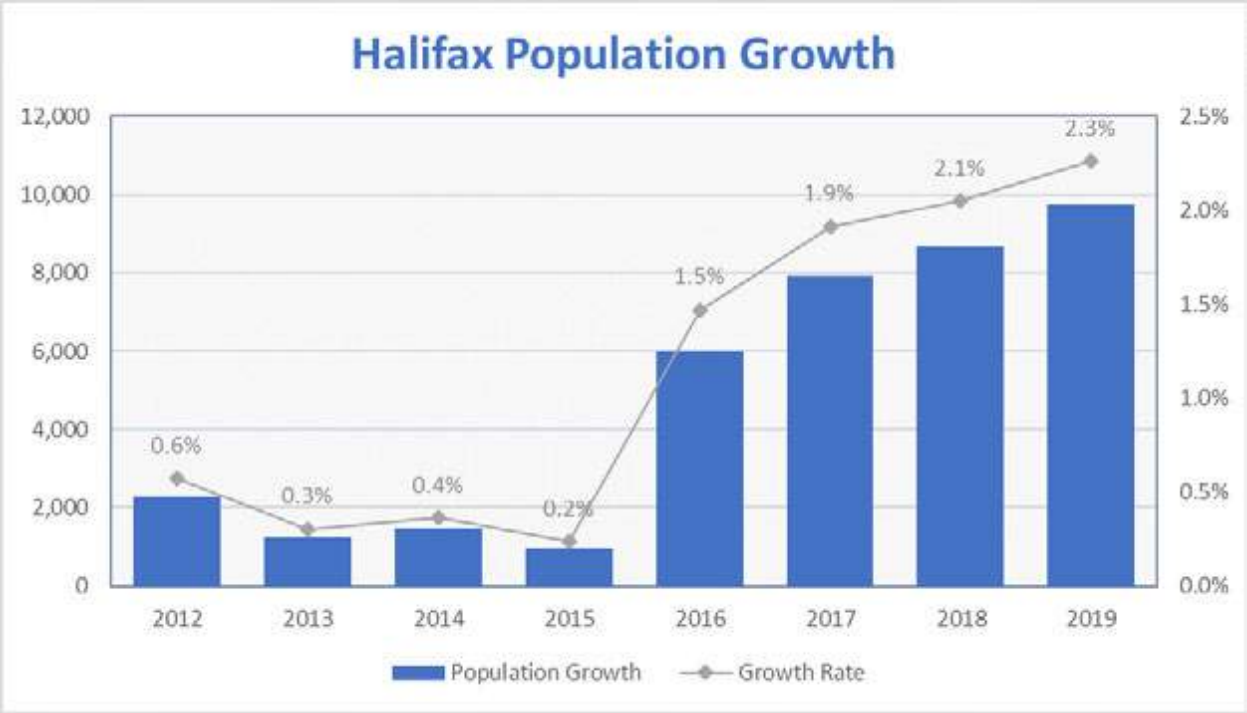
RP Policy S-2 re secondary planning applications requires consideration be given for the need for additional lands. The situation remains as described by staff in 2016 – lots of available developable land.

The Halifax Partnership (HP) reports that

[8] Halifax Green Network Plan Annual Progress Report - February 18, 2021 Community Planning & Economic | Halifax.ca

> *Halifax has had four consecutive years of record population growth in both absolute and percentage terms, with almost 10,000 newcomers added to our population over the year July 1, 2018, through June 30, 2019. Furthermore, of all census metropolitan areas in Canada, Halifax was the third fastest growing city, only behind Kitchener-Waterloo-Cambridge and London.*

HP provided the following graph with data covering an 8 year period not just the 4 years referenced in the quote.



> *Within these numbers, the majority of new residents came from abroad (international migration) and from other provinces within Canada.*

Based on the above HP graph, HRM population growth has only totalled 9.3% over the 2012-2019 period or 1.16% per year. The average growth predicted in the 2014 Regional Plan was 1%; thus, the average growth over the above referenced period averaged within the margin of error for that predicted in the 2014 Regional Plan.

The marked change between the 2012-15 period versus the 2016-2019 period begs the question - what does the 2016-19 growth indicate relative to the next 5-10 years? The general consensus is that the recent growth is driven by immigration. However, more recently, Covid has reduced the number of new immigrants and

caused the return of some Airbnb units to the rental market resulting in the Halifax residential vacancy rate almost doubling year over year to 1.9%[9]. Given the number of construction starts in HRM at 4800 residential units[10], there appears to be industry confidence that some of the population growth seen in the last 4 years will continue. However, the recent immigration downturn should allow industry more time to catch up with recent growth, putting supply and demand into better balance.

The staff report presented at the September 6, 2016 Council meeting stated

> *The estimate of available land supply conducted for the 2014 Regional Plan excludes infilling and redevelopment opportunities. However, Municipal records indicate that redevelopment and infill developments are actually a major contributor to residential development. Outside of the Regional Centre, approximately 38% of new residential building units building permits since 2013 were located within existing built-up areas, such as the construction of secondary suits(sic) and the redevelopment of commercial properties. This indicates that the 2013 estimate of a 28-35 year supply of land is significantly understated when redevelopment opportunities are considered.[Emphasis added]*

Due to redevelopment and infill options, even more land is available for residential development than suggested by the 2013 estimate. The staff report on the Purcell's Cove Backlands at Regional Council on September 14, 2016 said much the same thing.

A smattering of the residential (re)development projects now underway at either the planning or construction phase as reported by the media are:

Dartmouth:

(1) Terrace of Kings Grove, 1020 Micmac Boulevard – 148 units,
(2) 112 to 114 Wyse Rd – 160 units,
(3) 3 Bartlin Rd/ Prince Albert Rd – 175 units,
(4) Penhorn Plaza – 900 units + 45 Townhouses,
(5) 95 Caledonia Rd – 59 units,

[9] The 2021 CMHC rental housing report reports a 1.9% residential vacancy rate for the Halifax Census Metropolitan Area. This is up from 1.0 % in 2020.

[10] NS Investment Property Owners Association, 2021

(6) 46 Maple St – 20 units

Peninsula Halifax:

(7) 3411 Joseph Howe Drive,
(8) 210 to 214 Willett St - 550 units,
(9) Victoria Hall, 2438 Gottingen St – 13 storey – units u/k,
(10) 2032 to 2050 Robie St. – 102 units, 23 stories
(11) Cunard Lot at 1325 Lower Water St – 200+ units,
(12) Cogswell Interchange – 6,000 people estimated by HRM,
(13) Queen's Marque – units u/k,
(14) Rouvalis, The Promenade, College/Carlton St., 611 units
(15) 6070 Almon St – 352 units,
(16) Former Bloomfield Centre site – 400 units,
(17) 3311690 Nova Scotia Ltd at Robie and May St – 87 units,
(18) Adam Barrett – Brunswick St (old rectory site) – 8 stories,
(19) Dexel Developments 6324-30 Quinpool Rd – 160 units,
(20) Dexel Developments – Barrington St, The Press Block – units u/k,
(21) Spring Garden West – (2) 30 storey towers,
(22) 2218 Maitland St 10 bedrooms
(23) Jono Developments – St. Pat's Alexandra site – size at Council
(24) Jono Developments at Cogswell and Brunswick – 21 stories
(25) Szulewicz - 1029 South Park St. – 6 units

Mainland Halifax:

(26) Clayton Developments Bedford West Sub-Areas 1&12 – 238 acres plus parcels on west side of Larry Uteck Blvd – 2500 units (5,200 people),
(27) 210 to 214 Willett St - 550 units
(28) Bluenose Inn, 637 Bedford Hy – 102 units
(29) Rockingham South Ltd. (Halef) 239 units – Dunbrack/Ruth Goldbloom Dr.

Suburban Areas:

(30) Clayton, Kiln Creek, 1500 homes
(31) Clayton, Carriagewood Estates – units u/k
(32) 26 Rutledge St, Bedford – 16 units

This incomplete list alone will provide housing for about 30,000 residents. Given the unprecedented number of urban centre residential projects, it appears that the Hwy 102 West Corridor lands are not needed at this time – there is more than an

adequate existing supply of developable lands. Clearly, the secondary planning application by Susie Lake Holdings/Stevens Group does not meet RP Policy S-2.

Recommendation #6

It is recommended that the Hwy 102 West Corridor lands be removed from the Growth Centre list with a correlating change to Map 2, Generalized Future Land Use Map, as there is sufficient developable land available until at least the next RP review.

(f) Viewshed

A BMBCL park principle adopted by HRM[11] is the "viewshed" concept which embraces the idea that, while within the park, a park user should be largely divorced from the surrounding development impacts thereby creating an inner-city wilderness oasis. BMBCL offers a unique opportunity for the concept as its numerous ridges create a raised boundary elevation relative to the adjoining lands.

A narrow, high density, strip development lying between Hwy 102 and the shores of Susie, Quarry and Washmill lakes containing a collector road within 100-150 feet of the shoreline could easily destroy that viewshed concept. The Stevens Group have indicated their commitment to the viewshed concept by advising that their reshaping of the land would involving dropping the elevation of the development/construction area so that from the adjoining lakes coupled with the Map 11 treed boundary, there would be no visibility of the nearby 5-7 storey multi-use development.

The Friends applaud the commitment to the viewshed concept but that commitment has dependencies. It depends on the Stevens Group being the owner in the long term. It depends on HRM not allowing additional stories after any secondary plan has been approved, it depends on no additional density allowed on the property(s) through a reallocation process. It depends on the ability of the vegetation within the buffer to withstand the shock of a major reshaping of the land.

There is concern as to whether a slightly wider lake buffer than usual and the dropping of the elevation at the building locations is enough to avoid the proposed development creating a highly urbanized landscape between Hwy 102 and Susie,

[11] referenced in HRM 2013 deed to BANC

Quarry and Washmill lakes at complete counterpoint to the Viewshed vision espoused by HRM. Given the challenges with the tree retention, any reduction in the width of streets, and reduction in tree clearance in the rest of the project particularly if the wiring were undergrounded, there is a remote possibility of the project not completely destroying the concept of the BMBCL Regional Park as a wilderness park as opposed to a standard urban lakeside park. The more likely reality is that standard subdivision design approaches are employed at the expense of the wilderness area adjoining.

There is some information to suggest that the Annapolis proposed development has not been designed in a way to respect the city's Viewshed concept. Rather, building would take place to facilitate construction as close as possible to any nearby lake. Given that in many places the granite in the Quarry Lake area lies at grade, this will result in another reshaping of the landscape potentially reshaping it in such a way that destroys the wilderness area experience that would otherwise be possible.

(g) Susie Lake Wetlands

As noted above, adjacent to the northern side of Lacewood Drive exist two major wetlands filtering runoff from the Bayer's Lake Business Park. One is to be infilled to a significant depth (50 ft + or -) to achieve grades equivalent to those of Lacewood Drive for the purpose of constructing a roundabout, subdivision collector road and apartment buildings for the proposed Susie Lake Holdings/ Stevens Group development[12]. This eliminates what limited filtration is afforded by the existing wetlands replacing it with a combination of piped system and man-made lake with water quality implications for all downstream lakes including Quarry,Washmill, Little Kearney, Big Kearney and Papermill lakes. As to the second wetland, the proposal is that it be purchased by the city for park purposes or that it be part of the 10% parkland dedication.

HGNP Action Item 6 states:

> *Amend the RP to emphasize the importance of identifying and protecting environmental sensitive areas during master neighbourhood planning exercises (secondary planning).*

[12] As described in the Birchdale Properties 2009 application for secondary planning

The 2020 HGNP Progress report states that this action item is to be completed as part of the Regional Plan review.

This is an important HGNP recommendation but should be applied to all environmentally sensitive areas not just those under a master neighbourhood planning exercise.

Recommendation #7

The Friends of BMBCL recommend that consideration be given to the use of the Environmental Protection Zone designation for the wetlands lying between Hwy 102 and the shores of Susie, Quarry, Washmill, and Little Kearney lakes, with protection objectives being carefully coordinated with the planning of any permitted development of adjoining or nearby lands.

(h) Susie Lake Water Diversion Proposal

Susie Lake Holdings is proposing to divert a major water source for Susie Lake, flowing under Lacewood Drive in the Costco area from Susie Lake to its existing 200 foot deep quarry for the purpose of making the quarry into a man-made lake on which (Lacewood Drive side) shores are intended three ≈20 storey residential high rise structures. Given the shallowness of Susie and Quarry lakes, this would have an impact on water quantity[Stevens Group suggest only 5%] and corresponding ecological impacts. It would create a potential Susie lake dead zone in the southwest corner of Susie and have a corresponding impact on its downstream lakes, already impacted in low rainfall seasons. Eliminating this flow would exacerbate the issue inviting the problems seen in certain Dartmouth lakes and in Williams Lake[13]. The referenced issues will result in significant future costs to HRM taxpayers as the community would be looking to HRM – not the developer - to effect lake remediation.

Recommendation #8

It is recommended that HRM consider such "downstream" taxpayer impact costs, including water quality remediation costs, as part of its secondary planning approval process.

[13] Williams Lake issue are a combination of issues including Governors Brook development water redirection and a leaky dam

(g) Stormwater Quality Management

Given development pressures in the BMBCL area, the future impact of development on its 23 lakes and associated watercourses is a major concern. BMBCL Regional Park lies within 2 watersheds. In the case of the primary watershed, the water quality in 19 lakes impact the water quality in Kearney Lake which, in turn, impacts the water quality in Paper Mill lake – the last lake in the chain. See this link for an organizational map of the water flow.[14]

Concern regarding the impact of stormwater on receiving water quality has been a longstanding HRM concern reflected in the adoption of the following policies:

E-17 Watershed or sub-watershed studies concerning natural watercourses shall be carried out as part of comprehensive secondary planning processes. These studies shall determine the carrying capacity of the watersheds to meet the water quality objectives which shall be adopted following the completion of the studies. The studies, where appropriate, shall be designed to:

(a) recommend measures to protect and manage quantity and quality of groundwater resources;

(b) recommend water quality objectives for key receiving watercourses in the study area;

(c) determine the amount of development and maximum inputs that receiving lakes and rivers can assimilate without exceeding the water quality objectives recommended for the lakes and rivers within the watershed;

(d) determine the parameters to be attained or retained to achieve marine water quality objectives;

(e) identify sources of contamination within the watershed;

(f) identify remedial measures to improve fresh and marine water quality;

(g) recommend strategies to adapt HRM's stormwater management guidelines to achieve the water quality objectives set out under the watershed study;

[14] http://lakes.chebucto.org/TPMODELS/PIC/papermil.jpg

(h) recommend methods to reduce and mitigate loss of permeable surfaces, native plants and native soils, groundwater recharge areas, and other important environmental functions within the watershed and create methods to reduce cut and fill and overall grading of development sites;

(i) identify and recommend measures to protect and manage natural corridors and critical habitats for terrestrial and aquatic species, including species at risk;

(j) identify appropriate riparian buffers for the watershed;

(k) identify areas that are suitable and not suitable for development within the watershed;

(l) recommend potential regulatory controls and management strategies to achieve the desired objectives; and

(m) recommend a monitoring plan to assess if the specific water quality objectives for the watershed are being met

BW-3

A water quality monitoring program shall be undertaken for the Paper Mill Lake watershed, illustrated on Schedule BW-2 to track the eutrophication process. The program is to be designed in accordance with national guidelines established by the Canadian Council for Ministers of the Environment (the CCME guidelines) and undertaken by qualified persons retained by the Municipality and financed in whole or in part by developers within the watershed area. Specifics of the program are to be negotiated under the terms of a development agreement in consultation with the Bedford Watershed Advisory Board. …… The threshold indicators are to be established prior to any development approvals being granted; and d) conform with all water quality policies, specifications, protocols and review and approval procedures approved by Regional Council.

BW-5

In the event that water quality threshold levels, as specified under clause (c) of policy BW-3, for Paper Mill Lake or Kearney Lake are reached, the Municipality shall undertake an assessment and determine an appropriate course of action respecting watershed management and future land use

development in the area. An assessment shall consider the CCME guidelines. Water quality thresholds and any assessment reports shall be made available to the public.

(h) Phosphorus

Susie Lake Holdings/Stevens Group plan a major development on the shores of 4 lakes: Susie, Quarry, Washmill and Little Kearney and are currently looking for secondary planning approval via the Regional Plan review process. The Stevens Group has stated it has no plans to manage the introduction of phosphorus originating from the development of its 335 acres on the shores of Susie, Quarry, Washmill and Little Kearney lakes. The phosphorus load in downstream Kearney Lake, a situation of ongoing concern[15], will be affected unless steps are taken to manage the phosphorus impact.

The River-Lakes Secondary Planning Strategy for Planning Districts 14 & 17 includes Policy RL-22:

RL-22

An assessment prepared by a qualified person shall be required for any proposed development pursuant to these policies to determine if the proposed development will export any greater amount of phosphorous from the subject land area during or after the construction of the proposed development than the amount of phosphorus determined to be leaving the site prior to the development taking place.

Regardless whether a project is within the serviceable boundary, presumably construction within the watersheds of any of the 23 BMBCL lakes should have to meet the same "no net Total Phosphorus" standard.

Recommendation #9

It is recommended that the equivalent of River-Lakes Secondary Planning Strategy for Planning Districts 14 & 17 Policy RL-22 be adopted for lands within the watershed of the BMBCL Regional Wilderness Park.

[15] See various staff reports Bedford West Water Quality Status Update – NWCC, Item 2, July 17, 2017, NWCC Item 2, January 14, 2019, and NWCC, Item 12.1.1, March 11, 2019

(i) Road Salts

AECOM (2020) at C-8 notes

> *It is well documented that urban development will impact on the quantity and quality of the receiving waters without at source management. Development monitoring agreements should focus directly on the effects of the development and not on the ultimate impacts on the downstream receiving waters where control or management cannot be directly linked to construction and development.*

The report further notes[16]:

> *Managing stormwater within HRM has principally been the purview of the Halifax Regional Water Commission, also known as Halifax Water (2016). The design criteria contained in Halifax Water (2016) illustrate the more common aspects encountered in the design of stormwater systems. Any stormwater system within the core service boundary of HRM shall be designed to achieve the following objectives*[7 listed]*:*
>
> *V. to preserve natural water courses;*
> *VI. to minimize the long-term effect of development on receiving watercourses;*

Only items v and vi above make any direct reference to the protection of the natural water systems and the broader and long-term implications of stormwater on the natural receiving waters. There is no plan by Susie Lake Developments/Stevens Group nor Halifax Water to manage road salt runoff, with its associated increase in receiving water conductivity and the resultant impacts on the ecology of the lakes.

AECOM (2020) observes[17]

> *Elevated chloride levels can alter the community composition of fish, invertebrates and plankton, and reduce the richness and abundance of aquatic species. In extreme cases, high chloride concentrations can increase the density of bottom water to such an extent that it prevents lakes from mixing (called meromixis). Meromixis can cause anoxia that leads to impacts on habitat for aquatic biota and the release of nutrients and other*

[16] AECOM (2020)p.37
[17] AECOM (2020), Halifax Regional Municipality Water Quality Monitoring Policy and Program Development, section 6.3.2

> *chemicals from sediments (i.e., internal loading) that can contribute to eutrophication. De-icing and anti-icing salt materials used for winter maintenance of roads, parking lots, driveways and walkways are the primary sources of chloride to lakes.*

In his February 2021 "Report on the State of Sandy Lake, the Historical Trends and its Future Trajectory" Dr. David Patriquin notes at s.4.3 (d)

> *…. it is well documented from the synoptic observations on 50 HRM lakes that salt levels in HRM lakes are increasing and are highest in lakes in more settled areas (SL Fig 11 above)*

As noted by Dr. Patriquin[18]

> *While Best Management Practices can reduce salt loading and the impacts on lakes (e.g., view Bubeck and Burton, 1989), it's clear that the major anthropogenic determinant of salt loading is the percentage of a watershed that is settled/hard surfaces. From a recent, comprehensive review (Dugan et al., 2017): Results … revealed that impervious land cover and road density surrounding each lake were the primary classification splits and the most important predictors for lake chloride trends and cluster grouping.*

He concludes with

> *The rising salt levels in urban lakes and rural lakes impacted by large highways all over North America is proving to be a very difficult trend to reverse. While the salt itself is an issue, salt is also a proxy for a host of other materials associated with urbanization and highways that negatively impact lakes such as nutrients associated with use of fertilizers, and nutrients and organics from pet pooh.*

In Dr. David Patriquin's February 2021 Report on the State of Sandy Lake, he referenced a study by the Dalhousie Centre for Water Resource Studies which observed that: Water Quality Monitoring Policy and Program Development

> *When the percent of developed land [within a watershed] was 25% or more, the Cl concentrations tended to exceed Canadian freshwater quality guidelines for the protection of aquatic life.*

[18] Patriquin Sandy Lake s.4.2(d) Road Salts

The question is what to do about the issue if we are not to seriously damage our urban lakes as a collateral impact of the rampant development currently underway. CDS units[19] are recognized in various HRM documents as a means of managing both road salts and hydrocarbons escaping into local waterways. Currently contractors are avoiding their installation because of associated maintenance costs.

Reduction in use of road salts by HRM is an option to be considered. Sanding is employed on the roads immediately adjacent Kearney Lake: Colins Rd, Belle Rd, Hamshaw Drive and Saskatoon Drive. Friends understand the intention is to use the standard road salt application on the Brookline Park streets ensuring that road salts will be a problem for Kearney Lake this coming winter given that a subdivision the size of an entire Nova Scotia town will be dumping its road salts into a single lake.

Recommendation #10

It is recommended that the stormwater systems in new developments be required to be designed to minimize the long-term effect of development on receiving watercourses as recommended by AECOM.

(j) Construction Siltation

The Brookline Park development agreement contains a limited selection of Stormwater Best Management Practices (BMLs) which have not proven particularly effective. Routine rainstorms have regularly caused major turbidity events.

AECOM (2020) describes[20] the current Halifax Water requirements as follows:

> *The SWMPs are required to be an integral part of overall site design and development thereby requiring the development of an erosion and sediment control plan (ESCP) consistent with applicable municipal and provincial regulations and guidelines (Halifax Water, 2016; NSE, 1988). The ESCP is required to include both short-term measures applicable during construction and long-term measures after completion of development. Existing topography and vegetation shall be considered in the site design and cut and*

[19] Imbrium advertises: From oil capture and Phosphorus reduction, to Low Impact Development and urban redevelopment, our stormwater experts have seen it all. Our case studies are examples how Imbrium and our licensees have collaborated with clients to solve the most challenging stormwater treatment problems, and in the most demanding environments.

[20] AECOM (2020) at p.38

fill operations should be minimized. Site design shall consider minimizing if not preventing surface water flows across or from the construction site through considering the following at a minimum:

- *Construction staging to expose a minimum area of the site for the minimum time;*
- *Interception & diversion ditches to direct clear water around the construction site;*
- *Stable diversion berms;*
- *Sediment traps;*
- *Covering or seeding of topsoil or other soil stockpiles;*
- *Isolated stripping of land being developed;*
- *Vegetation screens or buffers;*
- *Filter bags in catch basins (during construction only); and,*
- *Settling ponds.*

Halifax Water (2016) also recommends long-term environmental protection measures shall include designs to minimize erosion and sediment flow, protect outfall areas, minimize disruption of natural water courses, utilize wetlands for natural filtration, and provide for ground water recharge when possible. Although required to follow the ESCP Handbook, HW does not provide specific details or objectives regarding erosion control and protecting the natural environment are not provided and are presumably left up to the developer.

What is in place are:

- Unstable diversion berms (insufficient and inadequate for the flow of sediment and water)
- Sediment traps that capture a limited amount of sediment
- Limited covering/mulching of exposed ground
- No isolated stripping of land (difficult given the size of the project and the number of independent contractors on site)
- Irregularly maintained catch basin filter bags
- Settling ponds performing as well as their number, size and location permit but insufficient to address conditions
- The recommended construction staging to expose a minimum area for the minimum time has suffered at the hands of the standard approach to cut,

clear, prep including excavation of all sites at the same time, road/services build and then construct as sales dictate.

A March 2013 report to Council regarding the AECOM 2012 Preliminary Report notes the AECOM study assumes rigorous application of stormwater management measures with removal rates of 80% or higher for total suspended solids (TSS) and 50% for total phosphorus (TP). Why would the study so assume? The 2013 report observes with respect to the above that

> *These standards may be difficult to achieve if enhancements to the public stormwater system are required. Halifax Water owns and maintains the public stormwater systems but does not report to HRM ……..*
>
> *Halifax Water has advised that since N.S. Environment has not established any water quality standards for stormwater, it might be difficult to justify any measures intended to improve water quality, particularly if such measures increase operating and maintenance costs (capital costs would be paid for by the developers).*
>
> *Until regulatory requirements from N.S.Environment are developed, any recommendations pertaining to the inclusion of advanced treatment methodologies as a component of the public stormwater system may be difficult to implement.*

These observations have regrettably proven only too true. And Clayton is one of the more responsible developers. So what has transpired at Brookline Park is to be anticipated at every other development occurring within the BMBCL Regional Park watersheds.

Four years after the 013 AECOM report, in a 2017 decision[21] the UARB approved Minutes of Settlement providing, in part

5. HRWC and HRM agree to work together with interested stakeholders to develop a quality program for stormwater which would include the development and administration of joint design and construction standards and the possible development of a credit for water quality as part of best management practices as described in the stormwater credit program in place from time to time.

[21] 2017 UARB 73

Friends of BMBCL Society have confirmed that no stormwater quality standards currently exist in Nova Scotia nor is there any stormwater quality credit system in place.[22]And the ditch rate credit approved by the UARB in 2017 only applies to stormwater quantity private sector investments but nothing in respect of stormwater quality improvement investments by the private sector.

Recommendation # 11

It is recommended that

1) **HRM conduct a review of the effectiveness and cost of available treatment technologies for phosphorus, salt and sediment. This would be an important first step and provide a data base for developing future policies.**
2) **Natural filtration continue to be permitted as a means of addressing construction siltation but only where the project engineer has certified what standard the natural filtration will achieve and that, in addition, federal & provincial highway construction standards will be required;**
3) **CDS units be mandated to address road salts and hydrocarbons; alternatively, road salts and hydrocarbons be addressed through a CDS equivalency system; and**
4) **A credit system be developed for investments in stormwater quality private sector investments.**

Receiving water quality impacts through construction related siltation are a significant concern. Witness the Summer 2020 – Spring 2021 Kearney Lake events resulting from the construction activities in Brookline Park S/D where significant turbidity has been a regularly recurring event from routine winter rain events. Local developers have been employing Best Management Practices since at least 1996 and therefore it is difficult to understand why there continues to be any issue with the management of construction-related siltation. The measures applied at Brookline Park, particularly in relation to Black Duck Brook, were not sufficient for the purpose, did not seem to be well targeted to the particular circumstances, and were not maintained.

How to address these inadequacies? One option is to specify the BMP requirements rather than leaving it to the developer. Another option is to set a

[22] April 2021 communication with HW engineering staff

turbidity standard that must be met at all times. Below is a photo of the type of approach applied elsewhere, where appropriate, such as in cases where the flow is rapid and requires slowing to allow the sedimentation to be captured by the berming. No applications such as this have been adopted at Brookline Park.



EROSION & SEDIMENT

Recommendation #12

It is recommended that construction duration easily measured turbidity standards be set and that any applicable development agreement provide that the HRM Engineer may shut down a project until such time as the turbidity situation has been rectified.

D Environmentally Sensitive Areas

HGNP Action Item 6 states:

> *Amend the RP to emphasize the importance of identifying and protecting environmental sensitive areas during master neighbourhood planning exercises (secondary planning).*

The 2020 HGNP Progress report states that this action item is to be completed as part of the Regional Plan review.

Recommendation #13

It is recommended that every effort be made to adopt policies that support HGNP Action #6.

E Watercourse Setbacks/Buffers

Given that watercourse ordinary highwater mark changes due to loss of natural vegetation and hard surfacing of development acreage, it is important that the highwater line from which buffers or setbacks are measured should be the developer-altered highwater mark. There is an opportunity to take advantage of the eyes and ears of the community to ensure adherence to development agreement terms respecting buffers and setbacks but this is only possible if these setbacks/ buffers are clearly delineated on the ground. Before construction begins on a development, both the new development-caused highwater lines should be clearly delineated on a publicly registered survey plan and the applicable setback/buffer in each and every watercourse marked with permanent survey pins.

Recommendation #14

It is recommended that the Subdivision By-law be amended to (1) use the development altered high water line as the line from which buffers and setbacks are measured; and (2) require that both the developer-altered highwater line and the setback or buffer therefrom be accurately delineated on a survey plan and permanently marked by survey pins.

Friends of BMBCL support the Backlands Coalition recommendation that the Mainland Land Use bylaw be amended to expand the application for restrictions on riparian buffers and not simply limited to development permit scenarios.

F Maple/Sheldrake Lake Constriction Point

The narrowest part of the Regional Park is in the area of Maple and Upper Sheldrake lakes. This area is targeted for development by at least two major developers. As set out in the 2018 HGNP, the area is virtually the only wildlife corridor connection point between the 5 Bridges Conservation Area, the Chebucto Peninsula and the Ingram River Conservation Area. A wildlife corridor charette was undertaken starting in November 2020 concluding in February 2021 with a published report under the auspices of the Crown Share Land Legacy Trust. The Themes & Direction document has indicated that HRM proposes undertaking further work on wildlife corridors following the conclusion of the RP. There is an

imperative that this work be completed before the conclusion of the Regional Plan and inform the Regional Plan. Private sector development on the conceptual BMBCL park boundary is moving at an extremely rapid pace and it is important that HRM planning decisions keep pace with or ideally, get ahead of the development decisions. Failure of work on environmental assets to be undertaken on a timely basis means that such assets end up inevitably taking a back seat to development decisions simply by virtue of timing.

The proposed Piercey S/D in particular would eliminate any possible wildlife corridor joining the Chebucto Peninsula if it were to be facilitated by the 3km Sussex Drive extension, its associated subdivision road network and the proposed housing on that self-same road network. Regrettably the focus of the applicable staff reports is solely on ensuring that all road construction costs, including any connection to Eider Drive, lie solely on the developer and not the municipality. That developer funded road connection only occurs if the developer secures development rights that fund the road. Either way, the public funds the road. In this scenario through the loss of an irreplaceable natural asset.

In a vague reference to road accommodations for a wildlife corridor, the Sussex Drive Extension staff reports suggest that corridor issues can be addressed; but there is obviously no reality to that when the entirety of the development is considered. There is no discussion in the staff reports on the feasibility of same, how such wildlife accommodation road costs would be transferred onto the developer nor who would set the design standard. Friends of BMBCL have brought forward to HRM and the Province at least 5 options to address the public safety driver for the Sussex Drive Extension that would preserve the potential for a suitable wildlife corridor.

Recommendation #15

It is recommended that the necessary work on wildlife corridors be undertaken as part of the 2022 Regional Plan review.

G Hwy 113

The proposed $100m plus, 9.9km Hwy 113 linking Hwys 103 and 102 is still not on the TAT (formerly TIR) 5-Year list in spite of its provincial approval in 2010. City planning staff have advised that development decisions, approved by the city, do not have dependency on the construction of Hwy 113.

The HGNP notes some of the issues created by 100 series highways and specifically the proposed Hwy 113:

> *Transportation corridors, such as 100 series highways, can create barriers to recreation networks and wildlife movements. …….*
>
> *The planned development of Highway 113, together with the multiple areas planned for future urban development, may eliminate the few remaining natural corridors between the peninsula and the mainland. If concerted efforts are not undertaken to mitigate and avoid impacts to landscape connectivity, the functioning of the Chebucto Peninsula for wildlife and overall ecological health will be severely compromised. [23]*

The HGNP also includes the following Objectives and Actions[24]:

> *4.3.3.2. Preserve natural corridors and sensitive natural features when planning the development of new urban neighbourhoods and business parks.*
>
> *Action 30: Amend the Regional Plan to clarify the purpose and scope of land suitability assessments, which identify vulnerable landforms and other ecological features, as base information needed to inform the design of new mixed-use neighbourhoods and business park developments.*
>
> *4.3.3.3. Maintain and improve natural connections between the Chebucto Peninsula and Mainland Nova Scotia, as well as those within the Peninsula itself.*
>
> *Action 32: Amend the Regional Plan and Municipal Planning Strategies to prioritize the preservation and creation of natural connections to the Chebucto Peninsula (Map 9) from the Mainland when reviewing development proposals and updating planning policies and zoning in the area. Specific connections to review and prioritize are highlighted on Map 9.*

A 100 series highway cutting through the middle of the BMBCL Regional Park will have a severing impact, materially damage wildlife habitat (the highway space contains 22 wetlands), negatively impact a new community living hard up against a 100 series highway and create a local community barrier.

[23] HGNP p.49
[24] HGNP p.50

Recommendation #16

It is recommended that HRM add a policy statement in the Regional Plan in opposition to the construction of the Hwy 113.

H Regional Park/Wilderness Area Provision

(i) Responsible Agency

Table 2-3: Regional Parks lists the Responsible Agency for BMBCL as DNR/HRM. This should be updated to reflect that NSE&CC/HRM/NSNT currently have land management responsibility in their respective areas of the park.

Recommendation #17

It is recommended that the Regional Plan be updated to recognize NSE&CC, HRM and NSNT as having responsibility for their respective areas of BMBCL Regional Park.

(ii) Amendment to Policy E-7

MPS Policy E-7 provides that Protected Area Zones are to be applied to designated wilderness areas. Given that the Nova Scotia Nature Trust has a renewed focus on wilderness areas in urban areas, Nova Scotia Nature Trust lands should be included within Protected Area Zones and policy E-7 amended to so provide.

Recommendation #18

Friends of BMBCL recommend that consideration be given to including Nova Scotia Nature Trust lands within Environmental Protected Area Zones and policy E-7 amended to so provide.

HGNP Recommendation #29 provides:

> Amend the Regional Plan to ensure that the Green Network map (Map 5 on page 35), is considered when reviewing changes to the Urban Service Area boundary, Urban Settlement Designation, Urban Reserve Designation, and when preparing Secondary Planning Strategies.

Recommendation #19

The Friends of BMBCL recommend that HGNP Map 5 be considered when considering changes that would impact the BMBCL Regional Park.

I Key Performance Indicators

Key Performance indicators have become standard for measuring progress. The HGNP has adopted such measures and Friends of BMBCL Regional Park are recommending

Recommendation #20

Friends of BMBCL recommend that HRM consider incorporating key performance indicators into the Regional Plan such as:

- **New enabling provisions enacted by both HRM and the province.**
- **Number of access points confirmed**
- **Number of access points developed**
- **Number of acres/hectares of land added (s. 2.1.3 of 2006 RP)**
- **Number of trails constructed**
- **Number of water quality surveys conducted**
- **Establishment and marking (i.e. signage) of park boundaries (s. 2.1.3 of 2006 RP)**
- **Reduction in turbidity complaints**
- **Water quality improvements**

Conclusion:

In an April 17, 2021 Globe & Mail article discussing the need for balance between development and retention of natural areas, the article concludes with the observation:

> *Just as we plan for and maintain our grey infrastructure – our buildings, our bridges – it's really critical that we plan for and maintain our ecological infrastructure in cities, too."*

In its support for this observation, the article notes:

> *"Providing access to safe, inclusive and culturally meaningful green spaces could improve mental health and reduce inequities in lower-income neighbourhoods and racialized communities."*

Particularly apropos to the Hwy 102 West Corridor application for secondary planning and the property's designation in part as Urban Settlement when there is adequate developable land as per the 2016 staff report, is the statement in the Globe article:

> *"As cities expand, they chew into the few remaining natural areas, clearing forests and paving over wetlands. We have to prioritize development in other areas when we can, and conserve the natural areas we have left."*

The HRM Charter, s 188(1) states:

188 (1) The Council may make by-laws, for municipal purposes, respecting

(a) the health, well-being, safety and protection of persons;
(b) the safety and protection of property;

The same Globe article connects city expansion decisions to mental health noting:

> *"Sound also influences our moods. Cities are filled with din. Buses moan and screech, trains clatter by and traffic helicopters circle overhead. That cacophony has been looked to sleeplessness, stress and higher risk of hypertension and heart attacks.*
>
> *…….*
>
> *In a new study, Dr. Buxton and her colleagues reviewed dozens of studies and found natural soundscapes helped with mental recuperation. Birdsong had the largest effect on reducing stress and annoyance, while water sounds had the greatest impact on health and feelings of tranquility."*
>
> *……..*
>
> *Providing access to safe, inclusive and culturally meaningful green spaces could improve mental health and reduce inequities in lower-income neighbourhoods and racialized communities."*

The Viewshed concept adopted by HRM in 2012, reflected in the Dakin Drive version of the proposed BMBCL Regional Park, continued in the HRM 2013 Bayer's Lake deed to BANC[25] as the basis for its BMBCL conveyance conditions

[2525] BANC Commercial Holdings

is a recognition of the value of the foregoing and an effort to achieve same in the midst of intense development pressures.

S.188 provides a legal basis for policy development in the Regional Plan based on health and wellness. It was the basis for Halifax adopting the original Pesticide By-law, a policy leading decision followed by many municipalities in the ensuing years. The Friends are asking that consideration be given to incorporating health and wellness policies into its planning decisions given the very real impact such decisions have on health and wellness.

C024 (2)

Regional Plan Review – W McDonald, District 12

The following are ideas or concerns developed after review of the Themes & Directions Report. I have identified gaps and opportunities that may have been overlooked, misrepresented or need enhancement by the team, with a focus on the Green Network Plan. Use of plain language when next connecting with community will be an important key to success of the review. In addition, in-person Community Engagement needs to be scheduled as part of next steps.

It is important to recognize the importance of Treaty and the rights of the Mi'kmaq people, as well as the importance of advancing reconciliation.

Public input has been encouraged. Have the Business Units and HRM committees been invited to respond after their briefing sessions? Their responses will be important.

My observation suggests that developers may be deciding where growth will occur, on their land with little or no community visioning. It is important that HRM creates transparent criteria and evaluation tools to decide where future growth and development will occur. Using a **Complete Communities** model which includes aging in place as well as live, play, work and learn, visioning can happen. Initiated in the 2006 Regional Plan outcomes, this needs to be revisited. Schools also need a place to grow in this densification plan so collaboration and facilitated consultation with existing community and all levels of government is key. Additionally, a major study of equitable affordable, all ages Recreation Programmes for all HRM Districts is urgently needed. Densification will stress limited (or even absent) Rec programmes!

Green Network Plan – This must be adequately resourced with funds and professional staff.

Biodiversity within HRM needs its own Management Plan as a part of the Green Network Plan to conserve and protect habitat and ecosystems. This could be partnered with an adequately resourced **Stewardship Programme** with oversight for water monitoring of lakes, watersheds and riparian zones; trails and parks, naturalization sites and other potential community based citizen science and volunteer-led initiatives.

A Signage and Wayfinding Programme including maps is needed. This will assist in location of parks, trails and other assets including benches, public washrooms, kayak launches, etc that enhance recreation and active living for a healthy community.

Create a **Park Strategy**. Within the strategy, create a hierarchy that helps define urban and suburban parks. Easy access to functional recreation spaces as well as nature parks is key as density is increased and mapping is required. Develop an equity lens to help enable access by marginalized groups.

Protect and support stewardship of **wilderness parks** including Blue Mountain Birch Cove Lakes, Sandy Lake, and the Purcell's Cove Backlands. Increase density in existing suburban areas rather than within identified wilderness spaces. Sale of established green space or Parks is not acceptable in the urban setting and has no place in the Green Network Plan.

Creation of a **Nature Centre** that will support outdoor environmental formal and informal education by trained professional staff. This will enhance respect for our outdoor world at all levels and ages. This may also help integrate newcomers to our natural resources.

An **Invasive Alien Species Management Plan** and budget for implementation is needed to address this growing problem on HRM land. Include an education programme for private landowners and Nursery/Landscaping service operators who may be adding to the problem.

Urban Forest Masterplan needs to be enhanced and expedited so the canopy is restored or replaced where low levels continue. Continue previous education opportunities within the programme. Consider implementing a subsidized or cost recovery private landowners 'plant a tree' programme as is done in other municipalities, using native species. Consider participation in the million Tree programme.

Bird Friendly City acknowledgement, recently initiated by a volunteer group but needs integration in to park planning and maintenance as well as complete communities when assessing green space as a planning or development contribution.

Protect wildlife corridors and ensure that our growth is guided by accurate, up-to-date mapping of the locations of wildlife corridors within HRM. Initiate safe wildlife crossings when the opportunity arises.

Create a **municipal wetland policy** which will ensure no net-loss of wetlands within HRM, better protection of watersheds, wetlands and their ecosystem services. A parallel public education programme is needed.

Riparian zones need protection by establishing a 100-metre vegetative buffer for all watercourses and a 50-metre vegetated buffer from the highwater mark in the HRM land use bylaw. **Coastal protection** is key with protection of public access points and identification and enhancement of recreation opportunities. Resolution of pre-Confederation water lot infilling or development is an urgent matter that needs fast tracking by all parties. Future construction on HRM coastlines must be built in safe places and avoids damage to sensitive coastal ecosystems.

Initiate **community-based** programmes that will support approved **Climate Change** initiatives. These can be many and varied and require collaboration - Active Recreation and Transportation routes, Walking School Bus programmes for urban schools, No Idling by fleet, Transit and public at HRM based properties...Schools, Rec Centres.

Increased use of naturalization and **nature-based climate solutions** such as rain gardens, swales and other tools by landowners as well as HRM lands will help with stormwater management.

June 2021.

C032 (1)

Halifax County Municipality

Planning & Development
Policy Division

Administration Centre
2750 Dutch Village Road
Halifax, Nova Scotia B3L 4E5
902-453-7468/69
902-453-7495 (Fax)

February 27, 1996

Shalom Mandaville
Soil & Water Conservation Society
of Metro Halifax
P.O. Box 911
Dartmouth, Nova Scotia
B2Y 3Z6

Dear Mr. Mandaville:

As per your request of February 26, 1996, please find enclosed the two disks containing the lake carrying capacity models of Halifax County lakes which you supplied us with on December 17, 1995.

As per your submission to the Planning Districts 15/18/19 and 14/17 plan review processes and our meeting with you on December 17, 1995, we had understood that you were providing us with these disks to familiarize ourselves with the lake carrying capacity modelling that the Soil and Water Conservation Society had conducted on 326 lake within Halifax County. We also understood that you were providing us with this information to facilitate your request to have the concept of lake carrying capacity recognized under the municipal planning strategies for Planning Districts 15/18/19 and 14/17. Unfortunately, however, we have been unable to review this information at this point in time, but may request a future loan of these models as per your generous offer. We will also keep the lake data you supplied to us for future reference.

At this point in time, we are unable to advise of what committee will be established to assume responsibility for the review of the above-noted municipal planning strategies under Halifax Regional Municipality. It is our understanding, however, that the plan review processes will continue after amalgamation and we will notify you when your submission is tabled for discussion.

Thankyou very much for the loan of the lake carrying capacity models and the data you supplied us on Halifax County lakes.

Yours truly,

Original Signed

Maureen Ryan
Senior Planner
Policy Division

C032 (1)

HALIFAX
REGIONAL MUNICIPALITY

PRIORITY & POLICY GROUP, CHIEF ADMINISTRATIVE OFFICE
Tony Blouin, PhD *Principal, Environmental Issues*

September 22, 1998

To Whom It May Concern:

The Soil & Water Conservation Society (S&WCS) of Metro Halifax is a volunteer community group, whose work is important and useful to the Halifax Regional Municipality. This group has conducted a wide variety of projects concerning the state and health of lakes within the municipality. Much of their work has been computer-based, including significant computer modeling of nutrients within lakes, permitting prediction of future states of the lakes under varying development pressures. In addition, they have undertaken an extensive collection of lake chemistry data which has been compiled on computer spreadsheets.

The S&WCS has made all of the results of these efforts available to the Halifax Regional Municipality through their Internet site, allowing transfer of computer files. They have also made a wide variety of issue summaries, research results and compiled information on lake management available to HRM and other community members through their Web site. The Municipality considers the efforts of this group to be important work, and the results will be useful to the Municipality in planning and assessing development impacts.

Sincerely,

Original Signed

Tony Blouin

PO Box 1749, Halifax, NS B3J 3A5, Tel: (902) 490-4610, Fax: (902) 490-4760
E-mail: blouint@region.halifax.ns.ca Web Site: www.region.halifax.ns.ca

C032 (2)* ***Excel spreadsheet for Phosphorus comparisons of select lakes in HRM was also submitted. This document is available upon request.**

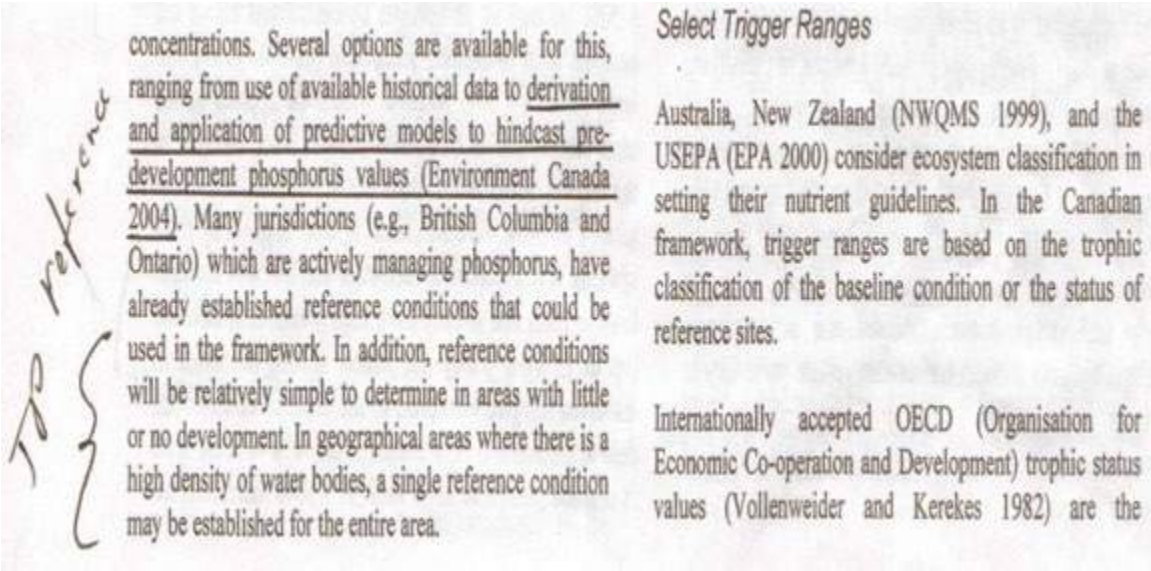
Soil & Water Conservation Society of Metro Halifax (SWCSMH)
310-4 Lakefront Road, Dartmouth, NS, Canada B2Y 3C4
Email: limnes@chebucto.ns.ca Tel: (902) 463-7777
Master Homepage: http://lakes.chebucto.org

Ref.:	ESSC_TPLCCs	3pg.
To:	**Environment & Sustainability Standing Committee (ESSC)**	
From:	S. M. Mandaville Post-Grad Dips. Chairman and Scientific Director	
Date:	June 06, 2016	
Subject:	Lake Carrying Capacities (LCCs) based on TP (Total Phosphorus) for the ESSC meeting of June 09, 2016	

Dear Chair & members:- Please share this submission with your colleagues in the Regional Council and senior staff as well. See page-3 for the artificially high threshold values for TP selected by the present and former Halifax's staff, and adopted by the Community Councils over time. For brevity, this is only a 3-page submission. I will be happy to answer any questions during the Public Participation period. We had already made several detailed printed submissions with scientific rationale on this to all the present/former Community Councils, as well as to the Regional Plan and the RP+5.

The LCCs MUST be based on the natural background values of TP, i.e., those that existed prior to any human development in the local as well as the upstream watersheds. The HRM's staff had picked the recent field values and that is a major error! It is not difficult to ascertain the natural background values, and my team has done that in 2,000 (two thousand) lakes/ponds over 1 hectare in size in 4 counties.

2 scanned excerpts from the Canadian Council of Ministers of the Environment (CCME, 2004) guideline, a methodology published by numerous scientists in several peer reviewed scientific journals dating back to the 1970's:-



TP reference

concentrations. Several options are available for this, ranging from use of available historical data to derivation and application of predictive models to hindcast pre-development phosphorus values (Environment Canada 2004). Many jurisdictions (e.g., British Columbia and Ontario) which are actively managing phosphorus, have already established reference conditions that could be used in the framework. In addition, reference conditions will be relatively simple to determine in areas with little or no development. In geographical areas where there is a high density of water bodies, a single reference condition may be established for the entire area.

Select Trigger Ranges

Australia, New Zealand (NWQMS 1999), and the USEPA (EPA 2000) consider ecosystem classification in setting their nutrient guidelines. In the Canadian framework, trigger ranges are based on the trophic classification of the baseline condition or the status of reference sites.

Internationally accepted OECD (Organisation for Economic Co-operation and Development) trophic status values (Vollenweider and Kerekes 1982) are the

recommended trigger ranges (Table 1). The only proposed variation is that the OECD meso-eutrophic category (10-35 $\mu g \cdot L^{-1}$) is subdivided into mesotrophic (10-20 $\mu g \cdot L^{-1}$) and meso-eutrophic (20-35 $\mu g \cdot L^{-1}$). This subdivision was necessary because considerable variation in community composition and biomass exist in Canadian waters over the OECD range of 10-35 $\mu g \cdot L^{-1}$. These trigger ranges are recommended for both rivers and lakes.

A trigger range is a desired concentration range for phosphorus; if the upper limit of the range is exceeded, it indicates a potential environmental problem, and therefore, "triggers" further investigations. Natural physical and chemical water quality variables (e.g., salinity, pH, nutrients) inherently vary within and between ecosystem types, and so the preferred method for determining the trigger ranges is to use similar, high quality reference sites to determine natural levels. These ranges are then categorised according to the trophic status of the reference site (Table 1). This approach provides a trigger range that is relevant to the ecosystem type and locality. These phosphorus limits allow management to define where their water bodies lie, and define a trigger range for that water body.

Table 1. Total phosphorus trigger ranges for Canadian lakes and rivers.

Trophic Status	Canadian Trigger Ranges Total phosphorus ($\mu g \cdot L^{-1}$)
Ultra-oligotrophic	< 4
Oligotrophic	4-10
Mesotrophic	10-20
Meso-eutrophic	20-35
Eutrophic	35-100
Hyper-eutrophic	> 100

The selection of appropriate trigger ranges and reference conditions can potentially benefit from the development and application of an ecoregional approach (Environment Canada 2004). Ecoregions provide a means of classifying ecologically distinct areas, where each region can be viewed as a discrete system made up of areas of similar geographical landform, soil, vegetation, climate, wildlife, water, etc. The use of ecoregions can improve predictability of nutrient enrichment effects. They can help differentiate between natural and anthropogenic contributions to nutrient enrichment, reduce variability in trigger ranges within a class and among classes, and contribute to improved assessment and development of trigger ranges.

Determine Current Phosphorus Concentration

Under normal conditions, TP is the only meaningful measurement of phosphorus for water (Wetzel 2001). TP can be expressed as a single measurement taken at spring turnover or as an average of several observations made on a seasonal basis; it may be an estimate for a specific zone (e.g., euphotic zone), or as a whole lake approximation. It is important that an appropriate number of samples are collected to accurately reflect TP concentrations in a system. Specific attention should be given to sites that are receiving variable phosphorus loads or exhibiting marked morphological and hydrological differences (Environment Canada 2004).

Compare Current or Predicted Concentration to Trigger Range

The upper concentration of the trigger range represents the maximum acceptable concentration of phosphorus within each of the trophic categories. If the upper limit of the trigger range is exceeded, or is likely to be exceeded, there is a risk of an impact either occurring or having occurred. At this stage, additional information on local environmental factors needs to be considered, and thus further assessment is recommended. The assessment could potentially lead to remedial advice and the restoration of a degraded water body. If the trigger range is not exceeded, the risk of an impact is regarded as low.

Compare Current or Predicted Concentration to Baseline Condition

Due to the general nature of the trigger values and the size of some of the phosphorus ranges defined, a second precaution is taken in the assessment of possible effects of phosphorus. In the event that the trigger value has not been exceeded, the question is now raised as to the degree of increase in phosphorus levels from the baseline. Up to a 50% increase in phosphorus concentrations above the baseline level is deemed acceptable (OMOE 1997). In large lakes, the 50% increase should be applied to the most sensitive areas (e.g., river mouth, point sources, or the littoral zone) rather than averaged over the whole lake. The 50% increase check is also applied to river systems. It is important to recognize that the 50% increase limit in lakes that already have high phosphorus baseline (up to 12 $\mu g \cdot L^{-1}$) may not protect against decreases in dissolved oxygen. However, in the absence of empirical data to recommend an alternative, the 50% increase limit is deemed preferable to no limit. If a 50% increase from

Management/Restoration:- Excerpt from the OECD (Organization for Economic Co-Operation and Development) research which is the outcome of several years' concerted effort by 18 Member countries.

Natural limnological conditions vary considerably among countries and also among different regions, particularly the larger countries. Consequently, the water quality objectives would differ in each country, taking local conditions and expectations into account. In the absence of human activities, the nutrient load and the trophic response in waterbodies are determined by the natural fertility of soils on the drainage basin which in turn depends on the geology and the climate of the area in question. Ideally, the objective of lake management should be to maintain or restore waterbodies to their natural state determined by the basic natural nutrient load of the area in question (e.g. free from human activities). In practice, this is not always possible.

HRM set the following artificially high Threshold/LCC values of TP:-

HRM had set 15 µg/l as the Threshold/LCC values for Lakes Morris and Russell, and 10 µg/l for Lakes Kearney and Papermill.

Scan from the HRM's Shubenacadie Lakes Sub-watershed Study Report d/September 20, 2013:-

Lake	Trophic State Objective	Numerical Objective	Early Warning	Evaluation
Grand, Lewis	Oligotrophic	< 10 µg/L	9 µg/L	Based on 3 year running average
Charles, Micmac, Banook, First, Second, Third, Thomas, Fletcher, Tucker, Kinsac, Barrett, and Powder Mill	Mesotrophic	< 20 µg/L	15 µg/L	
Loon, William, Rocky, Springfield	Mesotrophic	< 20 µg/L	18 µg/L	
Cranberry	Mesotrophic	< 20 µg/L	20 µg/L	
Fenerty	Meso-Eutrophic	22 µg/L	22 µg/L	Fenerty should be maintained at its current average phosphorus concentration of 22 µg/L.
Duck and Lisle	Both Duck (43 µg/L) and Lisle (50 µg/L) are eutrophic lakes. Water quality should not be allowed to deteriorate further and should be improved where feasible.			
Miller, Beaverbank, Fish and Beaver Pond	Insufficient data exist. More sampling is required to set WQO for these lakes.			

C032 (2)

(WHO 2011; WHO/FWC/WSH/15.03)

Table 1. Example assessment of the potential for high biomass of cyanobacteria based on environmental conditions[a]

Indicator	Very low	Potential for high biomass of cyanobacteria (blooms)			Very high
Total phosphorus (µg/L)	< 10	10–25	> 25–50	> 50–100	> 100
Water residence time	River with visible current	< 1 month		≥ 1 month	
pH	< 5–6	> 6–7	> 7		
Secchi disc transparency[b] during season typical for cyanobacteria	≥ 2 m	< 2–1 m	< 1–0.5 m		< 0.5 m
Temperature (°C)	< 10	10 – < 15	15 – < 20	20 – < 25	≥ 25

[a] The higher the number of these conditions that are fulfilled, the higher the potential for high biomass of cyanobacteria.
[b] Determined as the depth at which a white disc of 20 cm diameter lowered into the water is no longer visible.
Source: Adapted from Umweltbundesamt (2014).

C038

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PO Box 31076 Gladstone
Halifax, NS B3K 5T9

July 14, 2021

Regional Planning
Halifax Regional Municipality
PO Box 1749
Halifax, NS B3J 3A5

Re: HRM's 2020-22 Regional Plan Review

To Whom It May Concern:

I write on behalf of Hike Nova Scotia in response to HRM's 2020-22 Regional Plan Review Consultation. We know that Haligonians love our natural areas, green spaces and outdoor recreation areas. We think they deserve protection and investment.

Hike Nova Scotia (Hike NS) has been encouraging and promoting hiking, walking and snowshoeing throughout Nova Scotia since 2007. We are the voice of the hiking community in Nova Scotia with a membership representing over 2,500. Our reach goes even further on social media where we enjoy a combined following of over 80,000 people on Instagram, Facebook and Twitter. A large percentage of our followers are from the HRM area.

Hiking and walking are growing activities and Nova Scotians identified them as their top physical activities in a 2016 provincial-municipal survey. Hiking and connecting with nature improves physical health, mental health, social well-being, economic prosperity and environmental protection. The tourism industry is heavily reliant on hiking, as one of the top three outdoor tourist activities. Outdoor enthusiasts like hikers stay longer and spend more than most other types of tourists in Nova Scotia.

Natural areas, green spaces and outdoor recreation areas are crucial for supporting all of this and we know our members and followers value these areas immensely. Not only are they places where people can connect with nature and engage in recreation, such areas also protect the habitats and species that hikers, and indeed all Hailgonians, need and love.

Through the 2020-2022 Regional Plan review, the Regional Plan must be revised to effectively channel growth into complete communities and to intensify existing community centres rather than developing new ones. This shift is necessary to decrease our environmental footprint, preserve greenspace, and to create livable communities. To achieve these important results, we join Our HRM Alliance in calling for:

- Clear and transparent criteria to decide where growth and development occurs as well as measurable criteria for complete communities. This includes reconsidering the

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proposed growth at Sandy Lake and the Highway 102 Lands.
- Targets for increasing density in existing suburban areas.
- Decisions about growth and development be deferred until mapping access to parks and nature, including using an equity lens which considers historical lack of parks access for marginalized groups.

A significant aspect of the Regional Plan review focuses on integrating HRM's priority plans. In order to effectively implement and support the Halifax Green Network Plan (HGNP), alongside the Alliance, we would like to see:

- A parks strategy to protect and steward wilderness areas including Blue Mountain-Birch Cove Lakes, Sandy Lake, and the Purcell's Cove Backlands.
- The Regional Plan adopt the direction that HRM play a leadership role in wilderness protection and stewardship within the municipality.

In order to effectively mitigate and adapt to the effects of climate change, there are a number of actions that we believe HRM should take that were not included in the Themes & Directions document:

- Creating a municipal wetland policy to ensure no net-loss of wetlands within HRM.
- Increasing and standardizing the protection of riparian areas by establishing a 100-metre vegetative buffer for all watercourses and a 50-metre vegetated buffer from the highwater mark in the HRM land use bylaw.
- Creating a Stormwater Management Plan and program which encourages landowners to use naturalization efforts (rain gardens, bioswales) on their properties.
- Preventing unsafe and harmful development on coastal undersized lots.
- Protecting wildlife corridors and ensuring that our growth is guided by accurate, up-to-date mapping by updating the HGNP maps using the Wildlife Corridor Landscape Design Charrette mapping.

Thank you for your consideration.

Sincerely,

Original Signed

Janet Barlow, Executive Director
Hike Nova Scotia



C0039

The Neighbourhood Association of Uplands Park

The Board of The Neighbourhood Association of Uplands Park held a special meeting on July 15th, 2021 to address the recent request by the Steering Committee of the Sandy Lake – Sackville River Regional Park Coalition seeking our support by conveying our advocacy to HRM Council to prevent housing development in ecologically sensitive lands adjacent to the Lake.

The Board members unanimously expressed their wish to support these efforts and wish to conevy the collective voice of the residents of Uplands Park to this worthy initiative.

Specifically the Board requests, through its elected, representatives that :

1. The HRM delay the decision on secondary planning in the Sandy Lake area until the next Regional Plan Review in 5 years time in order to allow time for several important studies to be completed and considered, listed here:

    a. Conduct an independent ecological (not planning/housing) study of the park boundary needed to preserve the natural assets of the Regional Park.
    b. Conduct an independent floodplain study of the Sandy Lake watershed including how it relates to the rest of the Sackville River watershed. This would include detailed wetland delineation and before and after models.
    c. Incorporate the Wildlife Corridors Charrette Report into the Halifax Green Network Plan, and bring this Plan into the Regional Plan.

2. And that the Coalition's first submission to the Regional Plan Review be addressed.

C042

Themes and Directions Response from Backlands Coalition

Regional Plan Supplementary Submission

July 2021

Two and a half years ago Halifax Regional Council declared a Climate Emergency, a serious and urgent threat to HRM. This sense of emergency is not reflected in the Themes & Directions report. As well, throughout the Themes & Directions report the language is vague, ambivalent and obscure. Two examples of this awkward language can be found below:

- # 8.4 Provide guidance for environmental considerations during policy-enabled discretionary planning applications.
- # 9.2 Consider adopting policy to encourage net-zero and climate resilient new construction when considering discretionary planning applications.

We strongly encourage that in the coming draft of the Regional Plan that the language be clear, concise and readable by the average citizen.

Through the 2020-2022 Regional Plan review, the Plan must be revised to effectively channel growth into complete communities and to intensify existing community centres rather than developing new ones. This shift is necessary to decrease our environmental footprint, preserve green space, and to create livable communities. To achieve these important results, we join Our HRM Alliance in calling for:

- Clear and transparent criteria to decide where growth and development occurs as well as measurable criteria for what constitutes a "complete community"
- Measurable targets for increasing density in existing suburban areas
- Decisions about growth and development be deferred until mapping access to parks and nature, including using an equity lens which considers historical lack of park access for marginalized groups

A significant aspect of the Plan review focuses on integrating HRM's priority plans. In order to effectively implement and support HalifACT and the Halifax Green Network Plan (HGNP), alongside the Alliance, we would like to see:

- A clear strategy to protect and steward wilderness areas of the Backlands
- The Plan adopt the initiative that HRM play a leadership role in wilderness protection and stewardship

In order to effectively mitigate and adapt to the effects of climate change, there are a number of actions that we believe HRM should take that were not included in the Themes & Directions report:

- We commend staff for including a wetland policy as found in # 8.10 of the Themes & Directions report. The current definition of watercourse as found in the Plan must be expanded to include wetlands, marshlands and the woody vegetation of forested swamps. We refer you to a very recent Ducks Unlimited assessment of Williams Lake watershed wetlands (attached Comments on Williams Lake Wetlands and WESP Summaries _10 & _40). These wetlands provide different ecosystem services than other watercourse wetlands. In these wetlands "large amounts of woody vegetation and deep peat increase the wetland's ability to sequester carbon " (HRM_Shrub Bog, Ducks Unlimited report July 15, 2021).

It is becoming increasingly apparent that watercourses and wetlands must not only be thought of in the context of a riparian buffer. Instead, watercourses and wetlands must be identified, mapped and protected. It is noteworthy that the Province has begun a Wetlands Inventory. However, the current inventory does not include any of the many wetlands found in the Backlands.

In the Themes & Directions report page 94, the role of wetlands acting as carbon sinks can be found, but there is no action item addressing the requirement to create an inventory of wetlands.

It might not be a coincidence that recently the federal government announced "the first-ever Census of the Environment", a Statistics Canada program to quantify blue green infrastructure and ultimately assign value and economic benefit to wetlands, lakes and green spaces. The concept of valuing carbon capture and sequestration by wetlands needs to be pursued and placed in the ultimate formula of a carbon tax credit or assigned a specific value in our goals toward reducing carbon emissions in HRM.

- The Themes & Directions report has failed to increase and standardize the protection of riparian areas by establishing a 100-metre vegetative buffer for the high-water mark of all watercourses including wetlands, marshlands and forested swamp.
- The Themes & Directions report must expand the Lake Water Management Program (Action item # 8.8) beyond water quality monitoring to include information for residents on best practices in and near watercourses.
- While acknowledging the importance of our wildlife corridors (# 8.5), the Themes & Directions report needs to adopt the Wildlife Corridor Landscape Design Charette mapping to update the HGNP maps. Ensuring safe crossing is not a simple fix, but needs to be addressed as part of this effort.
- The HGNP Action item #31 should be adopted in the Themes & Directions report. Brownfield and infill sites should be prioritized for development rather than allowing development on greenfield sites.

We are very relieved to read Action item 1.9 of the Themes & Directions report which states;

> 1.9 Review the lands designated Urban Reserve where circumstances have changed and make appropriate amendments such as the Purcells Cove Backlands area.

It was satisfying to see recognition that there has been a change in circumstance in the consideration of the Backlands. What is missing in the Themes & Directions report is the acknowledgment and affirmation that "Regional Council directed staff to initiate a public engagement process to examine options and possibilities to bring those lands into public ownership." This very strong statement recognition is found on page 4 of the HRM planning staff report dated May 11, 2021, and titled "Council request for rezoning of PIDs 00271585, 00323139, 00323147 on and near Williams Lake", but we are very disappointed that this strong direction from Council to initiate a public engagement process with the goal of bringing these lands into public ownership has been left out of the Themes & Directions report.

As well, at page 8 of the staff report it is proposed that staff, "consult with property owners, the public, and other interested stakeholders to better understand the vision for the area of the Purcells Cove

Backlands". It is profoundly disappointing that these very forward-thinking initiatives were ignored in the crafting of the Themes & Directions report.

Again, in that staff report there is specific reference to Action 66 of the HGNP report. At page 5, the following quote can be found, "This action recognizes the recent acquisition of Shaw Wilderness Park and directs the Municipality to consider an appropriate land use designation and zoning for the Park and the Purcell's Cove Backlands more generally." It is confounding why Action 66 cannot be found in the Themes & Directions report.

We support and endorse the Blue Mountain – Birch Cove Lakes Regional Park Regional Plan Supplementary Submission, July 2021 recommendation #1

> "That the following HRM Charter amendments be made:
>
> HRM continue to vigorously pursue an amendment to s.235 as per HGNP Action #18 and as already requested by Council by letter to the Province dated December 2018.
>
> Amend s.237 to allow a 5-year window rather than the existing 1-year window for HRM to decide on the acquisition of lands zoned for public use.
>
> An amendment levelling the playing field between environmental and development policies in the Regional Plan.
>
> And that the applicable land use bylaws be amended pursuant to s.235(5)(p) of the HRM Charter: To facilitate HRM enforcement of development related provincial legislation so that there is a unified jurisdiction enforcement process."

Conclusion

To conclude, this submission is not meant to be a complete summary of our comments regarding the Themes & Directions report. We anticipate that prior to our stakeholder meeting with HRM planning staff scheduled for August 3, 2021 we may have a couple of additional comments. In any event, we certainly look forward with anticipation to our meeting. Thank you!

Attachments:

DUC Wetlands Comments WL July 15, 2021

WESP Summary Report Williams Lake HRM_10

WESP Summary Report Williams Lake_40

C042

Comments on Williams Lake Wetlands – Part 2

Prepared by Ducks Unlimited Canada, July 15, 2021

We completed two wetland assessments in the Purcell's Cove Backlands areas using the Wetland Ecosystem Services Protocol for Atlantic Canada (WESP-AC). WESP-AC is a standardized method for rapidly assessing some of the important functions and benefits of wetlands in Atlantic Canada.

The first site (HRM_10) was assessed on June 19, 2020. It is a shrub bog located to the west of Purcell's Pond. The second site (HRM_21_09) was assessed on June 25, 2021. It is a treed swamp with peat soil located to the east of Colpitt Lake (Figure 1).



Figure 1: Map of sites assessed using WESP-AC in the Purcell's Cove Backlands in 2020 (yellow) and 2021 (blue).

HRM_10: Shrub Bog



Figure 2: Groundcover, HRM_10, showing high density of Sphagnum moss.

Different wetland types naturally provide different ecosystem services based on their hydrology and ecology. It is clear from the WESP-AC function and benefit scores that this wetland does not provide ecosystem services that are commonly associated with the presence of open water (such as fish habitat, water cooling or stream flow support). This is normal. Like many peatland systems without surface water, this site has a high functional ability to store and delay surface water, due to deep peat soil and a high percentage of sphagnum moss (Figure 2), that has high absorptive capacity. This ability to store water also enables the wetland to retain sediment and nitrates, improving water quality downstream of the system. It is relatively undisturbed by local stressors, and therefore has a high ecological condition score. Large amounts of woody vegetation (Figure 3) and deep peat increase the wetland's ability to sequester carbon.



Figure 3: High density of woody vegetation at HRM_10.

HRM_21_09



Figure 1: Image of HRM_21_09.

This wetland is a forested swamp located to the east of Colpitt Lake (Figure 4). The publicly accessibly land that includes the wetland is located between two protected areas – the Shaw Wilderness Area and Nova Scotia Nature Trust land. Hiking trails leading to and from Shaw Wilderness Area pass relatively close to the wetland, and the area is popular for birding, increasing the wetland's public value. The swamp stores and delays water, retains and stabilizes sediments, and removes and retains nitrates, preventing drought, turbidity, and toxic algal blooms in the downstream and much-beloved Colpitt and Williams Lakes. Vegetation features of the wetland provide excellent habitat for birds – Common Nighthawks are even occasionally spotted nearby. The wetland is not without its stresses. It is close to urban and suburban areas that fragment the surrounding landscape, and foot traffic and a previous fire in Wildlands have increased erosion in the area.

C042

Site Name: Williams Lake **Site Code**: HRM_40
Date of Field Assessment: 08/31/2020
Assessor: Emma Bocking **PID:** 00271585
GPS Coordinates: 44.616341, -63.600103
Wetland Type: Marsh **Size:** 1 ac/0.4 ha
Landowner: Church of Christ Development Company Ltd.



Site Context: This site is accessible by a trail used frequently by both residents and hikers from nearby Colpitt Lake by way of Governor's Brook. The local stewardship organization is Williams Lake Conservation Company. Adjacent land use includes low density residential and conservation (the new Shaw Wilderness Park).

Site Summary: This wetland has a high public use value because of the presence of an active volunteer stewardship organization and the proximity to hiking trails and residential areas. This proximity also leads to increased stressors, such as the potential for inputs of stormwater (particularly via Governor's Brook), fertilizers, road salt and pesticides. Residents are concerned about persistently low water levels during the summer in Williams Lake. This wetland is naturally designed to function well during periods of low water. Additionally, it provides valuable nesting and feeding habitat for waterbirds and other wildlife.

Function/ Benefit	Rating	Description
Top Functions		
Waterbird Nesting Habitat	Higher	This wetland has habitat features that support a diversity and abundance of nesting waterbird species, such as ducks, shorebirds or herons. Such habitat features could include the presence of surface water, intermediate aquatic plant cover, mild water level fluctuation, tree snags and a wide vegetated buffer.
Pollinator Habitat	Higher	This wetland has habitat features that support pollinating insects and birds. It is likely to contain a diversity of flowering plants, and suitable nesting habitat such as tree snags, ground cover, downed wood, large trees and/or cliffs. The wetland is not persistently flooded.
Songbird, Raptor & Mammal Habitat	Higher	This wetland has habitat features that support a diversity and abundance of songbirds, raptors and mammals. Such habitat features could include a mix of open water and land cover, a wide vegetated buffer, tree snags, downed wood, varied microtopography, mature trees and diverse shrub cover.
Top Benefits		
Nitrate Removal & Retention	Higher	High concentrations of nitrate in aquatic systems can lead to toxic algal blooms that are harmful to people and wildlife. There may be domestic wells nearby, or a tributary is present that would transport soluble nitrates out of the wetland. In addition, there may be potential sources of nitrogen in the area from agriculture, urban areas or septic systems.
Resident Fish Habitat	Higher	This wetland may be a fishing spot (for both people and feeding waterbirds), which increases the value of a resident fish population. It may also be easily accessible by people.
Waterbird Feeding Habitat	Higher	This wetland may be recognized as an Important Bird Area or is known to host a rare migratory waterbird species. Alternatively, it may also be one of the few herbaceous wetlands or ponds in the local area, and/or it has the potential to have a high value for recreationists including birdwatchers and waterfowl hunters due its proximity to public roads and population centers.

Ducks Unlimited Canada
Conserving Canada's Wetlands

HRM_40 Function and Benefit Scores

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	2.97	Lower	4.23	Moderate
Stream Flow Support (SFS)	3.03	Moderate	5.77	Moderate
Water Cooling (WC)	2.79	Moderate	7.72	Higher
Sediment Retention & Stabilisation (SR)	5.05	Moderate	7.91	Higher
Phosphorus Retention (PR)	2.08	Lower	6.86	Higher
Nitrate Removal & Retention (NR)	3.58	Moderate	10.00	Higher
Carbon Sequestration (CS)	2.86	Lower		
Organic Nutrient Export (OE)	6.68	Moderate		
Anadromous Fish Habitat (FA)	7.92	Higher	9.87	Higher
Resident Fish Habitat (FR)	8.47	Higher	10.00	Higher
Aquatic Invertebrate Habitat (INV)	4.59	Moderate	9.46	Higher
Amphibian & Turtle Habitat (AM)	7.01	Higher	7.25	Higher
Waterbird Feeding Habitat (WBF)	7.85	Higher	10.00	Higher
Waterbird Nesting Habitat (WBN)	9.26	Higher	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	8.82	Higher	10.00	Higher
Pollinator Habitat (POL)	8.96	Higher	10.00	Higher
Native Plant Habitat (PH)	4.16	Moderate	8.34	Higher
Public Use & Recognition (PU)			8.84	Higher
Wetland Sensitivity (Sens)			2.43	Lower
Wetland Ecological Condition (EC)			0.72	Lower
Wetland Stressors (STR) (higher score means more stress)			6.40	Higher
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	2.97	Lower	4.23	Moderate
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	4.22	Lower	9.13	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.48	Moderate	8.55	Higher
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	8.68	Higher	9.71	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.14	Higher	9.72	Higher
WETLAND CONDITION (EC)			0.72	Lower
WETLAND RISK (average of Sensitivity & Stressors)			4.42	Moderate

Introduction to Wetland Ecosystem Services Protocol (WESP) for Atlantic Canada

What is WESP?

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Why is it used?

Wetlands are complex systems. Detailed wetland studies can be resource- and time-intensive. Conversely, one trained professional can use WESP to rapidly assess a wetland for 18 functions and benefits.

How is it used?

WESP consists of a field and office component. Practitioners visit the wetland and answer a series of questions relating to the site's vegetation, hydrology and public use. The office component is a series of questions relating to site location. Responses are recorded in an Excel spreadsheet that automatically calculates a score for each function and benefit. These scores rank the wetland on its ability to deliver each function relative to other wetlands in the province.

Who uses WESP-AC?

WESP practitioners have received specialized training to use this tool. They generally work for consultants, government or conservation organizations and have a background in wetland plants, soils and hydrology.

WESP data is used by provincial and municipal governments in Atlantic Canada as well as conservation organizations such as DUC to understand various wetland and watershed dynamics, including: which functions are represented by wetlands in an area, and whether restored wetlands are adequately replacing or compensating for functions that have been lost through wetland alteration or in-filling.

What is the difference between a function and a benefit score?

Function scores refer to the wetland's ability to deliver that function based on its structure, vegetation and hydrology. Benefit scores refer to the wetland's value for the people and wildlife in the watershed and are based off its location in the watershed and surrounding land use.

What do the scores and ratings mean?

Scores are calculated based on the answers inputted into the spreadsheet and calculations made by the model that reflect our understanding of which physical characteristics are representative of a wetland's ability to deliver the specified function. Scores are adjusted to be relative to other wetlands in the province. Ratings are Low, Moderate and High. WESP-AC is calibrated for each province in Atlantic Canada based on data collected from over 100 sites in each province. Scores and ratings are relative to other wetlands in Nova Scotia, therefore a "High" rating means that relative to other Nova Scotia wetlands, this wetland is highly beneficial or functional.

What can I do with this information?

WESP data has limitations. Like any model of a complex natural system, it is only an approximation of what is occurring. However, it can be used to give an idea of the functions and benefits of the wetland relative to other wetlands in the area. This information may be useful in making land-use decisions or directing further study.

Looking for more information?

This report was prepared by staff at Ducks Unlimited Canada. For more information, please contact:

Emma Bocking, Conservation Programs Specialist
E_bocking@ducks.ca

Ducks Unlimited Canada
Conserving Canada's Wetlands

September 30, 2020

C042

Site Name: Purcell's Cove backland bog **Site Code**: HRM_10
Date of Field Assessment: 06/19/2020
Assessors: Emma Bocking& Simone Charron
PIDs: 00269282 **GPS Coordinates**: 44.60836, -63.57826
Wetland Type: Bog **Size:** 1 ha
Landowner(s): Battery Hill Developments Ltd.



Site Context: Purcell's Cove backland bog is surrounded by forested area situated between Purcell's Cove Road and Herring Cove Road.

Site Summary: Purcell's Cove backland bog is in a popular urban reserve/protected area with plenty of recreation trails. The wetland itself has a highly-rated ecological condition and serves as excellent songbird, raptor, mammal, and pollinator habitat. It is in a favourable position in the watershed to retain and filter sediment, nitrate, and water entering the popular recreation spot, Purcell's Pond. Though the wetland is only moderately stressed, most of this comes from erosion from foot traffic in the surrounding areas.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Sediment Retention & Stabilization	Higher	This wetland intercepts and filters suspended inorganic sediment, allowing it to deposit in the wetland rather than entering surface or groundwaters downstream. It also reduces the velocity of surface water flow, decreases erosion, and stabilizes underlying soils. This can decrease turbidity in downstream waters and potentially reduce the toxicity of some contaminants.
Water Storage & Delay	Higher	This wetland is effective at retaining water during periods of high input, acting like a 'sponge' on the landscape. This storage function could enhance the wetland's ability to recharge local groundwater. During dry times of the year, it has the potential to release this stored water back into the watershed.
Nitrate Removal & Retention	Higher	This wetland is effective at storing particulate nitrate and converting soluble nitrate and ammonia to nitrogen gas, through the process of denitrification. High concentrations of nitrate in aquatic systems can lead to toxic algal blooms that are harmful to people and wildlife. Isolated wetlands are particularly effective at retaining nitrates.
Top Benefits		
Pollinator Habitat	Higher	This wetland may contain a rare plant species. Additionally, it may contain some of the only herbaceous or woody vegetation within the local area.
Wetland Ecological Condition	Higher	In WESP-AC, wetland health or integrity is primarily measured by vegetation composition. Wetlands in excellent ecological condition typically have no invasive plants and at least one rare species. Additionally, they have little bare ground, no strongly dominant plant species, and may have varied microtopography and no extensive algal blooms.
Songbird, Raptor & Mammal Habitat	Higher	This wetland is recognized as an IBA (Important Bird Area) or is known to support a rare breeding waterbird species. It may also be one of the few herbaceous or wooded wetlands locally.

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HRM_10 Function and Benefit Scores

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	10.00	Higher	6.65	Higher
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower
Water Cooling (WC)	0.00	Lower	0.00	Lower
Sediment Retention & Stabilisation (SR)	10.00	Higher	0.00	Lower
Phosphorus Retention (PR)	4.82	Lower	0.00	Lower
Nitrate Removal & Retention (NR)	10.00	Higher	6.00	Moderate
Carbon Sequestration (CS)	7.56	Higher		
Organic Nutrient Export (OE)	5.34	Moderate		
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower
Aquatic Invertebrate Habitat (INV)	8.02	Higher	0.65	Lower
Amphibian & Turtle Habitat (AM)	0.96	Lower	4.00	Moderate
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower
Songbird, Raptor, & Mammal Habitat (SBM)	7.10	Moderate	10.00	Higher
Pollinator Habitat (POL)	7.70	Moderate	10.00	Higher
Native Plant Habitat (PH)	6.06	Higher	7.50	Moderate
Public Use & Recognition (PU)			9.16	Higher
Wetland Sensitivity (Sens)			5.59	Moderate
Wetland Ecological Condition (EC)			10.00	Higher
Wetland Stressors (STR) (higher score means more stress)			4.87	Moderate
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	10.00	Higher	6.65	Higher
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	9.05	Higher	4.00	Moderate
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.68	Moderate	0.43	Lower
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	0.58	Lower	2.40	Lower
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.32	Higher	9.58	Higher
WETLAND CONDITION (EC)			10.00	Higher
WETLAND RISK (average of Sensitivity & Stressors)			5.23	Moderate

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Emma Bocking, Conservation Programs Specialist

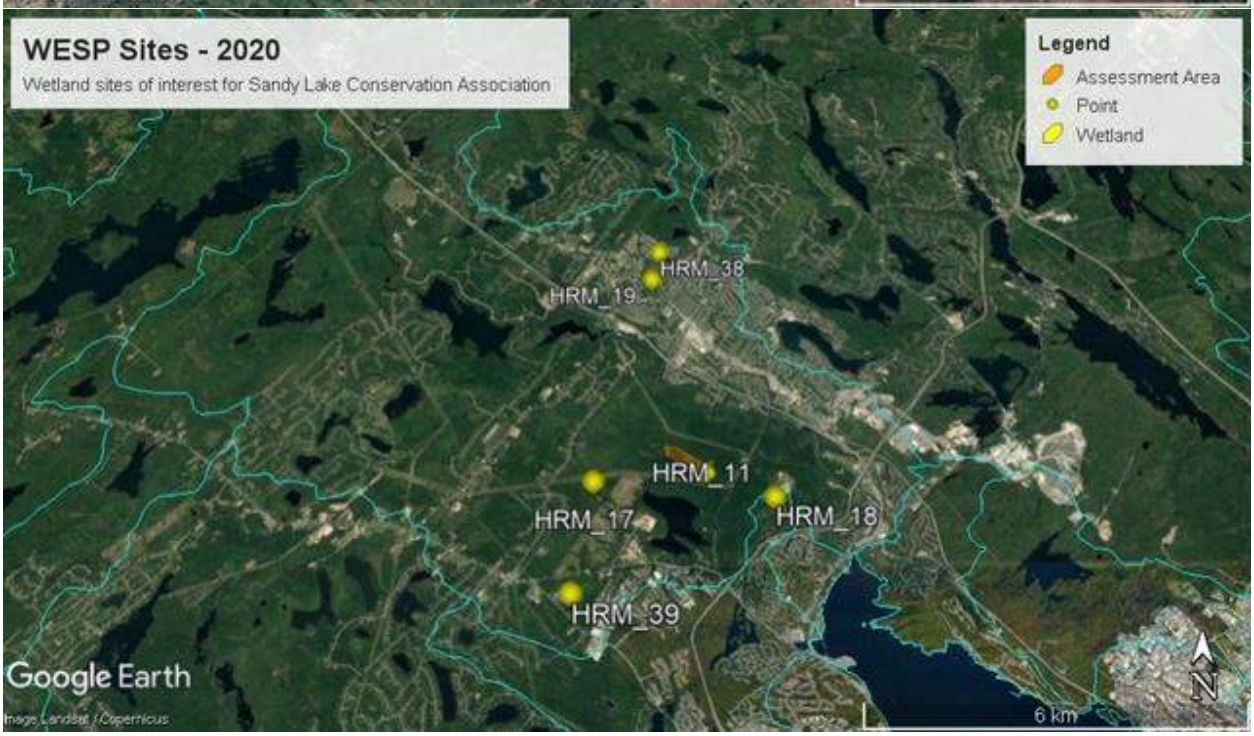
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Ducks Unlimited Canada
Conserving Canada's Wetlands

June 8, 2021

C043


HRM_17
David's Marsh
Legend
HRM_17
HRM_17_AA
HRM_17_Wetland
HRM_17
Google Earth
400 m
N


WESP Sites - 2020
Wetland sites of interest for Sandy Lake Conservation Association
Legend
Assessment Area
Point
Wetland
HRM_38
HRM_19
HRM_11
HRM_17
HRM_18
HRM_39
Google Earth
6 km
N

C043

WETLAND ASSESSMENT REPORTS

WESP data and reports for Sandy Lake and Sackville River Watershed

Abstract

Reports and scores for WESP assessments completed at 6 sites in June – August 2020. Report completed for Sandy Lake Conservation Association by Ducks Unlimited Canada staff.

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Emma Bocking, Conservation Programs Specialist

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Site Reports

Ducks Unlimited Canada
Conserving Canada's Wetlands

July 9, 2021

Site Name: Marsh Lake **Site Code**: HRM_ 11
Date of Field Assessment: 06/22/2020
Assessors: Emma Bocking & Coastal Action staff
PID: 00648139 **GPS Coordinates**: 44.7434645, -63.6934167
Wetland Type: Fen **Size:** 4 ha
Landowner: NS Dept. of Municipal Affairs



Site Context: The area immediately surrounding this wetland is forested. Marsh Lake is south of Lower Sackville and north of Bedford and is adjacent to Sandy Lake Regional Park. Some of the land surrounding Marsh Lake is owned by HRM, while the remainder is privately owned.

Site Summary: Marsh Lake is currently owned by the NS Department of Municipal Affairs. It is part of the Sandy Lake watershed and is an important corridor between Sandy Lake and the Sackville River for turtles, fish, birds and other wildlife. Volunteers with the Sandy Lake Conservation Association and the Sackville Rivers Association have an active interest in conserving Marsh Lake and surrounding lands and expanding the existing Sandy Lake Regional Park. In 2021, the site will be designated by DUC and the province as a Treasured Wetland of Nova Scotia. Despite its name, Marsh Lake is a wetland complex with graminoid fen, shallow open water and treed bog.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Waterbird Nesting Habitat	Higher	This wetland has habitat features that support a diversity and abundance of nesting waterbird species, such as ducks, shorebirds, seabirds or herons. Such habitat features could include surface water, intermediate aquatic plant cover, mild water level fluctuation, tree snags and a wide vegetated buffer.
Anadromous Fish Habitat	Higher	Not only is there evidence that this wetland is accessible to anadromous fish, several features of the wetland indicate that the structure, productivity and hydrologic regime are suitable for anadromous fish species. Natural land cover surrounding the wetland the absence of human-related stressors also contributes to favorable fish habitat.
Waterbird Feeding Habitat	Higher	This wetland has habitat features that support a diversity and abundance of feeding waterbird species, such as ducks and shorebirds, particularly as a stopover site during migration or for overwintering. Such habitat features include nearby ponds or lakes, food and nutrient availability, a flat surface, ponded water and plenty of emergent vegetation cover. There are likely minimal stressors that are harmful for waterbirds, including high concentrations of metals and other contaminants.
Top Benefits		
Invertebrate Habitat	Higher	A high benefit score implies that this wetland is also great habitat for fish, waterbirds and songbirds and mammals, all of which are supported by and benefit from healthy invertebrate species.
Water Storage and Delay	Higher	This wetland is in an area where people and infrastructure are at risk from non-tidal flooding. Wetlands in these areas with high benefit scores provide the ecosystem service of flood regulation.
Nitrate Removal and Retention	Higher	High concentrations of nitrate in aquatic systems can lead to toxic algal blooms that are harmful to people and wildlife. There may be domestic wells nearby, or a tributary is present that would transport soluble nitrates out of the wetland. In addition, there may be potential sources of nitrogen in the area from agriculture, urban areas or septic systems.

Ducks Unlimited Canada
Conserving Canada's Wetlands

Site Name: David's Marsh **Site Code**: HRM_17
Date of Field Assessment: 06/24/2020
Assessors: Emma Bocking & Coastal Action staff
PIDs: 40202806; 00422857
GPS Coordinates: 44.73965, -63.71891
Wetland Type: Fen **Size:** 0.5 ha
Landowner(s): Sandy Lake Holdings Ltd; 3063063 Nova Scotia Limited



Site Context: David's Marsh has a forested buffer. Beyond this buffer, there is some disturbance from clear-cutting and suburban residential development. The land is owned by Sandy Lake Holdings and is zoned residential. Volunteers with the Sandy Lake Conservation Association are actively seeking additional protection for this site. Karen's Brook runs through the wetland.

Site Summary: After doing a preliminary prioritization attempt of the WESP sites completed in 2020, this wetland had the highest average score. As a peatland it has high carbon sequestration potential; the watercourse provides good transport of nutrients to downstream systems, and good fish habitat. Its relative vegetative uniqueness compared to surrounding land uses makes it good wildlife habitat. The presence of downstream infrastructure vulnerable to flooding increases the benefit of this wetland for water storage and delay.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Pollinator Habitat	Higher	This wetland has habitat features that support pollinating insects and birds. It is likely to contain a diversity of flowering plants, and suitable nesting habitat such as tree snags, ground cover, downed wood, large trees and/or cliffs. The wetland is not persistently flooded.
Waterbird Nesting Habitat	Higher	This wetland has habitat features that support a diversity and abundance of nesting waterbird species, such as ducks, shorebirds, seabirds or herons. Such habitat features could include surface water, intermediate aquatic plant cover, mild water level fluctuation, tree snags and a wide vegetated buffer.
Songbird, Raptor and Mammal Habitat	Higher	This wetland has habitat features that support a diversity and abundance of songbirds, raptors and mammals. Such habitat features could include a mix of open water and land cover, a wide vegetated buffer, tree snags, downed wood, varied microtopography, mature trees and diverse shrub cover.
Top Benefits		
Water Storage & Delay	Higher	This wetland is in an area where people and infrastructure are at risk from non-tidal flooding. Wetlands in these areas with high benefit scores provide the ecosystem service of flood regulation.
Songbird, Raptor and Mammal Habitat	Higher	This wetland is recognized as an IBA (Important Bird Area) or is known to support a rare breeding waterbird species. It may also be one of the few herbaceous or wooded wetlands locally.
Waterbird Feeding Habitat	Higher	This wetland may be recognized as an Important Bird Area or is known to host a rare migratory waterbird species. Alternatively, it may also be one of the few herbaceous wetlands or ponds in the local area, and/or it has the potential to have a high value for recreationists including birdwatchers and waterfowl hunters due its proximity to public roads and population centers.

Site Name: Jack Lake **Site Code**: HRM_18
Date of Field Assessment: 06/24/2020
Assessors: Emma Bocking & Coastal Action staff & Molly LeBlanc (Coastal Action).
PID: 40857138 **GPS Coordinates**: 44.73960, -63.71887
Wetland Type: Fen **Size:** 0.4 ha
Landowner: Halifax Regional Municipality



Site Context: Jack Lake is surrounded by forest and is in Sandy Lake Regional Park. Beyond the forest is a 100 series highway, and a heavily populated suburb. There is a sand pit located near the lake, that is used by off road vehicles.

Site Summary: The wetland was assessed at the outflow of Jack Lake. Its very high organic nutrient export score and location of the wetland near the top of the watershed is critical for nourishing downstream ecosystems. Given the numerous sources of nitrogen from surrounding development, the wetland's nitrate removal and retention capability is greatly beneficial. Features of the wetland including its relative seclusion and the surrounding, partly old-growth, mixed Acadian forest provide excellent bird habitat and corridors or turtles and other herptiles. This site has a high recreation value with a boardwalk and an existing trail leading to the lake. Sandy Lake Conservation Association volunteers are pursuing further protection for this site and surrounding areas via the expanded Sandy Lake Regional Park.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Organic Nutrient Export	Higher	This wetland is effective as producing, cycling and exporting organic matter downstream. Organic nutrients exported from wetlands like this one, provide essential support for downstream estuarine food webs. Wetlands that provide this function have a surface water outflow and soil with high organic carbon content (e.g. peat).
Songbird, Raptor and Mammal Habitat	Higher	This wetland has habitat features that support a diversity and abundance of songbirds, raptors and mammals. Such habitat features could include a mix of open water and land cover, a wide vegetated buffer, tree snags, downed wood, varied microtopography, mature trees and diverse shrub cover.
Pollinator Habitat	Higher	This wetland has habitat features that support pollinating insects and birds. It is likely to contain a diversity of flowering plants, and suitable nesting habitat such as tree snags, ground cover, downed wood, large trees and/or cliffs. The wetland is not persistently flooded.
Top Benefits		
Nitrate Removal & Retention	Higher	High concentrations of nitrate in aquatic systems can lead to toxic algal blooms that are harmful to people and wildlife. There may be domestic wells nearby, or a tributary is present that would transport soluble nitrates out of the wetland. In addition, there may be potential sources of nitrogen in the area from agriculture, urban areas or septic systems.
Amphibian & Turtle Habitat	Higher	This wetland may be known to support a regionally rare amphibian or turtle species. Additionally, it may provide herbaceous or woody cover that is lacking in the surrounding landscape, and provide habitat for birds and mammals, which are supported by healthy amphibian and turtle populations.
Waterbird Feeding Habitat	Higher	This wetland may be recognized as an Important Bird Area or is known to host a rare migratory waterbird species. Alternatively, it may also be one of the few herbaceous wetlands or ponds in the local area, and/or it has the potential to have a high value for recreationists including irdwatchers and waterfowl hunters due its proximity to public roads and population centers.

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Site Name: Little Sackville River **Site Code**: HRM_19
Date of Field Assessment: 06/24/2020
Assessor: Emma Bocking & Izzy Clarke
PID: 40109068 **GPS Coordinates**: 44.784648, -63.704914
Wetland Type: Size: Swamp
Landowner: Valleyfield Farm Ltd.



Site Context: Little Sackville River is in the centre of a dense residential area in Lower Sackville. There is a small patch of trees in the area. Located nearby are subdivisions, and two schools (Millwood Elementary and Millwood Highschool).

Site Summary: Almost all the Benefit scores for this site are rated 'Higher', indicating the importance of this wetland in the watershed. Intensive development in the catchment area increases the relative importance of this wetland to store water, retain nutrients and sediments, and provide wildlife habitat. The Sackville River is known to support populations of anadromous and other fish (11 species total), so this wetland plays an important function in providing fish habitat. It is one of only two watersheds in HRM with a mapped floodplain, which indicates known risks to infrastructure when there are flooded conditions. This known risk increases the Water storage and delay benefit of wetlands in the watershed.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Resident Fish Habitat	Higher	This wetland has habitat features that support a diversity and abundance of native resident fish. Such habitat features could include connectivity with the surrounding waterscape, high nutrient and oxygen availability, suitable vegetation cover and shade, and few known stressors such as toxic contaminants.
Anadromous Fish Habitat	Higher	Not only is there evidence that this wetland is accessible to anadromous fish, several features of the wetland indicate that the structure, productivity and hydrologic regime are suitable for anadromous fish species. Natural land cover surrounding the wetland the absence of human-related stressors also contributes to favorable fish habitat.
Waterbird Feeding Habitat	Higher	This wetland has habitat features that support a diversity and abundance of feeding waterbird species, such as ducks and shorebirds, particularly as a stopover site during migration or for overwintering. Such habitat features include nearby ponds or lakes, food and nutrient availability, a flat surface, ponded water and plenty of emergent vegetation cover. There are likely minimal stressors that are harmful for waterbirds, including high concentrations of metals and other contaminants.
Top Benefits		
Water Storage & Delay	Higher	This wetland is in an area where people and infrastructure are at risk from non-tidal flooding. Wetlands in these areas with high benefit scores provide the ecosystem service of flood regulation.
Pollinator Habitat	Higher	This wetland may contain a rare plant species. Additionally, it may contain some of the only herbaceous or woody vegetation within the local area.
Nitrate Removal & Retention	Higher	High concentrations of nitrate in aquatic systems can lead to toxic algal blooms that are harmful to people and wildlife. There may be domestic wells nearby, or a tributary is present that would transport soluble nitrates out of the wetland. In addition, there may be potential sources of nitrogen in the area from agriculture, urban areas or septic systems.

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Site Name: Lower Sackville shrub swamp
Site Code: HRM_38
Date of Field Assessment: 07/16/2020
Assessor: Emma Bocking
PID: 40669392
GPS Coordinates: 44.79174, -63.70281
Wetland Type: Swamp
Size: 1.5 ha
Landowner: Halifax Regional Municipality



Site Context: The area immediately surrounding this wetland is treed. Beyond the wooded area (mix of shrub and trees) there is the densely populated community of Lower Sackville. Highways 101 and 102 are nearby.

Site Summary: Almost all the Benefit scores for this site are rated 'Higher', indicating the importance of this wetland in the watershed. Intensive development in the catchment area increases the relative importance of this wetland to store water, retain nutrients and sediments, and provide wildlife habitat. The Sackville River is known to support populations of anadromous and other fish (11 species total), so this wetland plays an important function in providing fish habitat. It is one of only two watersheds in HRM with a mapped floodplain, which indicates known risks to infrastructure when there are flooded conditions. This known risk increases the Water storage and delay benefit of wetlands in the watershed.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Organic Nutrient Export	Higher	This wetland is effective as producing, cycling and exporting organic matter downstream. Organic nutrients exported from wetlands like this one, provide essential support for downstream estuarine food webs. Wetlands that provide this function have a surface water outflow and soil with high organic carbon content (e.g. peat).
Water Cooling	Higher	This wetland is effective at maintaining or reducing the temperature of surface water, particularly in headwater streams. This is a more common function in wetlands that contain deep, flowing surface water that is shaded.
Songbird, Raptor & Mammal Habitat	Higher	This wetland has habitat features that support a diversity and abundance of songbirds, raptors and mammals. Such habitat features could include a mix of open water and land cover, a wide vegetated buffer, tree snags, downed wood, varied microtopography, mature trees and diverse shrub cover.
Top Benefits		
Water Storage & Delay	Higher	This wetland is in an area where people and infrastructure are at risk from non-tidal flooding. Wetlands in these areas with high benefit scores provide the ecosystem service of flood regulation.
Waterbird Feeding Habitat	Higher	This wetland may be recognized as an Important Bird Area or is known to host a rare migratory waterbird species. Alternatively, it may also be one of the few herbaceous wetlands or ponds in the local area, and/or it has the potential to have a high value for recreationists including birdwatchers and waterfowl hunters due its proximity to public roads and population centers.
Pollinator Habitat	Higher	This wetland may contain a rare plant species. Additionally, it may contain some of the only herbaceous or woody vegetation within the local area.

Ducks Unlimited Canada
Conserving Canada's Wetlands

Site Name: West Bedford Triangle **Site Code**: HRM_39
Date of Field Assessment: 08/20/2020
Assessors: Emma Bocking
PIDs: 00645960 **GPS Coordinates**: 44.719742, -63.723352
Wetland Type: Swamp **Size:** 0.4 ha
Landowner(s): West Bedford Holdings Ltd.



Site Context: West Bedford Triangle is a small wetland in a small forested area bordered by Hammonds Plains Rd and Larry Uteck Blvd. Some houses border the wetland, and there is an industrial park within 1 km.

Site Summary: This is an easily, small riparian marsh located in a suburban area. It includes habitat features for animals and would be an excellent place to spot birds, mammals, herptiles, and pollinators. The wetland protects surrounding infrastructure and waterways from potential flooding and contamination by storing and delaying water and supporting good water quality. Nearby development, including the road bordering the wetland in the southwest are causes of stress for this wetland and are vehicles of frequent input of contaminants, salts, and nutrients into the marsh.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Songbird, Raptor & Mammal Habitat	Higher	This wetland has habitat features that support a diversity and abundance of songbirds, raptors and mammals. Such habitat features could include a mix of open water and land cover, a wide vegetated buffer, tree snags, downed wood, varied microtopography, mature trees and diverse shrub cover.
Organic Nutrient Export	Higher	This wetland is effective as producing, cycling and exporting organic matter downstream. Organic nutrients exported from wetlands like this one, provide essential support for downstream estuarine food webs. Wetlands that provide this function have a surface water outflow and soil with high organic carbon content (e.g. peat).
Pollinator Habitat	Higher	This wetland has habitat features that support pollinating insects and birds. It is likely to contain a diversity of flowering plants, and suitable nesting habitat such as tree snags, ground cover, downed wood, large trees and/or cliffs. The wetland is not persistently flooded.
Top Benefits		
Water Storage & Delay	Higher	This wetland is in an area where people and infrastructure are at risk from non-tidal flooding. Wetlands in these areas with high benefit scores provide the ecosystem service of flood regulation.
Amphibian & Turtle Habitat	Higher	This wetland may be known to support a regionally rare amphibian or turtle species. Additionally, it may provide herbaceous or woody cover that is lacking in the surrounding landscape, and provide habitat for birds and mammals, which are supported by healthy amphibian and turtle populations.
Pollinator Habitat	Higher	This wetland may contain a rare plant species. Additionally, it may contain some of the only herbaceous or woody vegetation within the local area.

Appendix A: Pictures



Figure 1: HRM 11 (Marsh Lake)



Figure 2: HRM 17 (David's Marsh)



Figure 3: HRM 18 (Jack Lake)



Figure 4: HRM 19 (Little Sackville River 1)



Figure 5: HRM 38 (Little Sackville River 2)



Figure 6: HRM 39 (West Bedford wetland)

Appendix B: WESP Scores

HRM 11

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	2.52	Lower	10.00	Higher
Stream Flow Support (SFS)	7.59	Higher	5.71	Moderate
Water Cooling (WC)	4.71	Higher	9.40	Higher
Sediment Retention & Stabilisation (SR)	5.16	Moderate	8.33	Higher
Phosphorus Retention (PR)	3.68	Lower	7.93	Higher
Nitrate Removal & Retention (NR)	3.06	Moderate	10.00	Higher
Carbon Sequestration (CS)	5.14	Moderate		
Organic Nutrient Export (OE)	7.49	Higher		
Anadromous Fish Habitat (FA)	10.00	Higher	4.11	Moderate
Resident Fish Habitat (FR)	8.33	Higher	3.85	Moderate
Aquatic Invertebrate Habitat (INV)	8.63	Higher	10.00	Higher
Amphibian & Turtle Habitat (AM)	7.30	Higher	10.00	Higher
Waterbird Feeding Habitat (WBF)	10.00	Higher	10.00	Higher
Waterbird Nesting Habitat (WBN)	10.00	Higher	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	6.02	Moderate	10.00	Higher
Pollinator Habitat (POL)	7.36	Moderate	10.00	Higher
Native Plant Habitat (PH)	6.10	Higher	7.09	Moderate
Public Use & Recognition (PU)			7.10	Higher
Wetland Sensitivity (Sens)			2.06	Lower
Wetland Ecological Condition (EC)			4.78	Moderate
Wetland Stressors (STR) (higher score means more stress)			5.94	Moderate
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	2.52	Lower	10.00	Higher
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	4.56	Moderate	9.38	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.87	Higher	9.19	Higher
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	9.56	Higher	8.80	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.93	Moderate	9.52	Higher
WETLAND CONDITION (EC)			4.78	Moderate
WETLAND RISK (average of Sensitivity & Stressors)			4.00	Moderate

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	1.49	Lower	10.00	Higher
Stream Flow Support (SFS)	7.24	Higher	5.96	Moderate
Water Cooling (WC)	7.40	Higher	8.97	Higher
Sediment Retention & Stabilisation (SR)	4.58	Moderate	10.00	Higher
Phosphorus Retention (PR)	4.05	Lower	10.00	Higher
Nitrate Removal & Retention (NR)	3.08	Moderate	10.00	Higher
Carbon Sequestration (CS)	4.16	Moderate		
Organic Nutrient Export (OE)	7.14	Higher		
Anadromous Fish Habitat (FA)	6.46	Higher	5.46	Higher
Resident Fish Habitat (FR)	7.82	Higher	5.54	Higher
Aquatic Invertebrate Habitat (INV)	7.49	Higher	8.34	Higher
Amphibian & Turtle Habitat (AM)	4.62	Moderate	10.00	Higher
Waterbird Feeding Habitat (WBF)	6.96	Higher	10.00	Higher
Waterbird Nesting Habitat (WBN)	8.07	Higher	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	9.61	Higher	10.00	Higher
Pollinator Habitat (POL)	7.87	Moderate	10.00	Higher
Native Plant Habitat (PH)	7.31	Higher	8.27	Higher
Public Use & Recognition (PU)			5.98	Higher
Wetland Sensitivity (Sens)			5.34	Moderate
Wetland Ecological Condition (EC)			6.52	Higher
Wetland Stressors (STR) (higher score means more stress)			4.79	Moderate
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	1.49	Lower	10.00	Higher
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	4.24	Lower	10.00	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.40	Higher	8.36	Higher
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	7.43	Higher	9.10	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.94	Higher	9.71	Higher
WETLAND CONDITION (EC)			6.52	Higher
WETLAND RISK (average of Sensitivity & Stressors)			5.07	Moderate

HRM 18

	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	0.35	Lower	5.87	Moderate
Stream Flow Support (SFS)	5.52	Higher	6.62	Higher
Water Cooling (WC)	6.30	Higher	4.16	Moderate
Sediment Retention & Stabilisation (SR)	2.78	Lower	0.65	Lower
Phosphorus Retention (PR)	4.37	Lower	0.43	Lower
Nitrate Removal & Retention (NR)	1.81	Lower	10.00	Higher
Carbon Sequestration (CS)	4.45	Moderate		
Organic Nutrient Export (OE)	9.88	Higher		
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower
Resident Fish Habitat (FR)	7.48	Higher	6.69	Higher
Aquatic Invertebrate Habitat (INV)	5.47	Higher	6.67	Higher
Amphibian & Turtle Habitat (AM)	4.59	Moderate	10.00	Higher
Waterbird Feeding Habitat (WBF)	7.31	Higher	10.00	Higher
Waterbird Nesting Habitat (WBN)	7.51	Higher	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	8.93	Higher	10.00	Higher
Pollinator Habitat (POL)	8.19	Higher	10.00	Higher
Native Plant Habitat (PH)	4.48	Moderate	8.16	Higher
Public Use & Recognition (PU)			10.00	Higher
Wetland Sensitivity (Sens)			3.42	Lower
Wetland Ecological Condition (EC)			4.78	Moderate
Wetland Stressors (STR) (higher score means more stress)			5.34	Moderate
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	0.35	Lower	5.87	Moderate
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.68	Lower	6.85	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	8.34	Higher	6.24	Higher
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	6.44	Higher	8.67	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.07	Higher	9.69	Higher
WETLAND CONDITION (EC)			4.78	Moderate
WETLAND RISK (average of Sensitivity & Stressors)			4.38	Moderate

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	2.21	Lower	10.00	Higher
Stream Flow Support (SFS)	4.07	Moderate	5.52	Moderate
Water Cooling (WC)	6.54	Higher	9.96	Higher
Sediment Retention & Stabilisation (SR)	3.59	Lower	10.00	Higher
Phosphorus Retention (PR)	1.64	Lower	10.00	Higher
Nitrate Removal & Retention (NR)	4.45	Moderate	10.00	Higher
Carbon Sequestration (CS)	1.36	Lower		
Organic Nutrient Export (OE)	4.98	Moderate		
Anadromous Fish Habitat (FA)	7.06	Higher	5.46	Higher
Resident Fish Habitat (FR)	7.23	Higher	5.55	Higher
Aquatic Invertebrate Habitat (INV)	3.03	Moderate	6.34	Higher
Amphibian & Turtle Habitat (AM)	5.50	Moderate	5.58	Higher
Waterbird Feeding Habitat (WBF)	6.97	Higher	10.00	Higher
Waterbird Nesting Habitat (WBN)	4.13	Moderate	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	5.12	Moderate	10.00	Higher
Pollinator Habitat (POL)	5.39	Moderate	10.00	Higher
Native Plant Habitat (PH)	2.07	Lower	6.29	Moderate
Public Use & Recognition (PU)			5.46	Higher
Wetland Sensitivity (Sens)			2.71	Lower
Wetland Ecological Condition (EC)			4.78	Moderate
Wetland Stressors (STR) (higher score means more stress)			9.19	Higher
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	2.21	Lower	10.00	Higher
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.60	Lower	10.00	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.60	Moderate	8.61	Higher
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	6.70	Higher	8.66	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	4.79	Moderate	9.38	Higher
WETLAND CONDITION (EC)			4.78	Moderate
WETLAND RISK (average of Sensitivity & Stressors)			5.95	Higher

HRM 38

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	2.60	Lower	10.00	Higher
Stream Flow Support (SFS)	3.93	Moderate	5.04	Moderate
Water Cooling (WC)	8.30	Higher	9.51	Higher
Sediment Retention & Stabilisation (SR)	3.75	Lower	10.00	Higher
Phosphorus Retention (PR)	1.05	Lower	10.00	Higher
Nitrate Removal & Retention (NR)	3.02	Moderate	10.00	Higher
Carbon Sequestration (CS)	0.91	Lower		
Organic Nutrient Export (OE)	9.20	Higher		
Anadromous Fish Habitat (FA)	6.26	Higher	5.79	Higher
Resident Fish Habitat (FR)	6.13	Higher	5.89	Higher
Aquatic Invertebrate Habitat (INV)	0.34	Lower	6.30	Higher
Amphibian & Turtle Habitat (AM)	3.51	Lower	6.26	Higher
Waterbird Feeding Habitat (WBF)	5.75	Moderate	10.00	Higher
Waterbird Nesting Habitat (WBN)	4.76	Moderate	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	8.03	Higher	10.00	Higher
Pollinator Habitat (POL)	7.22	Moderate	10.00	Higher
Native Plant Habitat (PH)	2.79	Lower	7.63	Moderate
Public Use & Recognition (PU)			7.69	Higher
Wetland Sensitivity (Sens)			3.89	Moderate
Wetland Ecological Condition (EC)			0.00	Lower
Wetland Stressors (STR) (higher score means more stress)			10.00	Higher
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	2.60	Lower	10.00	Higher
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	2.97	Lower	10.00	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.32	Higher	8.23	Higher
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	5.77	Moderate	8.79	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.02	Moderate	9.61	Higher
WETLAND CONDITION (EC)			0.00	Lower
WETLAND RISK (average of Sensitivity & Stressors)			6.94	Higher

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	2.33	Lower	10.00	Higher
Stream Flow Support (SFS)	4.34	Moderate	4.79	Moderate
Water Cooling (WC)	4.67	Moderate	2.96	Moderate
Sediment Retention & Stabilisation (SR)	3.03	Lower	10.00	Higher
Phosphorus Retention (PR)	0.00	Lower	10.00	Higher
Nitrate Removal & Retention (NR)	2.75	Moderate	10.00	Higher
Carbon Sequestration (CS)	1.28	Lower		
Organic Nutrient Export (OE)	6.90	Moderate		
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower
Resident Fish Habitat (FR)	5.39	Moderate	4.98	Higher
Aquatic Invertebrate Habitat (INV)	3.83	Moderate	4.96	Moderate
Amphibian & Turtle Habitat (AM)	5.28	Moderate	10.00	Higher
Waterbird Feeding Habitat (WBF)	5.52	Moderate	10.00	Higher
Waterbird Nesting Habitat (WBN)	3.60	Moderate	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	8.58	Higher	10.00	Higher
Pollinator Habitat (POL)	6.67	Moderate	10.00	Higher
Native Plant Habitat (PH)	2.33	Lower	7.64	Moderate
Public Use & Recognition (PU)			1.35	Lower
Wetland Sensitivity (Sens)			3.99	Moderate
Wetland Ecological Condition (EC)			4.78	Moderate
Wetland Stressors (STR) (higher score means more stress)			6.92	Higher
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	2.33	Lower	10.00	Higher
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	2.40	Lower	10.00	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.92	Moderate	4.60	Moderate
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	4.74	Moderate	8.50	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.22	Higher	9.61	Higher
WETLAND CONDITION (EC)			4.78	Moderate
WETLAND RISK (average of Sensitivity & Stressors)			5.45	Moderate

C046

Halifax Regional Plan Review 2021: Feedback from two naturalist societies - the Halifax Field Naturalists and the Nova Scotia Wild Flora Society.

Submitted to regionalplan@halifax.ca on **July 15, *2021***

WHO WE ARE

The Halifax Field Naturalists (HFN), founded in 1975, seeks to "educate ourselves and the public at large in the natural history of Nova Scotia." Current membership is 110 paid up members. We have a website at www.halifaxfieldnaturalists.ca

The Nova Scotia Wild Flora Society (NSWFS), founded in 1990, is dedicated to the appreciation and conservation of wild flora and habitat in Nova Scotia. Currently we have 47 paid up members. We have a website at www.nswildflora.ca

Both groups are Halifax based for in-person and now some virtual meetings, but we have members from all over the province, and our field trips occur throughout Nova Scotia.

Whenever possible, meetings and field trips of HFN and NSWFS are open to the public at large. In the last several years we have seen rising interest in our activities, reflecting the increased appreciation generally today of nature and of the many and special opportunities we have in Nova Scotia to enjoy nature.

Many of our members are involved as individuals in trail organizations and in specific conservation efforts. As naturalist societies, we are often asked to support such efforts by visiting specific sites and documenting the flora and fauna, and by writing letters of support.

HFN and NSWFS are members of Our HRM Alliance and are highly supportive of the draft document that has been circulating "Our HRM Alliance **Response to the Proposed Regional Plan Review Themes & Directions".** We highlight some special concerns that we have as naturalist organizations below.

GREEN SPACE IN HRM: A LOT OF PROGRESS, BUT CONTINUING DEGRADATION

As naturalist societies and individually, it has been gratifying to participate in various HRM initiatives related to our 'green spaces' and we have been especially encouraged by the unanimous Regional Council support for the Halifax Green Network Plan in 2018 (but yet to be implemented). At the same time, however, we are witnessing continuing degradation of our green spaces.

Habitat Loss and Fragmentation
Continued expansion of serviced and un-serviced settlement into our greenspace reduces and further fragments wildlife habitat, very notably in the area bounded by Hwys 102, 103 and Hammonds Plains Road which includes BMBCL (the Blue Mt. Birch Cove Lakes Wilderness Area/ proposed Regional Park).

Such development has significantly impaired the already squeezed connectivity between BMBCL and the greater mainland, but also between Chebucto Peninsula lands more broadly (including, for example, the Backlands, the Terrence Bay Wilderness Area, the Five Bridge Lakes Wilderness Area) and the greater mainland.

Loss of habitat and habitat fragmentation are the major causes of loss of biodiversity globally, and clearly in our case, locally. We are only beginning to see the consequences but we can be sure that restricted connectivity will result in significant loss of biodiversity and overall Ecological Integrity in the future. We will likely regret not having been more protective of these corridor areas and we could be doing a lot of expensive retrofitting to recover some components of them. Thus it is very important that we hang on to as much of what we currently retain as possible, as identified in the recent **Wildlife Corridor Landscape Design Charrette – Summary Report.** (View https://ecologyaction.ca/wildlife-corridor-report).

In that regard, we especially support the Our HRM Alliance call urging HRM to "reconsider moving forward with Secondary Planning for growth at Sandy Lake and Blue Mountain-Birch Cove Lakes which should not occur until clear criteria for development are determined and ecological impacts of development have been understood. This is not the same as considering the environment at the neighbourhood-design level."

In that same context, we were impressed and gratified that Mayor Mike Savage has said that he would write a letter on behalf of Halifax Regional council, to the provincial government regarding the planned Highway 113 requesting that the province not build Hwy 113 which would seriously impact wildlife connectivity between the Chebucto Peninsula and greater mainland.

Habitat degradation associated with increased recreational activity on our green spaces
We applaud the many steps HRM has taken to promote active transportation and to support in various ways trail groups across HRM. Ready access to a wide range of natural landscapes and nature-based activities is clearly one of factors behind the current growth of HRM. We often hear comments to the effect 'we need places for people to live" as rationale for further new development in what is now green space. But it is a two-sided coin: we also 'need places for people to play', and our green space is not getting any larger. So we support the concept of growth by densifying as much as possible.

As well, more people are spending more time in our green spaces and some of these spaces are starting to degrade, e.g. in places, we are seeing many doggy bags left on trails or hanging in bushes and trees here and there, trail splintering, trees cut down and fire pits, damage from

Mt. Bikes and ATVs operating outside of designated trails, and we seeing more invasive and exotic species by trails and into natural habitat.

Thus, as well as keeping as much green space as we possibly can, good stewardship of our green spaces is vital. In this regard we support the concepts in a proposal advanced by Richmond Campbell and others of the Woodens River Watershed Environmental Organization/The Bluff Trail for a "Community Based Wilderness Stewardship program for HRM that is designed to enhance HRM environmental protection and climate action".

LAKE WATER QUALITY FURTHER THREATENED BY CLIMATE CHANGE

In addition to impacts of proposed developments on terrestrial habitat and connectivity, it is critical to re-examine the effects of proposed developments on water quality of the many lakes in HRM in the light of growing evidence that critical thresholds – notably Total P (phosphorus) - have actually been lowered by climate warming*; thus we are beginning to see blue-green algal blooms at Total P levels where we had not seen them previously, recent blooms at Grand Lake and Sandy Lake (Bedford) being possible examples. Hence, Trophic State Objectives based on Total P utilized to estimate tolerable levels of development in watersheds should be revised downwards. Also, added stresses associated with climate warming add to the rationale for increasing the Riparian Buffer in HRM to 100m *See Smol, J.P. 2019 **Under the radar: long-term perspectives on ecological changes in lakes** Proc. R. Soc. B 286: 20190834 (Available at https://royalsocietypublishing.org/doi/pdf/10.1098/rspb.2019.0834)

CARBON SEQUESTRATION

In regard to Climate Action, we are impressed with HRM's Urban Forest Management Plan but see the lack of any significant restrictions on clearcutting on private lands in HRM as largely negating the benefits of our urban forest management for carbon sequestration. There have been many cases where land slated for new development is clearcut even when a large proportion of the land area to be developed is allowed to regrow as forest, and often that has involved loss of high volume, high carbon storage, Multi-aged/Old Growth forest stands. We urge HRM to develop rigorous carbon accounting for HRM tree cover and to explore means of restricting such clearcutting.

Respectfully,

Burkhard Plache
President, Halifax Field Naturalists

Charles Cron
President, Nova Scotia Wild Flora Society

C048 (1)

September 12 2020

HRM Plan review committee

To Whom It May Concern:

My name is Gary Edwards, I am a lifelong resident of Eastern Passage/Cow Bay, as were my Father, Grandfather and Great Grandfather. I have 3 adult children and currently live in Cow bay along with my wife Mary.

I personally have seen E.P.C.B. grow from less than 2000 people to presently 14000+: I have spent my entire business career in Eastern Passage. I have completed a subdivision in Cow Bay (creating 30 beautiful lots in Bayview Estates) I was a 20+ year member of the E.P.C.B. Volunteer Fire Department, Was on the Board Of Directors for Fisherman's Cove for 5 years, and ran my own business for 35 years. I am well known and respected in the community. I also served on the review committee (Halifax County) for E.P.C.B. Land use and by-laws in 1992. I have been to public meetings, public hearings etc. with a variety of applications for subdivisions/ Development Agreements etc. I was successful in achieving a D/A which allowed for 2- 60 unit buildings on 5 acres at 1490 main Road. I have developed over 350 feet of waterfront at Quigley's Corner/Fisherman's Cove area complete with 350 ' of wharf, floating docks, gangway etc. I also built a 15000 sq. ft. multi-use building with 4 commercial units and 8 apartments on this site.

Given there is another review currently being considered for our community I would very much appreciate being involved (on a committee) or at the least have my concerns and future vision for this area heard by way of this letter and possible future conversations. I would like to remain informed and engaged in progress and timelines of same.

I do see the need for considerable changes to the current land use and by-laws. The population of E.P.C.B. has essentially doubled since the last review(which was very conservative)and did not allow for much growth residentially in Cow Bay or much commercial growth in the condensed commercial corridor in Eastern Passage.

The one thing I have constantly heard from residents is; (WE DON'T HAVE A RINK, SPORTS COMPLEX, GROCERY STORE ETC.) Although we now have a population larger than the Town Of Truro !

Since 1992 HRM has issued residential building permits in large numbers (Which now demands more commercial amenities and services)

In order for our community to achieve these goals HRM must consider such things as; Allowing for larger buildings; Expanding the Commercial district as well as many other things to consider in a fast growing community.(The last review called for a condensed commercial area) This will no longer work as the current 2 lane road (which has no possibility of widening to 4) will be overwhelmed with traffic woes. Since it doesn't look like we will ever have a "cole Harbour Road" we must expand or lengthen the available commercial zone so as to not create a "bottle neck" in this area.

We have a Beautiful Picturesque Community and people want to live here, therefore we need to allow for larger buildings, both commercially and residentially.

I feel the current height restriction of 35’ is too restrictive should be changed (this would allow for higher density and still retain view plains of our harbour, Islands, and waterways)

In closing I hope you will consider my thoughts and perhaps share other ideas as a group or community at some point

Thank-You

Gary Edwards

C049

Canadian Parks and Wilderness Society
Nova Scotia Chapter
P.O. Box 51086 Rockingham Ridge
Halifax, NS
B3M 4R8

Re: HRM regional plan review and Blue Mountain-Birch Cove Lakes

July 16, 2021

To Whom It May Concern:

The Nova Scotia Chapter of the Canadian Parks and Wilderness Society (CPAWS-NS) is a science-based, non-government organization that works to protect Nova Scotia's rich natural heritage for the benefit and enjoyment of all Nova Scotians. We advocate for the establishment of new protected areas, on land and in the ocean, by undertaking research and collaborating with governments, Indigenous peoples, local communities, academics, and other organizations.

We have prioritized the protection of near-urban wilderness in the Halifax Regional Municipality, through a long-running campaign to protect Blue Mountain-Birch Cove Lakes and, more recently, by advocating for the establishment of the Sackville River Wilderness Area. We participated in the public consultations for the original HRM regional plan, which established policies for the creation of a regional park at Blue Mountain-Birch Cove Lakes.

Protecting nature near the city is important. Residents need access to green spaces for their health and well-being. This is something that has become even more apparent over the past year, with the COVID pandemic, where people have sought out parks and protected areas as places where they can safely spend time outdoors. These places provide opportunities for recreation, gathering with family and friends, outdoor education, nature appreciation, adventure and fun. Having an abundance of wilderness protected near the city is one of our municipality's greatest asset, and something which needs to be prioritized and accessible to all residents. It also helps clean the air and water, and provides habitat for numerous species. A healthy environment, with functioning and intact ecosystems, is a pre-requisite for a healthy community and a healthy economy.

Blue Moutain-Birch Cove Lakes

The Blue Mountain-Birch Cove Lakes wilderness is a natural treasure for the Halifax Regional Municipality. Located in close proximity to the urban environment, and only about 5 kilometres from downtown, it contains important forests and lakes and rivers and wetlands. Blue Mountain-Birch Cove Lakes provides a place where residents can go to enjoy the outdoors, to undertake recreational activities, and to escape the busy lifestyle of the city. It is a popular location for hiking, mountain biking, canoeing, kayaking, swimming, trail running, camping, skating, snowshoeing, and cross-country skiing.

Blue Mountain-Birch Cove Lakes is also important ecologically, containing a network of headwater lakes that helps protect water quality downstream. Over 100 species of birds have been identified here, and over 800 different species overall. This includes a number of rare species, such as the mountain sandwort, common nighthawk, and the endangered mainland moose. Blue Mountain-Birch Cove Lakes contains many important wetlands and waterways. It supports species, such as beavers, loons, ospreys, and even black bears. It's pretty amazing to have this much natural diversity so close to the urban core. It is a wonderful thing about Blue Mountain-Birch Cove Lakes, and a wonderful thing for our city.

CPAWS-NS has been advocating for the protection of Blue Mountain-Birch Cove Lakes for over two decades. This includes raising public awareness, undertaking scientific research, advocating for conservation policies within the HRM regional plan, pushing for the establishment of a wilderness area designation on provincially-administered public lands, encouraging the involvement of the federal government in land acquisitions for the wilderness park, and most recently advocating for a National Urban Park designation. We have lots of experience working to protect Blue Mountain-Birch Cove Lakes, and we know this natural area extremely well.

The community has long recognized the value of Blue Mountain-Birch Cove Lakes for conservation. Land-use policies of the former City of Halifax established a Holding Zone on these lands to prevent it from being developed. Public campaigns in the late 1990's and early 2000's pushed for a wilderness area designation, to stop public land from being traded away and an unnecessary 4-lane highway from being constructed. In 2006, the Halifax Regional Municipality declared through the HRM regional plan that it would establish a regional park at Blue Mountain-Birch Cove Lakes and purchase private lands to make that park a reality. In 2007, the Nova Scotia government announced that they would protect the provincial public lands as a wilderness area, and they followed through on that commitment with a legal designation in 2009. The provincial government expanded the protected wilderness area again in 2015, and just this week has launched a public consultation to add additional public lands to the wilderness park near Kearney Lake. In 2018 and 2019, the Halifax Regional Municipality purchased several properties for the regional park, at Hobsons Lake, Blue Mountain Hill, and near Timberlea. The federal government contributed funding for several of those land purchases through the Canada Nature Fund and has expressed an interest in Blue Mountain-Birch Cove Lakes potentially becoming a National Urban Park. The Nova Scotia Nature Trust

acquired a key property last year that filled a big gap in the wilderness park and the organization has indicated an interest in doing additional land purchases. All of this is to say that a considerable amount of effort has gone into protecting Blue Mountain-Birch Cove Lakes. Many people have worked really hard, over many years, to leave a lasting natural legacy for the city through the permanent protection of Blue Mountain-Birch Cove Lakes. It's really exciting and is a good thing for the community.

Unfortunately, upon reviewing the 'Themes and Direction' documents provided for the HRM regional plan review, CPAWS-NS is underwhelmed by the content provided for Blue Mountain-Birch Cove Lakes. Little bits of information are sprinkled throughout, but these documents lack a clear and concise vision for protecting these extremely important lands for the benefit and enjoyment of the residents of the municipality. There is no clearly defined pathway for achieving this very significant wilderness park. The document is uninspiring and lacks passion for Blue Mountain-Birch Cove Lakes. This is problematic if it is signaling that the HRM regional plan will be revised so as also to be uninspiring for protecting Blue Mountain-Birch Cove Lakes and for completing the regional park. We realize this is still early on in the review process, but what we've seen so far is concerning to us.

The documents do not show a map for the Blue Mountain-Birch Cove Lakes regional park, despite the existing HRM regional plan having one. It fails to describe the existing policies for protecting these lands, and the importance of purchasing lands for the park specifically. The area is identified as a growth centre for secondary planning (Highway 102 Corridor), yet fails to mention that Regional Council rejected secondary planning for this specific area in 2016 after a rigorous public debate. The documents do not specifically state that the lands that have already been purchased by HRM for the regional park will be zoned as "Regional Park". The language talking about Blue Mountain-Birch Cove Lakes is very much focused on development rather than conservation. Even where it mentions land acquisition as a potential tool for conservation in general terms, this is immediately undermined by saying that this is "expensive" and must be balanced with the need for "settlement objectives".

CPAWS-NS has been involved with the protection of Blue Mountain-Birch Cove Lakes long enough to know what is happening here. We can read between the lines and it is disconcerting to us. We would like to be convinced that this is not an attempt to water down the existing policies in the HRM regional plan for Blue Mountain-Birch Cove Lakes regional park, but unfortunately what we have read in the 'Themes and Direction" documents does not instill much confidence.

The lackluster approach to implementing the conservation vision for Blue Mountain-Birch Cove Lakes is in stark contrast with the actual conversation taking place publicly about protecting these lands. There is enthusiasm for getting the job done and there is an incredible amount of momentum to achieve this goal. Lots of people, volunteers, and organizations are involved. HRM regional council has approved several unanimous resolutions over the past few years in support of protecting Blue Mountain-Birch Cove Lakes. Better coordination is happening between the various levels of government. The federal government is showing an increasing

interest in being directly involved in protecting these lands. And HRM regional council will soon be receiving a detailed staff report that will lay out various options and recommendations for completing the park and working more closely with the public and stakeholders on key decision-making. This is all really exciting stuff, and long overdue. Yet to read the 'Themes and Direction' document about Blue Mountain-Birch Cove Lakes, it is spectacularly divorced from what's actually taking place. That's a problem that needs to be addressed.

Unless the HRM regional plan review urgently changes course on Blue Mountain-Birch Cove Lakes, and better aligns the various policies and land-use decisions with the wishes of Regional Council and the general public, we are heading toward a huge disconnect between your work (which appears to be going in one direction) and that of the community and other levels of government which are going in the other. It is not too late to act. We respectfully request that you urgently improve your approach to Blue Mountain-Birch Cove Lakes. These are important lands that must be protected. CPAWS-NS provides these comments in a constructive way. We want to help improve the HRM regional plan and to ensure that this document matches the vision that the community has established for protecting Blue Mountain-Birch Cove Lakes as a wilderness park in perpetuity, for the benefit and enjoyment and health of future generations.

Thank you for attention toward this matter. We look forward to following up this written submission with a meeting to discuss our concerns.

Sincerely,

Original Signed

Chris Miller, Ph.D.
Executive Director
Canadian Parks and Wilderness Society
Nova Scotia Chapter

C058

Ecology Action Centre

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Response to the Themes & Directions of the Halifax Regional Plan Review

Overview

The Ecology Action Centre has analyzed the Themes & Directions from an environmental lens and has summarized our areas of concern, support, and critical issues we believe were not sufficiently considered in the report.

The EAC is offering comments on seven themes that directly intersect with our areas of work.

Cross-Cutting Themes and Priorities

Throughout the Themes & Directions, HRM engages in discussions and planning for land and land use. The report lacks any recognition of the connection between Mi'kmaw people and the land, and fails to acknowledge 'HRM' as a part of Mi'kma'ki which the EAC believes is essential for beginning to acknowledge Treaty and inherent rights, and advancing reconciliation. Other documents, such as HalifACT, have recognition of this relationship and it should be integrated into the Themes & Directions. As the first deliverable of the Regional Plan review process, we recognize the importance of the Themes & Directions report in establishing HRM's direction.

Throughout our analysis of the Themes & Directions, we have come back to three primary principles on which the Regional Plan needs to be changed to support a sustainable Halifax.

1. **Allow Halifax's Green Network, wetlands, and watercourses to guide our growth and development**

   HRM has rich green and blue networks surrounding our communities that are worth preserving. Currently, the needs of Nature and the benefits of natural ecosystems are not prioritized when reviewing growth and development decisions. Wilderness spaces, wildlife corridors, wetlands and waterbodies must guide our growth.

2. **Use new growth to build complete communities**

   We envision complete communities with active and public transit, diverse housing options, and essential services across HRM. Firm standards for complete communities need to be developed and growth and development decisions should be made accordingly.

3. ***Discourage growth where it will cause harm***

   Right now, we are subsidizing urban sprawl, developing over valuable greenspace, infilling wetlands and building too close to the coast. Moving forward, our developments need to value ecosystem services, prioritize grey and brownfield sites over development of greenspace, and ensure sufficient coastal setbacks.

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Theme 1 – Considering the regional scale first.

Creating Transparent Criteria Behind Service Area Expansion and Growth Centres

HRM needs clear criteria for where growth occurs. When reviewing lands designated Urban Reserve and future growth centres, as is proposed in the Themes & Directions, HRM needs to *first* establish clear criteria for expanding the Urban Service Area.

Criteria should include whether growth in the area will support the provision of diverse housing options, build complete communities, and support the Priority Plans' objectives. Criteria must take into account loss of community and environmental benefits that may occur through developing the specific site. This should include an inventory of potential developments' effect on the Halifax Green Network as well as an understanding of current ecosystem services being provided by a site.

EAC supports multiple actions proposed in Theme 1:

- The expansion of the Service Area for the Akoma lands and the reassessment of Urban Reserve designation in the Purcell's Cove Backlands to a designation that better reflects the ecological value and sensitivity of the area.
- The adoption of the growth targets suggested by the Integrated Mobility Plan (40% Regional Centre, 50% Suburban, and 10% Rural)

EAC is seeking changes to the following directions:

- Secondary Planning for growth at Sandy Lake and Blue Mountain-Birch Cove Lakes should not occur until clear criteria for development are determined and ecological impacts of development have been understood. *It is important to note that this is not the same as considering the environment at the neighbourhood-design level.*
- The criteria for establishing the Growth Centres should be shared with the public during the review and respond to the current needs of HRM to protect the green network, respond to the climate emergency, and build complete communities.
- The Halifax Green Network needs to *lead* our development and growth decisions rather than simply be *considered*.

Supporting Suburban Intensification

When revising growth targets to benefit quality of life, the feasibility of public transit and sustainability of our communities, the delineation between existing and future suburban communities is important. **Now more than ever, we must look to intensification and development of grey and brownfield sites first, and look to greenfield development as a last resort.** The prioritization of these development methods is essential to building complete communities, preserving our green network, and addressing climate targets.

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- Within the growth targets, a minimum target should be set for suburban intensification and Map 2 of the Themes & Directions report should be advanced to delineate existing suburban communities and future communities.

Theme 2 – Building healthier and more complete communities.

Building Measurable Criteria for Complete Communities

We believe it is essential that clear and measurable criteria for complete communities are established in order to actually ensure new growth occurs in, and is building complete communities. The building blocks for complete communities included in the Themes & Directions reflect our vision for such communities however they are not yet measurable.

The EAC is supportive of the following changes being proposed in the Themes & Directions:

- Development of Suburban and Rural plans with direction from the IMP, HGNP, and BRT strategy to centre growth and build complete communities.
- The use of a decision-making framework/policy for suburban development proposals submitted before the Suburban plan comes into effect.

The EAC would like to see the following aspects of Theme 2 expanded:

- The building blocks of complete communities need to be clearly defined and measured. Specifically, access to nature, age-friendly housing, and neighbourhood-level environmental protection.
- Recognition of the importance of protection of environmental areas, including wilderness, coasts and wetlands.
- Investigation into the needs and barriers to develop opportunities to age-in-place in rural communities.
- Setting minimum targets for suburban intensification.
- Allowing no new suburban developments that will not have access to public transportation.

Theme 4 – Transform how we move in our region.

Transportation and land use are deeply linked and much of the feedback that the EAC has with Themes 1 and 2 are relevant to Theme 4. It is essential that we **create transparent criteria behind service area expansion and growth centres, support suburban intensification,** and **build measurable criteria for complete communities.**

The EAC supports the objective of the Regional Plan review to implement the Integrated Mobility Plan including:

- Higher density mixed-use development around rapid transit including affordable housing and connectivity of local streets and active transportation infrastructure.

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- The growth targets recommended in the IMP. In order to implement these growth targets effectively, a minimum suburban intensification target must be created.
- Prioritizing the movement of people using sustainable modes over the transportation of vehicles using a complete streets approach.
- Broadening the pipeline for road network projects to include all mobility network projects.
- In order to be effective, the Curbside Management Policy will need to engage with the details of implementation, enforcement and logistics.

The EAC believes long-term land use planning to create walkable, transit-oriented, complete communities is the necessary direction and during this process, care must be given so land acquisition tools do not cause the displacement of marginalized communities.

Theme 5 – Social planning for community wellbeing.

The EAC, one of the partners in the Halifax Food Policy Alliance supports the development and implementation of HRM's work on food security and JustFOOD. We see many opportunities to advance community food security, create more resilient food systems, and support a diversity of agricultural and food retail enterprises.

The EAC recognizes the importance of providing housing for all as part of building sustainable and liveable communities. We support the proposed directions in requiring annual housing needs assessments. Annual housing needs assessments are used in other regions facing housing crises and can act as an important platform for planning the municipality's actions.

Theme 7 – Integrating community facilities & parks.

Level of Service Standards and the Park Spectrum

The Level of Service (LOS) Standards for access to parks is essential and we are pleased to see this element included. It is, however, also essential that LOS Standard for access to park be completed in advance of making development and growth decisions in the Regional Plan. **LOS Standards need to consider access to a broad spectrum of parks and nature across the Park Spectrum**. The approach needs to use an equity lens to examine barriers to access to nature for marginalized groups, and potential discrimination in park planning so far.

The Park Spectrum requires details beyond that of a diagram. Many park systems use a park classification spectrum with park categories (see Ontario Parks and NS Parks). HRM's Park Spectrum could place classifications in order from People Focus to Nature Focus. These changes could help create a valuable tool to help guide park management and development.

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Protecting the Parks of the Halifax Green Network

HRM should continue to consider additional tools to secure protected wilderness and parks. Some of these are in Themes & Directions and some are in the Open Space issue document. However, there are more, including:

- Exploring the potential for HRM to receive donated land for inclusion in the park system (and what incentives could be put in place to encourage this) and the potential for HRM to enter into conservation easements.
- Request changes to the Charter that would provide more tools for adding to the park system, and for preserving important ecological features through means other than inclusion in the park system.
- Establish a Parks Strategy for HRM that would direct the strategic expansion and management of parks across the municipality.
- Supporting Community-Based Wilderness Stewardship.

We support the application of the Open Space designation to publicly-owned land at the Wilderness Parks and ecologically important areas of the Green Network. We also support the adoption of policy to guide future park development and management of Wilderness Parks, but still call for a further definition of Wilderness Parks, classification of parks, and the fleshing-out of the Park Spectrum. In order to ensure that parks and open spaces owned and/or managed by community organizations and other levels of government are recognized within this framework **HRM needs to create a framework and plan for working with community organizations.** We encourage HRM to define a way to increase the level of this work.

Theme 8 – Enhancing environmental protection.

Establishing a Municipal Wetland Policy

The inclusion of the proposed increased wetland protection is a positive step. However, the Themes & Directions do not indicate how, and to what extent, wetlands will be protected.

While the Nova Scotia Wetland Conservation Policy has helped in the protection of wetlands across the province, wetlands loss, especially within HRM, is still a concern. While the Wetland Policy requires compensation for wetland destruction, compensation is more likely to occur outside of HRM. Consequently, **while Nova Scotia may be able to better achieve its goal of no net loss of wetlands, this is not true within HRM where wetlands are vulnerable to destruction.**

Wetlands play an important role in natural stormwater management, flood regulation, providing wildlife habitat, protecting coastal communities, and acting as carbon sinks. By adopting a watershed-based approach, protecting HRM wetlands and setting a goal of no net loss of wetlands in HRM, these significant ecosystem services will also be better protected. To address these

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challenges, **HRM can follow major cities across Canada in creating a municipal wetland policy that will better protect wetlands and their ecosystem services**.

Standardizing and Increasing Protection of Riparian Areas

HRM land use bylaw buffer requirements, aimed at protecting riparian areas, are usually about 20m; this should be changed to **100-metre vegetative buffer for all watercourses and 50-metre vegetated buffers from the highwater mark** of streams, brooks, tributaries, and wetlands in HRM should be mandated and identified. Not only will this allow for further protection of these valuable areas, but creating uniformity of buffers across the municipality would create clarity for landowners and developers.

Harnessing the Value of Green Infrastructure in Stormwater Management

EAC is thrilled to see the important discussions around naturalization, green infrastructure, and stormwater management. To reflect these advancements, the Regional Plan should:

- Prioritize the use of green infrastructure features in stormwater management.
- Establish a stronger focus on stormwater quality and better protection of watercourses is needed against the direct flow of stormwater and its pollutants directly into lakes and rivers. Actions 11 through 13 of the HGNP speak to this directly and require adoption.
- Establish a Stormwater Management Plan and program as outlined by HalifACT. This should also include avenues to encourage landowners, especially major landowners, to include and maintain naturalization efforts on their own properties.

Naturalization and nature-based climate solutions are key in how HRM can adapt to and mitigate effects of climate change including strengthening protections of watercourses, flood resilience, drought resilience and coastal protection. The Regional Plan should:

Utilizing Community Mapping to Update the HGNP Corridors

We recommend that this Wildlife Corridor Landscape Design report be integrated into the HGNP maps in order to be adopted into the Regional Plan. The Themes & Directions report proposes to protect natural corridors in part through utilizing and building upon the mapping included in the HGNP. The HGNP identified wildlife corridors by using computer modelling of predicted corridors and called for further work to delineate corridors and operationalize them. Work on the refinement of the locations of corridors has been completed, by stakeholders. **Provincial government employees, Academics with Dalhousie University, and members of non-profits completed a report that maps and describes the locations of wildlife corridors near urban Halifax** including those that facilitate wildlife movement on and off the Chebucto peninsula. This report complements and adds to the mapping in the HGNP and should be used to guide growth.

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Advancing Coastal Protection

The Themes & Directions addressed the significant need to act on coastal protection and prepare for sea level rise. By stating plans to apply coastal setbacks and vertical allowances to *all* buildings, not just residences, the Themes & Directions are introducing an important change, which the EAC firmly supports. In order to adapt our policies to best protect our communities, it is also essential that the review process consider and address an additional risk: coastal undersized lots. **Coastal undersized lots currently waive appropriate setbacks from the coast on lots with that designation**. This allowance introduces significant risk for residents and the wellbeing of our coasts and it is essential that it be addressed during the review. Coastal undersized lots should no longer be eligible for development unless they can accommodate an appropriate setback from the coast without destruction infill of coastal wetlands.

Theme 9 – Leading through action on climate.

The EAC supports the objectives of the Regional Plan review to implement HalifACT as much of the planning for leading through action on climate has already been completed through the priority plan. Of course, climate and land use are inextricably linked. In order to lead on climate action, it is essential that we:

- **Create transparent criteria behind service area expansion and growth centres**
- **Support suburban intensification**
- **Define measurable criteria for complete communities**
- **Take the necessary steps to protect our coasts, wetlands and riparian areas**

C066

Sandy Lake - Sackville River Regional Park Coalition
www.sandylakecoalition.ca

Second Submission to the RP+10 Review

from

The Sandy Lake-Sackville River Regional Park Coalition

July 16, 2021

Sandy Lake - Sackville River Regional Park Coalition
115 Farmers Dairy Lane, Bedford, Nova Scotia
www.sandylakecoalition.ca

Halifax Regional Plan Review RP+10
Kate Green, Regional Policy Program Manager

July 16, 2021

Re: Second Submission to RP+10 Review from Sandy Lake-Sackville River Regional Park Coalition (SL-SRRP groups listed at bottom of page)

This is our second submission to the Regional Plan review (RP+10) on behalf of The Sandy Lake-Sackville River-Regional Park Coalition. We request that this installment be combined with our April 24, 2020 first submission to become part of our overall submission.

Our comments and requests will include both the specific issues at Jack Lake/Sandy Lake Regional Park (We will refer to this as Sandy Lake – Sackville River Regional Park or SL-SRRP), and also more general requests and suggestions that we see as beneficial to HRM.

The requests in our April 24, 2020 submission have been altered somewhat for submission 2 because of changes in circumstances over the year. For example, the Themes and Directions Report states that parts of the HGNP are being acted upon and the HGNP is "to be considered". We request stronger language that leads to real action. We still request that the entire HGNP be implemented into the Regional Plan.

1. **We request that an outcome of the Regional Plan review be that the 1800 acres of undeveloped privately owned lands inside our proposed boundary map, including west of Sandy Lake, be removed from the Growth Centre list and be acquired for the park.**

2. **We request that the city defer the decision on secondary planning in the west Sandy Lake area until the next Regional Plan Review in 5 years time to allow time for several important studies to be completed and considered, listed here:**

a. Conduct an independent ecological (not planning/housing) study of the park boundary needed to preserve the natural assets of the Sandy Lake Regional Park.

b. Conduct an independent floodplain study of the Sandy Lake watershed including how it relates to the rest of the Sackville River watershed. This would include detailed wetland delineation and before and after models.

c. Incorporate the Wildlife Corridors Charrette Report into the Halifax Green Network Plan, and bring this Plan into the Regional Plan. HRM Regional Plan staff attended this charrette and have a copy of the resultant publication under the auspices of the Crown Share Land Legacy Trust. Here is a link: https://www.researchgate.net/publication/350550639_Wildlife_Corridor_Charrette_Halifax_SummaryReport_Mar2021_Final_NSCSLLT

3. **We ask that the requests in sections A, B, and C of the April 24 2020 SL-SRRPCoalition submission to the Regional Plan Review, and the requests in this second submission be addressed within the RP+10 review and implemented.**

We look forward to working with the city on this latest upgrade to the Regional Plan to benefit all of HRM, and the Sandy Lake-Sackville River Regional Park area in particular. Thank you for the opportunity to contribute.

Sincerely,

ORIGINAL SIGNED

***Karen Robinson**, Co-chair of SL-SRRP Coalition Steering Committee and rep. for Sandy Lake Conservation Association*
***Walter Regan**, Co-chair of SL-SRRP Coalition Steering Committee and rep. for the Sackville Rivers Association*
***Mary Ellen Donovan**, SL-SRRP Coalition Steering Committee and rep. for Friends of Blue Mountain Birch Cove Lakes Society*
***Karen McKendry**, SL-SRRP Coalition Steering Committee and rep. for the Ecology Action Centre*
***Ray Plourde**, SL-SRRP Coalition Steering Committee and rep. for the Ecology Action Centre*
***Harry Ward**, SL-SRRP Coalition Steering Committee and rep. for Five Bridges Wilderness Heritage Trust*

cc. Mayor Savage and Council
Kathleen Fralic, Halifax Green Network Plan
Leah Perrin, HRM Planning

Sandy Lake - Sackville River Regional Park Coalition Member Groups:
Sandy Lake Conservation Association
Sackville Rivers Association
Agropur Cooperative Dairy Bedford Plant
Beechville Lakeside Timberlea Rails to Trails

Canadian Parks and Wilderness Society - Nova Scotia Chapter
Canoe/Kayak Nova Scotia
CARP Nova Scotia Chapter
Cole Harbour Parks and Trails Association
Ecology Action Centre
Five Bridges Wilderness Heritage Trust
Friends of Blue Mountain Birch Cove Lakes Society
Friends of McNabs Island Society
Friends of Nature
Halifax North West Trails Association
Kingswood Ratepayers Association
Lucasville Community Association
Lucasville Greenway Society
McIntosh Run Watershed Association
Mountain Bike Halifax
Nova Scotia Bird Society
Nova Scotia Salmon Association
Nova Scotia Wild Flora Society
St. Margaret's Bay Stewardship Association
The Halifax Field Naturalists
The Neighbourhood Association of Uplands Park
The Turtle Patrol
Trips By Transit
WRWEO / The Bluff Wilderness Hiking Trail



Second Submission to the RP+10 Review from Sandy Lake-Sackville River Regional Park Coalition

July16, 2021

Overview

This is the second submission to the Regional Plan review (RP+10) from The Sandy Lake-Sackville River-Regional Park Coalition (SL-SRRP Coalition). It has been over a year since our first submission. We ask that this submission be added to the first submission of April 24, 2020 to form our submission to date.

Please review each of the April 24, 2020 *https://www.sandylakecoalition.ca/rpsubmission* and this July 2021 submissions in detail and address our points and requests in the Regional Plan.

We thank the city for this opportunity to bring our concerns, thoughts and suggestions to the process of revising the Regional Plan. We have reviewed several documents released by the city in this process and as well as relevant June 2021 Q&A sessions. Also, we thank you for meeting with us, for putting so much into communicating with citizens in general, and with our groups specifically. We trust that the city sees the value that community skills, experience, and knowledge bring to our collective table and ultimately benefit the decision-making.

We also thank the city for all that is being done to protect and expand Sandy Lake-Sackville River-Regional Park. We look forward to joining with the city in media work regarding any acquisitions should they succeed. However, as expressed in our first submission of April 2020, we also need to underline the importance of preserving what is left of the watershed. We ask that the city conduct an independent,

science-based ecological study to determine the park boundary needed to preserve and enhance the park's valuable natural assets, and to take whatever steps are required to ensure that boundary is formalized. This would also include doing thorough, independent, wildlife corridor and flood plain studies before a decision is made on secondary planning for any proposals for further housing in the watershed. These studies would be paid for by the city, not by developers, and we have asked to be part of the creation of the Terms of Reference and hiring processes.

About the Sandy Lake – Sackville River Regional Park Coalition: Our coalition has grown to 28 member groups, including three new groups since our first submission; Friends of Nature, CARP, and Cole Harbour Parks and Trails joined us in 2020. The SL-SRRP is a regional interest, not only local. Member groups are listed in the cover letter.

The SL-SRRP Coalition of groups supports the following **mission statement**:

> *"To preserve and protect 2,800 acres of wildlife and aquatic habitat surrounding the Sandy/Jack/Marsh Lakes and Sackville River area as Sandy Lake - Sackville River Regional Park for historical, cultural, conservation, educational, and recreational use." One thousand acres are now in public ownership as the Jack Lake Regional Park. The additional 1,800 acres the Coalition is working to protect are under immense development pressures and need to be protected to maintain the integrity of the Sandy Lake to Sackville River watercourse and as a critical wildlife corridor between the Chebucto Peninsula and central and eastern mainland.*

The proposed Sandy Lake-Sackville River Regional Park is 2,800 acres of rich ecosystem that stretches between the Hammonds Plains Road and the Sackville River encompassing the lands and rivers of Sandy, Marsh and Jack Lakes and the Sackville River. The proposed **SL-SRRP Boundary Map** is Appendix A. Our April 24th 2020 submission provided the original studies referenced for this boundary.

This submission provides studies and reports that have become available since then. We look to the city to complement these studies by doing an independent ecological/science-based study to determine the needed boundary from an ecological standpoint.

Our call for thorough study from a biological perspective comes from the professional planners and scientists who have identified for us **a proposed boundary** to protect the integrity of the ecological unit and also to allow good access to the park from all sides. As was envisioned five decades ago, we see this Regional Park as "the Heart of the Area" as the city grows around. (Appendix B)

Sandy Lake – Sackville River area main requests

The city keeps presenting these lands as being developable – even in the Themes & Directions Report. However, to be responsible, much study has to happen before making such a decision. Studies in the 1970s and since identified the area as important ecologically to preserve as a unit. Current studies are finding this is still the case. When Sandy Lake was put on the list for development, our trusted sources

tell us that none of this important ecological information was considered. Only the housing-needs-yardstick was used.

1. **We are advocating that an outcome of the Regional Plan review be that the 1800 acres of undeveloped privately owned lands inside our proposed boundary map, including west of Sandy Lake, be removed from the Growth Centre list and be acquired for the park.** The Halifax Green Network Plan (HGNP) Action # 31 recommended that brownfield and infill sites be identified for new growth rather than greenfield sites. Sandy Lake would be such a greenfield site. We urge the Regional Plan team to move on this recommendation and focus the Growth Centre list on non-greenfield sites.

   Additionally, at this point in time the policy S-2 criteria for secondary planning has not been met as there is no need for such a greenfield site for development purposes - there being projects to house significantly more than 20,000 people under construction or in the planning process, including some Clayton projects such as the 5,200 people that will be housed as part of the referenced Clayton project involving sub-area 12, the Clayton/Crombie project on the Dartmouth Penhorn lands, the Clayton MacIntosh Run Estates project, the Clayton Carriagewood Estates project, the Clayton 1500 units in Kilncreek and the Clayton Parks of Port Wallace project (subject to environmental remediation).

2. **We have assessed that the Sandy Lake lands are not required as developable land at the present time and for at least the next 5-10 years, we are requesting that the city defer the decision on secondary planning in the west Sandy Lake area until the next Regional Plan Review in 5 years time to allow time for several important studies to be completed and considered, listed here:**
   a. **Conduct an independent ecological (not planning/housing) study of the park boundary needed to preserve the natural assets of the Sandy Lake Regional Park.**
   b. **Conduct an independent floodplain study of the Sandy Lake watershed including how it relates to the rest of the Sackville River watershed. This would include detailed wetland delineation and before and after models.**
   c. **Incorporate the Wildlife Corridors Charrette Report into the Halifax Green Network Plan, and bring this Plan into the Regional Plan.** HRM Regional Plan staff attended this charrette and have a copy of the resultant publication under the auspices of the Crown Share Land Legacy Trust. Here is a link: https://www.researchgate.net/publication/350550639_Wildlife_Corridor_Charrette_Halifax_SummaryReport_Mar2021_Final_NSCSLLT

3. **We ask that the requests in sections A, B, and C of the April 24 2020 SL-SRRPCoalition submission to the Regional Plan Review, and the requests in this second submission be addressed within the RP+10 review and implemented.**

Further historical information

1. When SL was put on the list for development in 2006 RP none of the important ecological info was considered. No studies were done. Politicians and city staff who were there at the time tell us that in 2006 only the housing-needs-yardstick was used.

2. In 1982-7 the decision was even more concerning since we have learned there was significant disharmony between Bedford town councillors and some local citizens, exacerbated by complications caused by poor communication from the Province. We understand the situation had broken down to the point that a Bedford Council majority voted to zone for housing out of frustration rather than continuing to try to create a park under the circumstances. If you read the minutes of Bedford Council from that period you will see evidence of what we have been told by citizens who were there. **That time, in the 1980's, was the key point where Sandy Lake's trajectory changed. The value of preserving the area as park for the good of all was lost, chosen, and apparently from frustration and even anger from a failed process.**

   Now is our chance to right a wrong. We are requesting that the city delay any development decision at Sandy Lake until all of the studies we request are done, that they indicate there is no problem to go ahead, and provide the manner for going ahead. Until then, we are only guessing that maybe some development might be fine. Without all the information we risk losing a long-identified ecological treasure.



Patriquin photos – trees found only in old growth Acadian Forests

Reports and significant presentations since our first submission

1. Dr. Patriquin's "A Report On the State of Sandy Lake, the Historical Trends and its Future Trajectory", posted at http://versicolor.ca/sandylakebedford/waters/lakes/
   Rising levels of salt in Sandy Lake, documented in this report, are highly concerning.

2. Dr. Patriquin's "Summary of A Report on the State of Sandy Lake February 23, 2021" at http://versicolor.ca/sandylakebedford/waters/lakes/sl-report-summary/ (Appendix C)

3. Dr. Patriquin's summary statement of Sandy Lake area species (Appendix D)

4. Karen McKendry's presentation June 3, 2021, to the city's ESSC: *Themes & Directions from a parks & biodiversity perspective*. start at 1:48:35:
   https://www.youtube.com/watch?v=X1lQpTdger4

5. *Nova Scotia Crown Share and Legacy Trust Wildlife Corridor Charette Report*:
   https://www.researchgate.net/publication/350550639_Wildlife_Corridor_Charrette_Halifax_SummaryReport_Mar2021_Final_NSCSLLT

6. Ducks Unlimited Canada's *WETLAND ASSESSMENT REPORTS: WESP data and reports for Sandy Lake and Sackville River Watershed, June-August 2020*. Wetland Ecosystem Services Protocol (WESP) for Atlantic Canada (Appendix E)

7. Ducks Unlimited Canada and NS Department of Lands and Forestry and NS Department of Environment and Climate Change announced Marsh Lake as a 2021 TREASURED WETLAND in NS. "Marsh Lake, true to its name, a lake with a marsh around the margin, partly surrounded by Sandy Lake Regional Park, is a focus of public attention this summer as an amazing wetland from an educational point of view."
   https://storymaps.arcgis.com/stories/4274e1c1ec584850b613e5c856b0eef0

8. On Earth Day, Ecology Action Centre hosted a webinar in which Karen McKendry described the 3-remaining large, wild areas in urban Halifax, of which Sandy Lake - Sackville River is one. View the recording here: https://www.facebook.com/EcologyActionCentre/videos/599429170648617/

9. Support WRWEO's Community-Based Wilderness Stewardship proposal. The city and its citizens and parks could benefit from such a program. (Appendix F)

10. Cities need large, wild urban parks, along with other kinds of parks. Large urban parks ideally contain features like varied habitats, relatively unmanaged land, high levels of biodiversity, old-growth trees, large open spaces and wide vistas, and opportunities for visitors to experience solitude and a sense of remove from civilization. Decisions regarding other infrastructure such as water and wastewater and roads are no more important in their long-term implications for the health and livability of a community than the decisions regarding parks, wildlife connectors and open space.

https://www.anthropocenemagazine.org/2020/03/cities-dont-just-need-parks-they-need-big-wild-ones/

11. SL-SRRP Coalition supports the 2020 RP+10 submission from Our HRM Alliance https://ourhrmalliance.ca/2020/08/21/submission-to-the-regional-plan-review-process/ and its 2021 submission that reflects the Themes and Directions Report (Appendix G).

In particular:

1. We request that the Halifax Green Network Plan be implemented fully and that it clearly guide where we grow now.
2. While we recognize that there are limitations, there are tools and techniques available already that the city can use to protect and leave greenspace intact. For example, as mentioned, Urban Reserve and Open Space & Natural Resource designations can be used to put growth elsewhere. This benefits our communities, vulnerability to climate change, and nature/biodiversity (Loss of biodiversity being an equal threat to survival which parallels the threats from climate change).
3. We request that the city establish a Region-wide Parks Strategy that would direct the strategic expansion and management of parks across the municipality. The HGNP is about more than parks. This request identifies that without a clear vision of what parks do, where they should be, what the various kinds of parks should do, and why, then there is no coordinated vision for decision-making.
4. We request that parks be given real strength and protection from being overtaken by other priorities. For example, too often in the past parks have sections carved away when an area needs a new public building – as if they are reserves for some compromising development.
5. That the significant ecosystem services of wetlands be better protected through a watershed-based approach to wetland protection. Have a goal of no net loss of wetlands in HRM. Other major cities across Canada have created municipal wetland policies to better protect wetlands and their ecosystem services.
6. We ask that riparian vegetative buffers be changed, mandated and identified to be 100-metre vegetative buffer for all watercourses and 50-metre vegetated buffers from the highwater mark of streams, brooks, tributaries, and wetlands in HRM.
7. To reflect the recognition of the importance of naturalization, green infrastructure, and stormwater management in the Themes & Directions, the Alliance believes next steps should include:
    - Prioritizing the use of green infrastructure features in stormwater management.
    - Establishing a stronger focus on stormwater quality and better protection of watercourses is needed against the direct flow of stormwater and its pollutants directly into lakes and rivers, as proposed by the HGNP.
    - Establishing a Stormwater Management Plan and Program as outlined by HalifACT.

The Our HRM Alliance's #4. **Growth Centres and Growth Trends says,**

"Creating Transparent Criteria Behind Service Area Expansion and Growth Centres
HRM needs clear criteria for where growth occurs. When reviewing lands designated Urban Reserve and future growth centres, as is proposed in the Themes & Directions, HRM needs to *first* establish clear criteria for expanding the Urban Service Area.

These criteria should include whether growth in the area will support the provision of diverse housing options, build complete communities, and support the Priority Plans' objectives. The criteria needs to take into account loss of community and environmental benefits that may occur through developing the specific site. This should include an inventory of potential developments' effects on the Halifax Green Network as well as an understanding of current ecosystem services being provided by a site.

Our HRM Alliance supports the Themes & Directions' proposed actions to allow development of the Akoma lands and the reassessment of Urban Reserve designation in the Purcell's Cove Backlands to a designation that better reflects the ecological value and sensitivity of the area. We also support the adoption of the growth targets suggested by the Integrated Mobility Plan (40% Regional Centre, 50% Suburban, and 10% Rural)."

We strongly urge HRM to reconsider proposed actions concerning regional growth including:

- Moving forward with Secondary Planning for growth at Sandy Lake and Blue Mountain-Birch Cove Lakes which should not occur until clear criteria for development are determined and ecological impacts of development have been understood. *This is not the same as considering the environment at the neighbourhood-design level.*
- The criteria for establishing the Growth Centres should be shared with the public during the review and respond to the current needs of HRM to protect the green network, respond to the climate emergency, and build complete communities.
- The Halifax Green Network needs to *lead* our development and growth decisions rather than simply be *considered*.
- We support the Our HRM Alliance "7 Solutions". https://ourhrmalliance.ca/sevensolutions/
- We agree with the Our HRM Alliance recommendation that the Wildlife Corridor Landscape Design report be integrated into the HGNP maps in order to be adopted into the Regional Plan.



From recent HRM documents

1. Page 6 of the **Open Space Issue Paper** states: "*The Halifax Green Network Plan (HGNP) was approved on August 14, 2018 by Regional Council. The Plan is meant to be used as a framework for amending the Regional Plan and Secondary Planning Strategies. The HGNP identified several actions to improve environmental protection initiatives regionwide. Work to implement these actions is ongoing as part of the Regional Plan Review and other planning initiatives, including:*
   Reviewing the Regional Plan and Land Use By-Law requirements for watercourse and wetland protection (Action 6);
   Exploring the use of environmental protection zones to better protect environmentally sensitive features (Actions 5, 18);
   Considering greater protections for the urban forest (Action 9);
   Working with Halifax Water to adopt improved stormwater management standards and guidelines for green infrastructure (Action 11, 12, 13)."

It is encouraging to read that several actions to improve environmental protection initiatives regionwide identified in the HGNP are being implemented, but "reviewing", "exploring", and "considering", are weak action words.

2. **The Shape Our City**, public process of the Regional Plan Review at: https://www.shapeyourcityhalifax.ca/regional-plan makes opening statements that citizens will, and do, focus on with hope. From the Key Ideas from Halifax 's new Themes & Directions document:
   "We can decide how we want Halifax to grow."
   "We can use the Regional Plan Review to strengthen and protect natural and cultural places and use them to shape our region's communities."

   Yes, we focus on these statements with agreement and hope, yet we notice in the Themes and Directions report that Sandy Lake and BMBCL are still listed as areas to be developed. **We look to you to change the direction of the Regional Plan because it is only the plan that can do that.** We have done our best to show that important information was not on the table when the decision was made to aim Sandy Lake toward housing. Redirecting its future back to the 1970's biologists' and decision-makers' vision, and expanding it to suit current scientific information is in your hands. As quoted from former Atlantic Nature Conservancy of Canada director Craig Smith, *"The highest, best use for this property for the citizens of HRM is parkland."* (January 15 2020)

3. **Themes & Directions Report**
   - The Themes and Directions Report defines Urban Wilderness Park. This is very welcome, along with the fact that Sandy Lake and area are listed.

- What we don't have yet is a comprehensive park strategy and logical/ecological delineation of this park. What is the boundary needed to really preserve the park's assets, to protect its wildlife corridors and those connected to them, to protect the lower watershed, floodplains of Bedford & Sackville, from increased flooding?
- Also, there is no mention in Themes & Directions of the importance of Biodiversity. The planet's loss of Biodiversity is not the same threat as that of Climate Change, although the two are connected. It is important to put effort into maintaining biodiversity as an activity in its own right. Sandy Lake area is recognized by scientists as a resource for seed collecting and other forms of species preservation.
  Perhaps you have seen this fine document for understanding its importance: *How Our Health Depends on Biodiversity:*
  https://www.researchgate.net/publication/265187166_How_Our_Health_Depends_on_Biodiversity (summary Appendix H)
- **We agree with the Themes & Directions report that the best way to protect important lands is to acquire them.**
- We note the concerns from the Themes & Directions communications that HRM staff express that there are significant limits to the city's ability to protect parts of the Green Network.
- However, we ask that the city start by using the tools and techniques that the city does already have to protect and leave greenspace intact.

About existing Tools for protecting greenspace

While we recognize that there are limitations, there are many actions HRM can take to protect the Green Network. Utilize the tools we do have to protect the Green Network, and create additional tools where the current tools are limited.

Some existing Tools for Protecting and Conserving Land:

- **Action wording can help protect green space**. In a recent presentation to City Standing Committees the speaker underlined that citizens have high expectation for what planners can actually do regarding environmental protection. However, we respectfully point out that it is important to be aware that these "unmet expectations" are created by the wording of intent by planners themselves. In the Regional Plan, the HGNP, and any number of other planning documents presented to Council and the public all use words and phrases that lead readers to conclude that a desired action is intended. Citizens read and hear the right words about all the right actions, so that is what people expect to see happen. Yet, if one looks closely at wording, even the HGNP is only "to be considered", meaning even the HGNP can have limited benefit. **We request that Council firm up words to clearly create real action – This is VERY IMPORTANT. We see a need for clear action wording that is less misleading than "will consider". Until then all of the plan's ideas and ideals are still at risk.**

- **Establish a Parks Systems Strategy** for the strategic expansion and protection of parks across the municipality.
- **Utilize Open Space, Urban Reserve and Natural Resource designations to put growth elsewhere - move it away from the Halifax Green Network**, and develop appropriate neighbourhood-level zoning options to reflect the ecological needs of the land. This would benefit our communities, vulnerability to climate change, and nature/biodiversity.
- Make necessary changes to update the Halifax Green Network Plan mapping and have it guide growth. This should include updating wildlife corridors to reflect recent community-led mapping done through the Crown Share Land Legacy Trust.
- The Halifax Charter does have provisions allowing HRM to enforce provincial regulations if they choose to do so. It is possible to use the Provincial provisions to do such things as get wetlands, environmentally sensitive areas, and floodplains designated and protect them.
- **Identify and put into place more tools. We encourage the city to add at least the following examples of other tools for acquiring land.**
    - Use the **EcoGifts Program** and other acquisition programs that could replace or complement purchasing acquisition in some cases. Some city staff have told us they are aware of such programs, yet there is little indication their value is being used by the city in the acquisition process. We encourage the city to consider adding such programs to their acquisition tool box.

    - **Land trades** are not mentioned in Themes and Directions as viable options. We understand from planners that trading can be a very successful tool, but is rarely used. Unfortunately, the last trade we are aware of in our Sandy Lake area was the swapping of a 50-acre piece of Sandy Lake Park to protect Morris Pond parkland the same year, 2013, that 300 acres of Acadian forest was stripped from the other side of Sandy Lake. Since then, in 2018, the Sandy Lake Conservation Association worked with the developers who own important ecological lands west of Sandy Lake, and established their willingness to trade if we could interest the city in finding that trade. In June of 2018, Clayton offered to trade the crucial west Sandy Lake lands to protect this park. The question needs to be answered, "Why was this generous opportunity not explored?" City planners told us such a cooperative resolution to this area would be the least expensive and least disruptive option to explore, and that it could be done.

      We worked for two years to alert the city of this opportunity that could save the city much trouble and money and could preserve important watershed of Sandy Lake for all time. We stayed in touch with the developers and were repeatedly told they would trade, and not just for the Jack Lake lands they had already proposed to the city. When the developers met with us in June 2020 to tell us they had waited as long as they could, and were about to apply for secondary planning, they reaffirmed that they had been willing to trade if the city had looked for a win-win.
      We learned this winter that the city did not look for a trade. That the topic was never brought to Council's attention by local council, that the topic was never even discussed in-camera.

Citizens, with the developer's backing, spent nearly two years of efforts to interest the city in trading. All this time we were believing it was the city that wouldn't seek a trade, but why?

- **Zone changing is a further tool**
  - Ask the Province to work with the city to change the Halifax Charter section .237. The Halifax Charter requires lands rezoned to park land must be acquired in one year. Our group along with Our HRM Alliance, BMBCL, Purcell's Cove Backlands Co. and others have been meeting with and writing to the city and province to change that section .237 of the Charter to align it with the more reasonable 5-year time frame required for acquisition of private lands for roads and schools. This is acknowledged as a barrier by city planners. We request that the city ask for the change from the Province. Section .237 is currently a barrier to planners who are trying to acquire land for parks.

  - We suggest the city create a new zoning category that provides better protection than is currently provided for parks, including for existing Regional Parks. Place Sandy Lake and other parks in this new zone. This category, firmer than "Regional Park", is needed because of the history of regional park land and other park land being used for other purposes. Park land is not just "unused" property that can be repurposed when a new school is needed or some other public building. Parks values need to be equivalent to other forms of land use. Parks need firmer protection.

- **Further thoughts on zoning:**
  - As mentioned, zoning to P-park might not work because the Halifax Charter section .237 is a barrier to changing areas to park land, but see the example currently being considered to change zoning at Purcell's Cove Backlands. Those lands west of Sandy Lake in particular we ask to be preserved for park, possibly with an interim rezoning to something less imminently threatening than the current Urban Settlement.

  - "Down-zoning" is not often attractive to municipalities. It refers to a particular way of valuing land. There are emerging alternatives to this measuring stick that show society's values can and do change, as seen at Purcell's Cove Backlands and in the Kings County Municipal rezoning of R-2 and R-7 lands, changes to housing setbacks along farm properties, and other such protections of viable farmland beside towns was achieved in their last Municipal Plan review/LUB of 2019.

    One of our group members was an active participant in the 50-year effort which resulted in success in November 2019 and was completed Feb 2020 when the Minister of Agriculture not only ratified the "'down-zoning" but also disallowed the 11-th hour compromised motions that would have prevented agricultural land from proposed protections under certain areas and circumstances favoured by some. https://www.saltwire.com/news/local/new-county-of-kings-planning-documents-amended-following-provincial-review-419846/

Kings Co. municipal Land Use By-Law:
https://www.countyofkings.ca/residents/services/planning/lub.aspx

In this process, the farmers in North Kentville had been working since 1974 to have their ~400 acres of farm land returned to A-1 zoning. At that time, the municipality expropriated farm land for a new sewer pipe, installed a sewage treatment system, and zoned the farms R-2 for future housing for the town of Kentville, all against the will of the farmers. This 2019 LUB returned all but one small piece to A-1 Agricultural zoning.

One might assume that protecting agricultural land is a "no-brainer". However, a closer look will find that housing development traditionally took precedence over preserving easy-to-build-on, and apparently plentiful, farm land. Yes, society's values can and do change. That is one reason why this Regional Plan Review is so important.

With that in mind, this submission and our April 24 2020 submission reveal new information that has surfaced about Sandy Lake and area that shows the 1982 decision of zoning, and then proceeding toward development for housing in the 2006 RP, were taken without important information. Is that not a good reason to stop the current direction and look at the information that was missed, plus new information, such as HGNP, wildlife corridors and Climate Change issues? That as stated in the opening to the Themes and Directions Report, Sandy Lake area is a prime location for looking again – that a change in direction may be warranted, as was boldly done in Kings County.

Urban service boundary

It is concerning that in the Themes and Directions Report it appears that the city intends to move forward with the planning of three growth centres, two of which are at Sandy Lake and Blue Mountain-Birch Cove Lakes. We refer you to the previous comments for both instances.

However, it also indicates an intent to develop transparent criteria behind regional growth decisions, including the location of growth centres and reviewing the Urban Service Area and Urban Reserve designation where circumstances have changed.

The Akoma lands are an example of where the service area ought to be changed for the benefit of the community and providing diverse and needed housing options. As noted, the Purcell's Cove Backlands are an example of land zoned Urban Reserve which could be reviewed in favour of a more conservation-focused designation.

- **We have an update on the status of the oversizing of wastewater pipes** (see our April 24 2020 submission). We requested details from Halifax Water and received the attached reply (Appendix I)

We learned in a meeting with city staff, October 7, 2020, that the city has spent only $800K of the $3m intended to be spent on oversizing wastewater infrastructure for facilitating the Sandy Lake development.

- **We do not encourage the city to spend any more money on that proposed plan**. We encourage the city to use the remaining funds toward some other housing development, and to foster the park at Sandy Lake instead.

  At Sandy Lake-Sackville River we request that in your review of the Urban Service Area and Urban Reserve designation you to recognize that if circumstances have changed at all, the area has become even more valuable environmentally than it was before the unfortunate moment in time when a decision was taken by Bedford Town Council in 1982-83 to zone park land to become developable land.

- See the Themes and Directions Service Boundary Map (Appendix J)
  - **We request the service boundary not cross Hammonds Plains Road**
  - **We request that particular care be used in decisions and practices in development of any lands within the Sandy Lake and Sackville River watershed, including Sub-area 12.** (Appendix K)



Sandy Lake

Mature tree protection

We underline the need for tree-retention by-law with teeth that will protect trees on private property from unnecessary cutting or destruction. As requested in our first submission. Examples of the importance of this need continue to happen, but few are as blatantly obvious as the clear-cutting of 300 acres of Acadian Forest beside Sandy Lake in 2013 by an angry developer who admitted he did it "out of spite" at not getting his way. Here are pictures of some of the trees that were cut for no reason, simply because the landowner had the right to do as he wished on his land.





Planting new seedlings has value, but the natural services supplied by new trees are far outweighed by that of mature trees. The economic benefits to protecting nature far outweigh the benefits of exploiting it. https://phys.org/news/2021-03-economic-benefits-nature-outweigh-exploiting.html

At Sandy Lake the 300 acres are eight years into regrowth and are already beginning to serve the lake and watershed. However, keeping adult trees in the ground is far more beneficial for many reasons, including protection against Climate Change: https://theconversation.com/keeping-trees-in-the-ground-where-they-are-already-growing-is-an-effective-low-tech-way-to-slow-climate-change-154618

A remarkable scientific book entitled "**Finding the Mother Tree:** *Discovering The Wisdom Of The Forest*" by Suzanne Simard, the world's leading forest ecologist who forever changed how people view trees and their connections to one another and to other living things in the forest. The book is a scientific story that affects a "paradigm change" in how we understand forest plant communities. https://suzannesimard.com/finding-the-mother-tree-book/



"The Cathedral" at Sandy Lake

Wetlands

We ask that HRM establish a Municipal Wetland Policy

The Nova Scotia Wetland Conservation Policy has helped in the protection of wetlands across the province. However, wetland loss within HRM is of particular concern. The Wetland Policy does require compensation for wetland destruction. However, compensation tends to happen outside of HRM. In HRM wetlands are vulnerable to destruction. By adopting a watershed-based approach, protecting HRM wetlands and setting a goal of no net loss of wetlands in HRM, these significant ecosystem services will be better protected. HRM can follow major cities across Canada in creating a municipal wetland policy that will better protect wetlands and their ecosystem services.



Wetland in Subarea-12

Sub-area 12 as it relates to Sandy Lake/Sackville River

An urgent and current example is **Sub-area 12 of Bedford West housing development, along with west Sandy Lake.**

Recently, AllNovaScotia reported that Clayton Developments is proposing to begin development of Bedford West Sub-area 12. Clayton advised that the project area covers 238 acres plus parcels on the west side of Larry Uteck Blvd, for a total of 2500 units (5,200 people). The area in question is shown in Appendix L as the triangle below Hammonds Plains Road that includes the strip on the other side of Larry Uteck Blvd.

Background

The Parks of West Bedford sub-area 12 lies within the Sandy Lake watershed which, in turn, is part of the Sackville River watershed. As you are aware, the Sackville River Association has spent the last 33 years bringing back the Sackville River to tremendous public acclaim. The Sackville River was once a significant salmon river and much effort and public funding have gone into restoring the configuration of the river bed to suit salmon needs. In recent years there has been an effort to expand the conservation efforts into the larger watershed as they are critical to the health of the Sackville River. Those efforts have resulted this Spring in the provincial announcement of its intention to designate the Lewis Lake lands as protected.

Protection of Sandy Lake not only protects the watershed of the Sackville River but also the many species that enjoy the very rich habitat of the Sandy Lake/Marsh Lake area and particularly the associated tributary area on the west side of Sandy Lake. Much work has gone into documenting the old growth forests in the Sandy Lake area, the numerous species that inhabit the area, and ongoing water quality sampling at Sandy Lake. In the midst of this, salmon have been observed again in Sandy Lake, demonstrating the interconnectedness of the watercourse systems, reminding us all that the Sackville River as an important water system does not stand on its own but has a major dependency on the watercourse systems around it.

Wetland values

Because of the significant ground-truthing in the last several years of the Sandy Lake surrounds, additional wetlands not found on the various wetland maps have been documented – the accuracy of wetland mapping being a regular problem not specific to this area. Appendix M is an updated map of the area's wetlands drawn from several sources, and Ducks Unlimited's recent WESP report of the area. Other wetlands are in the process of being added to this map from other map sources.

Not only is Sandy Lake and its immediate tributaries part of this larger system, so is the watercourse feeder system within sub-area 12. There are two major concerns with respect to the sub-area 12 water feeder system: (1) that there be no change in the quantity of water feeding the Sandy Lake watershed, and (2) the quality of the water not be impacted either during or after construction. We are concerned there might be a replication of the Governor's Brook redirection of groundwater/stormwater from William's Lake.

We are concerned that sub-area 12 wetlands are slated for destruction as part of the development. The NSE&CC policy dictates the creation of substitute wetlands, but these are not created within any

proximity to the affected wetland and therefore are unsupportive of local wildlife. **Under these circumstances we are of the view that the approach should be that no wetlands be affected by the proposed development and that the identified corridors and wetlands remain in place.**

As you know, Clayton applied last year for secondary planning for the west Sandy Lake lands which application has been assigned for consideration to the Regional Plan Review. This is the overarching topic of this submission.

Clayton communicated to our representatives on two occasions (June 2020 and August 2020) that the company can not afford to develop Sub-area 12 without also developing at least a portion of the area west of Sandy Lake. We presume that is no longer the case. We have previously had HRM assurances that the development by Clayton of the lands west of Sandy Lake is not being addressed as part of the development of sub-area 12. **We would appreciate your assurances that this remains the case and no discussion regarding infrastructure sizing etc. is tied to the development of the lands west of Sandy Lake.**

Wildlife Corridor

The properties of Sub-area 12 and west of Sandy Lake connect with the "Essential Wildlife Corridor" identified in the Halifax Green Network Plan, and are linked to accompanying "Important Corridors" through the area and into Blue Mountain Birch Cove Lakes and the Chebucto Peninsula.

To achieve a best practices approach to the development of sub-area 12, an analysis of how it is intended that the HGNP corridors and greenspace priorities will be integrated with the overall development is needed and we presume is being, or has been, undertaken. Is this to be published by Planning & Development online?

It should be noted that in the corridor charrette one of the ground-truthing experts noted that turtles are crossing the Hammonds Plains Rd from the wetland at the apex of the sub-area 12 triangle at the Kearney/Larry Uteck lights – not a particularly safe choice but seems to be the preferred choice. **We are interested in seeing how this situation is intended to be addressed in the project plan and how this wetland is to be managed.** Note that this is one of the wetlands missing from the map mentioned above.

Also, how is the remaining corridor at Webber's Lake, which is identified in both the HGNP and the corridor charrette report as being Essential to the corridor system, to be preserved?

Stormwater runoff during construction and afterward

A related concern is protection of valuable wetlands and habitats during neighbouring housing construction. This concern is magnified by what has been happening in Bedford West with the serious siltation from Brookline, despite promises that such things would not happen. This arises from contractors taking shortcuts at the expense of the larger community, in particular downstream impacts.

And HRM enforcement has been virtually non-existent with no inspectors seemingly assigned to routinely inspect the site especially during rain events. The sub-area 12 contractors are expected to have little interest in ensuring that their activities have no impact on adjoining watercourses or on Sandy Lake. It's a case of short-term thinking ignoring longer term impacts. At Brookline, very limited mulching was provided to control siltation, then siltation control fabric at catch basins was hung on sticks beside the catchbasins probably to free up the catchbasins – not quite sure how they could catch any silt hanging in the air. And then landscapers temporarily stored soil on paved streets while they readied the property for the soil while HRM inspectors were nowhere to be seen. These are just but a few of the numerous examples of the failures around siltation management at Brookline Park. In 2021 none of this is acceptable. We know the long-term impacts of substandard stormwater management practices which were so evident at Brookline Park. There is absolutely no reason to believe that this will not be replicated at sub-area 12 unless there is a concerted effort to address same.

Of interest is the River-Lakes Secondary Plan which requires that there be no net phosphorus in the stormwater flowing from the property. **We are asking that consideration be given there be as a minimum a similar standard set for sub-area 12 together with the same approach to salt run off and siltation run-off and that there be no net loss of groundwater flow.** The Sandy Lake scientific studies done to date have a particular lens on water conductivity issues and as a result there is a heightened concern that the stormwater runoff will result in significantly enhanced conductivity issues in Sandy Lake and its tributaries such as Johnson's (Bob's), Karen's, Western and South brooks and their associated wetlands.

Discussions with Clayton indicated an intent to make changes related to the bog at the end of Bluewater Rd. **We believe that an analysis needs to be done to determine what impact any changes that might affect this bog would have on the nearby Sandy Lake tributaries.** We are concerned that there is a plan to simply fill in the bog and redirect the water elsewhere thereby negatively impacting the water quantity to the Sandy Lake tributaries which primarily lie on the western side of the lake.

As Subarea 12 is developed, and in all housing developments, we must do better than this.

We ask that the city take steps to prevent damage from stormwater runoff during and after construction, when the streets and homes are functioning. Because Subarea 12 is in the Sandy Lake watershed, both aspects are very important to the health of the lakes and watershed.

> **a. We wish to see details of how stormwater will be managed during, not just after, construction. This entire Subarea-12 area lies within the Sandy Lake watershed and places Sandy Lake and the Sackville River system at risk if it is not done well. The Sackville River watershed is one of HRM's only five main water corridor "spines" in the HGNP.**

As Sub-area 12 is allowed to be developed, stormwater must be superbly controlled both during construction and afterward.

Stormwater from both existing and planned developments across the city must be treated before it is discharged into water courses, including in the Sandy Lake watershed.

Reconfigure the Growth Centre List

We understand that the HGNP is being integrated into the Regional Plan during the current RP+10 Review process. According to the HGNP Report of 2020 (February 2021, Appendix N excerpt) https://www.halifax.ca/sites/default/files/documents/city-hall/standing-committees/210218cped111.pdf , several HGNP action items will be dealt with within the Regional Plan. Several will impact the waterways and corridors of the two areas, Sub-area 12 and Sandy Lake west.

Item 29 was implemented over a year ago. Items 30, 31, 32, 35, 37, and 62 are all important to the preservation of the Sandy Lake – Sackville River Regional Park area. In particular, Items 30 and 31 are "to be completed as part of the ongoing Regional Plan Review". As noted above, Item 31 calls for amending "the Regional Plan to prioritize the redevelopment of brownfield sites and other underdeveloped urban infill sites ahead of undisturbed greenfield sites."

We request that the city move brownfield sites and other underdeveloped urban infill to be next in line for development, and move BMBCL and Sandy Lake well down the list while the requested studies are done to prevent possible harm to the area.

Because both the secondary planning application and these and other Action items from the HGNP are all to be dealt with within the Regional Plan Review, we want to make sure that you take care not to allow Sandy Lake and area to find itself slipping between the cracks caused by timing. **We request that the city take steps to preserve the wetlands and corridors through both Sub-area 12 and the Sandy Lake area now, before Sub-area 12 is approved,** to protect the wetlands and wildlife corridors, indeed the 11 rich habitats and 20+ Species of Interest/Species at Risk associated with them in this area.

Note that Action item 30 supports our call for the ecological studies we have listed above, and possibly others.

Further observations and requests regarding parks

- **Create a well thought out Park Systems Plan**. We have detailed plans for housing development. We need equally respected and equally detailed plans for parks and how they will serve their functions. We have compiled a list of 42 Regional Parks from city documents, but there is no parks systems plan, and no timelines for achieving them. Without a coherent parks plan the parks are at risk. The current ad-hoc approach leads to park land being used for other purposes. Having no real plan for parks is costing us all.

- **The Halifax Green Network Plan (HGNP) needs to be implemented into the Regional Plan Review before any decisions are made to proceed with development** in any areas referenced in the HGNP. Important habitats, wetlands and valuable corridor areas could slip through the cracks of bureaucracy if projects are allowed before the HGNP has had a chance to do what it was designed to do.
- It is important to recognize that the HGNP is not a parks plan. It is a green network plan which includes existing and potential parks, plus a lot more. We ask for your support through the Regional Plan to prevent harm to wetlands and corridors, including Sandy Lake-Sackville River and Sub-area 12 through to the Chebucto Peninsula.

- **We request again that the city conduct a staff report to determine whether that 2015 map was or was not drawn to be an approved boundary that would protect the park's assets. (see our April 24, 2020 Submission).** In our April 24th RP submission where we requested again that the 2015 conceptual map be the topic of a staff report to determine its genesis, we have continued to request and follow up on that request. While it is very important to acquire the undeveloped lands within the 2015 Conceptual Map boundary, as noted, those significant lands outside the boundary, including those owned by developers, can make or break the park.

- We request that the city hire more Environmental Staff. Awareness of the importance of protecting many aspects of the environment has grown. The department's staff numbers must be expanded to fit the need.

- We request more staff for the city's Urban Forestry department. Awareness of the value and importance of protecting mature trees has grown. Staff currently struggle to oversee development projects. More staff are needed to care for street tree needs and to protect and care for more rural tree stands.

- The new reports show the Johnson's Brook sub-subwatershed, which includes the area along Hammonds Plains Road, is very important to protection of Sandy Lake and the entire system through to the Sackville River to the Bedford Basin.

- As we write this, a city-wide Parks Patrol Program is being developed to enforce by-law P-600 and thereby protect the natural assets of our city's parks. At Sandy Lake, the partners are educating and notifying off-road vehicle associations that enforcement of the long-posted "No Motorized Vehicles" signs is about to begin in this city park to protect the 11 habitats, wildlife and walking trails from unauthorized recreational vehicle damage.

- **We request that the city implement a low-wake boating by-law for Sandy, Marsh and Jack Lakes.** Also, that the city assess other parks with lakes across the region to determine if such protections are warranted in their lakes. Sandy Lake was part of the application when Kearney Lake, Lake Banook and Micmac lakes became low-wake waterways. Decision-makers denied Sandy Lake, saying there was "no problem there yet". The problem is there now. The lakes loons have failed to raise even one chick in the past four years because of speed boats. Lake

dwellers have witnessed the drownings in two of the four cases. **We request that this bylaw disallow any public boat launch facilities other than for paddling.**

- Our coalition of 28 groups request the city delay any decisions to proceed with housing in the Sandy Lake – Sackville River Regional Park area for another 5-years, until the next Regional Plan review. This would allow time for independent, biologically-based boundary, corridor, and floodplain studies to be completed before irreparable damage is done to the proposed park area and to the HGNP goals, including to the city's wildlife corridors.



In closing

As mentioned in our April 24 2020 submission, about 800 of the 1,800 acres within our proposed Sandy Lake-Sackville River Regional Park boundary belong to about 20 private landowners. The balance, approximately 1,000 of the 1,800 unprotected acres, is owned by developers. One that owns about half of that, west of Sandy Lake, has applied for secondary planning in the RP +10 Review.

The 1971 Dean report, Natural Environment Survey, classified Sandy Lake and Marsh Lake as Category 1: *"…consists of natural assets that are unique in the Halifax-Dartmouth area or important on a regional or provincial scale. This category includes important wildlife habitats and ecologically rich or fragile areas."* The Sackville River as a Category 4 area *"of high recreational or environmental value."* p.6.

"This area should be reserved immediately for public use before it is irreparably damaged by adverse developments … Since the land need not be developed (for park) immediately, considerable flexibility is

available in bargaining with owners. It should be emphasised that this is a prime park land – nature reserve site in an excellent landscape setting." P. 50.

We have unfortunately passed the point where acquisition can be leisurely and relatively inexpensive, however it still needs doing. More now than ever, given Climate Change and biodiversity pressures and the rapid expansion of the city toward the area – butting up against what can logically be a high-quality wild urban park for the new citizens. We must consider the value and not just the cost.

Over the decades, despite some setbacks, deliberate actions by community, municipalities, the province, and others have preserved for many decades the beautiful old growth forest, and thus set these lands and waters up to still be uniquely worth acquiring for park protection. One mistake in 1982-3 set the area on a different path that has continued since, when well-meaning decision-makers voted to zone parkland to become developable reserve and set the ball rolling. We must do whatever is required to reverse that error.

Foxes and fish don't recognize property lines made by humans. It is the natural ecological boundary that will protect an area. The natural boundary of this system resembles more of the original concept of the 1970s Regional Park, which called for parkland around the lakes, not to one side, including buffers and flood plains. We request that the city acquire the 1,800 acres, including developer's lands, in order to protect the long-known-about valuable ecological unit.

The city will always need more housing. Placing housing in an area that is identified as a natural unit worth preserving, that was identified as such in many studies since at least 1971, would be tragic. Please re-read the first submission for the history and current natural values of the area, including but not limited to a remarkable number of Species at Risk and Species of Interest, 11 habitats, outstanding educational and recreational values and flood plain protection for the Sackville River.

4. **We are advocating that an outcome of the Regional Plan review be that the 1800 acres of undeveloped privately owned lands inside our proposed boundary map, including west of Sandy Lake, be removed from the Growth Centre list and be acquired for the park.**

5. W**e are requesting that the city defer the decision on secondary planning in the west Sandy Lake area until the next Regional Plan Review in 5 years time to allow time for several important studies to be completed and considered, listed here:**

    a. Conduct an independent ecological (not planning/housing) study of the park boundary needed to preserve the natural assets of the Sandy Lake Regional Park.

    b. Conduct an independent floodplain study of the Sandy Lake watershed including how it relates to the rest of the Sackville River watershed. This would include detailed wetland delineation and before and after models.

c. Incorporate the Wildlife Corridors Charrette Report into the Halifax Green Network Plan, and bring this Plan into the Regional Plan. HRM Regional Plan staff attended this charrette and have a copy of the resultant publication under the auspices of the Crown Share Land Legacy Trust. Here is a link: https://www.researchgate.net/publication/350550639_Wildlife_Corridor_Charrette_Halifax_SummaryReport_Mar2021_Final_NSCSLLT

6. **We ask that the requests in sections A, B, and C of the April 24 2020 SL-SRRPCoalition submission to the Regional Plan Review, and the requests in this second submission be addressed within the RP+10 review and implemented.**

The 1800 undeveloped acres need protection and not compromise. Sacrificing an outstanding ecosystem is not a solution. Once it is paved it can't go back.

This Regional Plan review has the ability to reset the trajectory of this outstanding natural unit back to its most valuable role for the city, as parkland. It is in your hands as you adjust the Regional Plan to set all this to rights.

Thank you for this opportunity to provide input on our particular concerns from the Sandy Lake-Sackville River area.

We send good wishes to all involved for a wise and excellent outcome.

Most Sincerely,

Sandy Lake-Sackville River Regional Park Coalition (SL-SRRPC)



APPENDIX A

Sandy Lake – Sackville River Regional Park
Planning vision



Recommended boundary of Sandy Lake - Sackville River Regional Park in community context

Municipal land ownership in area of Sandy Lake – Sackville River Regional Park

Sandy Lake – Sackville River Regional Park boundary

Municipal Land ownership

Sandy Lake – Sackville River Regional Park

Planning context



APPENDIX B

APPENDIX C

A DRAFT Report on the State of Sandy Lake, the Historical Trends and its Future Trajectory

David G. Patriquin
Prof of Biology, Dalhousie University (retired)

February 23, 2021.

BACKGROUND & HIGHLIGHTS

Background

Since June of 2017, I have been conducting observations on the plant communities of the surface waters and forests in the area of Sandy Lake (Bedford, NS) as a volunteer for the Sandy Lake Conservation Association. The results and related literature, links etc. are compiled on a website titled "Forests and Surface Waters of Sandy Lake & Environs (Bedford, Nova Scotia), A Natural History Perspective" (http://versicolor.ca/sandylakebedford)

The observations to date have included limnological profiles on Sandy Lake conducted on Oct 2, 2017 and Sep 29, 2019, and many measurements of electrical conductivity (salt), temperature and pH of lake water and associated streams. Derek Sarty, Bruce Sarty, and Ed Glover have assisted in collecting these observations.

In this report, those observations are integrated with information available from earlier observations and reviews and related scientific literature to provide an assessment of the current state of the lake and its future trajectory. As such, it is essentially a follow-up to the comprehensive review on the state of the lake conducted for HRM by AECOM (2014), and a re-evaluation of AECOM's projected impacts of new development on the state of the lake in the light of new information. (Except for a few water samples, AECOM (2014) was entirely a desktop study.)

I am seeking critical comment on the Draft and will revise it for a Final Report. The Draft Report is posted at http://versicolor.ca/sandylakebedford/waters/lakes/; it is also available there as a PDF for printing.

Highlights

Sandy Lake, located in Bedford, Nova Scotia is 78.5 ha in area, 21.7 m maximum depth. The watershed (24.2 square kilometers) was entirely forested in 1967, 21 % developed in 1986 and currently is about 30% developed. Some new development to accommodate about 2400 people has been approved but has not yet taken place; more intensive development has been proposed which would add as many as 15,000 people and bring the developed area up to circa 45% of the watershed. The lakeshore itself is only lightly settled, on the west and south sides of the lake.

Sandy Lake was oligotrophic in 1971 and made a transition to mesotrophic circa 2001; in 2012 Total P was circa 12 ug/L. While the lake appears to have acidified significantly for a period in

response to acid rain, it supported Atlantic salmon historically, and the current pH is circa 6 to 6.5. Atlantic salmon have been sighted in the lake recently, also American eel, speckled trout and gaspereau; all are desirable species facing significant challenges today. The Sackville Rivers Association constructed and maintains digger logs on Peverill's Brook to facilitate movement of these migratory fish to and from Sandy Lake. Invasive smallmouth bass have been present for some time and are the species now most commonly caught by anglers. The wetlands fringing the lake support large populations of frogs; snapping turtle (endangered) are also common. Beavers, otters and loons feed and reproduce on or close to the lake. The Lions Club Sandy Lake Beach Park is especially popular with families because of the clean water, sandy beach and gentle slope into deeper water. HRM offers swimming lessons at the park in the summertime.

AECOM (2014) used the Lakeshore Capacity Model (Dillon and Rigler 1975) as elaborated by Brylinski (2004) and MOE (2011) to predict the effects of the proposed development on lake Total P, a predictor of lake water and fish habitat quality. They set the WQO (Water Quality Objective) at 18 ug/L which was 50% above the current –circa 2012 - value (12 ug/L), but still in the mesotrophic range. Based on their modelling, they concluded "Cumulative impacts of development on phosphorus concentrations are predicted to increase to 16 µg/L for Sandy Lake when mitigations measures to decrease phosphorus loading are not implemented... Removing point sources of phosphorus such as the Uplands WWTF and septic systems near Sandy Lake by connecting them to municipal wastewater services decreases the predicted phosphorus concentrations to 15 µg/L... Additional phosphorus mitigation measure using advanced stormwater management that reduces phosphorus runoff by 50% is predicted to further decrease the phosphorus concentration of Sandy Lake to 13 µg/L".

AECOM (2014) also noted that "the degree of influence of urbanization on water quality in Sandy Lake can only be approximated using the phosphorus load model because of limitations arising from assumptions and uncertainty in the application of the model". They proposed "a robust water quality monitoring plan...to provide a further assessment of current conditions and to evaluate the impacts of development on the water quality." A formal monitoring program has not yet been implemented but Sandy Lake was identified as a Priority Lake for future monitoring in a recent AECOM report on lake monitoring for HRM (AECOM, 2020).

The quasi-formal observations we conducted and some of the historic observations cited by AECOM (2014) indicate that the lake is currently in a precarious state.

Deep water oxygen in 2017 and 2019 was 2.25 and 2.29 mg/L mg/L compared to 5 mg/L in 1971 and 3 mg/L in 1998. AECOM (2014) cites provincial data showing that on 2 of 3 sampling dates in the summers of 2008 to 2011, deep water Total P was highly elevated compared to surface water Total P, an indication that the deep waters were hypoxic. That condition accelerates eutrophication and decline of water quality and habitat for salmonids.

An intense but transient algal bloom in 2019 is another early warning sign. It occurred in early August and coincided with an abrupt lowering of the lake level following the legal removal of a beaver dam in the outlet stream (Upper Peverill's Brook). A plausible explanation (by analogy

with effects of rapid lowering of water level in reservoirs): there was high total P in the hypolimnion; disturbance of the thermocline associated with the rapid water movement resulted in a flush of the deep water phosphorus being released into surface waters; the bloom began quickly and once the water movement stopped, dissipated quickly. Transient disturbance of stratification in the summer period by wind was recognized as a potential issue at Mirror Lake, NY when spring turnover is impaired in some years by winter salt loading (Wiltse et a;., 2020). An extreme summer wind event could likewise be a threat at Sandy Lake.

Rising levels of salt in Sandy Lake, documented in this report, are highly concerning.
The CCME (2011) guideline for chloride ion for the protection of aquatic life is 120 mg/L for long term exposure, and 640 mg/l for short term exposure, corresponding approximately to EC (Electrical Conductivity) values of 470 and 2410 uS/cm respectively, using the conversion formula given in AECOM (2020). Current lake EC values, mostly in the range 150 to 250 uS/cm are still well below the long term exposure guideline, but values in streams frequently exceed that value.

The 2017 and 2019 limnological profiles revealed elevated EC (salt) levels in the hypolimnion compared to the epilimnion. Extensive sampling of surface waters illustrated that the salt is coming from settled areas in the upper reaches of streams feeding Sandy Lake. Rough mass balance calculations suggest that about three-quarters of the water entering Sandy Lake is influenced by salt inputs from settled areas. Seasonally, stream EC values over 2019 and 2020 peaked in March and then again in July (2019) or October (2020); the latter peaks are suggestive of a groundwater salt signal.

At some point such stratification could interfere with normal lake turnover, initially the spring turnover. It's quite possible that is already happening based on similarities of the Sandy Lake morphometry and early fall limnological profiles to those of Mirror Lake NY (Wiltse et al., 2020). Although Mirror Lake is oligotrophic (by Total P criteria), in recent years it has experienced low oxygen in the hypolimnion following high salt loading in winter and failure to the lake to turn over in spring due to salt stratification. The early fall salt profiles in Sandy Lake are similar to those for Mirror Lake (we don't have spring profiles). The deep water winter values that impaired spring turnover at Mirror Lake, circa 115 mg/L chloride versus 34 mg/L at the surface, indicate that spring turnover can be impaired by salt levels less than the CCME Guideline for long term exposure (120 mg/L) which is also the WQO for chloride cited by AECOM (2014) for Sandy Lake.

The salt signal we are viewing for Sandy Lake is also an 'urban influence signal' and increased loading of organics and nutrients from urbanized areas might contribute to or otherwise account for reduced hypolimnion oxygen levels.

Salt levels are increasing in Sandy Lake and if continued would very likely impair or further impair spring turnover and worsen the already precarious condition of the lake. While Best Management Practices can reduce salt loading, the overriding cause of increased salt-loading in

the snow and ice latitudes is increased area of settlement/hard surface in a watershed; such settlement area effects can be only partially reduced by BMPs.

Sandy Lake represents an enviable situation where we still have the option of choosing the most effective way to prevent the predictable and largely inevitable deterioration of a treasured lake associated with increasing urbanization: to strongly limit as yet unapproved development in the watershed, especially close to the lake itself and to streams draining into the lake.

Even without further development, it is important to reduce existing inputs of sediment, organics, nutrients and salt as much as possible to counteract the increasing stresses associated with climate warming (e.g., longer periods of summer-fall stratification, reduced oxygen solubility and more favorable temperatures for algal blooms). Thus to maintain Sandy Lake as an invaluable community recreational area and as habitat for iconic species such as salmon and loons, the WQO for Sandy Lake should be to "walk the lake backwards" as much as possible to an earlier, more pristine, oligotrophic state.

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APPENDIX D

Dr. Patriquin's summary of Natural Wonders Avian Species Report

http://versicolor.ca/sandylakebedford/species-lists/avian-sar-report/

In March 2020, the Natural Wonders Consulting Firm (NWCF) reported on Avian & Species at Risk Surveys of the proposed Sandy Lake – Sackville River Regional Park.
There were an astounding 11 habitats identified within the proposed park.

Data drawn from the Report:

- 117 species of birds visit or reside year-around or seasonally within the SR-SRRP
- 99 bird species nest within the SR-SRRP
- **15 are avian species of "Species of Concern"**
- Of those 15, **7 are classified as "Species-At-Risk"** and are protected under the Nova Scotia Endangered Species Act

The NWCF Report also documents the presence of **6 non-avian Species-At-Risk** in the SL-SRRP, these being the

- Monarch Butterfly
- Little Brown Myotis (Bat)
- Moose (Mainland Population)
- Common Snapping Turtle
- Eastern Painted Turtle
- Wood Turtle

Two Species present but not cited as they are aquatic species and outside of the scope of the NWCF study are

- Atlantic Salmon
- American Eel

In summary, the proposed park has at least **15 avian and non-avian Species-At-Risk** on **Federal and Provincial lists, along with an amazing number of old growth forest stands,** part of the less than 1% still remaining in the province.
Dr. Patriquin asks, "Is there any other equivalent area in HRM?"



APPENDIX E

WETLAND ASSESSMENT REPORTS

WESP data and reports for Sandy Lake and Sackville River Watershed

Abstract

Reports and scores for WESP assessments completed at 6 sites in June – August 2020. Report completed for Sandy Lake Conservation Association by Ducks Unlimited Canada staff.

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Introduction to Wetland Ecosystem Services Protocol (WESP) for Atlantic Canada

What is WESP?

WESP-AC (Wetland Ecosystem Services Protocol for Atlantic Canada) is a standardized method for rapidly assessing important natural functions of wetlands in Atlantic Canada. It was originally developed in western North America by Dr. Paul Adamus at Oregon State University.

Why is it used?

Wetlands are complex systems. Detailed wetland studies can be resource- and time-intensive. Conversely, one trained professional can use WESP to rapidly assess a wetland for 18 functions and benefits.

How is it used?

WESP consists of a field and office component. Practitioners visit the wetland and answer a series of questions relating to the site vegetation, hydrology and public use. The office component is a series of questions relating to site location. Responses are recorded in an Excel spreadsheet that automatically calculates a score for each function and benefit. These scores rank the wetland on its ability to deliver each function relative to other wetlands in the province.

Who uses WESP-AC?

WESP practitioners have received specialized training to use this tool. They generally work for consultants, government or conservation organization and have a background in wetland plants, soils and hydrology.

WESP data is used by provincial and municipal governments in Atlantic Canada as well as conservation organizations such as DUC to understand various wetland and watershed dynamics, including: which functions are represented by wetlands in an area, and whether restored wetlands are adequately replacing or compensating for functions that have been lost through wetland alteration or in-filling.

What is the difference between a function and a benefit score?

Function scores refer to the wetland's ability to deliver that function based on its structure, vegetation and hydrology. Benefit scores refer to the wetland's value for the people and wildlife in the watershed and are based off its location in the watershed surrounding the land use.

What do the scores and ratings mean?

Scores are calculated based on the answers inputted into the spreadsheet and calculations made by the model that reflect our understanding of which physical characteristics are representative of a wetland's ability to deliver the specified function. Scores are adjusted to be relative to other wetlands in the province. Ratings are Low, Moderate and High. WESP-AC is calibrated for each province in Atlantic Canada based data collected from over 100 sites in each province. Scores and ratings are relative to other wetlands in Nova Scotia, therefore a "High" rating means that relative to other Nova Scotia wetlands, this wetland is highly beneficial or functional.

What can I do with this information?

WESP data has limitations. Like any model of a complex natural system, it is only an approximation of what is occurring. However, it can be used to give an idea of the functions and benefits of the wetland relative to the other wetlands in the area. This information may be useful in making land-use decisions or directing further study.

Looking for more information?

This report was prepared by staff at Ducks Unlimited Canada. For more information, please contact:

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Site Reports

Ducks Unlimited Canada
Conserving Canada's Wetlands

July 9, 2021

Site Name: Marsh Lake **Site Code:** HRM_ 11
Date of Field Assessment: 06/22/2020
Assessors: Emma Bocking & Coastal Action staff
PID: 00648139 **GPS Coordinates:** 44.7434645, -63.6934167
Wetland Type: Fen **Size:** 4 ha
Landowner: NS Dept. of Municipal Affairs



Site Context: The area immediately surrounding this wetland is forested. Marsh Lake is south of Lower Sackville and north of Bedford and is adjacent to Sandy Lake Regional Park. Some of the land surrounding Marsh Lake is owned by HRM, while the remainder is privately owned.

Site Summary: Marsh Lake is currently owned by the NS Department of Municipal Affairs. It is part of the Sandy Lake watershed and is an important corridor between Sandy Lake and the Sackville River for turtles, fish, birds and other wildlife. Volunteers with the Sandy Lake Conservation Association and the Sackville Rivers Association have an active interest in conserving Marsh Lake and surrounding lands and expanding the existing Sandy Lake Regional Park. In 2021, the site will be designated by DUC and the province as a Treasured Wetland of Nova Scotia. Despite its name, Marsh Lake is a wetland complex with graminoid fen, shallow open water and treed bog.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Waterbird Nesting Habitat	Higher	This wetland has habitat features that support a diversity and abundance of nesting waterbird species, such as ducks, shorebirds, seabirds or herons. Such habitat features could include surface water, intermediate aquatic plant cover, mild water level fluctuation, tree snags and a wide vegetated buffer.
Anadromous Fish Habitat	Higher	Not only is there evidence that this wetland is accessible to anadromous fish, several features of the wetland indicate that the structure, productivity and hydrologic regime are suitable for anadromous fish species. Natural land cover surrounding the wetland the absence of human-related stressors also contributes to favorable fish habitat.
Waterbird Feeding Habitat	Higher	This wetland has habitat features that support a diversity and abundance of feeding waterbird species, such as ducks and shorebirds, particularly as a stopover site during migration or for overwintering. Such habitat features include nearby ponds or lakes, food and nutrient availability, a flat surface, ponded water and plenty of emergent vegetation cover. There are likely minimal stressors that are harmful for waterbirds, including high concentrations of metals and other contaminants.
Top Benefits		
Invertebrate Habitat	Higher	A high benefit score implies that this wetland is also great habitat for fish, waterbirds and songbirds and mammals, all of which are supported by and benefit from healthy invertebrate species.
Water Storage and Delay	Higher	This wetland is in an area where people and infrastructure are at risk from non-tidal flooding. Wetlands in these areas with high benefit scores provide the ecosystem service of flood regulation.
Nitrate Removal and Retention	Higher	High concentrations of nitrate in aquatic systems can lead to toxic algal blooms that are harmful to people and wildlife. There may be domestic wells nearby, or a tributary is present that would transport soluble nitrates out of the wetland. In addition, there may be potential sources of nitrogen in the area from agriculture, urban areas or septic systems.

Site Name: David's Marsh **Site Code:** HRM_17
Date of Field Assessment: 06/24/2020
Assessors: Emma Bocking & Coastal Action staff
PIDs: 40202806; 00422857
GPS Coordinates: 44.73965, -63.71891
Wetland Type: Fen **Size:** 0.5 ha
Landowner(s): Sandy Lake Holdings Ltd; 3063063 Nova Scotia Limited

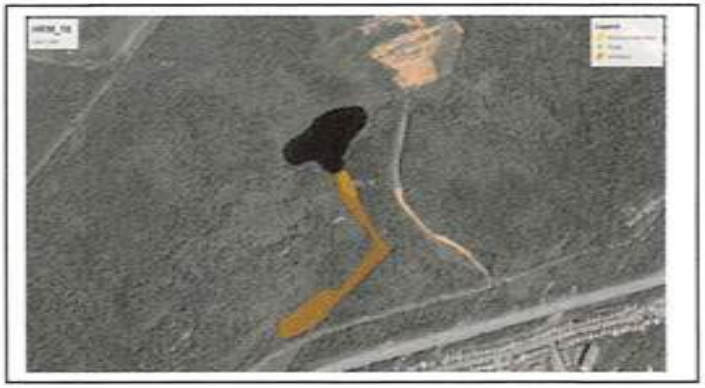


Site Context: David's Marsh has a forested buffer. Beyond this buffer, there is some disturbance from clear-cutting and suburban residential development. The land is owned by Sandy Lake Holdings and is zoned residential. Volunteers with the Sandy Lake Conservation Association are actively seeking additional protection for this site. Karen's Brook runs through the wetland.

Site Summary: After doing a preliminary prioritization attempt of the WESP sites completed in 2020, this wetland had the highest average score. As a peatland it has high carbon sequestration potential; the watercourse provides good transport of nutrients to downstream systems, and good fish habitat. Its relative vegetative uniqueness compared to surrounding land uses makes it good wildlife habitat. The presence of downstream infrastructure vulnerable to flooding increases the benefit of this wetland for water storage and delay.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Pollinator Habitat	Higher	This wetland has habitat features that support pollinating insects and birds. It is likely to contain a diversity of flowering plants, and suitable nesting habitat such as tree snags, ground cover, downed wood, large trees and/or cliffs. The wetland is not persistently flooded.
Waterbird Nesting Habitat	Higher	This wetland has habitat features that support a diversity and abundance of nesting waterbird species, such as ducks, shorebirds, seabirds or herons. Such habitat features could include surface water, intermediate aquatic plant cover, mild water level fluctuation, tree snags and a wide vegetated buffer.
Songbird, Raptor and Mammal Habitat	Higher	This wetland has habitat features that support a diversity and abundance of songbirds, raptors and mammals. Such habitat features could include a mix of open water and land cover, a wide vegetated buffer, tree snags, downed wood, varied microtopography, mature trees and diverse shrub cover.
Top Benefits		
Water Storage & Delay	Higher	This wetland is in an area where people and infrastructure are at risk from non-tidal flooding. Wetlands in these areas with high benefit scores provide the ecosystem service of flood regulation.
Songbird, Raptor and Mammal Habitat	Higher	This wetland is recognized as an IBA (Important Bird Area) or is known to support a rare breeding waterbird species. It may also be one of the few herbaceous or wooded wetlands locally.
Waterbird Feeding Habitat	Higher	This wetland may be recognized as an Important Bird Area or is known to host a rare migratory waterbird species. Alternatively, it may also be one of the few herbaceous wetlands or ponds in the local area, and/or it has the potential to have a high value for recreationists including birdwatchers and waterfowl hunters due its proximity to public roads and population centers.

Site Name: Jack Lake **Site Code:** HRM_18
Date of Field Assessment: 06/24/2020
Assessors: Emma Bocking & Coastal Action staff & Molly LeBlanc (Coastal Action).
PID: 40857138 **GPS Coordinates:** 44.73960, -63.71887
Wetland Type: Fen **Size:** 0.4 ha
Landowner: Halifax Regional Municipality



Site Context: Jack Lake is surrounded by forest and is in Sandy Lake Regional Park. Beyond the forest is a 100 series highway, and a heavily populated suburb. There is a sand pit located near the lake, that is used by off road vehicles.

Site Summary: The wetland was assessed at the outflow of Jack Lake. Its very high organic nutrient export score and location of the wetland near the top of the watershed is critical for nourishing downstream ecosystems. Given the numerous sources of nitrogen from surrounding development, the wetland's nitrate removal and retention capability is greatly beneficial. Features of the wetland including its relative seclusion and the surrounding, partly old-growth, mixed Acadian forest provide excellent bird habitat and corridors or turtles and other herptiles. This site has a high recreation value with a boardwalk and an existing trail leading to the lake. Sandy Lake Conservation Association volunteers are pursuing further protection for this site and surrounding areas via the expanded Sandy Lake Regional Park.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Organic Nutrient Export	Higher	This wetland is effective as producing, cycling and exporting organic matter downstream. Organic nutrients exported from wetlands like this one, provide essential support for downstream estuarine food webs. Wetlands that provide this function have a surface water outflow and soil with high organic carbon content (e.g. peat).
Songbird, Raptor and Mammal Habitat	Higher	This wetland has habitat features that support a diversity and abundance of songbirds, raptors and mammals. Such habitat features could include a mix of open water and land cover, a wide vegetated buffer, tree snags, downed wood, varied microtopography, mature trees and diverse shrub cover.
Pollinator Habitat	Higher	This wetland has habitat features that support pollinating insects and birds. It is likely to contain a diversity of flowering plants, and suitable nesting habitat such as tree snags, ground cover, downed wood, large trees and/or cliffs. The wetland is not persistently flooded.
Top Benefits		
Nitrate Removal & Retention	Higher	High concentrations of nitrate in aquatic systems can lead to toxic algal blooms that are harmful to people and wildlife. There may be domestic wells nearby, or a tributary is present that would transport soluble nitrates out of the wetland. In addition, there may be potential sources of nitrogen in the area from agriculture, urban areas or septic systems.
Amphibian & Turtle Habitat	Higher	This wetland may be known to support a regionally rare amphibian or turtle species. Additionally, it may provide herbaceous or woody cover that is lacking in the surrounding landscape, and provide habitat for birds and mammals, which are supported by healthy amphibian and turtle populations.
Waterbird Feeding Habitat	Higher	This wetland may be recognized as an Important Bird Area or is known to host a rare migratory waterbird species. Alternatively, it may also be one of the few herbaceous wetlands or ponds in the local area, and/or it has the potential to have a high value for recreationists including irdwatchers and waterfowl hunters due its proximity to public roads and population centers.

Ducks Unlimited Canada
Conserving Canada's Wetlands

Site Name: Little Sackville River **Site Code:** HRM_19
Date of Field Assessment: 06/24/2020
Assessor: Emma Bocking & Izzy Clarke
PID: 40109068 **GPS Coordinates:** 44.784648, -63.704914
Wetland Type: Size: Swamp
Landowner: Valleyfield Farm Ltd.



Site Context: Little Sackville River is in the centre of a dense residential area in Lower Sackville. There is a small patch of trees in the area. Located nearby are subdivisions, and two schools (Millwood Elementary and Millwood Highschool).

Site Summary: Almost all the Benefit scores for this site are rated 'Higher', indicating the importance of this wetland in the watershed. Intensive development in the catchment area increases the relative importance of this wetland to store water, retain nutrients and sediments, and provide wildlife habitat. The Sackville River is known to support populations of anadromous and other fish (11 species total), so this wetland plays an important function in providing fish habitat. It is one of only two watersheds in HRM with a mapped floodplain, which indicates known risks to infrastructure when there are flooded conditions. This known risk increases the Water storage and delay benefit of wetlands in the watershed.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Resident Fish Habitat	Higher	This wetland has habitat features that support a diversity and abundance of native resident fish. Such habitat features could include connectivity with the surrounding waterscape, high nutrient and oxygen availability, suitable vegetation cover and shade, and few known stressors such as toxic contaminants.
Anadromous Fish Habitat	Higher	Not only is there evidence that this wetland is accessible to anadromous fish, several features of the wetland indicate that the structure, productivity and hydrologic regime are suitable for anadromous fish species. Natural land cover surrounding the wetland the absence of human-related stressors also contributes to favorable fish habitat.
Waterbird Feeding Habitat	Higher	This wetland has habitat features that support a diversity and abundance of feeding waterbird species, such as ducks and shorebirds, particularly as a stopover site during migration or for overwintering. Such habitat features include nearby ponds or lakes, food and nutrient availability, a flat surface, ponded water and plenty of emergent vegetation cover. There are likely minimal stressors that are harmful for waterbirds, including high concentrations of metals and other contaminants.
Top Benefits		
Water Storage & Delay	Higher	This wetland is in an area where people and infrastructure are at risk from non-tidal flooding. Wetlands in these areas with high benefit scores provide the ecosystem service of flood regulation.
Pollinator Habitat	Higher	This wetland may contain a rare plant species. Additionally, it may contain some of the only herbaceous or woody vegetation within the local area.
Nitrate Removal & Retention	Higher	High concentrations of nitrate in aquatic systems can lead to toxic algal blooms that are harmful to people and wildlife. There may be domestic wells nearby, or a tributary is present that would transport soluble nitrates out of the wetland. In addition, there may be potential sources of nitrogen in the area from agriculture, urban areas or septic systems.

Site Name: Lower Sackville shrub swamp **Site Code:** HRM_38
Date of Field Assessment: 07/16/2020
Assessor: Emma Bocking **PID:** 40669392
GPS Coordinates: 44.79174, -63.70281
Wetland Type: Swamp **Size:** 1.5 ha
Landowner: Halifax Regional Municipality



Site Context: The area immediately surrounding this wetland is treed. Beyond the wooded area (mix of shrub and trees) there is the densely populated community of Lower Sackville. Highways 101 and 102 are nearby.

Site Summary: Almost all the Benefit scores for this site are rated 'Higher', indicating the importance of this wetland in the watershed. Intensive development in the catchment area increases the relative importance of this wetland to store water, retain nutrients and sediments, and provide wildlife habitat. The Sackville River is known to support populations of anadromous and other fish (11 species total), so this wetland plays an important function in providing fish habitat. It is one of only two watersheds in HRM with a mapped floodplain, which indicates known risks to infrastructure when there are flooded conditions. This known risk increases the Water storage and delay benefit of wetlands in the watershed.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Organic Nutrient Export	Higher	This wetland is effective as producing, cycling and exporting organic matter downstream. Organic nutrients exported from wetlands like this one, provide essential support for downstream estuarine food webs. Wetlands that provide this function have a surface water outflow and soil with high organic carbon content (e.g. peat).
Water Cooling	Higher	This wetland is effective at maintaining or reducing the temperature of surface water, particularly in headwater streams. This is a more common function in wetlands that contain deep, flowing surface water that is shaded.
Songbird, Raptor & Mammal Habitat	Higher	This wetland has habitat features that support a diversity and abundance of songbirds, raptors and mammals. Such habitat features could include a mix of open water and land cover, a wide vegetated buffer, tree snags, downed wood, varied microtopography, mature trees and diverse shrub cover.
Top Benefits		
Water Storage & Delay	Higher	This wetland is in an area where people and infrastructure are at risk from non-tidal flooding. Wetlands in these areas with high benefit scores provide the ecosystem service of flood regulation.
Waterbird Feeding Habitat	Higher	This wetland may be recognized as an Important Bird Area or is known to host a rare migratory waterbird species. Alternatively, it may also be one of the few herbaceous wetlands or ponds in the local area, and/or it has the potential to have a high value for recreationists including birdwatchers and waterfowl hunters due its proximity to public roads and population centers.
Pollinator Habitat	Higher	This wetland may contain a rare plant species. Additionally, it may contain some of the only herbaceous or woody vegetation within the local area.

Site Name: West Bedford Triangle **Site Code:** HRM_39
Date of Field Assessment: 08/20/2020
Assessors: Emma Bocking
PIDs: 00645960 **GPS Coordinates:** 44.719742, -63.723352
Wetland Type: Swamp **Size:** 0.4 ha
Landowner(s): West Bedford Holdings Ltd.



Site Context: West Bedford Triangle is a small wetland in a small forested area bordered by Hammonds Plains Rd and Larry Uteck Blvd. Some houses border the wetland, and there is an industrial park within 1 km.

Site Summary: This is an easily, small riparian marsh located in a suburban area. It includes habitat features for animals and would be an excellent place to spot birds, mammals, herptiles, and pollinators. The wetland protects surrounding infrastructure and waterways from potential flooding and contamination by storing and delaying water and supporting good water quality. Nearby development, including the road bordering the wetland in the southwest are causes of stress for this wetland and are vehicles of frequent input of contaminants, salts, and nutrients into the marsh.

Function/ Benefit	Score/ Rating	Description
Top Functions		
Songbird, Raptor & Mammal Habitat	Higher	This wetland has habitat features that support a diversity and abundance of songbirds, raptors and mammals. Such habitat features could include a mix of open water and land cover, a wide vegetated buffer, tree snags, downed wood, varied microtopography, mature trees and diverse shrub cover.
Organic Nutrient Export	Higher	This wetland is effective as producing, cycling and exporting organic matter downstream. Organic nutrients exported from wetlands like this one, provide essential support for downstream estuarine food webs. Wetlands that provide this function have a surface water outflow and soil with high organic carbon content (e.g. peat).
Pollinator Habitat	Higher	This wetland has habitat features that support pollinating insects and birds. It is likely to contain a diversity of flowering plants, and suitable nesting habitat such as tree snags, ground cover, downed wood, large trees and/or cliffs. The wetland is not persistently flooded.
Top Benefits		
Water Storage & Delay	Higher	This wetland is in an area where people and infrastructure are at risk from non-tidal flooding. Wetlands in these areas with high benefit scores provide the ecosystem service of flood regulation.
Amphibian & Turtle Habitat	Higher	This wetland may be known to support a regionally rare amphibian or turtle species. Additionally, it may provide herbaceous or woody cover that is lacking in the surrounding landscape, and provide habitat for birds and mammals, which are supported by healthy amphibian and turtle populations.
Pollinator Habitat	Higher	This wetland may contain a rare plant species. Additionally, it may contain some of the only herbaceous or woody vegetation within the local area.

Appendix A: Pictures



Figure 1: HRM 11 (Marsh Lake)



Figure 2: HRM 17 (David's Marsh)



Figure 3: HRM 18 (Jack Lake)



Figure 4: HRM 19 (Little Sackville River 1)



Figure 5: HRM 38 (Little Sackville River 2)



Figure 6: HRM 39 (West Bedford wetland)

Appendix B: WESP Scores

HRM 11

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	2.52	Lower	10.00	Higher
Stream Flow Support (SFS)	7.59	Higher	5.71	Moderate
Water Cooling (WC)	4.71	Higher	9.40	Higher
Sediment Retention & Stabilisation (SR)	5.16	Moderate	8.33	Higher
Phosphorus Retention (PR)	3.68	Lower	7.93	Higher
Nitrate Removal & Retention (NR)	3.06	Moderate	10.00	Higher
Carbon Sequestration (CS)	5.14	Moderate		
Organic Nutrient Export (OE)	7.49	Higher		
Anadromous Fish Habitat (FA)	10.00	Higher	4.11	Moderate
Resident Fish Habitat (FR)	8.33	Higher	3.85	Moderate
Aquatic Invertebrate Habitat (INV)	8.63	Higher	10.00	Higher
Amphibian & Turtle Habitat (AM)	7.30	Higher	10.00	Higher
Waterbird Feeding Habitat (WBF)	10.00	Higher	10.00	Higher
Waterbird Nesting Habitat (WBN)	10.00	Higher	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	6.02	Moderate	10.00	Higher
Pollinator Habitat (POL)	7.36	Moderate	10.00	Higher
Native Plant Habitat (PH)	6.10	Higher	7.09	Moderate
Public Use & Recognition (PU)			7.10	Higher
Wetland Sensitivity (Sens)			2.06	Lower
Wetland Ecological Condition (EC)			4.78	Moderate
Wetland Stressors (STR) (higher score means more stress)			5.94	Moderate
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	2.52	Lower	10.00	Higher
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	4.56	Moderate	9.38	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.87	Higher	9.19	Higher
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	9.56	Higher	8.80	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.93	Moderate	9.52	Higher
WETLAND CONDITION (EC)			4.78	Moderate
WETLAND RISK (average of Sensitivity & Stressors)			4.00	Moderate

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	1.49	Lower	10.00	Higher
Stream Flow Support (SFS)	7.24	Higher	5.96	Moderate
Water Cooling (WC)	7.40	Higher	8.97	Higher
Sediment Retention & Stabilisation (SR)	4.58	Moderate	10.00	Higher
Phosphorus Retention (PR)	4.05	Lower	10.00	Higher
Nitrate Removal & Retention (NR)	3.08	Moderate	10.00	Higher
Carbon Sequestration (CS)	4.16	Moderate		
Organic Nutrient Export (OE)	7.14	Higher		
Anadromous Fish Habitat (FA)	6.46	Higher	5.46	Higher
Resident Fish Habitat (FR)	7.82	Higher	5.54	Higher
Aquatic Invertebrate Habitat (INV)	7.49	Higher	8.34	Higher
Amphibian & Turtle Habitat (AM)	4.62	Moderate	10.00	Higher
Waterbird Feeding Habitat (WBF)	6.96	Higher	10.00	Higher
Waterbird Nesting Habitat (WBN)	8.07	Higher	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	9.61	Higher	10.00	Higher
Pollinator Habitat (POL)	7.87	Moderate	10.00	Higher
Native Plant Habitat (PH)	7.31	Higher	8.27	Higher
Public Use & Recognition (PU)			5.98	Higher
Wetland Sensitivity (Sens)			5.34	Moderate
Wetland Ecological Condition (EC)			6.52	Higher
Wetland Stressors (STR) (higher score means more stress)			4.79	Moderate
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	1.49	Lower	10.00	Higher
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	4.24	Lower	10.00	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.40	Higher	8.36	Higher
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	7.43	Higher	9.10	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.94	Higher	9.71	Higher
WETLAND CONDITION (EC)			6.52	Higher
WETLAND RISK (average of Sensitivity & Stressors)			5.07	Moderate

HRM 18

	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	0.35	Lower	5.87	Moderate
Stream Flow Support (SFS)	5.52	Higher	6.62	Higher
Water Cooling (WC)	6.30	Higher	4.16	Moderate
Sediment Retention & Stabilisation (SR)	2.78	Lower	0.65	Lower
Phosphorus Retention (PR)	4.37	Lower	0.43	Lower
Nitrate Removal & Retention (NR)	1.81	Lower	10.00	Higher
Carbon Sequestration (CS)	4.45	Moderate		
Organic Nutrient Export (OE)	9.88	Higher		
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower
Resident Fish Habitat (FR)	7.48	Higher	6.69	Higher
Aquatic Invertebrate Habitat (INV)	5.47	Higher	6.67	Higher
Amphibian & Turtle Habitat (AM)	4.59	Moderate	10.00	Higher
Waterbird Feeding Habitat (WBF)	7.31	Higher	10.00	Higher
Waterbird Nesting Habitat (WBN)	7.51	Higher	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	8.93	Higher	10.00	Higher
Pollinator Habitat (POL)	8.19	Higher	10.00	Higher
Native Plant Habitat (PH)	4.48	Moderate	8.16	Higher
Public Use & Recognition (PU)			10.00	Higher
Wetland Sensitivity (Sens)			3.42	Lower
Wetland Ecological Condition (EC)			4.78	Moderate
Wetland Stressors (STR) (higher score means more stress)			5.34	Moderate
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	0.35	Lower	5.87	Moderate
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.68	Lower	6.85	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	8.34	Higher	6.24	Higher
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	6.44	Higher	8.67	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.07	Higher	9.69	Higher
WETLAND CONDITION (EC)			4.78	Moderate
WETLAND RISK (average of Sensitivity & Stressors)			4.38	Moderate

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	2.21	Lower	10.00	Higher
Stream Flow Support (SFS)	4.07	Moderate	5.52	Moderate
Water Cooling (WC)	6.54	Higher	9.96	Higher
Sediment Retention & Stabilisation (SR)	3.59	Lower	10.00	Higher
Phosphorus Retention (PR)	1.64	Lower	10.00	Higher
Nitrate Removal & Retention (NR)	4.45	Moderate	10.00	Higher
Carbon Sequestration (CS)	1.36	Lower		
Organic Nutrient Export (OE)	4.98	Moderate		
Anadromous Fish Habitat (FA)	7.06	Higher	5.46	Higher
Resident Fish Habitat (FR)	7.23	Higher	5.55	Higher
Aquatic Invertebrate Habitat (INV)	3.03	Moderate	6.34	Higher
Amphibian & Turtle Habitat (AM)	5.50	Moderate	5.58	Higher
Waterbird Feeding Habitat (WBF)	6.97	Higher	10.00	Higher
Waterbird Nesting Habitat (WBN)	4.13	Moderate	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	5.12	Moderate	10.00	Higher
Pollinator Habitat (POL)	5.39	Moderate	10.00	Higher
Native Plant Habitat (PH)	2.07	Lower	6.29	Moderate
Public Use & Recognition (PU)			5.46	Higher
Wetland Sensitivity (Sens)			2.71	Lower
Wetland Ecological Condition (EC)			4.78	Moderate
Wetland Stressors (STR) (higher score means more stress)			9.19	Higher
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	2.21	Lower	10.00	Higher
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.60	Lower	10.00	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.60	Moderate	8.61	Higher
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	6.70	Higher	8.66	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	4.79	Moderate	9.38	Higher
WETLAND CONDITION (EC)			4.78	Moderate
WETLAND RISK (average of Sensitivity & Stressors)			5.95	Higher

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	2.60	Lower	10.00	Higher
Stream Flow Support (SFS)	3.93	Moderate	5.04	Moderate
Water Cooling (WC)	8.30	Higher	9.51	Higher
Sediment Retention & Stabilisation (SR)	3.75	Lower	10.00	Higher
Phosphorus Retention (PR)	1.05	Lower	10.00	Higher
Nitrate Removal & Retention (NR)	3.02	Moderate	10.00	Higher
Carbon Sequestration (CS)	0.91	Lower		
Organic Nutrient Export (OE)	9.20	Higher		
Anadromous Fish Habitat (FA)	6.26	Higher	5.79	Higher
Resident Fish Habitat (FR)	6.13	Higher	5.89	Higher
Aquatic Invertebrate Habitat (INV)	0.34	Lower	6.30	Higher
Amphibian & Turtle Habitat (AM)	3.51	Lower	6.26	Higher
Waterbird Feeding Habitat (WBF)	5.75	Moderate	10.00	Higher
Waterbird Nesting Habitat (WBN)	4.76	Moderate	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	8.03	Higher	10.00	Higher
Pollinator Habitat (POL)	7.22	Moderate	10.00	Higher
Native Plant Habitat (PH)	2.79	Lower	7.63	Moderate
Public Use & Recognition (PU)			7.69	Higher
Wetland Sensitivity (Sens)			3.89	Moderate
Wetland Ecological Condition (EC)			0.00	Lower
Wetland Stressors (STR) (higher score means more stress)			10.00	Higher
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	2.60	Lower	10.00	Higher
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	2.97	Lower	10.00	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.32	Higher	8.23	Higher
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	5.77	Moderate	8.79	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.02	Moderate	9.61	Higher
WETLAND CONDITION (EC)			0.00	Lower
WETLAND RISK (average of Sensitivity & Stressors)			6.94	Higher

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating
Water Storage & Delay (WS)	2.33	Lower	10.00	Higher
Stream Flow Support (SFS)	4.34	Moderate	4.79	Moderate
Water Cooling (WC)	4.67	Moderate	2.96	Moderate
Sediment Retention & Stabilisation (SR)	3.03	Lower	10.00	Higher
Phosphorus Retention (PR)	0.00	Lower	10.00	Higher
Nitrate Removal & Retention (NR)	2.75	Moderate	10.00	Higher
Carbon Sequestration (CS)	1.28	Lower		
Organic Nutrient Export (OE)	6.90	Moderate		
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower
Resident Fish Habitat (FR)	5.39	Moderate	4.98	Higher
Aquatic Invertebrate Habitat (INV)	3.83	Moderate	4.96	Moderate
Amphibian & Turtle Habitat (AM)	5.28	Moderate	10.00	Higher
Waterbird Feeding Habitat (WBF)	5.52	Moderate	10.00	Higher
Waterbird Nesting Habitat (WBN)	3.60	Moderate	10.00	Higher
Songbird, Raptor, & Mammal Habitat (SBM)	8.58	Higher	10.00	Higher
Pollinator Habitat (POL)	6.67	Moderate	10.00	Higher
Native Plant Habitat (PH)	2.33	Lower	7.64	Moderate
Public Use & Recognition (PU)			1.35	Lower
Wetland Sensitivity (Sens)			3.99	Moderate
Wetland Ecological Condition (EC)			4.78	Moderate
Wetland Stressors (STR) (higher score means more stress)			6.92	Higher
Summary Ratings for Grouped Functions:				
HYDROLOGIC Group (WS)	2.33	Lower	10.00	Higher
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	2.40	Lower	10.00	Higher
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.92	Moderate	4.60	Moderate
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	4.74	Moderate	8.50	Higher
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.22	Higher	9.61	Higher
WETLAND CONDITION (EC)			4.78	Moderate
WETLAND RISK (average of Sensitivity & Stressors)			5.45	Moderate

APPENDIX F

COMMUNITY BASED WILDERNESS STEWARDSHIP

Approved December 2nd, 2020
Version updated January 26, 2021

This document is a proposal to HRM to create an Office of Community Stewardship (CBWS) to support the Halifax Green Network Plan (HGNP). The proposal has the objective of fostering ecologically sensitive recreational use of the public open spaces that are integral to the HRM Regional Plan now under review in 2020-2022. The ***Executive Summary*** *is at the end (p. 7).*

Protected Wilderness Areas, Nature Reserves, Parks, and Open Space in HRM

Thanks to the Province and thousands of dedicated citizens, HRM as of 2015 enjoys 14 wilderness areas protected under the 1998 Wilderness Areas Protection Act. They comprise approximately 15% of open space in HRM. If we add the 12 nature reserves, 36 provincial parks, and 6 major municipal parks, and other open space, approximately 84% of HRM was open space as 2015.[1] These natural assets have immense positive implications for the vitality of our flora and fauna, the general health of our ecosystems, the physical and mental health of our citizens, the ability of HRM to attract more tourists and investment in our green economy, and the capacity of the Province to meet its goals in mitigating the impact of climate change.

The Paradox of Success in Achieving Wilderness Protection

Wrapped up in this good news, but no longer hidden from us, are bad news and a paradox that cries out for resolution. To make a complex message plain and simple, consider a clear example of how good news has paradoxically become bad news. In 1995 citizens concerned to protect from development the unspoiled barrens and moose habitat on the west side of the Chebucto Peninsula created the Woodens River Watershed Environmental Organization (WRWEO) to act as a steward of the important watershed at its core. Because there were no roads or even marked trails in the extensive wilderness in and around the watershed, the public was mostly unaware of this natural treasure just a few minutes bus ride to the west of Halifax.

To encourage public support for the legal protection of this wilderness, WRWEO constructed **The Bluff Wilderness Hiking Trail** to acquaint the public with the astonishingly beautiful ecologically sensitive barrens around the trail. The trail was completed in 2005 under a letter of authority from the Nova Scotia Department of Lands and Forestry. The hiking trail achieved its purpose, drawing the enthusiastic support of more than 30 community groups and businesses. In October 25, 2011, the Province declared the wilderness around the trail to be protected. It comprises almost 10,000 hectares of lands, lakes, and streams and is home to rare species such as the mountain sandwort and to broom crowberry that is uncommon outside this region. However, as a direct result of its popularity—the trail had been declared by a well-known outdoor

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[1] For a summary of these facts and a map that was current in 2014/15, see: http://wildlandns.ca/docs/sharing/PPA.html .

magazine to be one of the eight best urban escapes in Canada—the trail began to deteriorate through overuse and misuse.[2] The paradox is that The Bluff Trail—a key means to achieving protection of a healthy, health-creating wilderness—had become a key means to the gradual destruction of what it was designed to protect.[3]

Long-Term Community-Based Resolution

A natural response to this dilemma is to imagine that it is possible to close the trail to the public for a period of recovery, but this idea is not promising for several good reasons. First, closing the trail denies to the public the vital health benefits of being able to have easy access to the wilderness and makes Halifax a much less attractive place of destination and residence. Similar problems arise for other natural open spaces close to the urban core. Are they to be closed to the public too? Furthermore, it is not really possible to close these natural spaces, since the Province lacks the resources to enforce the lockout, and if it did the social consequences could be extremely negative. Lastly and most important, closing the trail would postpone the continuation of the problem rather than resolving it. Strictly enforcing the rules would not result in changes in the mindset that generates the bad behavior. The behavior would return as soon as the trail was reopened or the threat of being caught diminished. Neither lockdown nor strict enforcement nor both together is a sustainable solution.

Fortunately, there is a clear and tested way forward to resolving the paradox. The answer is to formulate principles and practices for stewardship of natural areas in HRM and to engage the public in their use. The community would learn through engagement with trail stewards how to have minimal impact on the trail tread and surrounding wildlife. This learning would come through a stewardship program of the kind described in the document cited in footnote 3. In this community-based program a Stewardship coordinator trains volunteers how to exert minimal impact, such as practicing Leave-No-Trace (LNT) camping, which can include using a fire bowl to make a small fire for cooking instead of an open fire, avoiding trail braiding, refraining from cutting trees and leaving trash, and avoiding disturbance of wildlife habitat (by, for example, having dogs on leash). These volunteers or "trail stewards" are trained how to remediate damage to the trail and how to engage other trail users in a friendly and cooperative manner to convey positive habits and attitudes, thereby creating incrementally through many such encounters new trail stewards who will educate others in turn even without intending to do so. The community of trail users has in effect created a larger community of wilderness stewards from the ground up. The stewardship training would be community driven, community organized,

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[2] Evidence of issues in 2016 can be seen at: http://versicolor.ca/docs/BluffTrailHike2016.pdf

[3] For an exposition of the problem and solution see BTSP funding request to NSE: https://drive.google.com/file/d/0B4hch_IZZfoQUElqUnhsUTJPRmZxZ2xUQk9wdmI0bkNrUTBJ/view?usp=sharing

and done voluntarily by those who hike, canoe, camp, bird watch, fish and hunt, and immerse themselves in the beauty and natural energy around them.

Is this a pipe dream? Are there any stats to support the effectiveness of this kind of program? The answer is positive and detailed in the Lancaster report of the last WRWEO AGM on July 7, 2020.[4] The report compares trends for numerous variables during the past three years. Trends are positive from 2017-2020, involving the work of over 100 stewards trained to look after the trail, engage the users of the trails, and report problems as well as positive outcomes. This strategy is endorsed by Nova Scotia Department of Environment (NSE) and appears to be a positive, long-term, sustainable solution. [5]

The Community Stewardship program, undertaken by WRWEO in collaboration with the St. Margaret's Bay Stewardship Association (SMBSA), not only appears to be successful as a means of preserving sustainable public access to ecologically sensitive lands of the Five Bridge Lakes Wilderness Area (FBLWA), but also appears to be a likely means to address the problems of a similar kind that arise in adjacent wilderness areas surrounding Halifax whether they are protected or are simply open areas of natural beauty. The protected areas are Blue Mountain Birch Cove Lakes Wilderness Area (BMBCLWA), the Waverley-Salmon River Long Lake Wilderness Area (WSRLLWA), and the Terence Bay Wilderness Area (TBWA). Other key areas are the wilderness lands supported by the Backlands Coalition, the Sandy Lake wilderness lands adjacent to WSRLLWA, the Ingram River wilderness area that citizens have proposed for protection, and the islands managed by SMBSA.

How Do We Define Community Stewardship? What Is Its Goal?

Drawing on Merriam Webster Dictionary, stewardship may be defined as the careful and responsible management of something entrusted to one's care. If we now apply this definition to the case at hand, we can say that the Office of Community Stewardship will seek to ensure the careful and responsible management of green spaces and wilderness areas in HRM. How will this goal be achieved? The means to achieve this goal would include: development of plans, guidelines, and strategies to reach this goal; recruitment and training of Volunteer Stewards; a presence, as constant as possible, of these trained stewards in the areas subject to the most use, including green spaces and wilderness areas in HRM that have trails; and a coordinated effort by these stewards to engage, inform, and support the hikers, campers, and others who use these lands so that they can join in our effort to become better stewards of nature.

Through their engagement with these persons, Volunteer Stewards would endeavour to decrease the impact of human harms on the green spaces and wilderness areas in HRM; improve Leave-No-Trace (LNT) practices among all users; enhance sustainability of the green

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[4] Bluff Trail Stewardship Program, Year In Review Report, 2019

[5] Fire pit rings remain a serious concern: 53 were remediated in 2017, 12 in 2018, and 20 in 2019. The practice of camping with open fires is deeply engrained in our culture and only sustained stewardship over the long term will eliminate it.

spaces and wilderness areas in HRM and the wildlife that live in them; and ensure the implementation of the best possible stewardship practices in these spaces.

Is Community Stewardship Right for All Managed Natural Areas?

Since the approach is community based, it is not the place of WRWEO to speak for communities that are supporting other nearby wilderness areas. They must speak for themselves. Moreover, there are many more resources and experiences that can be drawn upon. We note for example that the Sackville River Association has gained related experience and a high degree of success in its efforts over many years to engage the public in restoration of the Sackville River system.

We suggest that there is already significant empirical evidence that this approach is workable provided that it remains a ground-up, community-centered effort that is endorsed by the community. As such, the cost of the approach will be affordable since the effort comes primarily from volunteers who are committed to preserving through ecological stewardship natural wildlife areas and the wildlife corridors that link them, whatever their current status and use.

Stewardship and Trail Maintenance

The Province and Municipality are already engaged in community stewardship through supporting the Halifax Regional Trails Association (HRTA). HRTA is an organization that has representatives from over 25 community trails groups that have created and maintained trails within HRM. Obviously, building and maintaining trails in environmentally sustainable ways, as is one of HRTA's key objectives stated in their website, entails stewardship of the land.

The present community stewardship proposal, however, envisions a much broader conception of stewardship of land. The public use of wild areas includes more than hiking on trails. Many people hike and camp off trails and their negative impact on the land can be significant, for example, if lack of good practices causes a forest fire. It is critical that community stewardship extends well beyond trail maintenance and includes the inculcation of ecologically respectful treatment of nature on and off trails. An Office of Community Stewardship would need to coordinate with and be able to support the objectives of HRTA but at the same time would have a broader mandate that would cover all wilderness areas, nature reserves, parks, and open spaces that can be negatively impacted by human use.

Monetary Support

That said, in contemplating the creation of the OCS, there are two kinds of monetary support that are important. A knowledgeable, experienced Stewardship Coordinator who is especially competent in communication and leadership should be retained by salary (we suggest that a salary of at least $50,000 would be appropriate if he or she is covering more

than one area managed by a community group). There needs also to be at least two assistants to work with the Stewardship Coordinator (2 x $25,000) and money to pay students during the summer to help in the stewardship training. As detailed in the report in footnote 4, The Canada Summer Jobs Program yielded $18,572 in 2019 for work in BTSP. If a similar amount were raised for wilderness areas stewardship programs, the total would be almost $120,000.

This money would be budgeted independently of money now provided for HRTA groups. One would not detract from the other. The sources of funding for OCS and HRTA groups would be separate, though the stewardship work would be complementary.

The breakdown of sources of OCS funding might be divided as follows: Federal green initiative funding: $30,000; Provincial funding: Environment, Tourism, Health and Wellness, each $10,000 = total $30,000; HRM: Parks and Recreation $60,000 with half from Active Transportation; Volunteer Contributions In Kind: 6 groups (in a pilot project) at $20,000 each. Government (Federal, Provincial, and Municipal) total contribution: $120,000. Volunteer total contribution: $120,000.

The details need to be worked out but *costs are minimal in consideration of what is at stake.* Many millions of dollars are generated each year through commercial ecosystem services, the attraction not only of tourists but of innovative, young immigrants that are looking for a global, progressive city, as evidenced in the report by Gardner Pinfold, commissioned by the Province.[6] These attractions are under threat and likely severely diminished if proper stewardship is not enacted. It is absolutely vital that funds be provided for an Office of Community Stewardship that are both sufficient and reliable throughout the term of the pilot project.

We would suggest that no more than four to seven natural areas around Halifax be included in a pilot program for three years. If the results are as positive as reported in the review for FBLWA for 2017-19 (see footnote 4), the Community Stewardship (CS) program could be extended to all natural areas in HRM that are in need of the program and OCS would become integral part of the HRM Regional Plan. Whether it is extended, however, should depend on both government and volunteers finding the CS program jointly

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6 https://novascotia.ca/nse/protectedareas/docs/NS_Protected_Areas_Commercial_Benefits_Final_Report.pdf (note continued on next page)



acceptable and either government or volunteers represented by Our HRM Alliance could veto continuation of the program beyond the pilot stage.

Indigenous Leadership

The WRWEO dedication sign at the beginning of the first loop of The Bluff Trail acknowledges our indebtedness to and reverence for the First People who lived here longer than we have and preserved this land before us. Several years ago we renamed Indian Hill Loop to Mi'kmaw Hill Loop and assigned Mi'kmaw names to the LNT camping sites. It is appropriate in this time of reconciliation to go much further. We propose that the Office of Community Stewardship be provided resources to engage the leadership and guidance of the Mi'kmaw community to help the local trail groups and other stewards find the best way to move forward in Community Stewardship drawing on Mi'kmaw traditions, experience, and knowledge.[7]

The invitation to a conversation about stewardship, however, should be framed so that it is not, and does not come across as, a request that the Mi'kmaw people help descendants of settlers manage the land that those settlers took away from them. The request should be put in such a way that it is open-ended and would allow the Mi'kmaw community to define the terms of engagement, whether as co-stewards, or sources of expertise about principles of stewardship, or on some other model, as they see fit. (Thanks to Lynette Reid and Ariella Pahlke for this last point.)

Connectivity, HGNP, and Community Stewardship

A critical element in stewardship of the wilderness has been omitted in the above discussion, though it lies at the heart of wilderness protection and the success of the Halifax Green Network Plan. The missing element is connectivity linking together the protected wilderness areas. There is ample scientific evidence to support the conclusion that without wilderness corridors linking wilderness areas biodiversity in these areas will inevitably decline and will negatively affect the resilience of plant and animal life in the area including iconic species such as the mainland moose whose numbers in the area have drastically reduced, causing them to be declared an endangered species in 2003 when the first two loops of the trail opened.[8]

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[7] For support from the World Wildlife Fund-Canada newsletter see: **Indigenous-led conservation is the path forward** at WWF-Canada wwf_canada@wwf.ca

[8] See, for example, the HGNP and information archived on the WRWEO website: https://web.archive.org/web/20131127150100/http://wrweo.ca/ChebWilderness/index.html Also see: **Guidance on the maintenance of landscape connectivity features of major importance for wild flora and fauna – – Guidance on the implementation of Article 3 of the Birds Directive (79/409/EEC) and Article 10 of the Habitats Directive (92/43/EEC).**
Marianne Kettunen et al., 2007. Institute for European Environmental Policy (IEEP), Brussels, 114 pp. & Annexes.

Though there can be and are corridors of connectivity within wilderness areas, what is important to notice in this instance is the need for communities *from adjacent wilderness areas* to combine their roles as stewards of the land to find corridors and learn together how to protect the corridors that allow wildlife both plant and animal to move between (and ultimately among) various wilderness areas and open spaces. One can safely say that without connectivity even the "protected areas," though legally designated as protected, are not in truth protected. Community Stewardship as advocated here must therefore include stewardship of connectivity between natural areas of all kinds. Moreover, this concept and aspiration should be written into our mutual understanding of the HGNP as Council completes its ten-year review of the Regional Plan.

Executive Summary of Community Stewardship Proposal

A central paradox besets the efforts of local communities to promote preservation of the many wilderness areas surrounding Halifax. We promote the legal protection needed to block development in these ecologically vital areas and we build trails for recreational access to the natural areas on which our health depends. We thereby make the inherent value of these areas known and accessible. But the means to this important end can result in the gradual deterioration of the very areas that we are trying to preserve. We negatively affect the natural value of these areas, thereby defeating the point of their preservation. The answer to this problem is Community Stewardship of the kind proven to be successful over the past three years on The Bluff Wilderness Hiking Trail. This submission recommends as a pilot project the establishment of an Office of Community Stewardship (OSC) that would coordinate and enhance the voluntary participation of four to seven community groups already providing stewardship to natural areas to determine whether this project should be extended further. Besides criteria applied to measure the success of the stewardship program on The Bluff Wilderness Hiking Trail, we could include criteria to measure success in increasing connectivity between natural areas as a guide to determine success of a more inclusive stewardship program. The proposal is to build, stage by stage, the Community Stewardship of wildernesses and other open spaces into the Greenbelt portion of the Regional Plan for HRM and thereby help to preserve the ecological and monetary value of the natural resources in HRM.

Respectfully submitted with approval of the WRWEO board by these members:
Paul Berry, Board Chair and Treasurer; David Patriquin, ecologist;
Mike Lancaster, stewardship coordinator; Richmond Campbell, founding member.

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https://ec.europa.eu/environment/nature/ecosystems/docs/adaptation_fragmentation_guidelines.pdf

This proposal has been endorsed and supported by Our HRM Alliance including the following members.

Ecology Action Centre

Hike Nova Scotia

Canadian Association for Retired Persons Nova Scotia

Sandy Lake Conservation Association

Friends of Blue Mountain Birch Cove Lakes

Backlands Coalition

Trips By Transit

Downtown Halifax Business Commission

The Village on Main (Main Street Dartmouth Business Improvement District)

North End Business Association

McIntosh Run Watershed Association

Purcell's Cove Area Residents Action Committee

Beechville, Lakeside, Timberlea (BLT) Rails to Trails Association

Cole Harbour Parks and Trails Association

Friends of Hemlock Ravine

Halifax Regional Trails Association

Preston and Area Trails Association

Penhorn Lake Area Trails Association

Canadian Parks and Wilderness Society, Nova Scotia Chapter

Canoe Kayak Nova Scotia

Eastern Shore Forest Watch Association

Five Bridges Wilderness Heritage Trust

Ducks Unlimited Canada – Nova Scotia

Sackville Rivers Association

Sackville Lakes Park and Trails Association

Save Bedford's Waterfront Society

Citizens' Climate Lobby – Halifax

Canada Green Building Council – Atlantic Chapter

Dalhousie Office of Sustainability

Ferguson's Cove Neighbourhood Association

Friends of McNabs Island Society

Halifax Field Naturalists

Halifax Urban Greenway Association

Lake Echo Watershed Association

Shore Active Transportation Association

Shubenacadie Watershed Environmental Protection Society

St. Margaret's Bay Stewardship Association

Williams Lake Conservation Company

Woodens River Watershed Environmental Organization

Cole Harbour Rural Heritage Society

Dalhousie School for Resource and Environmental Studies

FUSION Halifax

Genuine Progress Index (GPI) Atlantic

Halifax Cycling Coalition

Heart and Stroke Foundation of Nova Scotia

It's More Than Buses

Lucasville Community Association

Musquodoboit Harbour and Area Community Association

North End Community Health Centre

Purcell's Cove Neighbourhood Committee

Rural Coastal Communities Network

Walk n' Roll Halifax

Wyse Society for Sensible Urban Development, The

YWCA Halifax

Akoma Holdings Inc.

Downtown Dartmouth Business Commission

Quinpool Road Mainstreet District Association

Sackville Business Association

Spring Garden Area Business Association

St. Margaret's Bay Chamber of Commerce

Community Society to End Poverty

Halifax North West Trails Association

APPENDIX G

Response to the Proposed Regional Plan Review Themes & Directions

1. Introduction and Background

Our HRM Alliance is a coalition of 65 organizations across health, environment, trails, business, community, and transportation sectors advocating for a sustainable future through greenbelting and complete communities. The Alliance believes that strategic growth and protection of the places that matter will build a desirable, healthy and equitable place to live. The member organizations of the Alliance are powered primarily by volunteers and reflect thousands of citizens across all settlement types and regions of HRM.

This Regional Plan review is of specific focus to the Alliance as it holds significant opportunities to advance complete communities and protect the Halifax Green Network. This is the second formal submission from Our HRM Alliance and responds to the proposed Themes & Directions whereas the first covered general concerns and input to the review.

2. The Halifax Green Network

Guiding Our Growth

The unanimous adoption of the Halifax Green Network Plan in 2018 and HalifACT in 2020, as well as the unprecedented community support for climate, nature, and sustainability – seen through the climate marches, support for Blue Mountain Birch Cove Lakes and the success of the Shaw Wilderness Park amongst many other events – have shown that now is the time to be ambitious and committed to building our community around sustainability. The Alliance sees a core step in this, locally, as ensuring that the Halifax Green Network guides where we grow. Further feedback on this element is detailed in part four of this submission.

Access to Nature: Level of Service Standards and the Park Spectrum

Park closures and limitations related to the pandemic have put even more strain on access to nature and greenspace. These issues call us to take high-level action to provide equitable access to greenspace. While we are pleased to see the Level of Service Standards be brought forward by the Themes & Directions, they need to be combined with a developed parks spectrum in order to be effective. The approach needs to look at access to the broad spectrum of parks and use an equity lens to examine barriers to access to nature. It is also essential that the standards be completed in advance of making any development and growth decisions in the Regional Plan. Implementation of the standards and parks spectrum have been delayed since they were initially proposed by the Halifax Green Network Plan. This delay will result in detriment to citizens if it is not developed before further decisions are made in the review.

Protecting the Parks of the Halifax Green Network: Parks Strategy and Stewardship

The Themes & Directions communicate that HRM believes there are significant limits on your ability to protect parts of the Green Network. While the Alliance recognizes the present limitations, we also believe there are a number of techniques that the city can utilize to more effectively protect and leave greenspace intact. Perhaps the most important is that of utilizing Urban Reserve and Open Space & Natural Resource designations to put growth elsewhere. This benefits both our communities, vulnerability to climate change, and nature. Alongside

this, the Alliance believes there is a significant need to establish a Region-wide Parks Strategy for HRM that would direct the strategic expansion and management of parks across the municipality. As we have seen in the past years, the HGNP fails to provide enough direction on parkland acquisition across HRM. This is recognized in CDAC's recommendation for a Regional Centre Parks Strategy. This approach should be developed across the municipality. Secondly, we believe action on wilderness stewardship is necessary in HRM.

Establishing a Municipal Wetland Policy

While the Nova Scotia Wetland Conservation Policy has helped in the protection of wetlands across the province, wetlands loss, especially within HRM, is still a concern. The Wetland Policy requires compensation for wetland destruction, however, compensation is more likely to occur outside of HRM. While Nova Scotia may be able to achieve its goal of no net loss of wetlands, this is not true within HRM where wetlands are vulnerable to destruction. By adopting a watershed-based approach, protecting HRM wetlands and setting a goal of no net loss of wetlands in HRM, these significant ecosystem services will also be better protected. To address these challenges, HRM can follow major cities across Canada in creating a municipal wetland policy that will better protect wetlands and their ecosystem services.

Standardizing and Increasing Protection of Riparian Areas

HRM land use bylaw buffer requirements, aimed at protecting riparian areas, are usually about 20m; this should be changed to 100-metre vegetative buffer for all watercourses and 50-metre vegetated buffers from the highwater mark of streams, brooks, tributaries, and wetlands in HRM should be mandated and identified. Not only will this allow for further protection of these valuable areas, but creating uniformity of buffers across the municipality would create clarity for landowners and developers.

Harnessing the Value of Green Infrastructure in Stormwater Management

Naturalization and nature-based climate solutions are key in how HRM can adapt to and mitigate effects of climate change including strengthening protections of watercourses, flood resilience, drought resilience and coastal protection. To reflect the recognition of the importance of naturalization, green infrastructure, and stormwater management in the Themes & Directions, the Alliance believes next steps should include:

- Prioritizing the use of green infrastructure features in stormwater management.
- Establishing a stronger focus on stormwater quality and better protection of watercourses is needed against the direct flow of stormwater and its pollutants directly into lakes and rivers, as proposed by the HGNP.
- Establishing a Stormwater Management Plan and Program as outlined by HalifACT.

Protecting Wildlife Corridors

We recommend that the Wildlife Corridor Landscape Design report be integrated into the HGNP maps in order to be adopted into the Regional Plan. The Themes & Directions report proposes to protect natural corridors in part through utilizing and building upon the mapping included in the HGNP. The HGNP identified wildlife corridors by using computer modelling of predicted corridors and called for further work to delineate corridors and

operationalize them. Work on the refinement of the locations of corridors has been completed, by stakeholders. Provincial government employees, Academics with Dalhousie University, and members of non-profits completed a report that maps and describes the locations of wildlife corridors near urban Halifax including those that facilitate wildlife movement on and off the Chebucto peninsula. This report complements and adds to the mapping in the HGNP and should be used to guide growth.

Protecting Our Coasts

The Themes & Directions addressed the significant need to act on coastal protection and prepare for sea level rise. By stating plans to apply coastal setbacks and vertical allowances to *all* buildings, not just residences, the Themes & Directions are introducing an important change, which the Alliance firmly supports. In order to adapt our policies to best protect our communities, it is also essential that the review process consider and address an additional risk: coastal undersized lots. Development of such lots introduces significant risk for residents and the wellbeing of our coasts and it is essential that it be addressed during the review.

3. Complete Communities

Building Measurable Criteria

We believe it is essential that clear and measurable criteria for complete communities are established in order to actually ensure new growth occurs in, and is building complete communities. The building blocks for complete communities included in the Themes & Directions reflect our vision for such communities however they are not yet measurable. The Alliance supports the Themes & Directions proposed actions to develop Suburban and Rural plans with direction from the IMP, HGNP, and BRT strategy and to use a decision-making framework/policy for suburban development proposals submitted before the Suburban plan comes into effect. Both actions will be instrumental to creating complete communities. This being said, there are a number of elements in the Themes & Directions concerning complete communities that we believe need to be taken further.

- The building blocks of complete communities need to be clearly defined and measured. Specifically, access to nature, age-friendly housing, and neighbourhood-level environmental protection.
- Investigation into the needs and barriers to develop opportunities to age-in-place in rural communities.
- Setting minimum targets for suburban intensification.
- Allowing no new suburban developments that will not have access to public transportation.

4. Growth Centres and Growth Trends

Creating Transparent Criteria Behind Service Area Expansion and Growth Centres

HRM needs clear criteria for where growth occurs. When reviewing lands designated Urban Reserve and future growth centres, as is proposed in the Themes & Directions, HRM needs to *first* establish clear criteria for expanding the Urban Service Area.

These criteria should include whether growth in the area will support the provision of diverse housing options, build complete communities, and support the Priority Plans' objectives. The criteria needs to take into account loss of community and environmental benefits that may occur through developing the specific site. This should include an inventory of potential developments' effects on the Halifax Green Network as well as an understanding of current ecosystem services being provided by a site.

Our HRM Alliance supports the Themes & Directions' proposed actions to allow development of the Akoma lands and the reassessment of Urban Reserve designation in the Purcell's Cove Backlands to a designation that better reflects the ecological value and sensitivity of the area. We also support the adoption of the growth targets suggested by the Integrated Mobility Plan (40% Regional Centre, 50% Suburban, and 10% Rural).

We strongly urge HRM to reconsider proposed actions concerning Regional growth including:

- Moving forward with Secondary Planning for growth at Sandy Lake and Blue Mountain-Birch Cove Lakes which should not occur until clear criteria for development are determined and ecological impacts of development have been understood. *This is not the same as considering the environment at the neighbourhood-design level.*
- The criteria for establishing the Growth Centres should be shared with the public during the review and respond to the current needs of HRM to protect the green network, respond to the climate emergency, and build complete communities.
- The Halifax Green Network needs to *lead* our development and growth decisions rather than simply be *considered*.

Supporting Suburban Intensification

When revising growth targets to benefit quality of life, the feasibility of public transit and sustainability of our communities, the delineation between existing and future suburban communities is important. Now more than ever, we must look to intensification and development of grey and brownfield sites first, and look to greenfield development as a last resort. The prioritization of these development methods is essential to building complete communities, preserving our green network, and addressing climate targets.

Within the growth targets, a minimum target should be set for suburban intensification and Map 2 of the Themes & Directions report should be advanced to delineate existing suburban communities and future communities.

APPENDIX H

Quotes from How Our Health Depends on Biodiversity

2010

Eric Chivian M.D. and Aaron Bernstein M.D., M.P.H.
Dr. Chivian was winner of the 1985 Nobel Peace Prize.

For the full paper go to:
https://www.researchgate.net/publication/265187166_How_Our_Health_Depends_on_Biodiversity

"The eminent Harvard biology Professor Edward O. Wilson once said about ants, "We need them to survive, but they don't need us at all." The same fact could be said about countless other insects, bacteria, fungi, plankton, plants, and other organisms. This fundamental truth, however, is largely lost to many of us. Rather, we humans often act as if we are totally independent of Nature, as if our driving thousands of other species to extinction and disrupting the life-giving services they provide will have no effect on us whatsoever.

This summary, using concrete examples from our award-winning Oxford University Press book, *Sustaining Life: How Human Health Depends on Biodiversity*, co-sponsored by the U.N. and the International Union for the Conservation of Nature, has been prepared to demonstrate that human beings are an integral, inseparable part of the natural world, and that our health depends ultimately on the health of its species and on the natural functioning of its ecosystems.

We have written this summary because human health is generally not part of discussions about biodiversity loss, by policy-makers or by the general public, and because most people, as a result, do not understand the full magnitude of the biodiversity crisis and do not develop a sense of urgency about addressing it. We believe that once people really grasp what is at stake for their health and their lives, and for the health and lives of children, they will do everything in their power to protect the living world." p.3

Another aspect discussed with examples is that future pandemics can result from disruptions caused by habitat loss. "Ecosystem disruption and the loss of biodiversity have major impacts on the emergence, transmission, and spread of many human infectious diseases." ... "The pathogens for some 60% of human infectious diseases, such as those causing malaria and HIV–AIDs, have entered our bodies after having lived in other animals." P.16

"Ecosystems provide goods and services that sustain life on this planet, including human life. If damaged, we cannot fully restore them, no matter how much money we spend." P.7

APPENDIX I

From: **Kenda MacKenzie** <[redacted]>
Date: Tue, Jun 8, 2021, 8:28 AM
Subject: RE: Sandy Lake oversizing dollars
To: Mary Ellen Donovan <[redacted]>, Peter Duncan <[redacted]>

Mary Ellen,

Sorry for not passing this along sooner. Please see the payment history below and some of the supporting documents are attached:

2009 – CBCL Cost of Servicing Greenfield Sites – Page 41 – Costs for Wastewater Oversizing. This is where the $3,587,000 originates. See attached ***2009 – CBCL – Cost of Servicing Greenfield Sites.pdf***

2012 – Armco MOU for the $1,000,000 upfront payment for Sandy Lake (this was later transferred to WBHL, it was paid to Halifax Water in 2018). See attached ***Sandy Lake Oversizing memorandum of Understanding.pdf***

2012 – HRM Sandy Lake Council Report.pdf – Budget forecasting of $2,141,232 to be paid by HRM (includes the MOU payment). I have never been able to recreate this calculation or the proposed forecasting.

2018 – ***HRM Benefit to Sandy Lake Letter – November 22, 2018*** – Detailed explanation of costs incurred to date to the benefit of Sandy Lake

2018 – Halifax Water Invoice to HRM for infrastructure installed up to 2018 (includes MOU payment). ***(***Paid February 27, 2019).

2020 – January, Sandy Lake HRM Budgeting for 20/21. The gravity main identified in this forecast will not be constructed in this fiscal year and it will not be constructed in the next 21/22 fiscal year. The other items will be billed in 20/21 is the $13,282.01 & $3,109.31

2021/2022 – No projected infrastructure being installed to the benefit of Sandy Lake.

Infrastructure within West Bedford Wastewater Infrastructure to the benefit of Sandy Lake to be installed in the future (Approximately $760,000, does not include Area 12).

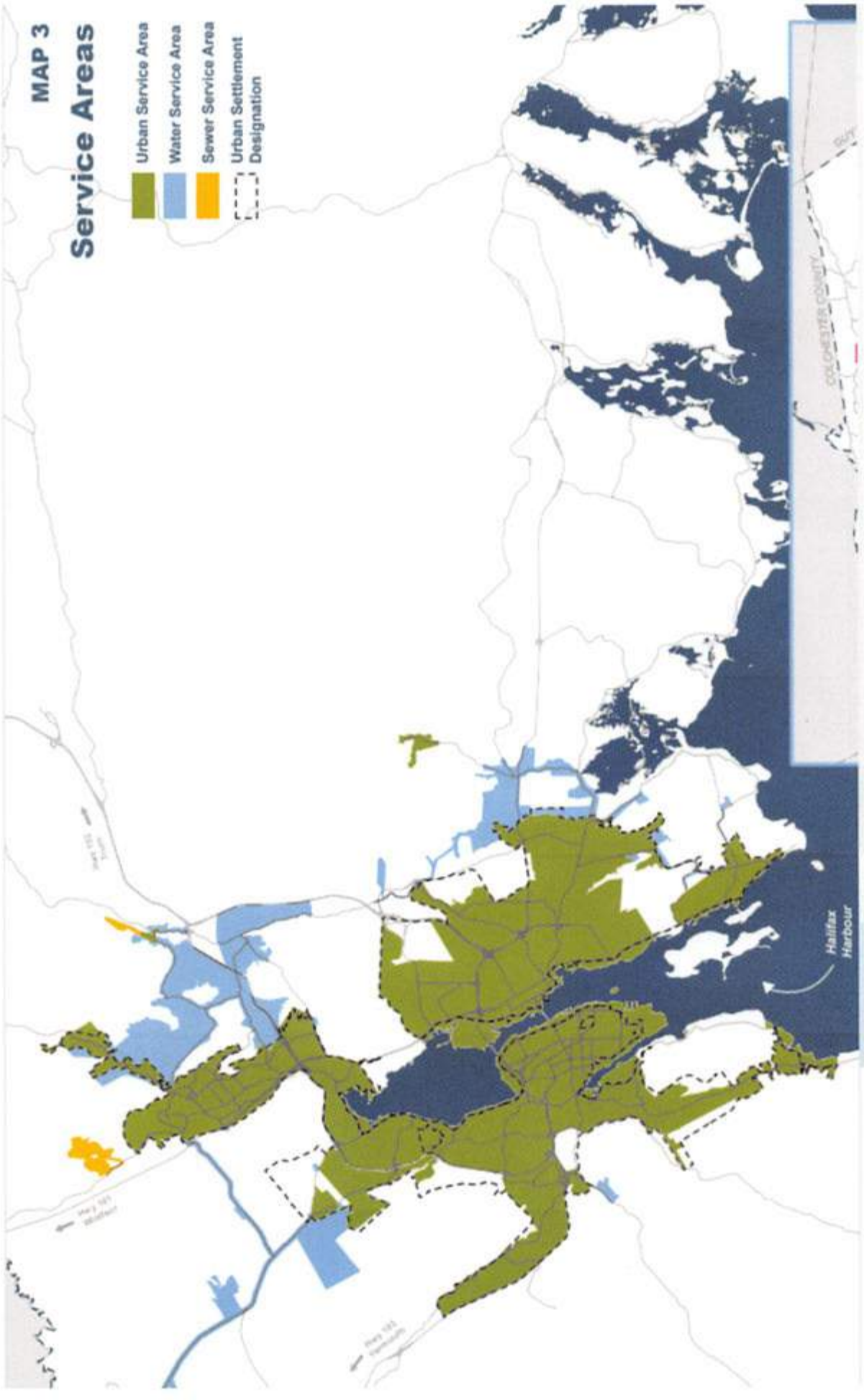
Area 12 infrastructure will have infrastructure installed to the benefit to Sandy Lake. Halifax Water will be updating an Area 12 specific CCC to be approved by the NSUARB.

(Please Note: The projections may exceed what was previously projected once the strategy for Area 12 is developed.)

Let us know if you have any questions.

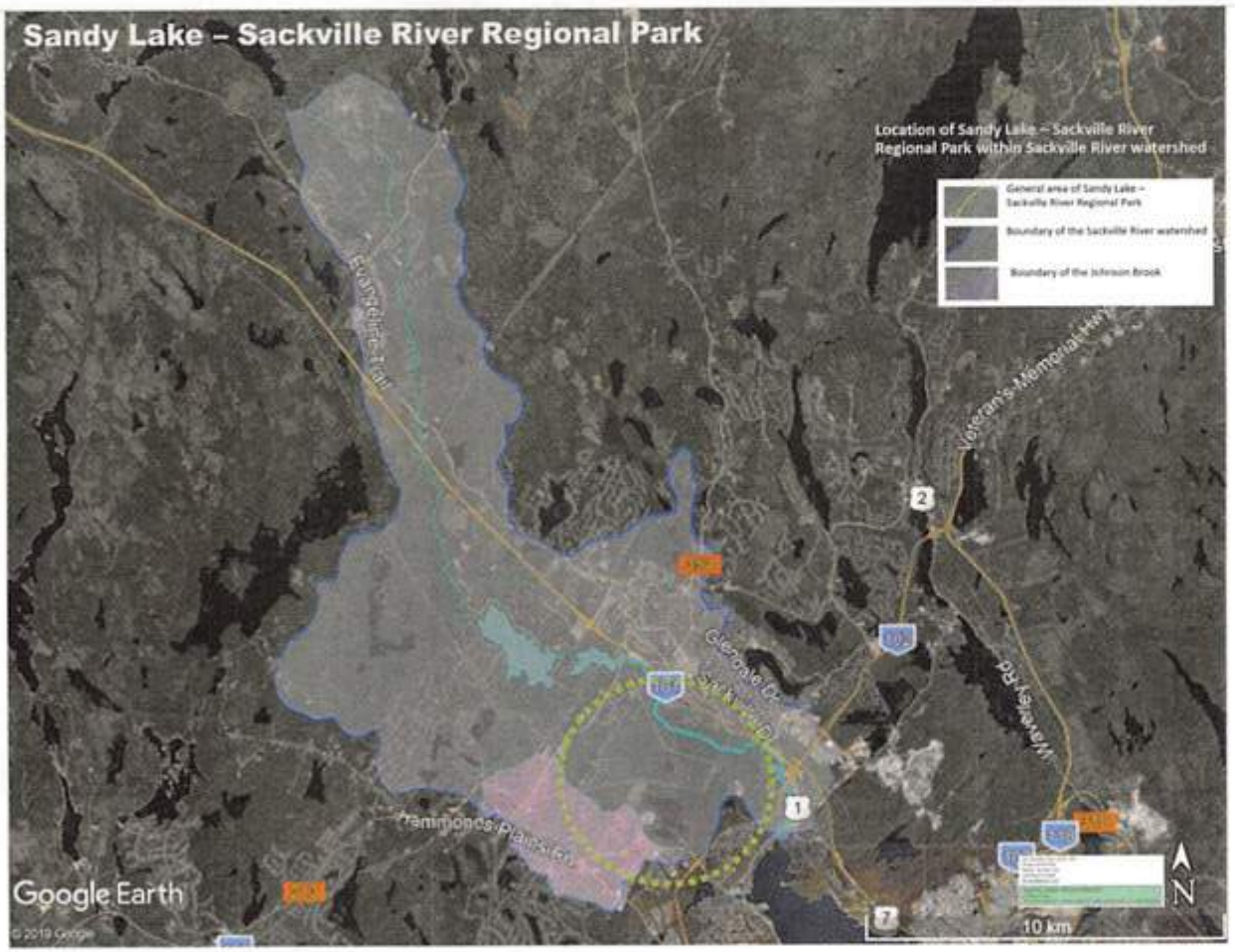
Kenda

APPENDIX J


MAP 3
Service Areas
Urban Service Area
Water Service Area
Sewer Service Area
Urban Settlement Designation
Halifax Harbour

Sandy Lake – Sackville River Regional Park

Planning analyses

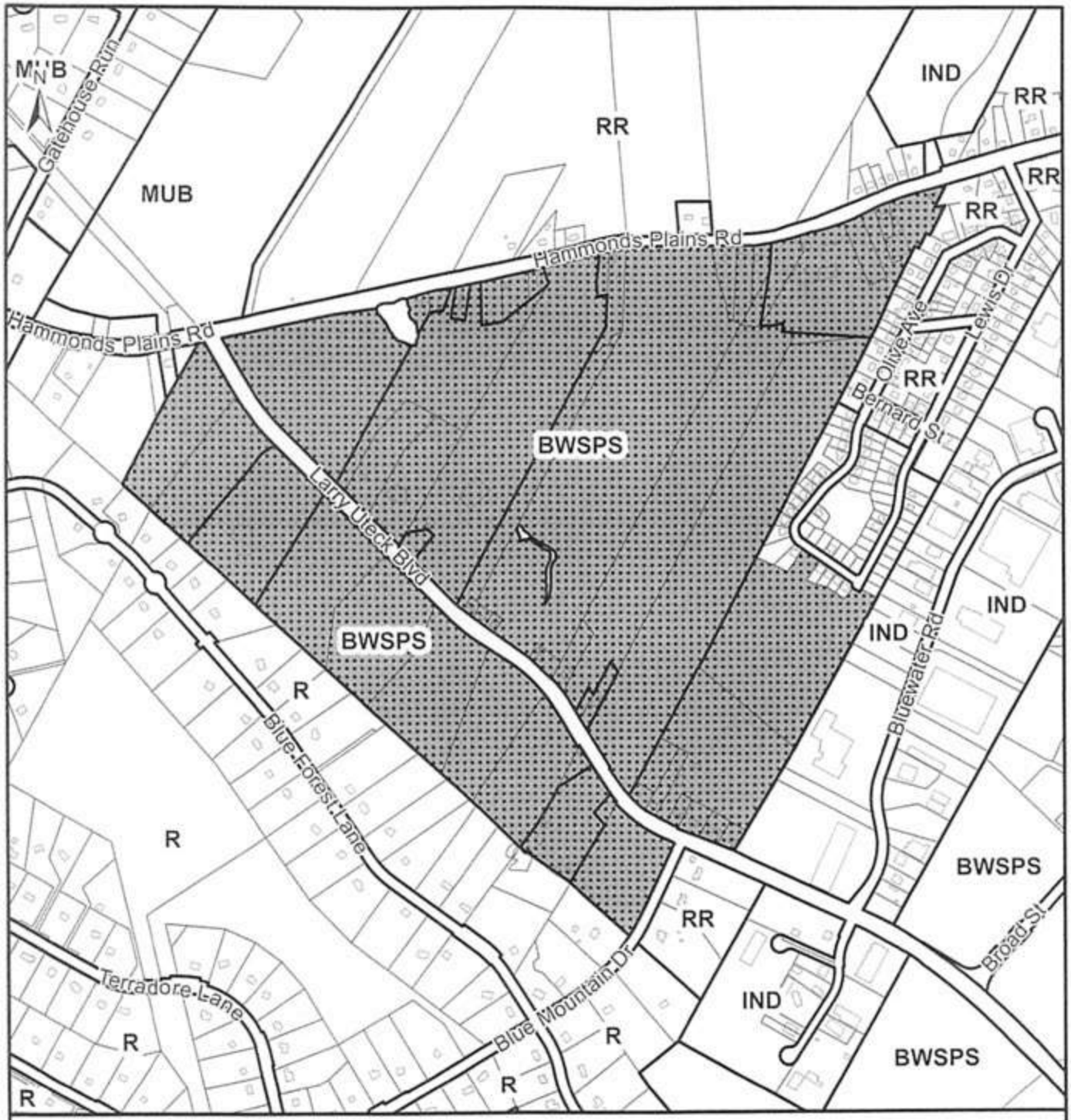


Location of watersheds in area of Sandy Lake – Sackville River Regional Park

APPENDIX K

APPENDIX L

Bedford West Subarea 12



Map 1 - Generalized Future Land Use

Bedford West Sub-Areas 12 & 1

HALIFAX

Subject Properties

Designation - Bedford

BWSPS	Bedford West Secondary Planning Strategy
IND	Industrial
RR	Residential Reserve

Designation - HPSBB

BWSPS	Bedford West Secondary Planning Strategy
HPC	Hammonds Plains Commercial
MUB	Mixed Use B
R	Residential

0 100 200 300 m

This map is an unofficial reproduction of a portion of the Generalized Future Land Use Map for the plan area indicated.

The accuracy of any representation on this plan is not guaranteed.

Bedford Plan Area
Beaver Bank, Hammonds Plains and Upper Sackville Plan Area,

22 April 2021 Case 23307 T:\work\planning\SER_Group\SER_Cases\Variances\23307\Maps_Plans\ (JC)



Map 4 - Bedford West Community Concept Plan

Legend

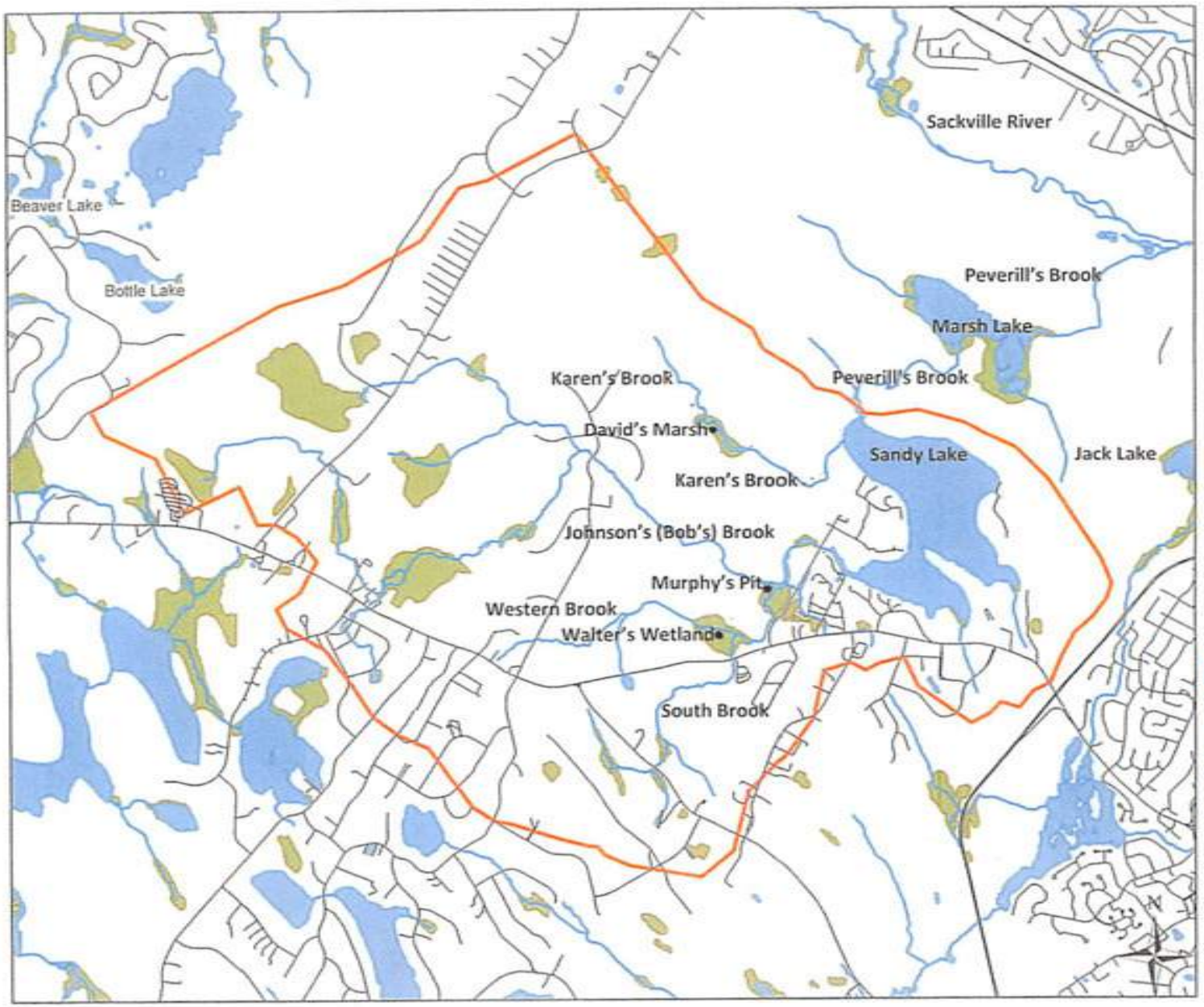
- Subject Property - Sub Areas 12 & 1
- Residential Neighborhoods
- General Commercial
- Community Commercial Centre
- Institutional
- Mixed Use Business Campus
- Park and Open Space

0 250 500 Meters

The accuracy of any representation on this plan is not guaranteed.

22 April 2021 Case 23307 T:\work\planning\SER_Group\SER_CasesVariances\23307\Maps_Plans\ (JC)

Sandy Lake Catchment Area



SACKVILLE RIVERS ASSOCIATION

Sandy Lake has a surface area of 0.78 square kilometers, and a catchment area of aproxametly 17.93 square kilometers. Please note this area approximation is based on natural topography and does not account for runoff redirection from roadways or stormwater collection.

Legend

- Roads
- SandyLakeWatershed
- Lakes
- Rivers
- MarshLand
- ContourLines

October 2013

APPENDIX M

				By-law Simplification program.	
26	Working Landscapes	Amend Municipal Planning Strategies and Land Use By-laws to ensure that rural industrial developments are adequately screened from scenic roads and trails.	2-7 Years	In progress: Project planning for the next Regional Plan review is underway and is targeted to be presented to Regional Council for formal initiation in fall 2019.	In progress: To be completed as part of the ongoing Regional Plan review and By-law Simplification Program.
27	Working Landscapes	Review Municipal Planning Strategies and Land Use By-laws to maintain and, where needed, increase lot size and frontage requirements to prevent dense "ribbon development" along scenic routes located between rural centres.	2-7 Years	In progress: • Rural development patterns research completed as part of the P&D Rural team work plan. • To be completed as part of the upcoming Regional Plan Review and on-going By-law Simplification program.	In progress: • Supported by Action 23 of HalifACT • To be completed as part of the ongoing Regional Plan review and By-law Simplification Program.
28	Working Landscapes	Amend Municipal Planning Strategies and Land Use By-laws to encourage both small- and large-scale tourism related uses in rural areas. Specific measures to consider include: » Relaxing restrictions for home-based businesses that cater to tourists, such as bed and breakfast operations, accessory cabins, tour operations, arts and crafts, farm stays, and commercial recreation (such as kayak rentals etc.) » Where not already permitted, considering the development of large-scale resorts, campgrounds, spas and hotels by rezoning or development agreement in rural areas that balance tourism opportunities with impacts on the environment and nearby residents » Enabling the development of resource-based and eco-tourism opportunities, including fishing, wildlife viewing, hunting, agriculture and forestry focused tours and experiences	2-7 Years	In progress: • Background research is underway as part of the P&D Rural team work plan. • To be completed as part of the upcoming Regional Plan Review and on-going By-law Simplification Program.	In progress: • To be completed as part of the ongoing Regional Plan review and By-law Simplification Program.
29	Community Shaping	Amend the *Regional Plan* to ensure that the Green Network map (Map 5 on page 35), is considered when reviewing changes to the Urban Service Area boundary, Urban Settlement Designation, Urban Reserve Designation, and when preparing Secondary Planning Strategies.	2-7 Years	In progress: Project planning for the next Regional Plan review is underway and is targeted to be presented to Regional Council for formal initiation in fall 2019.	In progress: • Supported by Action 23 of HalifACT. • To be completed as part of the ongoing Regional Plan review.
30	Community Shaping	Amend the *Regional Plan* to clarify the purpose and scope of land suitability assessments, which identify vulnerable landforms and other ecological features, as base information needed to inform the design of new mixed-use neighbourhoods and business park developments.	2-7 Years	In progress: Project planning for the next Regional Plan review is underway and is targeted to be presented to Regional Council for formal initiation in fall 2019.	In progress: • Supported by Action 23 of HalifACT. • To be completed as part of the ongoing Regional Plan review.
31	Community Shaping	Amend the *Regional Plan* to prioritize the redevelopment of brownfield sites and other underdeveloped urban infill sites ahead of undisturbed greenfield sites.	2-7 Years	In progress: Project planning for the next Regional Plan review is underway and is targeted to be presented to Regional Council for formal initiation in fall 2019.	In progress: • Supported by Action 23 of HalifACT. • To be completed as part of the ongoing Regional Plan review.

APPENDIX N

32	Community Shaping	Amend the *Regional Plan* and Municipal Planning Strategies to prioritize the preservation and creation of natural connections to the Chebucto Peninsula (Map 9) from the Mainland when reviewing development proposals and updating planning policies and zoning in the area. Specific connections to review and prioritize are highlighted on Map 9.	2-7 Years	In progress: Project planning for the next Regional Plan review is underway and is targeted to be presented to Regional Council for formal initiation in fall 2019.	In progress: • Supported by Actions 23, 25 and 26 of HalifACT. • To be completed as part of the ongoing Regional Plan review and By-law Simplification Program.
35	Community Shaping	Amend the *Regional Plan* to better define the size, shape and location of all rural centres in relation to natural corridors and valued open spaces.	2-7 Years	In progress: Project planning for the next Regional Plan review is underway and is targeted to be presented to Regional Council for formal initiation in fall 2019.	In progress: • Supported by Actions 23, 25 and 26 of HalifACT. • To be completed as part of the ongoing Regional Plan review.
36	Community Shaping	Amend the *Regional Plan* by updating the conservation design development policies to streamline the planning process for proposed developments located within rural centres. Specific planning approaches to consider include: » Site plan approvals, which can direct development to suitable areas, without involving the lengthier development agreement process » Enabling as-of-right developments within carefully selected pre-zoned areas	2-7 Years	In progress: • Background research is underway as part of the P&D Rural Team work plan. • To be completed as part of the upcoming Regional Plan review and on-going By-law Simplification program.	In progress: • Supported by Actions 23, 25 and 26 of HalifACT. • To be completed as part of the ongoing Regional Plan review and By-law Simplification Program.
37	Community Shaping	Amend the Regional Plan conservation design development agreement policies to: » Further focus development within rural centres » Avoid conflicts with working landscapes » Direct development to the edges of the core areas shown on the Green Network Ecology Map (Map 5 on page 35) » Preserve the essential and important corridors shown on the Green Network Ecology Map (Map 5 on page 35) » Take a cautious approach to development within areas of high environmental value (Map 5 on page 35) by ensuring the underlying values are investigated and conserved and any impacts from development are mitigated	2-7 Years	In progress: • Background research is underway as part of the P&D Rural Team work plan. • To be completed as part of the upcoming Regional Plan review and on-going By-law Simplification program.	In progress: • Supported by Actions 23, 25 and 26 of HalifACT. • To be completed as part of the ongoing Regional Plan review and By-law Simplification Program.
62	Outdoor Recreation	During the next *Regional Plan* review, amend the *Regional Plan* concerning Regional Parks to differentiate Regional Park types with particular regard to Nature Parks - which are specially designed to protect an area of land and/or water, support natural processes, species and habitat; and where human activities are primarily passive (e.g. hiking, nature interpretation and appreciation), and do not compromise ecological function.	2-7 Years	In progress: Project planning for the next Regional Plan review is underway and is targeted to be presented to Regional Council for formal initiation in fall 2019.	In progress: • Supported by Actions 23, 25 and 26 of HalifACT. • To be completed as part of the ongoing Regional Plan review.
66	Outdoor Recreation	During the next *Regional Plan* review amend the *Regional Plan* to recognize recent land acquisitions (pending) within the Purcell's Cove Backlands as Regional Park and consider open space planning for the remainder of this area.	2-7 Years	In progress: Project planning for the next Regional Plan review is underway and is targeted to be presented to Regional Council for formal initiation in fall 2019.	In progress: • Supported by Actions 23, 25 and 26 of HalifACT. • To be completed as part of the ongoing Regional Plan review.

C067

Response to the Proposed Regional Plan Review Themes & Directions

1. Introduction and Background

Our HRM Alliance is a coalition of 65 organizations across health, environment, trails, business, community, and transportation sectors advocating for a sustainable future through greenbelting and complete communities. The Alliance believes that strategic growth and protection of the places that matter will build a desirable, healthy and equitable place to live. The member organizations of the Alliance are powered primarily by volunteers and reflect thousands of citizens across all settlement types and regions of HRM.

Our HRM Alliance would like to see the next iteration of the Regional Plan recognize and act on the significant opportunities to advance complete communities and protect the Halifax Green Network. This is the second formal submission from Our HRM Alliance and responds to the proposed Themes & Directions. The first submission detailed our full-spectrum priorities for the review and we still ask that those details be considered.

2. The Halifax Green Network

Guiding Our Growth

The unanimous adoption of the Halifax Green Network Plan in 2018 and HalifACT in 2020, as well as the unprecedented community support for climate, nature, and sustainability – seen through the climate marches, support for Blue Mountain Birch Cove Lakes and the success of the Shaw Wilderness Park amongst many other events – has shown that citizens want ambitious commitment to building our community around sustainability. The Alliance sees that for this to happen, the Halifax Green Network guides where we grow. Further feedback on this element is detailed in part four of this submission.

Access to Nature: Level of Service Standards and the Park Spectrum

While we are pleased to see the Level of Service Standards be brought forward by the Themes & Directions, they need to be combined with a developed parks spectrum in order to be effective. The approach needs to look at access to the broad spectrum of parks and use an equity lens to examine barriers to access to nature. It is also essential that the standards be completed in advance of making any development and growth decisions in the Regional Plan. Implementation of the standards and parks spectrum have been delayed since they were initially proposed by the Halifax Green Network Plan. This delay will result in detriment to citizens if it is not developed before further decisions are made in the review.

Park closures and limitations related to the pandemic have put even more strain on access to nature and greenspace. These issues call for high-level action to provide equitable access to greenspace.

Protecting the Parks of the Halifax Green Network: Parks Strategy and Stewardship

The Themes & Directions communicate that HRM believes there are significant limits on your ability to protect parts of the Green Network. While the Alliance recognizes the present limitations, we also believe there are a number of techniques that HRM can utilize to more effectively protect and leave greenspace intact. Perhaps the most important is that of utilizing Urban Reserve and Open Space & Natural Resource designations to direct growth. This

benefits both our communities, vulnerability to climate change, and nature. Alongside this, the Alliance sees a significant need to establish a Region-wide Parks Strategy for HRM that would direct the strategic expansion and management of parks across the municipality. As we have seen in the past years, the HGNP does not provide enough direction on parkland acquisition across HRM. This is recognized in CDAC's recommendation for a Regional Centre Parks Strategy. This approach should be developed across the municipality. Related to the lack progress on wilderness protection, we believe support of community-based wilderness stewardship and other community-based project is timely and necessary in HRM. It is of benefit to both HRM and citizens alike that citizen groups be actively supported in participating in activities like monitoring and public education.

Establishing a Municipal Wetland Policy

Wetland loss within HRM is a major ecological concern. HRM has the opportunity to follow major cities across Canada in creating a municipal wetland policy that will better protect wetlands and their ecosystem services. While the Nova Scotia Wetland Conservation Policy has helped in the protection of wetlands across the province, wetlands loss, especially within HRM, is still a concern, where wetlands are vulnerable to destruction. By adopting a watershed-based approach, protecting HRM wetlands and setting a goal of no net loss of wetlands in HRM, these significant ecosystem services will also be better protected. In this process, it is essential that watersheds across HRM be identified and acknowledged.

Standardizing and Increasing Protection of Riparian Areas

HRM land use bylaw buffer requirements, aimed at protecting riparian areas, are usually about 20m; these areas need to be clearly identified and requirements should be changed to be a 100-metre vegetative buffer for all watercourses and 50-metre vegetated buffers from the highwater mark of streams, brooks, tributaries, and wetlands in HRM should be mandated and identified. Not only will this allow for further protection of these valuable areas, but creating uniformity of buffers across the municipality would create clarity for landowners and developers.

Harnessing the Value of Green Infrastructure in Stormwater Management

Naturalization and nature-based climate solutions are key in how HRM can adapt to and mitigate effects of climate change including strengthening protections of watercourses, flood resilience, drought resilience and coastal protection. To reflect the recognition of the importance of naturalization, green infrastructure, and stormwater management in the Themes & Directions, the Alliance believes next steps should include:

- Prioritizing the use of green infrastructure features in stormwater management.
- Establishing a stronger focus on both stormwater quality and better protection of watercourses is needed against the direct flow of stormwater and its pollutants directly into lakes and rivers, as proposed by the HGNP.
- Establishing a Stormwater Management Plan and Program as outlined by HalifACT.

Protecting Wildlife Corridors

We believe the Wildlife Corridor Landscape Design report should be integrated into the HGNP maps in order to be adopted into the Regional Plan. The Themes & Directions report

proposes to protect natural corridors in part through utilizing and building upon the mapping included in the HGNP. The HGNP identified wildlife corridors by using computer modelling of predicted corridors and called for further work to delineate corridors and operationalize them. Work to refine the locations of corridors has been completed, by stakeholders: provincial government employees, academics with Dalhousie University, and members of non-profits completed the report which maps and describes the locations of wildlife corridors near urban Halifax including those that facilitate wildlife movement on and off the Chebucto peninsula. This report complements and adds to the mapping in the HGNP and should be used to guide growth.

Protecting Our Coasts

The Themes & Directions addressed the significant need to act on coastal protection and prepare for sea level rise. By stating plans to apply coastal setbacks and vertical allowances to *all* buildings, not just residences, the *Themes & Directions* are introducing an important change, which the Alliance firmly supports. In order to adapt our policies to best protect our communities, it is also essential that the review process consider and address an additional risk: coastal undersized lots. Development of such lots introduces significant risk for residents and the wellbeing of our coasts and it is essential that it be addressed during the review.

3. **Complete Communities**

Building Measurable Criteria

We believe clear and measurable criteria for complete communities must be established in order to ensure new growth occurs in, and is building complete communities across all settlement typess. The building blocks for complete communities included in the Themes & Directions reflect our vision for such communities however they are not yet measurable. The Alliance supports the Themes & Directions proposed actions to develop Suburban and Rural plans with direction from the IMP, HGNP, and BRT strategy and to use a decision-making framework/policy for suburban development proposals submitted before the Suburban plan comes into effect. Both actions will be instrumental to creating complete communities. This being said, there are a number of elements in the Themes & Directions concerning complete communities that we believe need to be taken further.

- The building blocks of complete communities need to be clearly defined and measured. Specifically, access to nature, age-friendly housing, and neighbourhood-level environmental protection.
- Investigation into the needs and barriers to develop opportunities to age-in-place in rural communities.
- Setting minimum targets for suburban intensification.
- Allowing no new suburban developments that do not have access to public transportation.

4. **Growth Centres and Growth Trends**

Creating Transparent Criteria Behind Service Area Expansion and Growth Centres

HRM needs clear criteria for where growth occurs. When reviewing lands designated Urban Reserve and future growth centres, as is proposed in the Themes & Directions, HRM needs to *first* establish clear criteria for expanding the Urban Service Area that includes supporting the provision of diverse housing options, building complete communities, and supporting the objectives of priority plans.

The criteria need to take into account loss of community and environmental benefits that may occur through developing the specific site. This should include an inventory of effects on the Halifax Green Network by any potential development, as well as an understanding of current ecosystem services being provided by a site.

The members of Our HRM Alliance support the actions proposed in the Themes & Directions to allow development of the Akoma lands and the reassessment of Urban Reserve designation in the Purcell's Cove Backlands to a designation that better reflects the ecological value and sensitivity of the area. We also support the adoption of the growth targets suggested by the Integrated Mobility Plan (40% Regional Centre, 50% Suburban, and 10% Rural).

We strongly urge HRM to reconsider proposed actions concerning Regional growth including:

- Moving forward with Secondary Planning for growth at Sandy Lake and Blue Mountain-Birch Cove Lakes which should not occur until clear criteria for development are determined and ecological impacts of development have been understood. *This is not the same as considering the environment at the neighbourhood-design level.*
- The criteria for establishing the Growth Centres should be shared with the public during the review and respond to the current needs of HRM to protect the green network, respond to the climate emergency, and build complete communities.
- The Halifax Green Network needs to *lead* our development and growth decisions rather than simply be *considered*.

Supporting Suburban Intensification

The delineation between existing and future suburban communities is important when revising growth targets to benefit quality of life, the feasibility of public transit, and sustainability of our communities. We must look to intensification and development of grey and brownfield sites first, and look to greenfield development as a last resort. The prioritization of these development methods is essential to building complete communities, preserving our green network, and addressing climate targets.

Within the growth targets, a minimum target should be set for suburban intensification and Map 2 of the Themes & Directions report should be advanced to delineate existing suburban communities and future communities.

C094

May 28, 2021

Attention HRM Planning Department

I am concerned about the planning process in HRM that appears to result in major congestion and traffic issues in certain areas.

Here are a few examples.

Bedford West and the Larry Uteck area.

Bedford West is a massive development of a greenfield area. It seems to be successful as far as providing living accommodations go. However I am unable to understand how such a significant development reaching from Hammond Plains Road to Larry Uteck Boulevard and beyond is planned and constructed without providing sufficient infrastructure for handling traffic in and out of the area.

There are two schools being constructed at Broad Street and Larry Uteck Boulevard. There are new commercial and retail buildings along that section of Larry Uteck Boulevard and many apartment buildings in the immediate area, and yet Larry Uteck Boulevard is one lane. When this area is fully built out in the near future there is going to be a huge traffic issue on that Boulevard.

Hogan Court area.

The Hogan Court area off of Larry Uteck Boulevard and Highway 102, currently in the midst of construction, consists of a supermarket, a hotel, two apartments, a gas bar and several restaurants or other retail outlets. The only inlet or outlet to the area is a narrow road connecting to the round a bout at highway 102. When this area is fully built out in the future, there will be significant traffic issues as residents and retail and hotel patrons try to exit to the round a bout. I know HRM wants to increase density in the urban area of the municipality, but this level of density with very poor ingress and egress is in my view poor planning. I do know that the Utility and Review Board allowed an appeal by one of the developers to change a proposed office building expected to go next to an apartment building into a second apartment building. So somebody at HRM must have had some concerns to initially disallow this request.

Round a Bouts in the Larry Uteck, Highway 102 area.

There are four round a bouts on Larry Uteck Boulevard within probably less than a kilometer between Starboard Drive and Hogan Court just the other side of highway 101. Under current conditions these round a bouts, especially the three immediately adjacent to highway 102 are very busy. It feels like a game of chicken in a demolition derby trying to use these especially during certain hours of the day.

I appreciate that HRM Planning cannot take full credit for this questionable design. I presume the NS Department of Transportation had a say in these round a bouts.

Larry Uteck Boulevard

This area was undeveloped about fifteen years ago. It was open space. The lower section coming up from the Bedford Highway was developed first, with a school and some town houses. The Boulevard at that point from the Bedford Highway to Bedros Lane was an actual boulevard with two lanes of traffic in both directions separated by a median. It was also very wide.

However, beyond Bedros Lane the boulevard narrows significantly with only one lane in each direction and no median. At the same time, several large apartment buildings on both sides of the street were constructed. Currently, I believe the last two apartments are being built in that area and it appears that no further apartments can be built on Larry Uteck Boulevard between the Bedford Highway and Highway 102 because every square millimeter of land has been used.

Why would Larry Uteck Boulevard be narrowed and medians eliminated when massive apartment construction complexes were planned for this section of the street? Very puzzling!

Residents of the apartments are unable to make a left turn out of their driveways onto Larry Uteck Boulevard without taking their life in their hands due to the volume of traffic. When they do get onto the street they have to stop in many cases as they are driving due to the fact that there is parking on both sides in many portions of the street and if a large pickup truck or SUV or bus is coming there is insufficient space to get by.

What is very annoying about the development of this area and this Boulevard is that there was sufficient space to do it properly in the first place so that traffic and safety issues would have been minimized.

How anybody would approve or sign off on this whole area, knowing about the planned high density apartment s, without specifying that the road infrastructure be constructed to reasonably standards is beyond me. At the beginning of the Larry Uteck area development, it was not Barrington Street or Bayers Road where there were space restrictions. It was an open area.

Bedford Highway Apartment /Condo construction.

There is a new residential building under construction south of Larry Uteck Boulevard on the Bedford Highway just across from the Fisherman's Market retail location. The residential building adjacent to this new construction is set back a reasonable distance from the Bedford Highway. The new residential building under construction is so close to the Bedford Highway that the residents of the building will be able to pass a cup of coffee to bus patrons at the bus stop within a few feet of the building.

Again, how something like this with virtually no setback can ever be approved is shocking. HRM has recently mentioned an initiative to widen or put additional bike lane space on the water side of the Bedford Highway. If they ever try to do this on the other side of the highway they would have to go right through this new building.

Drive by this building and I think you will question the planning decision that approved the specs on this building.

HRM planners and Regional Council can talk all they want about the Bedford Highway functional plan, the Integrated Mobility Plan, the Higher Order Transit Framework, the Urban District Growth Centres, and the Transit Oriented Community, but please use plain common sense and have some foresight when you make HRM planning decisions.

Yours Truly

David Knowles

C099

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Regulated by RICS

Our Ref: 2115537:NL

6 August 2021

Ms. Kate Greene, MCIP, LPP
Regional Policy Program Manager
Halifax Regional Municipality
PO Box 1749
Halifax NS B3J 3A5

VIA EMAIL: greenek@halifax.ca

Dear Ms. Greene:

Re: Regional Plan Review – Population & Housing Analysis

The Halifax Regional Municipality (HRM) is in the early stages of reviewing and updating its Regional Plan. As part of that process, a Preliminary Population & Housing Analysis Issue Paper was released which provides high level forecasts of growth and housing demand to 2050, and estimates the development capacity that exists to accommodate it under current and prospective policy contexts.

Clayton Developments retained Turner Drake & Partners to review this analysis, with two objectives for our engagement:

1. To review the methods and assumptions used, as well as the results generated, to assist Clayton in fully understanding the report, and;
2. Based on this review, share any helpful comments or suggestions with HRM which could help improve and refine this work, as well as any considerations we think should be kept in mind as the findings are used in other stages of the review process going forward.

To this end, we were provided additional detail on the analysis by HRM in the form of a Technical Report which delves deeper into the analysis methodology, assumptions, and results. This collaborative support from HRM is appreciated, and we hope our letter will be an equally valuable reciprocation.

SUMMARY OF FEEDBACK

- Overall, this is a well executed analysis and we found no significant issues with the methodology and assumptions used.
- The demand forecast based on population growth is robust, but forward-looking only. Consideration should be given to the current deficit of housing construction relative to recent population growth. This is a significant addition to the methodology and resulting demand forecast. Relatedly, vacancy targets should be increased to 5% rather than the current 3%.
- The supply capacity analysis is generally appropriate for a preliminary level of investigation and the technical report correctly identifies the weaknesses and unknowns that are inherent to this type of work. Having said that, we think there are considerations around some of the Urban Reserve lands which would be appropriate to include in this analysis.
- The analysis sets up an examination of zoned capacity and what level of capacity is appropriate as a multiple of expected demand. We have included some commentary on this topic for consideration going forward.

…2

REVIEW PROCESS & OVERALL COMMENTARY

Our review of the analysis consisted of a thorough examination of all documents and supporting excel files to understand and evaluate the methodology used and assumptions made. We then spot-checked various input data, and compared the findings to recent work Turner Drake has conducted on this topic in order to gauge the overall reasonableness of the results. Finally, we examined the supply capacity analysis based on our working familiarity of HRM and its development landscape to look for significant instances where the broad, necessary assumptions may not be appropriate in light of site-specific considerations.

In general, we find the analysis to be robust. Demand projections are executed correctly using a well-established methodology and we find all necessary assumptions to be reasonable. Where judgement is required, the analysis makes conservative choices which balance uncertainty in the direction of a housing surplus rather than a housing shortage. The supply capacity analysis is similarly appropriate, though there is greater inherent uncertainty in this type of exercise. While the documents confirm that HRM staff are aware of these important limitations, it is one thing to acknowledge this in a technical report and another to ensure they are given proper consideration as the analysis results are interpreted and used to inform subsequent stages of the review process. This is particularly relevant as local political leaders and the general public will generally consume it without the benefit of a full knowledge of the technical limitations. Though this does not necessarily require adjustments to the analysis itself, we highlight two issues that flow from this analysis to emphasize the importance of HRM giving them due consideration going forward.

SUGGESTIONS

Overall, we have two only minor suggestions with respect to improving the analysis within its scope and known limitations. That said, taking the broader context into account, we believe a significant addition to the analysis scope should be considered so that the modelled housing demand reflects not only expected growth, but the current shortfall as well.

Minor - Modify Demand Adjustment for Target Vacancy
The demand analysis makes a final adjustment to the modelled figures for apartment demand, increasing the total to build-in a 3% vacancy rate. The report correctly notes that 3% is generally viewed as a “healthy” vacancy rate that balances the market power of tenants and landlords. However, the ideal level of vacancy is more accurately described as a range from 3%-5%, with the higher end of that range more favourable to tenants than landlords. Given housing cost trends in recent years, HRM should consider targeting 5% as the preferred stable vacancy rate, being the higher end of the healthy range and a more ambitious target in favour of renters. For reference, HRM has not experienced a vacancy rate of ≥ 5% since 1998.

Minor - Urban Reserve Land Considerations
Estimating supply capacity is a challenging exercise and the technical report correctly identifies many of the limitations and assumptions that go along with it. Ultimately, this analysis is measuring policy-driven capacity, not the capacity of economically feasible supply. For the most part, there is limited room to suggest improvements given its purpose, however treatment of the Urban Reserve (UR) lands is one area where some further refinement of the analysis would be appropriate.

First, we reviewed the UR lands using HRM’s Regional Plan Generalized Future Land Use shapefile, retrieved from the Open Data portal in July 2021. This is a different dataset than the internal files used by staff in the analysis, and on visual inspection there are boundary differences which limit our ability to review figures directly. The analysis itself states that 5,763 acres of land make up the totality of UR areas (excluding Ragged Lake and Purcell’s Cove Backlands). Adjusting the shapefile boundaries to the best of our ability, we can only replicate a figure of 5,534 acres using the Canada Alber’s Equal Area Conic map projection. This does not confirm an error, but is perhaps grounds to double check the figure.

Our principal concern is that applying the uniform unit yield assumptions to the entirety of the Anderson Lake and Blue Mountain - Birch Cove UR lands, specifically, may not be appropriate for several reasons:

Blue Mountain - Birch Cove
Compared to other UR areas, these lands are heavily fragmented by lakes and other surface water features. Due to differences in the data we have access to, we are unable to determine if the area of water coverage was excepted from the total land area used in the capacity calculation. If it was not, then the 7 units per acre yield assumption is likely not appropriate to apply, having been informed by development concepts for less constrained greenfield development areas.

Anderson Lake
The current boundaries of this Urban Reserve area were predicated on the old proposed alignment of the HWY 107/Burnside Drive extension, originally intended to connect Burnside Dr. with Duke St. by traversing to the east and north of Anderson Lake. The UR area was therefore meant to capture all lands between this new 107 extension and the Trunk 7/Magazine Hill corridor to the south and west.

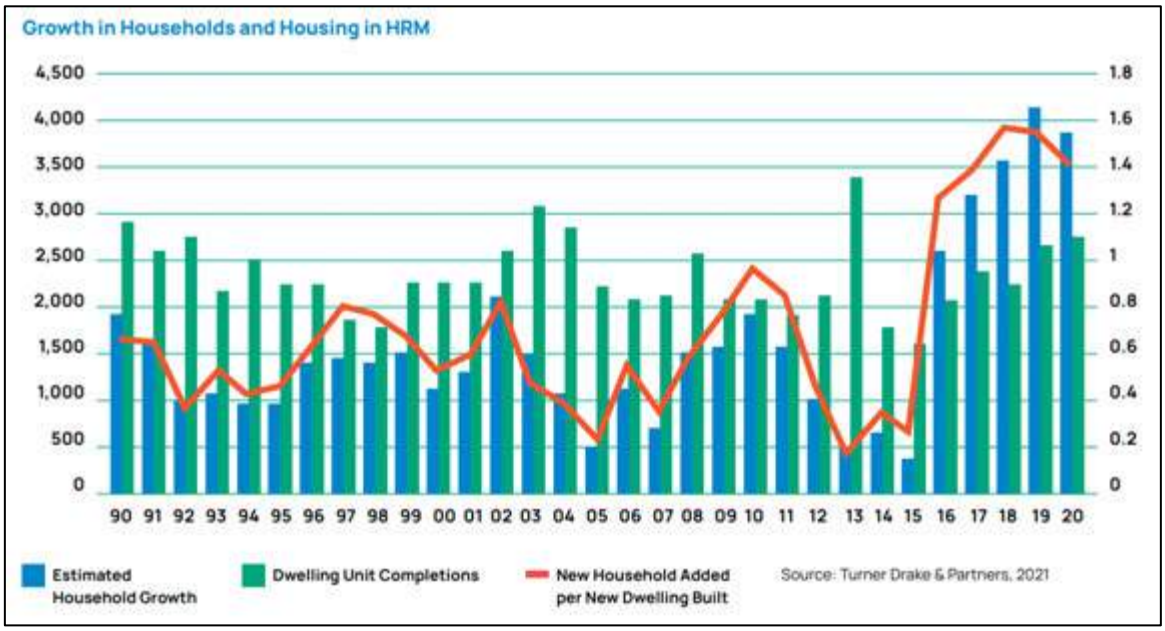
However, in the time since the previous Regional Plan review, the Province of Nova Scotia has negotiated with landowners and settled on a new alignment for this road extension which now passes on the other side of the lake and through the centre of the UR land block rather than along it's periphery. The new alignment is now under construction and therefore a reality for the new Regional Plan to contend with. This has two implications for the capacity analysis; the new road corridor itself will consume a significant amount of the UR lands, and the conditions which led to this realignment also suggest that far less development will occur here than the UR boundaries imply.

Further to the last point, much of this UR area is in the land reserve for an active quarry. Turner Drake & Partners was party to some of the purchase negotiations between the Province and current landowner which ultimately led to the realignment. Quarry operations are sensitive to location as aggregate is costly to transport relative to its value. It does not take long before establishing a new local source of material is a better idea than shipping it in by truck. Given these considerations, this quarry is ideally located – close to a large, growing urban area with ample room for expansion. As a consequence, the value of this reserve land is quite high and geological testing showed that the most productive rock formations were generally located to the north-west of Anderson Lake, well inside the UR boundary. These two hurdles – the value of land in it's current use, and the motivation of the current owner to preserve their holdings for future expansion and buffering against any land use conflict – were insurmountable for the original highway alignment.

In most cases, it is appropriate for HRM not to consider issues related to ownership or current use when assessing land supply at a high level. In this case, given the magnitude of the issue and the demonstrated position of its current long-term owner with respect to changes in use, it would be appropriate in our opinion to re-evaluate the expected contribution of these UR lands to the capacity analysis.

Significant - Demand Adjustment for Present Housing Deficit
The core analysis methodology has an inherent assumption that demand and supply are in balance at the starting point of the projection period, i.e. the net demand starts at 0 in the base year and grows from there regardless of whether a housing deficit or surplus exists as a starting condition. This is a typical approach, and one we often take in our own work as it is usually appropriate for the context.

However, the last few years in HRM have not been typical. The municipality has experienced sustained acceleration in population growth, while new dwelling construction rates have not kept pace. We have recently estimated changes in household and dwelling unit growth in HRM over the past three decades, this research was used in the report recently issued by the Nova Scotia Affordable Housing Commission.



Source: Nova Scotia Affordable Housing Commission. (2021). Charting a New Course for Affordable Housing in Nova Scotia. Retrieved from: https://beta.novascotia.ca/sites/default/files/documents/1-2679/charting-new-course-affordable-housing-nova-scotia-en.pdf

We have included the data behind this chart as an appendix to this letter. Our research illustrates the significant deviation in the relationship between demand and supply growth rates since 2016 in contrast to longer term trends. As a result, there exists a current deficit of housing that should be taken into account by the demand analysis.

The adjustment for desired vacancy partially recognises this condition, however it does not capture the entirety of the issue. The implications of under-building are clear in data for primary rental market vacancy rates, but it is also experienced in the secondary rental market (for which we have no reliable data source), and also the broader owner-occupied market which makes up the majority of the housing stock. Part of the challenge for the latter is that there is no duplicate “vacancy” metric for this market. Instead, measures such as the average days on market, sales to list ratios, list price to sold price ratios, or months of inventory available, are used to describe the balance of market power between buyers and sellers. These vacancy-esque measures have been indicating a low availability of housing for some time, and we see the results of this in recent sale prices much the same way that low vacancy portends rising rents.

However, these measures are not conducive to the same adjustment calculation made for vacancy rate as they only describe the inventory of housing that is transacting in the market, and not the full stock of owner-occupied housing. Further, there is interplay between the rental and owner-occupied markets; the current deficit of homes for ownership is part of the reason for there being low vacancy of homes for rentership. To circumvent these complexities, we suggest implementing a broader approach to adjust for desired slack in the housing inventory by calculating an overall housing deficit based on top-line household growth and construction data and integrating an apartment vacancy adjustment subsequent to this.

We suggest an approach that sets 2015/2016 as the breakpoint between two development paradigms. First, we must establish a long-term “baseline” set of metrics for the pre-2016 period. Then these are applied to the growth that has been observed from 2016 onwards. Finally, these are compared to the construction that has actually been delivered in order to quantify a cumulative deficit of housing that should be added to the total demand projection.

At it's most basic, the adjustment could look like this:

1. Estimated New Households Added (2016-2020): 14,944
2. CMHC New Dwelling Completions (2016-2020): 10,070
3. 10YR Average of New Dwellings Completed per New Household Added (2006-2015): 1.99
    a. For reference, the 5YR and 20YR averages up to 2015 are 2.66 and 1.86, respectively.
4. Dwelling Completions Expected @ 1.99 per New Household: 29,739
5. Cumulative Shortfall of Completions (2020): 29,739 – 10,070 = 19,669

To consider a desired vacancy rate, a further adjustment could be made:

6. Primary Rental Market Share of Total Rental Market in 2016: 44,898 Occupied Units (CMHC) / 69,090 Rental Tenured Households (Census) = 0.650 or 65%
7. Primary Market Rental Universe (2020): 52,913 Units
8. Estimated Total Rental Universe (2020): 52,913 / 0.65 = 81,405 Units
9. Average Vacancy Rate (2006-2015): 3.1%
10. Desired Vacancy Rate: 5.0%
11. Desired Marginal Vacancy Rate Increase: 5.0% - 3.1% = 1.9%
12. Rental Inventory Increase Required: 81,405 x 1.9% = 1,547 Units
13. Cumulative Shortfall After Vacancy Adjustment (2020): 19,669 + 1,547 = 21,216 Units

As this represents an existing deficit, it would apply equally to all growth scenarios as well as both the 2031 and 2050 forecast horizons. In the case of the Moderate Growth scenario, this represents an upward adjustment to total demand of 54% and 19%, respectively. In other words, expanding the analysis methodology will unsurprisingly generate a significant difference in the final output.

LOOKING FORWARD

There are two issues that follow directly from the findings of this analysis, but are not within its scope (and in some cases are readily acknowledged as limitations). We are therefore not framing these as suggested changes to the analysis itself, but issues that are critical to bear in mind as the review process continues.

Economic Feasibility of Capacity

The ultimate objective of land supply management is to ensure that land development can produce new housing in line with expected changes in demand, and have enough time to adjust to unexpected demand shocks. Policy-driven supply capacity is a starting point, but does not accurately capture the quantum of supply that can be delivered via market mechanisms as the limiting factor is often something other than policy feasibility. The analysis recognises this fact and explicitly mentions the open question of economic feasibility as an important limitation of the work.

Though HRM is clearly aware of this, we wish to highlight it again here as it is a critical issue connecting this preliminary analysis to its ultimate goal. The matter becomes more important as the proportion of supply capacity is increasingly comprised of infill or redevelopment within existing urban areas. Greenfield land development feasibility can still vary from site to site, but the presence of existing urban conditions, fragmented land ownership, and much higher "existing use" values add larger and more complex barriers to development feasibility. In particular, the supply represented by suburban BRT corridors under Centre Plan development typologies is one that should receive further scrutiny and testing going forward.

Zoned Capacity

Both the Issue Paper and Technical Report conclude on a comparison of demand and supply which sets up a question of the appropriate relationship between these two figures. The Technical Report goes one step further, explicitly calculating the supply capacity multiple of demand under various growth scenarios and laying out the conceptual basis for using an adequately high multiple as one strategy for managing the issue of unknown economic feasibility noted above, as well as other development constraints that aren't considered in a high-level analysis of capacity.
This relationship is generally known as Zoned Capacity, and it is an important but fraught topic in

planning. There is no generally accepted rule that we are aware of with respect to the proper zoned capacity ratio to demand; it appears to be determined by the unique local circumstances of market conditions, development regulation, and a host of other factors. For example, the City of Seattle effectively adopted a 3.2x multiple of zoned capacity to expected demand in 2014 when their analysis concluded that the 223,713 units of capacity identified in their analysis was sufficient to accommodate an expected growth of 70,000 households[1]. At the other end of the spectrum, the City of Los Angeles is presently updating the Housing Element of the City's General Plan in order to meet regional development targets. Interestingly, they are using an econometric approach to estimating potential supply. Part of the reason for this approach is the low observed uptake of zoned capacity by new development in recent years; the econometric modelling memo notes that in excess of 1,380,000 units of zoned capacity translated into only 128,000 units of new housing between 2010 and 2020, implying a functional multiple of 10.8 at the minimum[2].

Zoned capacity itself is often a point of contention, with the same analysis being used to support both pro- and anti-development policy arguments from the public because the "correct" multiple is rarely examined. We feel it is important to highlight the challenges and pitfalls that accompany zoned capacity discussions in public planning processes so that HRM can plan to approach the topic appropriately in the Regional Plan review. Ideally some further analysis of local data would be undertaken in order to support these future discussions given the apparent difficulty in taking lessons from other jurisdictions.

CONCLUDING REMARKS

Thank you for sharing the details of the Preliminary Population and Housing Analysis and welcoming our review. This is, overall, a well-executed and defensible analysis that provides important guideposts for the Regional Plan update. In and of itself we have only minor suggestions for refinement. However, we believe it is important to expand the methodology to include consideration of current conditions and not just net changes in demand and supply from the base year forward. This is not always a necessary step – it was not done for previous Regional Plan reviews, and we have similarly not taken existing conditions into account in past forecasting work we have undertaken for HRM and other communities – but given the recent history of growth and development, we believe it is an important issue to account for. We have provided a suggested approach and are happy to discuss this further as you consider this letter.

Beyond the analysis itself, we again emphasise that the policy-based supply capacity only exists to the extent that it is economically and physically viable, and aligns with the motivations and desires of current land owners. We can therefore expect that only a fraction of the capacity will be delivered over the timeframe of the Regional Plan. Examination of this issue should be a key next step as this relationship is very influential in determining whether the Preliminary Population & Housing Analysis is showing a need for additional development capacity, in what magnitude, type, and location.

Yours truly,

TURNER DRAKE & PARTNERS LTD.

ORIGINAL SIGNED

NEIL R. LOVITT, LPP MCIP, CPT
Vice President
Planning & Economic Intelligence

[1] See https://www.seattle.gov/opcd/population-and-demographics/zoned-development-capacity

[2] See Section 1.2 https://planning.lacity.org/odocument/15117d38-35ca-416b-9980-25eb20201ba2/Appendix_4.6_-_Regression_Methodology.pdf

APPENDIX – GROWTH AND DEVELOPMENT DATA

Year	Population Estimate	Net Population Growth YoY	Census - People Per Dwelling	Linear Interpolated / Extrapolated - People Per Dwelling	Overall Vacancy Rate	Estimated Household Growth	Dwelling Unit Completions (Total)	Dwellings Completed per New Household
	Statistics Canada	*Derived from Population Estimate*	*Statistics Canada*	*Derived from Census Figures*	*CMHC*	*Net Population Growth divided by People Per Dwelling*	*CMHC*	*Unit Completions divided by Estimated Household Growth*
1989	327,432							
1990	332,545	5,113		2.718	3.4%	1,881	2,902	1.54
1991	337,097	4,552	2.7		4.7%	1,686	2,645	1.57
1992	339,735	2,638		2.682	5.7%	984	2,764	2.81
1993	342,687	2,952		2.664	6.3%	1,108	2,126	1.92
1994	345,373	2,686		2.646	7.2%	1,015	2,520	2.48
1995	348,085	2,712		2.628	7.7%	1,032	2,253	2.18
1996	351,740	3,655	2.61		8.6%	1,400	2,229	1.59
1997	355,526	3,786		2.586	7.7%	1,464	1,849	1.26
1998	359,081	3,555		2.562	5.5%	1,388	1,816	1.31
1999	362,942	3,861		2.538	3.6%	1,521	2,257	1.48
2000	365,947	3,005		2.514	3.6%	1,195	2,300	1.92
2001	369,252	3,305	2.49		2.8%	1,327	2,263	1.71
2002	374,445	5,193		2.472	2.7%	2,101	2,588	1.23
2003	378,091	3,646		2.454	2.3%	1,486	3,127	2.10
2004	380,752	2,661		2.436	2.9%	1,092	2,888	2.64
2005	381,940	1,188		2.418	3.3%	491	2,241	4.56
2006	384,658	2,718	2.40		3.2%	1,133	2,091	1.85
2007	386,402	1,744		2.392	3.1%	729	2,149	2.95
2008	389,919	3,517		2.384	3.4%	1,475	2,593	1.76
2009	393,688	3,769		2.376	2.9%	1,586	2,071	1.31
2010	398,356	4,668		2.368	2.5%	1,971	2,044	1.04
2011	402,074	3,718	2.36		2.4%	1,575	1,910	1.21
2012	404,376	2,302		2.3531	3.0%	978	2,156	2.20
2013	405,598	1,222		2.3462	3.2%	521	3,357	6.44
2014	407,061	1,463		2.3393	3.8%	625	1,850	2.96
2015	408,017	956		2.3324	3.4%	410	1,674	4.08
2016	414,015	5,998	2.33		2.6%	2,579	2,028	0.79
2017	421,713	7,698		2.3197	2.3%	3,319	2,380	0.72
2018	429,895	8,182		2.3139	1.6%	3,536	2,246	0.64
2019	439,529	9,634		2.3081	1.0%	4,174	2,668	0.64
2020	448,544	9,015		2.3023	1.9%	3,916	2,776	0.71

C106

Collin's Park Watershed Advisory Committee

[redacted]

June 17, 2021

Thea Langille
HRM Principal Planner – Rural Policy & Applications
PO Box 1749, Halifax Nova Scotia B3J 3A5
and via email: [redacted]

Re: HRM Development Application Cases 21460, 22195, 23188, 23325

The Collin's Park Watershed Advisory Committee (CPWAC) is writing to express serious concerns regarding the proposed multi-unit Halifax Regional Municipality (HRM) Development Application Cases 21460, 22195, 23188 and 23325. The CPWAC's primary concern is about the potential for a significant increase in phosphorus production from these developments entering the drinking water supply, unless it is properly controlled. While the CPWAC is not opposed to development in general, the Committee is compelled to provide advice and recommendations, per its mandate (see Appendix B: Terms of Reference), regarding the risks that these proposed developments pose to the Collin's Park municipal drinking water supply. Appendix A tabulates the Committee's concerns and recommendations about each of these developments. However, our primary concern is about the potential increase of phosphorus loading into the water supply.

Three (3) of the proposed townhouse development cases, i.e., 21460, 23188 and 23325 are proposing enhanced sewage treatment systems (STS), while the fourth, case 22195, proposes to use the Lockview municipal wastewater treatment system. With the use of enhanced STS, the CPWAC is primarily concerned that they will not be adequately maintained or managed. Without regular maintenance, these systems can very quickly fail, reducing them to the same capacity as a regular on-site sewage disposal system (OSSDS), which are not capable of handling the high phosphorus loads that these proposed multi-unit developments would produce and a potential impact on the drinking water supply.

In review of Appendix C of the Strum Consulting Phosphorus Net Loading Assessment – Townhomes of Lake Thomas (June 12, 2020) (Case 23188), these enhanced STP systems use electrodes to precipitate out the increased phosphorus loading that these more intense development applications would produce, specifically with respect to cases 21460 and 23188 that propose 3, 40-unit buildings of 3 storeys each and 18 townhouse dwellings, respectively. The testing trial data provided in the STS manufacturer's report show that they may become ineffective within a year of installation because the electrodes in the enhanced STS system often oxidize, or the electrical power required in the tank fails in the extreme environment. Such failures reduce the effectiveness of the system to the typical on-site sewage disposal systems (OSSDS) that single unit residential landowners currently have.

This raises serious concerns for the Committee, as the Fall River Waverley/Windsor Junction area becomes a priority development area for HRM, where more of these large, unserviced development requests propose to use these enhanced STS systems. Further, the Committee is concerned that HRM will have no capability to effectively monitor or provide back up support, nor enforcement measures if the STS isn't properly maintained.

These STS provide a fundamentally new approach to sewage disposal that purports to support much larger developments on unserviced lots, by mitigating the phosphorus loading that would

otherwise find its way into nearby watercourses. With conventional on-site sewage disposal systems (OSSDS), it is obvious when they are failing. Some of these new STS use a completely different operational approach, i.e., the use of electrical power supplies and consumable electrodes that must be replaced, at least every year. To make matters worse, it is not obvious when these systems fail because there are no indications that the electrodes need to be replaced. Subsequently, a failed system may appear to be working for many years, while nutrients are unknowingly leaching into the environment. The authorization of these systems, which require a minimum semi-annual maintenance regime to replace the consumables, where necessary, should be a condition of permit.

HRM must appreciate, and facilitate some mechanism to independently monitor these STS, to ensure they are working. As the design consultant reports show, Total Phosphorus levels for these new developments will be orders of magnitude above the current situation; and if not controlled properly, this will be discharged into the Shubenacadie Canal system, severely impacting the water quality of the water supply. This is the most pressing problem for all four of these development proposals and indeed for unserviced development in general.

Approving developments is a Council and a planning department decision. HRM states that it is the owner's responsibility to maintain these enhanced STS. However, the planning department has repeatedly said to this Committee that they have no capability, or responsibility for the systems once the development is complete. The Committee recommends that a general provision be built into a development agreement that holds the developer, landowner or other named responsible agent to provide an annual report demonstrating that the STS is being maintained to a high standard. We also suggest that the overseer/enforcement of the monitoring and maintenance of these systems should be the Nova Scotia Department of Environment and Climate Change (NSECC), who are the regulatory agency with respect to on-site sewage treatment systems (OSSDS), where semi-annual monitoring and annual maintenance reports should be sent, with copies to HRM and this Committee; and failing that, penalties of an amount that will assure compliance will result.

The four recent development applications have brought this issue to the fore. A combination of more intensive development, with the realisation of new technologies to allow higher density development in the area could result in higher nutrient loading to the Shubenacadie water system and deterioration in water quality. Existing regulations and responsibilities do not appear to be adequate to manage such development in a sustainable way. Before HRM approves the developments, we urge Council to ensure these gaps in the regulatory regime are filled to protect the integrity of the drinking water supply.

Additionally, please review the attached table in Appendix A, considering the Committee's concerns about phosphorus loading just described and the other comments and recommendations about these development proposals. Thank you for your attention to our concerns. I look forward to receiving further updates on these development applications.

Respectfully,

Original Signed and being sent via Canada Post

Richard Pickrill,
Chair CPWAC

Cc: Councillor Deagle Gammon
Meghan Woszczynski, Development Engineer, Halifax Water
CPWAC Membership

Appendix A:

Appendix A: Table Outline of the CPWAC Concerns About Development Cases 21460, 22195, 23188, 23325				
Application Type / Case#		**Development Description**	**CPWAC Comments and concerns**	**CPWAC Recommendations**
Policy and Plan Amendment	**22195**	Application by KWR Approvals Inc., on behalf of LawDia Developments, to amend the policies for Block B of the River-Lakes Secondary Planning Strategy within the Municipal Planning Strategy for Planning Districts 14 and 17, and also to amend the Land Use By-law to enable a development agreement for **16 townhouse units on a portion of Block B in Canal Court**, Fall River.	The Committee has serious concerns with this proposal due to its size, impervious surface area, encroachment into the setback/buffer zone and phosphorus loading into the watercourse, as described below:	The Committee has the **following recommendations** for this proposal, which correspond to the concerns in the previous column, as follows:
			1. The proposed developed area in relation to the lot size **covers too much area and has too many units**.	1. **Redesign and resubmit the application with consideration of reducing the number of units** and the recommendations outlined below.
			2. There is **too much impervious surface** (i.e., asphalt) on this property.	2. Consider the Sobeys car wash development (Building Permit #183626 & 183627 at 3170 Highway 2, Fall River) and their treatment on what is typically an impervious surface area; **this development left much of the area with pervious surface areas** – an excellent alternative surface area application example to curb the impact on surface water quality (and groundwater quantity) supplies. Further, **HRM/Halifax Water should consider making pervious surfaces a stormwater runoff policy requirement**.
			3. Normally, a berm would be created between the development area and the setback/buffer zone to prevent broad surface area runoff into the setback/buffer zone, with collection of the stormwater and some treatment to remove nutrients, other contaminants (e.g. petroleum products) and debris, to prevent such compounds from entering the setback/buffer and the watercourse. In this case, the Strum report indicates that **phosphorus loading** treatment is required, and because the site is so small, they recommend creating an **80 m grass swale in the setback/buffer zone** to allow filtering of the nutrients. This proposed solution will not deal with the removal of other contaminants and debris from the properties and the roadway due to the following concerns:	3. The solution to **honoring the setback/buffer zone requirement** (i.e., Dist. 14/17 General Provision 4.17: Watercourse Setbacks and Buffers; 1.c.) would be to **reduce the number of units** constructed to **allow room for the swale to be developed outside of the setback/buffer zone area**. **Note**: There appears to be a contradiction between Provisions 4.17 1. c. and 1. d, whereby 1.d. permits wastewater, storm and water infrastructure and water control structures within the setback/buffer. **The Committee advises that these permissions be retracted in this Provision, as part of the Regional Plan review process,** for many reasons that are described throughout this table, including the following:
			a. The **setback/buffer zone will be disturbed by the creation of the grass swale** and the runoff will be piped into the setback/buffer area, the actual location of which will be decided during the construction process. The concept of a grass swale Best Management Practice is that runoff will be filtered through the soil and in the process, nutrients will be filtered out. The 20 m width of the setback/buffer zone is a minimum width.	a. Notwithstanding Dist. 14/17 LUB 4.17 1. d., the biggest issue is the proponent's proposed suggestion to convert part of an undisturbed riparian setback/buffer zone into a grass swale, which the Committee feels thwarts the purpose of an undisturbed riparian setback/buffer zone. Therefore, the Committee recommends that **riparian setbacks/buffers should not be disturbed, and the grass swale be constructed adjacent to the buffer zone.**

Appendix A:

			b. **Nutrients will eventually saturate the soil in the setback/buffer zone**, reducing its capacity to absorb; eventually nutrients will reach the watercourse. **Any reduction of the width of the setback/buffer will reduce the filtering ability**. Leaving the decision to actual placement of where the runoff will be piped could result in a very narrow setback/buffer between the swale and the watercourse. This part of the proposal eliminates the value of the setback/buffer zone.	b. **The engineered grass swale should not encroach into the riparian setback/buffer zone**. Redesign of the project, with potentially fewer units should be required to fit the available lot size and meet statutory requirements.
			c. The Strum report emphasizes the need for routine maintenance of the swale area to remove debris etc., acknowledging that otherwise, **the effectiveness of the swale will be compromised, further compromising the setback/buffer zone area**.	c. **A mechanical system for removing petroleum products and debris from stormwater**, such as that installed at the Sobeys mall **would be effective** in removing those components from the stormwater, **but not for the nutrients**.
Municipal Planning Strategy Amendment and Development Agreement process	**21460**	Application by KWR Approvals Inc., on behalf of Perry Lake Developments, for a site specific amendment to the River-Lakes Secondary Planning Strategy (SPS) under the Municipal Planning Strategy (MPS) for Planning Districts 14 and 17 (Shubenacadie Lakes), to enable a residential development at the south end of Ingram Drive and west of Highway 102, Fall River, known as Opportunity Site C (PID 40844375, 40551277, 00472910, 00472902 and 40551558). The proposed development is for **3, 40-unit buildings of 3 storeys each**, **serviced for water** by the Pockwock (J. D. Kline) water supply plant.	The Committee was **impressed by the depth of the analysis** and the proposed environmental mitigation plans as outlined below:	The Committee has the following recommendations for this proposal, which correspond to the comments in the previous column, as follows:
			1. The design **respects the setback/buffer zones** around the site with the addition of advanced (in the Committee's opinion) berms and sand filtering to contain overland runoff outside of the setback/buffer zone.	1. **Ensure that the final approved plans mimic the development plan** with the grass swales and sand filters to control runoff, septic effluent discharge, and the runoff retention area near Ingram Drive.
			2. The recommendation in the phosphorus loading document provided by the environmental consultant is for **an enhanced sewage treatment system (STS) design (a Waterloo Biofilter unit**) to achieve the necessary phosphorus reduction. This unit **uses electrostatic phosphorus removal** to ensure that phosphorus loading does not exceed the LUB requirement in the RLRC Zone.	2. Due to the reasoning described in the opening remarks of this letter, the Committee **recommends that the Waterloo Biofilter STS be installed as per the consultant's recommendation**, **or an equivalent STS with advanced phosphorus removal capability**.
			3. This case **proposes a group septic system in which each building would have septic tanks with fluid discharge to the enhanced STS for further treatment** before being discharged into a dispersal field.	3. **Ensure that the DA approval dictates that the septic tanks shall be pumped regularly and that the other parts of the STS shall be maintained and that pumping date documentation shall be provided annually to the regulating agency (i.e., the Nova Scotia Department of Environment and Climate Change (NSECC)) and copied to HRM and this Committee**.
			4. The manufacturer states that the **phosphorus removal electrode components may require replacement (see Case 23188 below for more details)**.	4. Inspection of the electrode components of the STS that precipitate out phosphorus should be **inspected every six months (see Case 23188 below for more details)**, and those **inspection reports shall be provided to the regulating agency** (NSECC) to ensure all recommendations are implemented to maintain the system at design performance levels.
Development Agreement process	**23188**	Application by KWR Approvals Inc., on behalf of John and Judith MacDonald to enter into a Development Agreement to	The Committee's **concerns are with respect to the ability for the proposed enhanced sewage treatment system (STS) to maintain the necessary phosphorus reduction**, as follows:	The Committee has the following recommendations for this Case, which correspond to the concerns in the previous column, as follows:

Appendix A:

		construct **18 townhouse dwellings** on lands located at 2136 & 3124 Hwy #2, Fall River.	1. The recommendation in the phosphorus loading document provided by the consultant (Strum) is for an enhanced sewage treatment system (STS) design (Waterloo Biofilter unit) that **uses electrostatic phosphorus removal (electrodes) to achieve the necessary phosphorus reduction** to meet or exceed the LUB requirement in the RLRC Zone. The Committee's interpretation of the Waterloo Biofilter Unit manufacturer's report is that **the lifespan of the electrodes appears to be inconsistent**. The report's description of the efficacy of the electrodes is high, when new; however, in some cases they have oxidized and deteriorated, **reducing the STS effectiveness to that of a basic on-site septic system, unless and until the electrodes are replaced.** Further, a Committee septic system expert states that his experience with electrical connections within a septic system has not been good. **A septic tank is a very corrosive environment and electrical connections are prone to an early demise**.	1. **Frequent monitoring (every 6 months), and replacement of the electrodes**, where necessary, is required. T**he regulating agency** (NSECC)) shall ensure all recommendations are implemented to maintain the system at design performance levels.
			2. There is concern as to **who would be responsible for monitoring these enhanced STS**, for changing the electrodes when necessary and for providing the oversight for these responsibilities.	2. We **foresee that monitoring and maintenance of these enhanced STS would be the responsibility of the system installer, as per the contract between the current landowner and the installer**. Inspection of the electrode components of the STS that precipitate out phosphorus should be **inspected every 6 months**, and those **inspection reports shall be provided to the regulating agency (NSECC)** to ensure all recommendations are implemented to maintain the system at design performance levels.
	23325	WSP Canada Inc. is applying for a DA at 3195 Highway 2, Fall River, **for a 4-unit townhouse positioned** between Hwy 2 and Lake Thomas; it is the property currently hosting a single-family dwelling adjacent to the Turtleback Restaurant **and also includes a commercial building** on the site. This site is serviced for city water but not sewer.	The Committee has the following concerns/observations regarding **wetlands, flood risks, watercourse setbacks, use of the setback/buffer zone for OSSDS, OSSDS specifications, phosphorus loading, buildings and services, size of development and lack of information**:	The Committee has the following recommendations for this Case, which correspond to the concerns in the previous column, as follows:
			1. Wetland: a. This is a relatively flat, low-lying property with a wetland in the northwest portion that is contiguous to Lake Thomas. Much of the wetland illustrated on the plan is included within the watercourse setback/buffer zone. **The wetland assessment (and high-water mark see point 3. below) on this site are questionable, especially considering flood prone areas** (see 2. Below). b. In the proponent's Onsite Servicing Letter is stated that "ongoing discussions will be had with NSE on **wetland alteration to allow for the treatment and disposal field" in at least a portion of the current wetland area. The Committee has serious concerns about this proposed OSSDS solution considering the potential for flooding not to mention undermining the integrity of a valuable wetland with respect to the water supply.**	1. Wetland: a. It is **vital that this wetland be properly defined (**by a certified wetland delineator**) and maintained** because it serves as part of the 20 m setback/buffer area and a filter **within a municipal water supply system**. b. **Rather than infilling the wetland to use as a dispersal field** (as proposed in the Onsite Servicing Letter), ensure the developer **adheres to the NSECC OSSDS Technical Guide (Table 2.5) requirement of a 30.5 m horizontal clearance area** from the wetland area.

Appendix A:

			2. Flood Risk: The northern portion (around the wetland area) of this property sometimes floods in the spring. Over the last 15 years, Committee members have **often observed a good portion of the northern side of that property under water, which puts into question where the high-water mark and subsequently where the setback/buffer is**. If the setback/buffer zone is part of the floodplain, then the setback/buffer zone at various times will not be a setback/buffer zone because it will be submerged, and dry other times.	2. Flood Risk: The Committee recommends that HRM **consider the results of the impending HRM Shubenacadie Floodplains Mapping Study** in the deliberation of this development proposal, to help define where the watercourse setback/buffer should be.
			3. Watercourse Setbacks/Buffers: a. The consultant's report and site plan show the 20 m setback/buffer zone line and **state that the zone will be respected**. b. However, **the Committee questions the proponent's assessment of where the high-water mark is, which is where the watercourse setback/buffer should start from**.	3. Watercourse Setbacks/Buffers: a. The Committee recommends**, as part of the Regional Plan review process, that the Dist. 14/17 LUB General Provision 4.17 1.(d) clause, which allows "wastewater, storm and water infrastructure, and water control structures" be removed**, in consideration of the impacts such infrastructures could have on water supply areas (municipal or otherwise) in the event these setback/buffer areas flood. b. **The 20 m setback/buffer from the watercourse must be more clearly defined**, in consideration of item 1.a. in the previous column and item 2. above, to clearly establish where the watercourse setback/buffer should start from.
			4. Use of Setback/Buffer Zone for OSSDS: The Committee has **significant concerns with the proposal to use the setback/buffer zone (and wetland area – see 1.b. above) as part of the OSSDS effluent dispersal system,** which **puts the dispersal system much closer than 30.5 m (NSECC regs) or even 20 m (HRM buffer LUB) to Lake Thomas**.	4. Use of Setback/Buffer Zone for OSSDS: The watercourse setback/buffer is supposed to be undisturbed as per the Dist. 14/17 LUB General Provision 4.17 1.(c) **The Committee recommends this be respected, which would not permit the dispersal field within the setback/buffer zone** (see Item 3. above).
			5. Building and water/wastewater services: This proposal is for 4 townhouses and a commercial building. They propose combining the OSSDS plan for all the facilities. Also, **the townhouses are intended as rental units**. **That raises a big flag; if the developer develops it and then rents it and subsequently decides to sell off any of the units individually then there will be multiple owners, plus the commercial building, all relying on this enhanced OSSDS** that requires regular maintenance.	5. Buildings and water/wastewater services: Concerning the potential sale of the townhouses to private entities, the Committee recommends **that a requirement** or a covenant or something of that nature **that commits the owners of the townhouses – whether a corporation or separate individual – that they jointly, with the commercial building, have the responsibility for maintenance for proper operating of the proposed OSSDS**.

Appendix A:

			6. OSSDS Specifications: a. The **site plan does not show where the OSSDS will be installed**, only the sites of two test pits. b. The **site plan does not show where the dispersal bed would be placed within the setback/buffer zone** and the required 30.5 m setback from watercourses and the wetland. c. In the proponent's Onsite Servicing Letter on wastewater treatment and disposal, the consultant refers to discussions with NSECC regarding **using at least a portion of the wetland area for a dispersal field**.	6. OSSDS Specifications: a. The OSSDS dispersal system must be 30.5 m from a watercourse and wetland according to the **OSSDS Technical Guide**. **The Committee requests that the OSSDS be better defined in the proposal**. b. The Committee advises that **no OSSDS dispersal system be permitted in the setback/buffer zone.** c. The Committee believes it may be prohibitive for the proponents to develop the proposed lot as submitted without proposing encroachment on the setback/buffer. Therefore, the **Committee advises that the density of the development be reduced to accommodate the OSSDS outside the setback/buffer zone**.
			7. Phosphorus Loads: a. The phosphorus load modelling indicates that the post-development loading will be at least an order of magnitude higher than pre-development and recommends that **phosphorus reduction occur in the wastewater treatment process**. b. They suggest that **phosphorus removal will be accomplished by adding alum or ferric salts to an enhanced OSSDS to achieve tertiary treatment.** However, in the proponent's Onsite Servicing Letter, **they state that secondary treatment will be achieved by using enhanced technologies, but only if NSECC regulations require higher removals.** So, which proposed option is correct? c. The consultant also notes that any tenants in the commercial building will need to be assessed in terms of their phosphorus loading to ensure it will not exceed the capacity of the enhanced OSSDS system. **Who will be responsible for maintaining this system? Who will assess the tenant's phosphorus loading post-development?**	7. Phosphorus Loading: a. In consideration of the following from the District 14/17 Municipal Planning Strategy (MPS): "*The Regional Plan requires the **retention of riparian buffers and wetlands** which will also **aid in the uptake of phosphorus and ameliorate its impacts**. However, there is a substantial amount of housing development proposed within the southern and northern portions of the Secondary Planning Strategy Area which should be assessed **to ensure that it does not exceed the capacity of the receiving waters to assimilate phosphorus without exceeding the water quality objectives** established under this Secondary Plan*." (pg. 124) The Committee recommends decreasing the level of potential phosphorus loading by decreasing the development footprint on this lot. b. The Committee **requests more clarity regarding what OSSDS will be used**. c. The Committee recommends some system **that a requirement** or a covenant or something of that nature **that commits the owners of the townhouses – whether a corporation or separate individual –jointly, with the commercial building, have responsibility for properly maintaining operation of the proposed OSSDS.**
			8. Inadequate Information: **Inadequate information has been provided to enable the Committee to adequately assess all of the potential impacts on the water quality** of Lakes Thomas and Fletcher with respect to the Halifax Water Collins Park public drinking water supply.	8. Inadequate Information: The Committee requests that **specific details be provided on location of the OSSDS and the dispersal system, that meet the regulatory requirements of minimum OSSDS dispersal fields from watercourses distances.** If complying with the setback and OSSDS requirements reduces the land available for development, **the proponent should resubmit a less intensive development plan to fit the site**.

Appendix B:

COLLIN'S PARK WATERSHED ADVISORY COMMITTEE TERMS OF REFERENCE

Mandate:

These Terms of Reference shall serve to constitute the Collin's Park Watershed Advisory Committee's (hereafter referred to as the Committee) role as an advisory group to the Halifax Regional Water Commission (Halifax Water), the Halifax Regional Municipality (Halifax), the Province of Nova Scotia, stakeholders and communities in the Collin's Park watershed area (Appendix A) on the potential effects of land use practices within the Collin's Park watershed.

Objectives:

1. The Committee will foster avenues for open communication between stakeholders within the identified watershed area.
2. The Committee will help promote effective best management practices in the watershed.
3. The Committee will foster environmental stewardship practices through education and awareness for the purpose of ensuring healthy water quality.
4. The Committee will help to maintain water quality health through research and water quality protection projects as needed.
5. The Committee will review and make recommendations in a timely manner, to the Minister of Environment and Halifax Water, on all activities or policy issues affecting the water quality, flows and levels in the Collin's Park watershed, as requested by Halifax Water, the Province of Nova Scotia, stakeholders and communities in the area.
6. The Committee may, from time to time, request individuals or groups make presentations to the Committee on matters influencing the watershed.
7. The Committee will review and comment on water quality and monitoring programs and other studies related to the watershed. All water quality information available from member agencies shall be made available to the Committee to the extent permitted.
8. The Committee will liaise with government agencies not represented on the Committee with regard to matters affecting the watershed.
9. The watershed focus area is defined by the Source Water Protection Plan to which the Committee provides input.
10. The Committee will provide advice and recommendations to the Waterworks Operator who is responsible to ensure that the terms and responsibilities related to watershed protection, as defined by the Committee through these Terms of Reference are followed.

Membership and Meetings:

11. The Committee shall be comprised of the following voting members:
    a) one identifiable group, organization or individual representative from each of the following communities:
        - Waverley;
        - Fall River;
        - Lake Fletcher; and
        - Wellington;
    b) a community representative from at least one industry sector, as determined by the Committee, which may include but not limited to Nova Scotia Power Inc., retail, the Nova Scotia Homebuilders Association, and/or the mining and/or quarry industry;
    c) one private landowner-customer of the Collin's Park Water Supply System; and
    d) one representative from Halifax Water.
12. The Committee shall be comprised of the following non-voting technical representatives:
    a) one (1) from Halifax Planning and Development;
    b) up to two (2) from Nova Scotia Environment; and
    c) one (1) from Nova Scotia Transportation and Infrastructure Renewal.
13. The Committee may also include other members as determined by the Committee.
14. All community members will serve for a two-year term (except for the first term whereby half of the members shall serve for a three year term to ensure continuity of membership). Subsequent appointments or re-appointments by the community to the Committee shall be for a term of two years.
15. Technical representatives to be appointed to the Committee by their respective organizations.
16. Upon expiration of terms, for members representing identifiable groups or organizations, that member will be asked by the Committee to have their group or organization nominate a member for the subsequent term. Where that is not possible, Halifax Water will contact the group or organization to request an appointment. For members not representing an identifiable group or organization, Halifax Water will write all landowners in the area of interest affected by the Collin's Park watershed seeking an individual volunteer for the Committee. If more than one volunteer per community comes forward, the Committee will decide upon the community membership through a balloting process.
17. The Chair and Vice-Chair of the Committee shall be appointed every two years by the membership at the meeting closest to April 1st. The Chair of the Committee must be a voting community representative of the Committee while the Vice-Chair must be a voting Halifax Water representative of the Committee.
18. Administrative support shall be provided by Halifax Water.

19. The Committee shall endeavor to conduct business by consensus, but should voting be necessary, all motions will require support from a majority of the members present. A quorum shall consist of at least four (4) voting members and at least one (1) of the non-voting technical representatives. In the event there is not a quorum, an Information Meeting will be held.
20. Members who miss 3 consecutive meetings will forfeit their position to which the board will seek a replacement from the affected representation.
21. Bodies appointing representatives may name an alternate. Alternates may attend all meetings as observers and may vote when the appointed representative is absent.
22. The Committee shall meet as necessary and not less than two times per year.
23. The Committee shall be empowered to amend its Terms of Reference by motion, with the approval of the Waterworks Operator.
24. The Chair, or a person designated by him/her shall act as the Committee spokesperson.

Land Development:

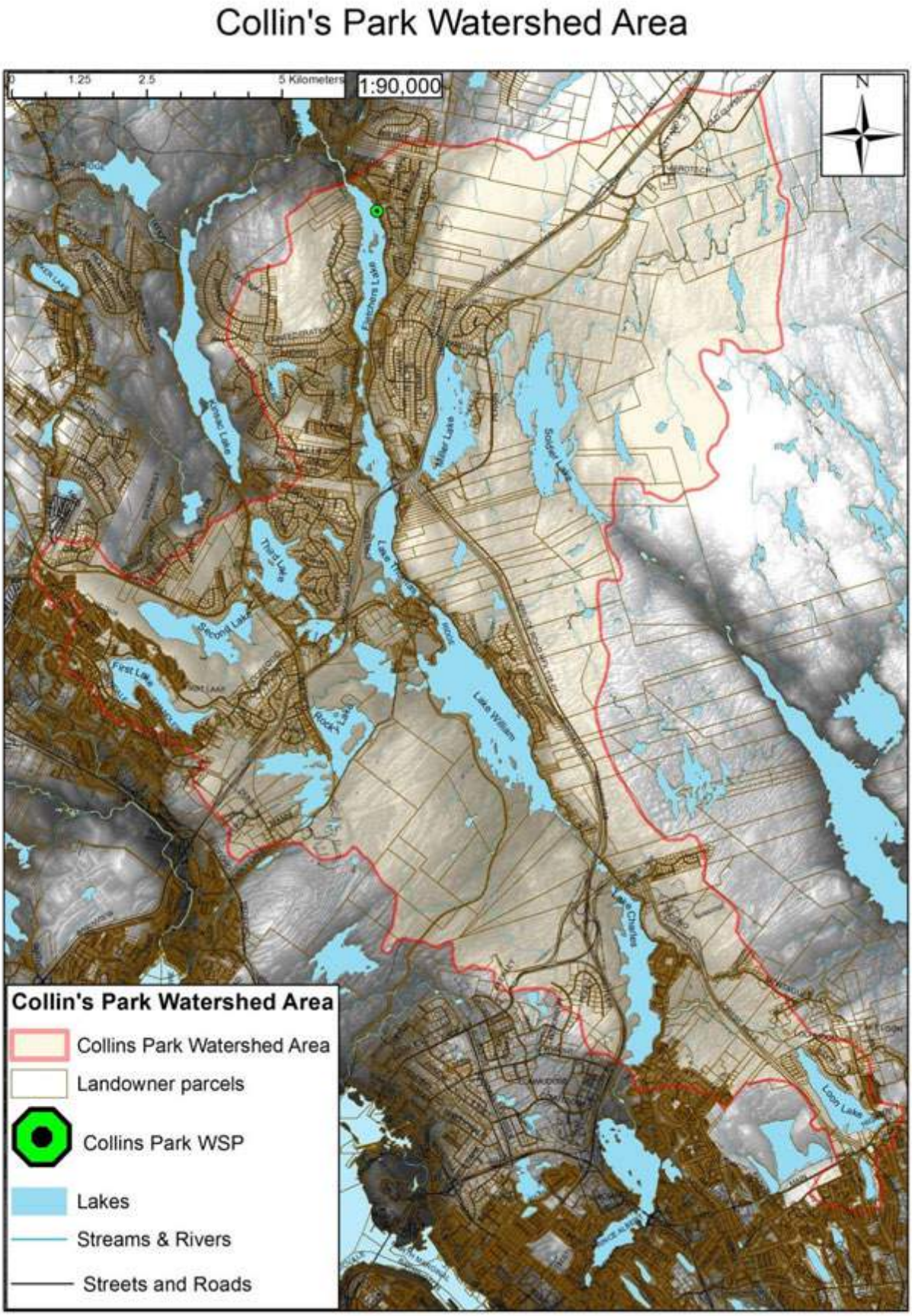
25. Through its representation on the Committee, Halifax Water, and Halifax Municipality Planning and Development may maintain an open dialog regarding development applications in and near the watershed with the goal that the Committee has the opportunity to provide recommendations to Halifax Municipality Planning and Development regarding such applications.

Committee Review Process:

26. The Committee will review and forward recommendations to the Waterworks Operator for approval within thirty (30) days following receipt of all submissions and requests pertaining to changes in land use activities within the Collin's Park Water Supply Area as defined in these Terms of Reference.

February 18, 2016

Appendix A: Collin's Park Watershed Area Map



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WILDLIFE CORRIDOR LANDSCAPE DESIGN CHARRETTE

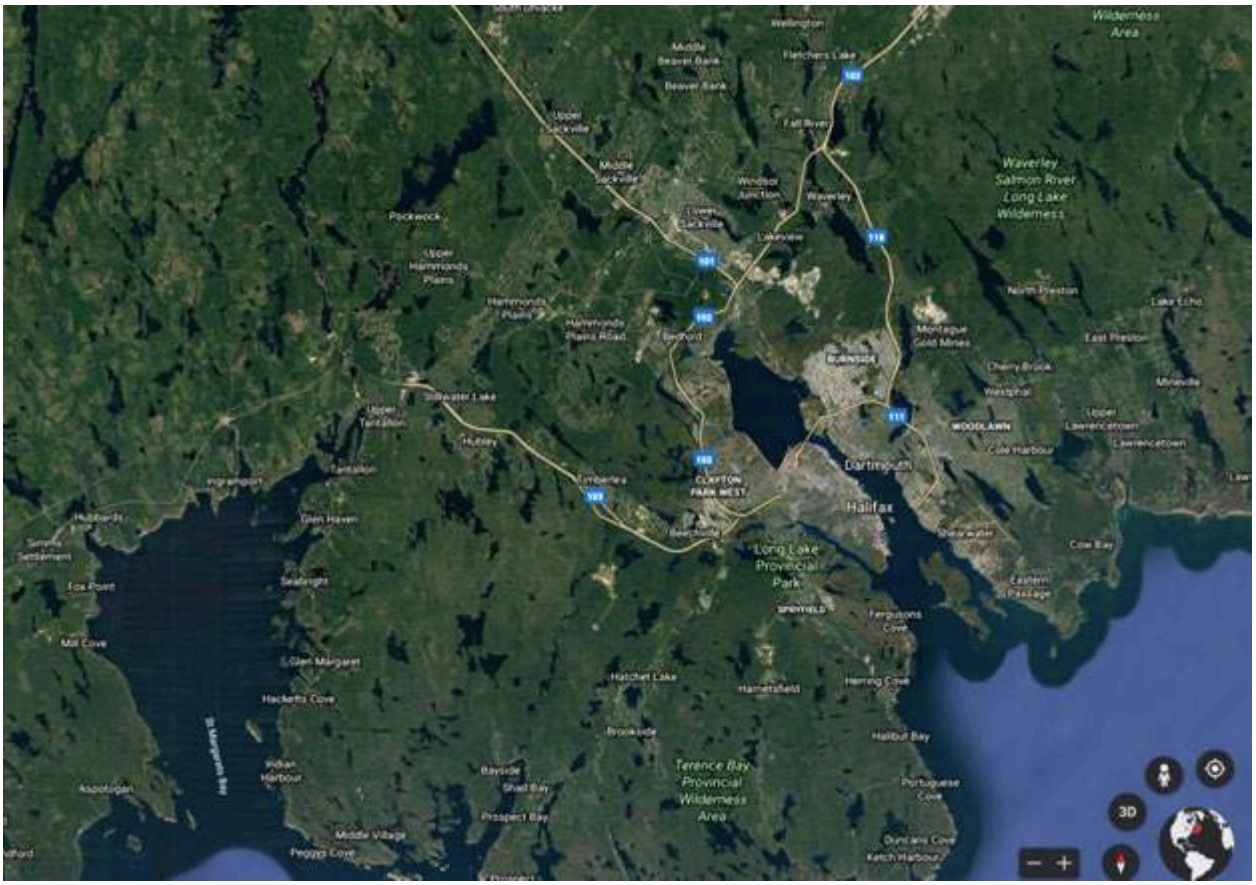
Chebucto-Timberlea-Sandy Lake area of Halifax, NS

Summary Document



NOVA SCOTIA CROWN SHARE LAND LEGACY TRUST

Halifax, NS, March 2021



Source: Google Earth

Cite report as:

Nova Scotia Crown Share Land Legacy Trust. 2021. Wildlife Corridor Landscape Design Charrette: Chebucto-Timberlea-Sandy Lake area of Halifax, NS. Summary Document. Nova Scotia Crown Share Land Legacy Trust, Halifax, NS. Canada. 55pgs.

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Cover photo: Five Bridge Lakes, K. Beazley

Halifax is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq.

We are all Treaty people.

INTRODUCTION AND CONTEXT

Halifax Regional Municipality's initial regional plan (2006) and the regional plan update (2014) highlight the importance of ecological connectivity between natural areas so as to enable and facilitate the movement of species across intervening landscapes that are becoming increasingly occupied by a continuously expanding pattern of urban development. The 2006 and 2014 plans (Map 4, in each case) identify connectivity priorities at a macro scale; however, although useful in identifying the importance of planning for the protection and maintenance of ecological corridors, both plans lack detail in regard to providing explicit direction for on-the-ground implementation.

The 2014 plan therefore calls for the preparation of "a greenbelting and open space priorities plan to protect and preserve connectivity between natural areas and open space lands …". The resulting Green Network Plan (2018) provides direction for land management and community design "to maintain ecologically and culturally important land and aquatic systems" and "to identify, define and plan land suited for parks [and protected areas] and corridors". A particular focus of the Green Network Plan (Map 9) is emphasis on the preservation and creation of natural connections between the Chebucto Peninsula and the greater Mainland.

As the Green Network Plan remained largely a 'desktop' effort based on available GIS information, the charrette approach reported on herein attempted to move the process a step forward, by bringing GIS experts together with other participants having scientific and local area knowledge, to map significant corridor opportunities and options relative to the Chebucto Peninsula and existing and proposed protected areas on the Peninsula and nearby greater Mainland, generally extending from Ingrams River to the Peninsula to the Sandy Lake area.

OVERVIEW

Ecological connectivity is "the degree to which the landscape facilitates or impedes movement among resource patches" (Taylor et al., 1993, p. 571). It has both structural (based on the spatial structure of the landscape) and functional (based on how a particular organism reacts to the spatial structure of the landscape) elements, but the two are not mutually exclusive, with each informing the other (Brooks, 2003). At the landscape level, connectivity is often modelled through a core-corridor model, where large, vegetated areas serve as the core areas which are connected to one another by corridors.

Corridors are linear connections that facilitate through-movement across the landscape between core areas. Some corridors are contiguous, providing continuous physical connection between core habitat areas, while other are stepping stones, a linear series of smaller pieces of habitat linking two core habitat areas. Ideally, corridors should be as wide as possible to mitigate the edge effects that result from development on either side of a corridor and extend into the corridor, creating the zone of influence of human activity. For example, the zone of influence for black bears is 5 km in residential areas (Ford et al., 2020). To account for this zone of influence and to have a 1 km wide effective corridor for black bear, the corridor needs to be at least 6 km wide.

In Halifax Regional Municipality (HRM), the Halifax Green Network Plan was approved by Council in 2018. The Plan includes a framework to define an interconnected open space system, describes the benefits of such a system, and recommends actions to implement the Plan. To map the current state of connectivity of natural areas in HRM, the Plan used a core-corridor model, identifying 'Important Corridors' (the loss of which would impact local connectivity, but likely not regional

connectivity) and 'Essential Corridors' (those that provide critical or unique connections between core areas and are crucial to regional connectivity). According to the Plan, Essential Corridors should be at least 1 km wide (though the width should increase in proportion to the corridor's length), and Important Corridors should be at least 100 m wide. Where these widths are not possible, the Plan calls for as wide of an area to be maintained as possible and for restoration activities to be undertaken to restore disturbed habitats and to mitigate the impacts of nearby human activity(Halifax Regional Municipality & O2 Planning and Design, 2018, p. 36).

While the Halifax Green Network Plan provides a good basis for regional level planning, there are opportunities to build on the Plan's modeling and identify critical areas for connectivity at a finer scale, especially within and around the city's urban core, where there is pressure from urban development, road construction and forestry. Ultimately, more refined corridor mapping and rationale is needed to inform Action 32 in the Plan: "Amend the Regional Plan and Municipal Planning Strategies to prioritize the preservation and creation of natural connections to the Chebucto Peninsula (Map 9) from the Mainland when reviewing development proposals and updating planning policies and zoning in the area."

THE CHARRETTE PROCESS

On November 25, 2020, the Nova Scotia Crown Share Land Legacy Trust (NSCSLLT) hosted a virtual charrette to bring together scientists, planning experts and community advocate groups (for a full list of participants see Appendix I) with specific local area knowledge to create a conceptual map for wildlife corridors extending from the Backlands to the Ingram River Wilderness Area and the Sandy Lake-Sackville River Area. These are the main areas that provide habitat connectivity for wildlife on the Mainland moving to and from the Chebucto Peninsula.

Participants were divided into four groups, each looking at connections between different core areas (Figure 1):

a) Sackville River- Sandy Lake to Blue Mountain Birch Cove Lakes Wilderness Area (BMBCL);
b) BMBCL to the proposed Ingram River Wilderness Area;
c) BMBCL to the Five Bridge Lakes Wilderness Area; and,
d) Five Bridge Lakes Wilderness Area to Long Lake Provincial Park and the Backlands.

Each group worked together to identify the critical connections in their core area, considering both terrestrial and aquatic connectivity, as well as both structural and functional elements of connectivity. The goal of this charette was to create a series of maps (and their supporting rationale) that would build on the Plan's corridors mapping and would also identify areas not currently being considered in connectivity planning which should be considered.

The objectives were to: 1) stimulate thinking about possible solutions and collaboration amongst knowledgeable individuals; 2) create a series of conceptual maps that could be used for future refinements and work in the area; 3) identify areas not currently being considered in connectivity planning, but that should be considered in the future; and, 4) advance the work of O2 in the HGNP in identifying potential wildlife corridors by utilizing the extensive local knowledge of participants.

Each group presented their mapped outputs to the larger group. The maps were then compiled and refined for consistent symbology for presentation in this summary report. The four separate maps were overlaid and combined to form a composite map of the larger region. The following sections provide overviews of each of the four group maps, as well as a summary and composite map.

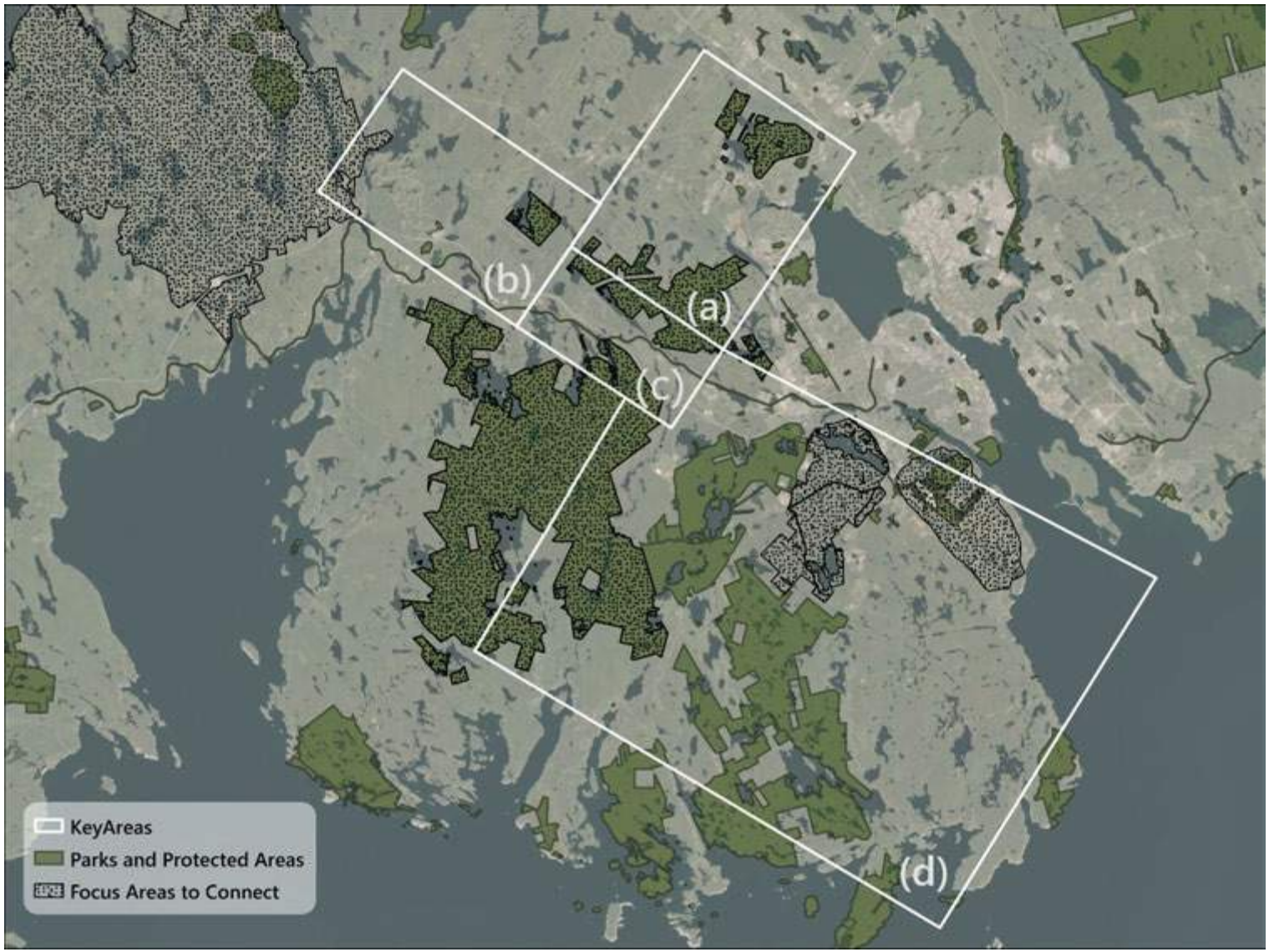


Figure 1. Key areas of concern for four groups during the charrette: Sackville River and Sandy Lake to Blue Mountain Birch Cove Lakes Wilderness Area (BMBCL) (a); BMBCL to the proposed Ingram River Wilderness Area (b); BMBCL to the Five Bridge Lakes Wilderness Area (c); Five Bridge Lakes Wilderness Area to Long Lake Provincial Park and the Backlands (d).

1. SACKVILLE RIVER-SANDY LAKE TO BLUE MOUNTAIN BIRCH COVE LAKES

Overview of the Area

The first group was focused on connectivity from the Sackville River and Sandy Lake to Blue Mountain - Birch Cove Lakes Wilderness Area (BMBCL). The Halifax Green Network Plan designates the Sackville River Valley from McCabe Lake to the Bedford Rifle Range as an essential corridor, and there are two converging important corridors linking Sandy Lake Regional Park and BMBCL, looping around the Stonington Park subdivision (Figure 2).

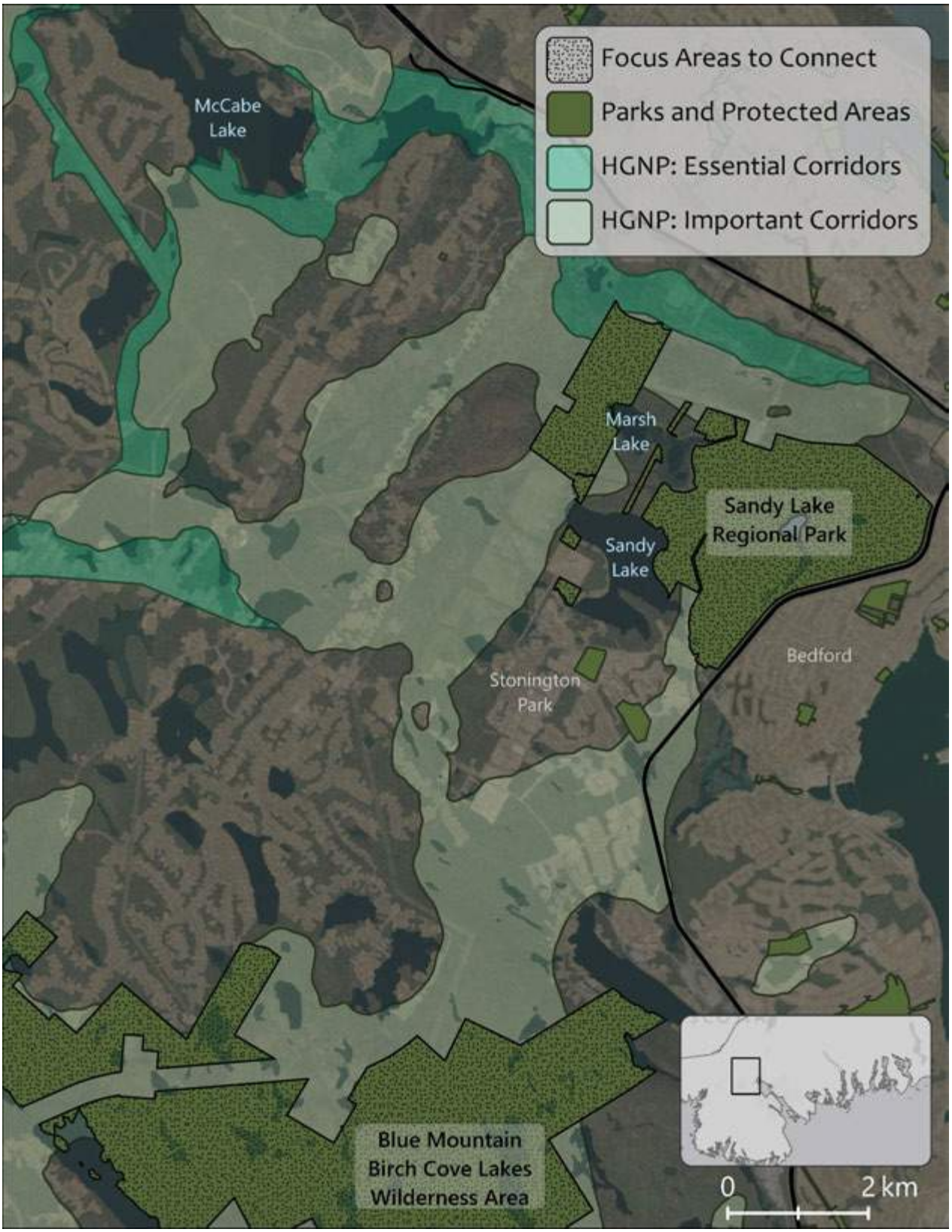


Figure 2. Overview of the area between Sandy Lake and Blue Mountain Birch Cove Lakes Wilderness Area

Primary Connections

The group identified a primary corridor that runs from Webber Lake along the Sackville River Valley into Sandy Lake Regional Park, through an essential corridor identified in the Halifax Green Network Plan (Figure 3). Between the two larger protected parts of Sandy Lake Regional Park lies Marsh Lake, which the group identified as being critical habitat to protect and an important area for aquatic connectivity. The important corridors identified in the Halifax Green Network Plan actually go around much of this critical area rather than incorporating it.

Another primary connection identified by this group runs along the west side of Sandy Lake to the intersection of Hammonds Plains Road and Larry Uteck Boulevard, which was identified as a major pinchpoint for connectivity between Sandy Lake and BMBCL (Figure 4). At this juncture, there are a few options for connectivity, which could also point to potential candidate spots for wildlife crossing structures. It was noted that there are a number of wetlands around this intersection which are important habitat and should form the basis of the corridors in the area.

The group largely focused their identification of corridors on aiming to preserve the areas around streams in order to maintain both aquatic and terrestrial connectivity, incorporating known corridors of wildlife movement to refine corridor placement. A corridor along a powerline right of way was also identified through the Uplands Park subdivision, which is known to be used by wildlife currently. From the Black Duck Wetlands there is a relatively undeveloped path that connects to BMBCL (Figure 5).

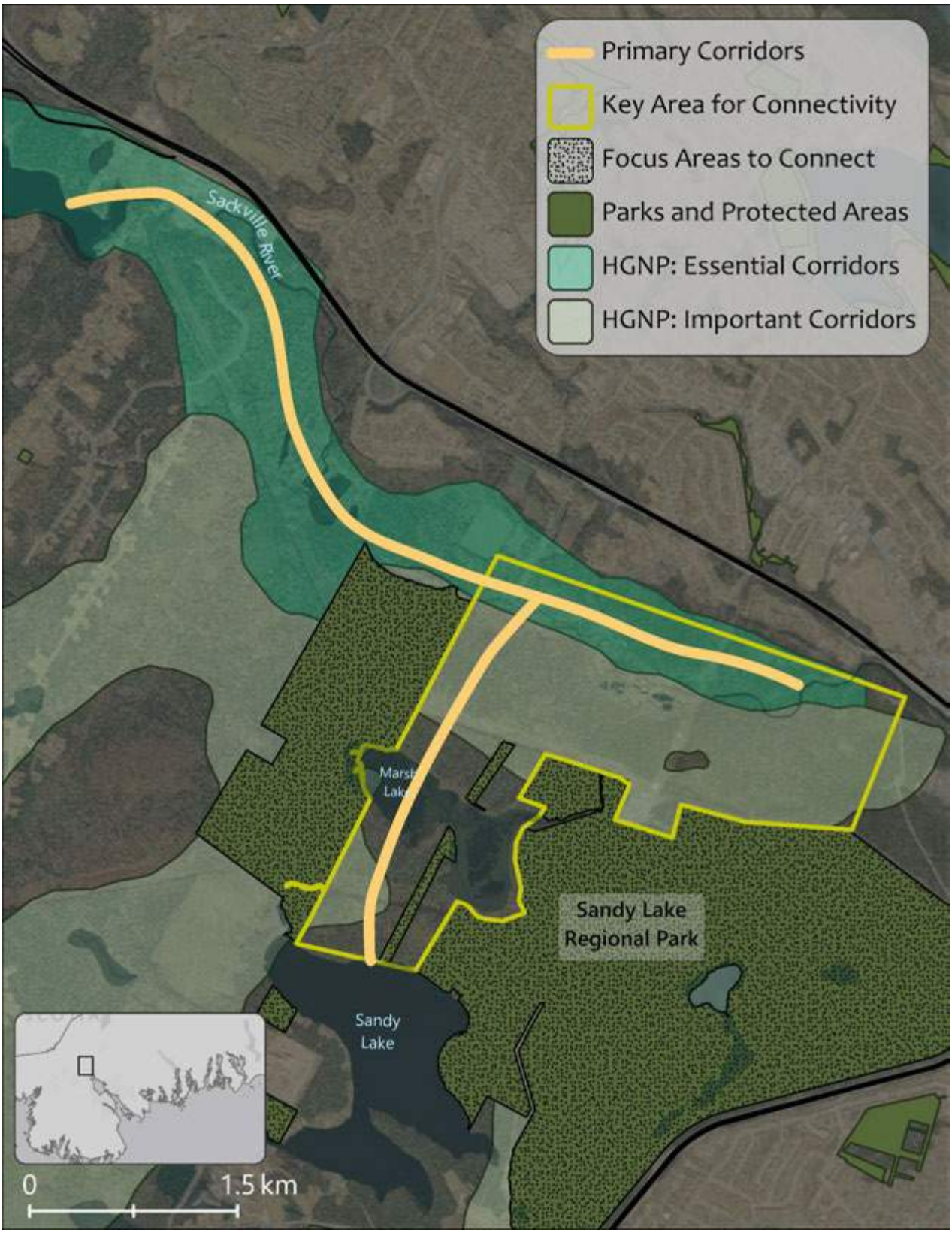


Figure 3. Connectivity between the Sackville River Valley and Sandy Lake, focused on the key area around Marsh Lake

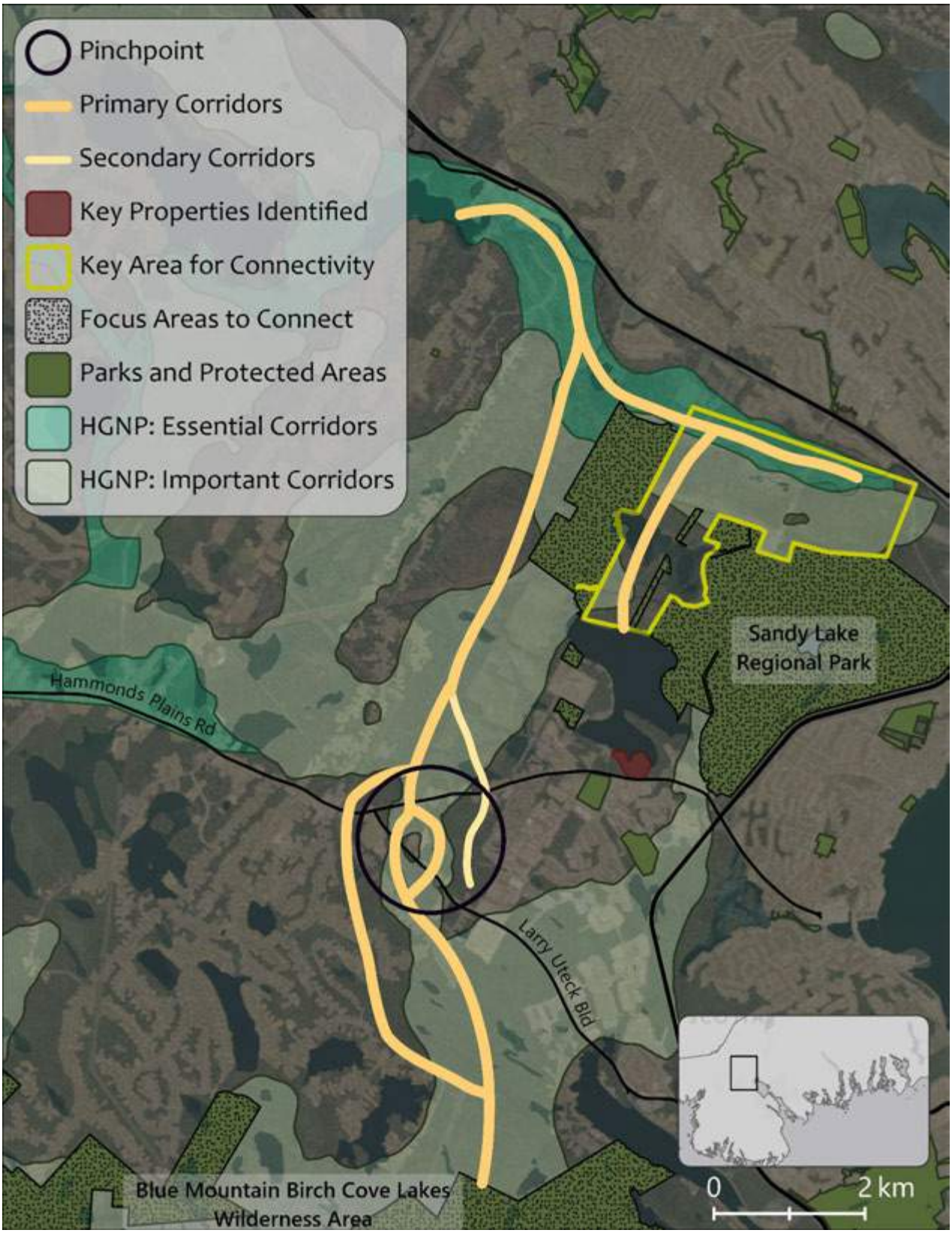


Figure 4. The main terrestrial connections between Sandy Lake and Blue Mountain Birch Cove Lakes Wilderness Area

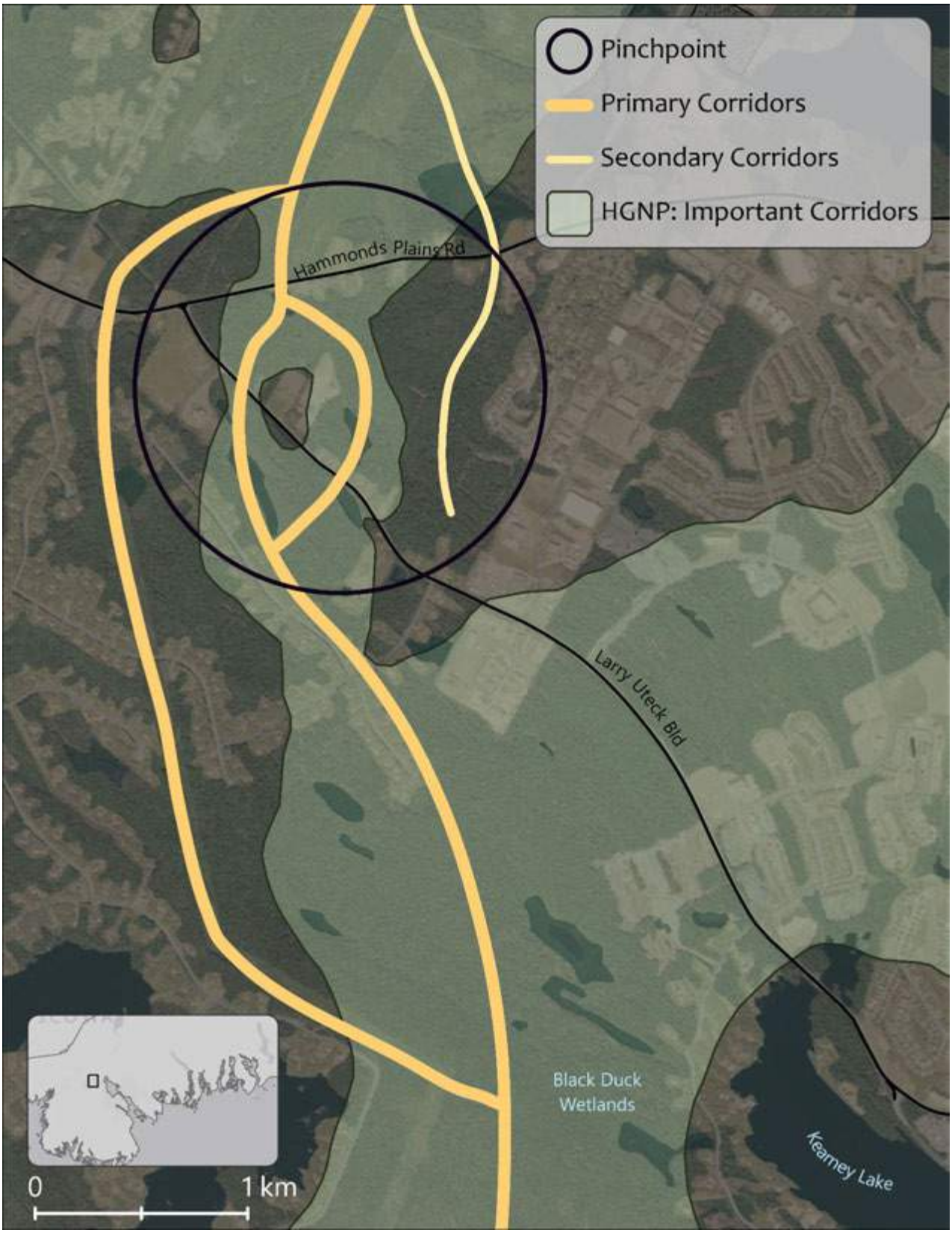


Figure 5. Pinchpoint around the intersection of Hammonds Plains Road and Larry Uteck Boulevard

Aquatic Connectivity

The entire Sackville River Valley was identified as being critical to protect, from McCabe Lake to the Bedford Basin, most of which is also designated as an essential corridor in the Halifax Green Network Plan (Figure 6). The group also noted that there is a pinchpoint for aquatic connectivity where the river meets Lucasville road, near Webber Lake (Figure 7).

As was noted above, Marsh Lake is an important area for connectivity, providing a direct linkage between the Sackville River and Sandy Lake via. Peverills Brook. Other streams and their tributaries flow from the BMBCL Wilderness Area into Sandy Lake, flowing around the intersection of Hammonds Plains Road and Larry Uteck Boulevard. As was noted above, this is a critical area for connectivity, and the group first identified the aquatic connections and then widened them to incorporate terrestrial connectivity as well. Several wetlands and streams connecting them were identified, including Black Duck Brook, which eventually flows into Kearney Lake and links up with an aquatic connection also identified by the group focused on connectivity between BMBCL and Five Bridge Lakes Wilderness Area.

Across the study area, the corridors identified by the group largely followed those in the Halifax Green Network Plan, but there were some differences, as noted (Figure 8).

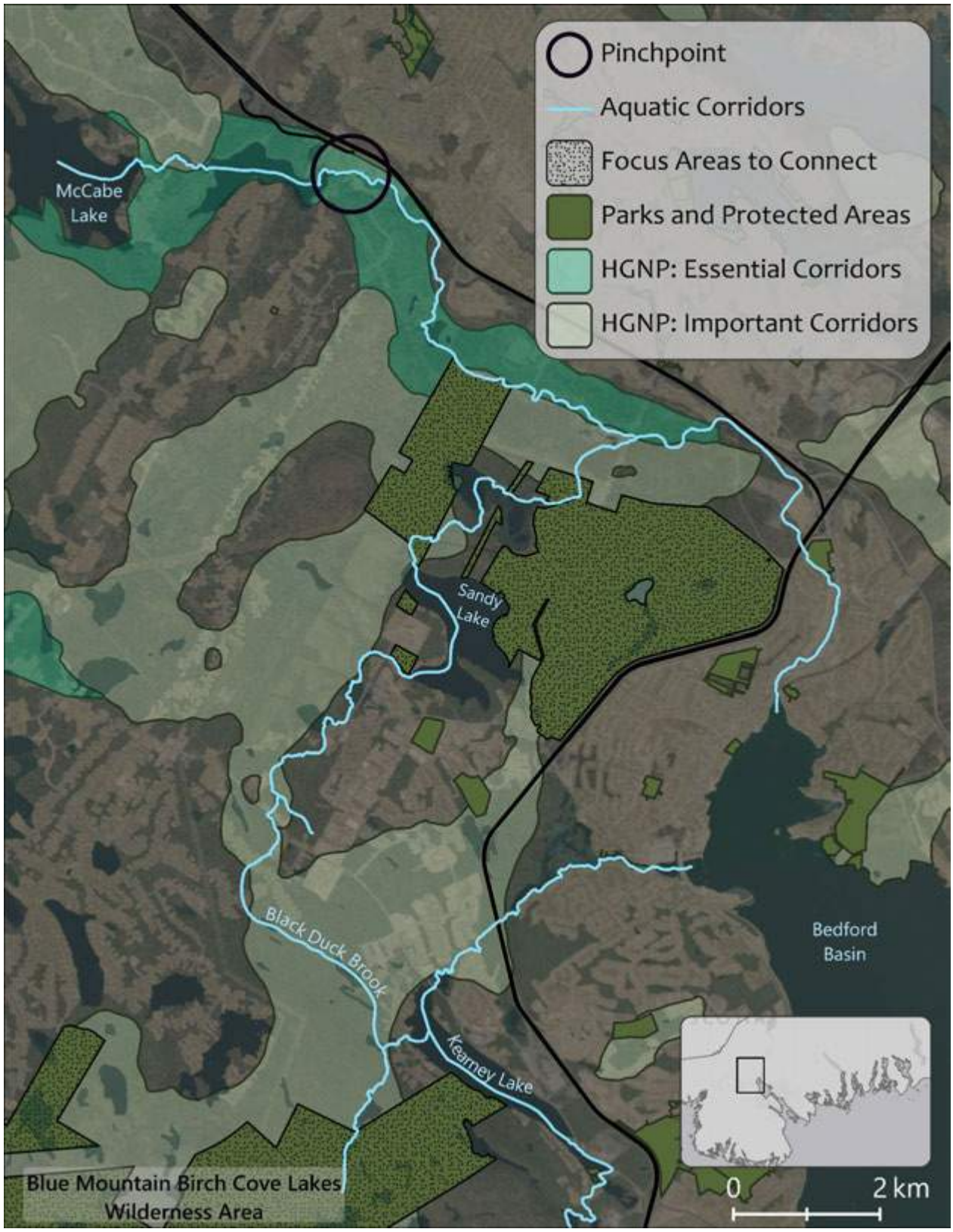


Figure 6. Aquatic Connectivity in the area around the Sackville River and Sandy Lake to Blue Mountain Birch Cove Lakes

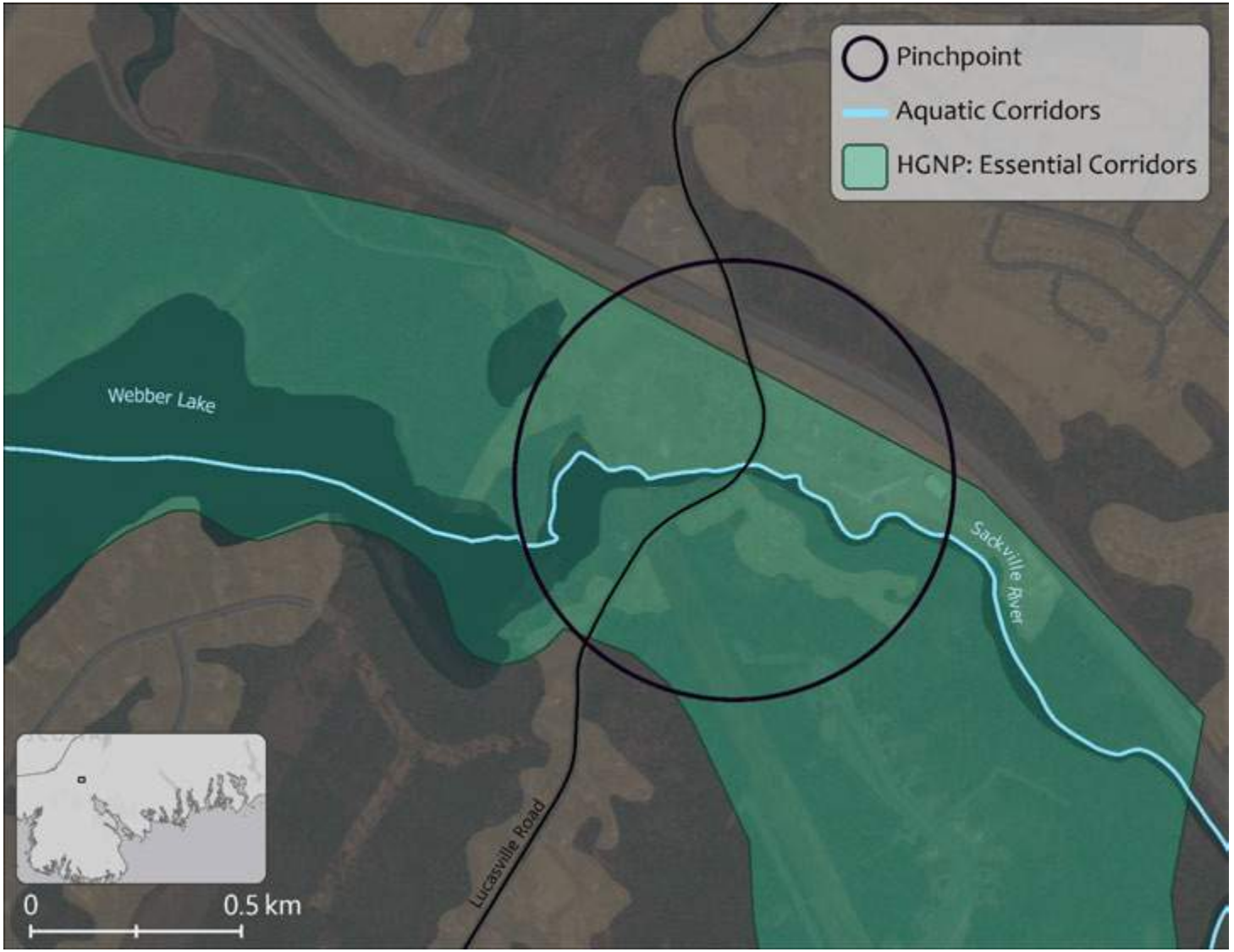


Figure 7. Pinchpoint in Aquatic Connectivity along the Sackville River at Lucasville Road near Webber Lake

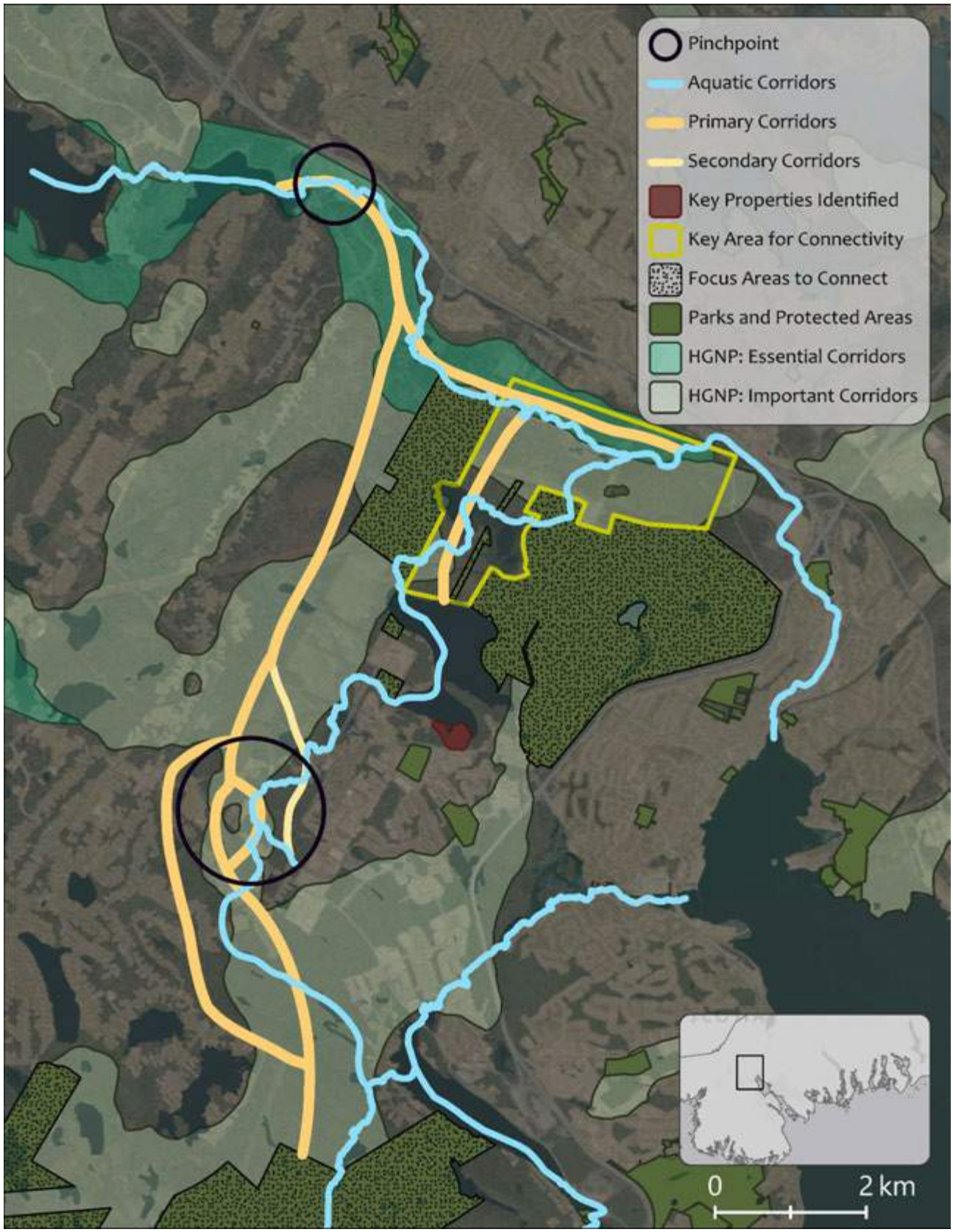


Figure 8. Summary map for the Sandy Lake to Blue Mountain Birch Cove Lakes group

BLUE MOUNTAIN BIRCH COVE LAKES TO INGRAM RIVER

Overview of the Area

The second group was focused on identifying areas for connectivity between the Blue Mountain Birch Cove Lakes (BMBCL) Wilderness Area and the Ingram River area and beyond (Figure 9). The Ingram River area is key to provincial scale connectivity, linking the Central and Western regions of the province. The St. Margarets Bay Stewardship Association has spearheaded a campaign to establish a core wilderness area on a block of Crown land formerly owned by the Bowater Mersey Paper Company, just to the north of St. Margarets Bay, as the proposed Ingram River Wilderness Area. The Halifax Green Network Plan identified two key corridors between BMBCL Wilderness Area and the Ingram River area. The wider of the two corridors flows to the north between the communities of Yankeetown and Glen Arbour, crossing Hammonds Plains Road as it continues towards the Pockwock Wilderness Area. A narrower corridor to the south flows through a more densely populated area, crossing Highway 103 twice, between the communities of Stillwater Lake and Hubley and to the west of the exit at Hammonds Plains Road, connecting also to Five Bridge Lakes Wilderness Area. Though highly developed, the latter corridor is identified as essential in the Halifax Green Network Plan.

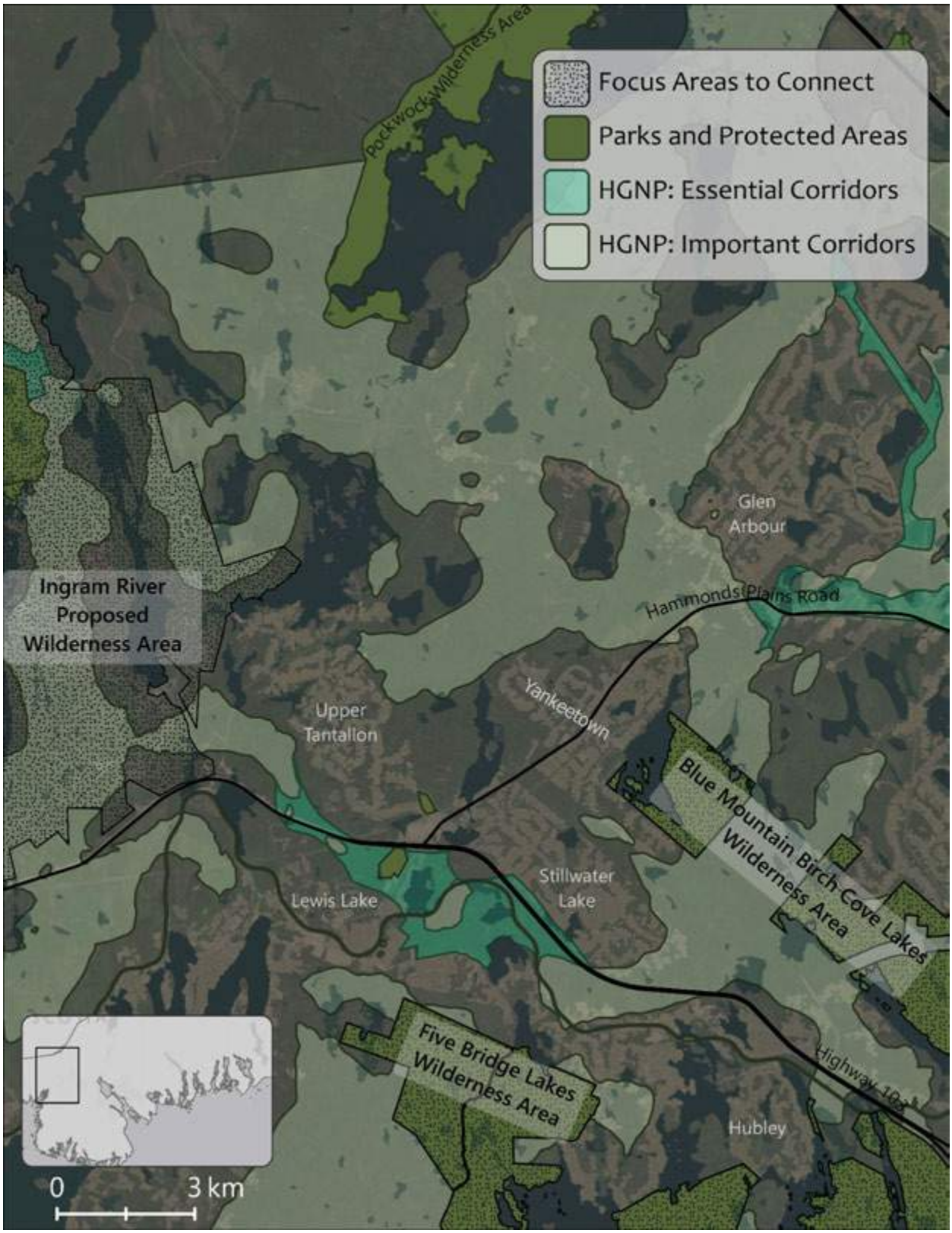


Figure 9 Overview map of the area between the Blue Mountain Birch Cove Lakes Wilderness Area and the Ingram River area

Northern Connection

A primary connection between BMBCL and the proposed Ingram River Wilderness Area flows northwards out of BMBCL towards the Pockwock Wilderness Area before turning westward towards Ingram River (Figure 10). The group noted that land ownership patterns drove the identification of potential corridors in the area, as much of it is privately owned and developed/slated to be developed. They also noted that the important corridors identified in the Halifax Green Network Plan served as a guide to finding the remaining intact corridors between the area's many subdivisions.

The area where the corridor crosses Hammonds Plains Road, between Yankeetown Road and Wallace Hill Road, was identified as a pinchpoint (Figure 11). Although it is narrow (~150 m wide), there is an intact remnant natural habitat between the communities of Yankeetown and Glen Arbour that provides an opportunity for wildlife movement along the identified corridor up towards the Pockwock Wilderness Area and the Ingram River area. Although there is development pressure, it is critical that this piece remains undeveloped as it is the only opportunity to cross Hammonds Plains Road with undeveloped land on both sides of the road within the identified corridor.

A large swath of land for connectivity was identified for potential acquisition or collaboration with the landowners (Figure 12). Properties in this area are currently owned by a variety of actors, including the Crown, Halifax Regional Water Commission and Elmsdale Lumber, the latter of which holds the properties immediately adjacent to the proposed Ingram River Wilderness Area. Properties managed by the Halifax Water Commission in this area provide connectivity to the Pockwock Wilderness Area and areas beyond HRM.

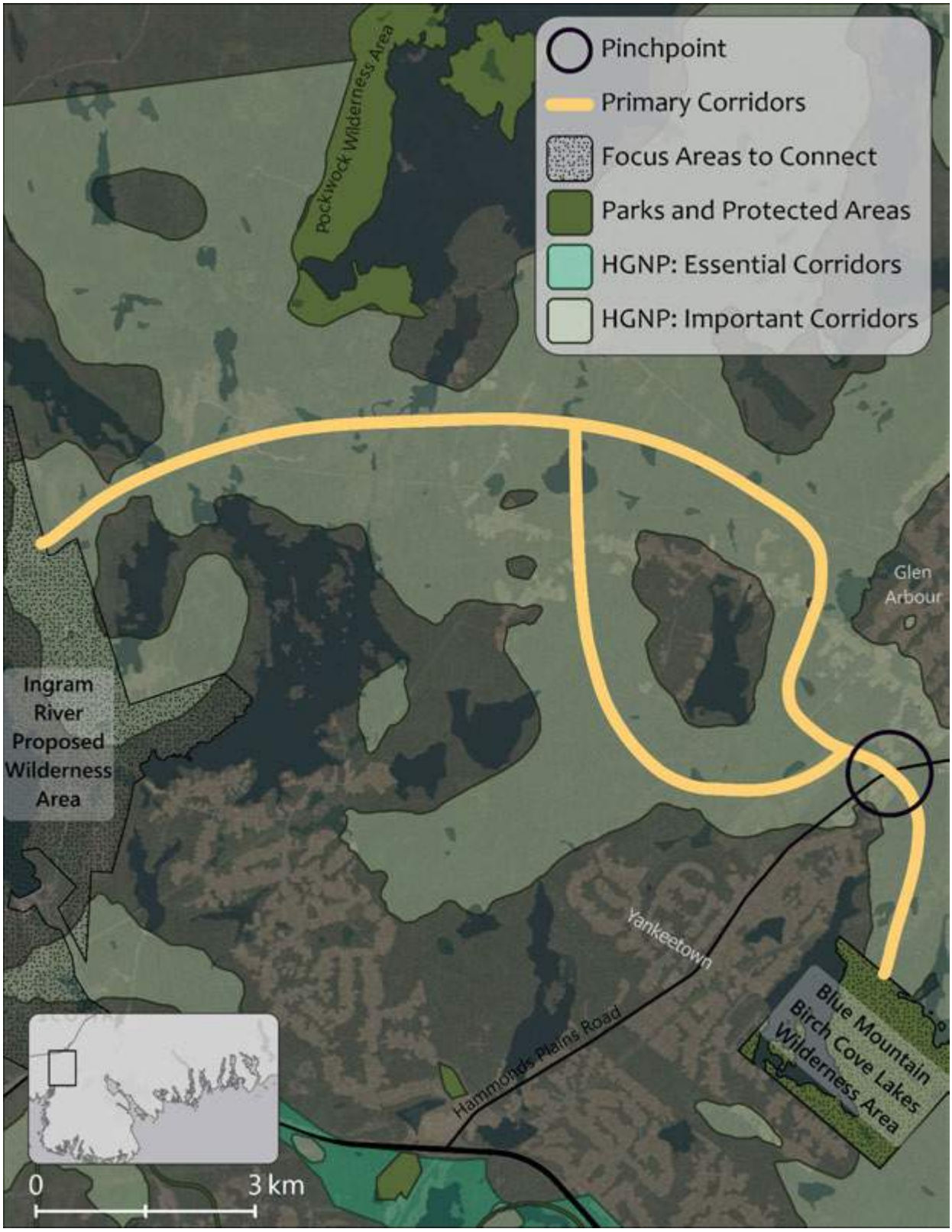


Figure 10 Corridors identified in the northern part of the area of interest



Figure 11 Pinchpoint identified in the Northern Connection where the corridor crosses Hammonds Plains Road between Yankeetown Road and Wallace Hill Road.

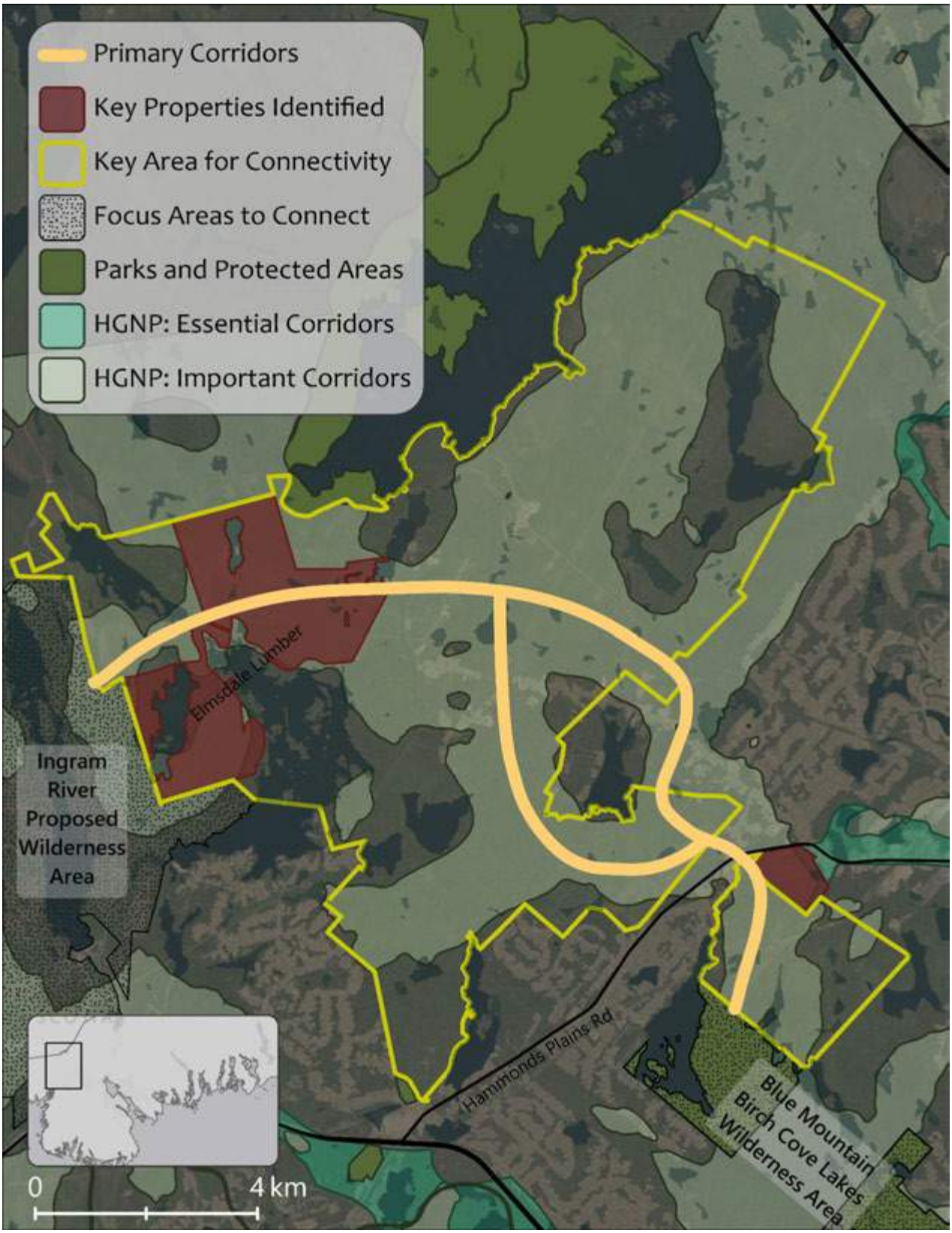


Figure 12. The key areas to manage for connectivity around the northern connection identified between Blue Mountain Birch Cove Wilderness Area and the Ingram River proposed Wilderness Area

Southern Connection

Connecting BMBCL to the Ingram River area by going south from the BMBCL is also important, though intact potential corridors are far narrower (well under 100 m) and comprise fewer opportunities for connectivity than within the northern connection (Figure 13). The corridor is identified in the Halifax Green Network Plan, with parts of it deemed essential. Connectivity along this path is highly limited to the gaps between a number of subdivisions in the area, especially in the area south of Highway 103. These paths offers opportunities to connect to the Five Bridge Lakes Wilderness Area, but this would require going through Hubley, and questions were raised about how successful this could be as it is a very narrow connection through an already narrow corridor and would likely require restoration (Figure 14).

An important opportunity to link to the northern connection was also identified (Figure 13). Just to the southwest of BMBCL there is a strip of Crown Land between the communities of Yankeetown and Stillwater Lake that provides a link towards Hammonds Plains Road, beyond which there is undeveloped land that connects to and abuts the HGNP important corridor and the northern connection in the area around Stillwater Lake. This opportunity for connectivity was not identified in the Halifax Green Network Plan but appears to be a potentially crucial option, especially given significant development pressures throughout the area.

Across the study area, important options for connectivity were identified, including opportunities for designing some redundancy into a connected system (Figure 15). Some corridor locations are situated within larger undeveloped areas and represent crucial opportunities for additional core areas and wide corridors. Other corridors are very narrow, including some that are considered essential, and are likely to require restoration, especially in key pinchpoints.

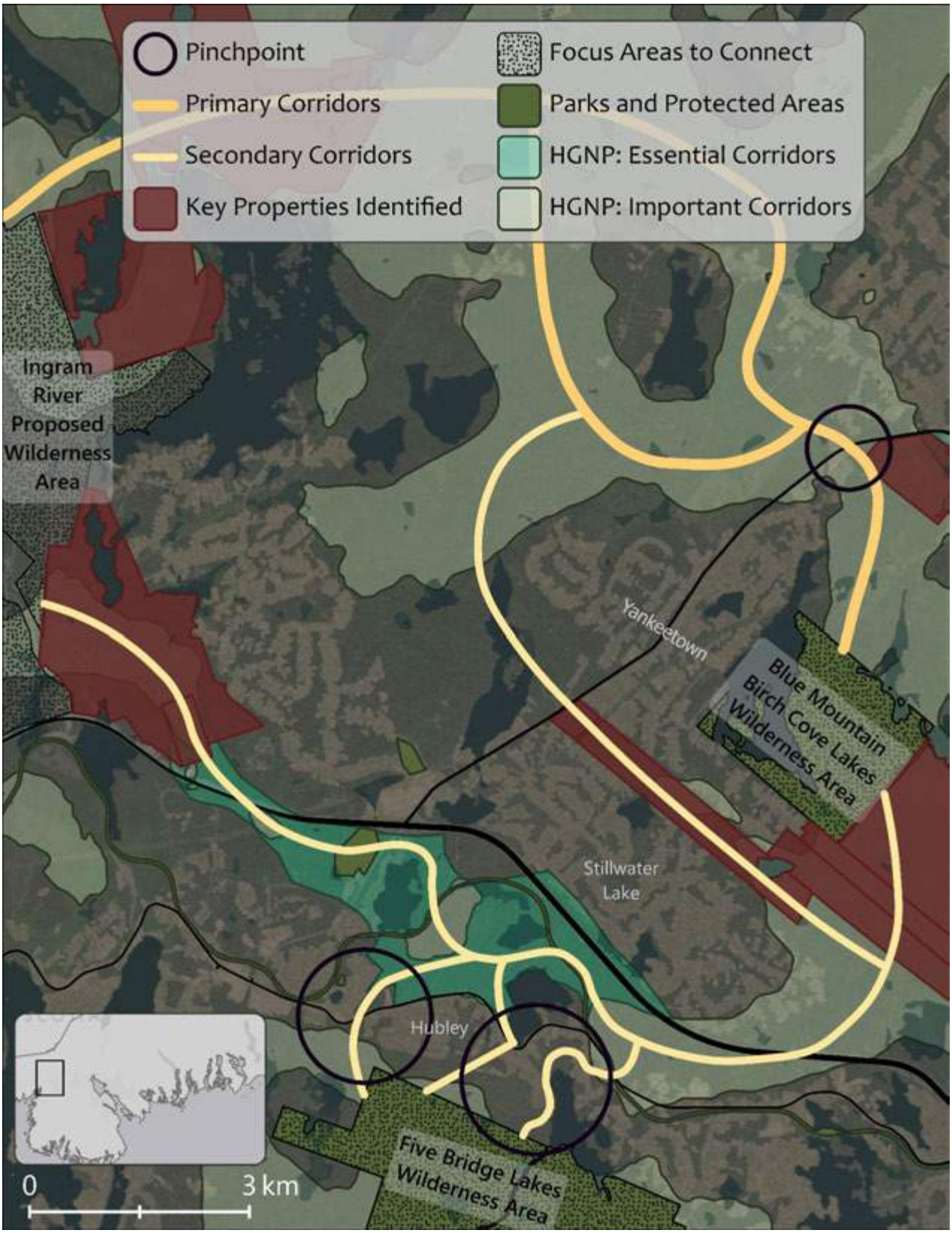


Figure 13 Corridors identified in the southern part of the area of interest

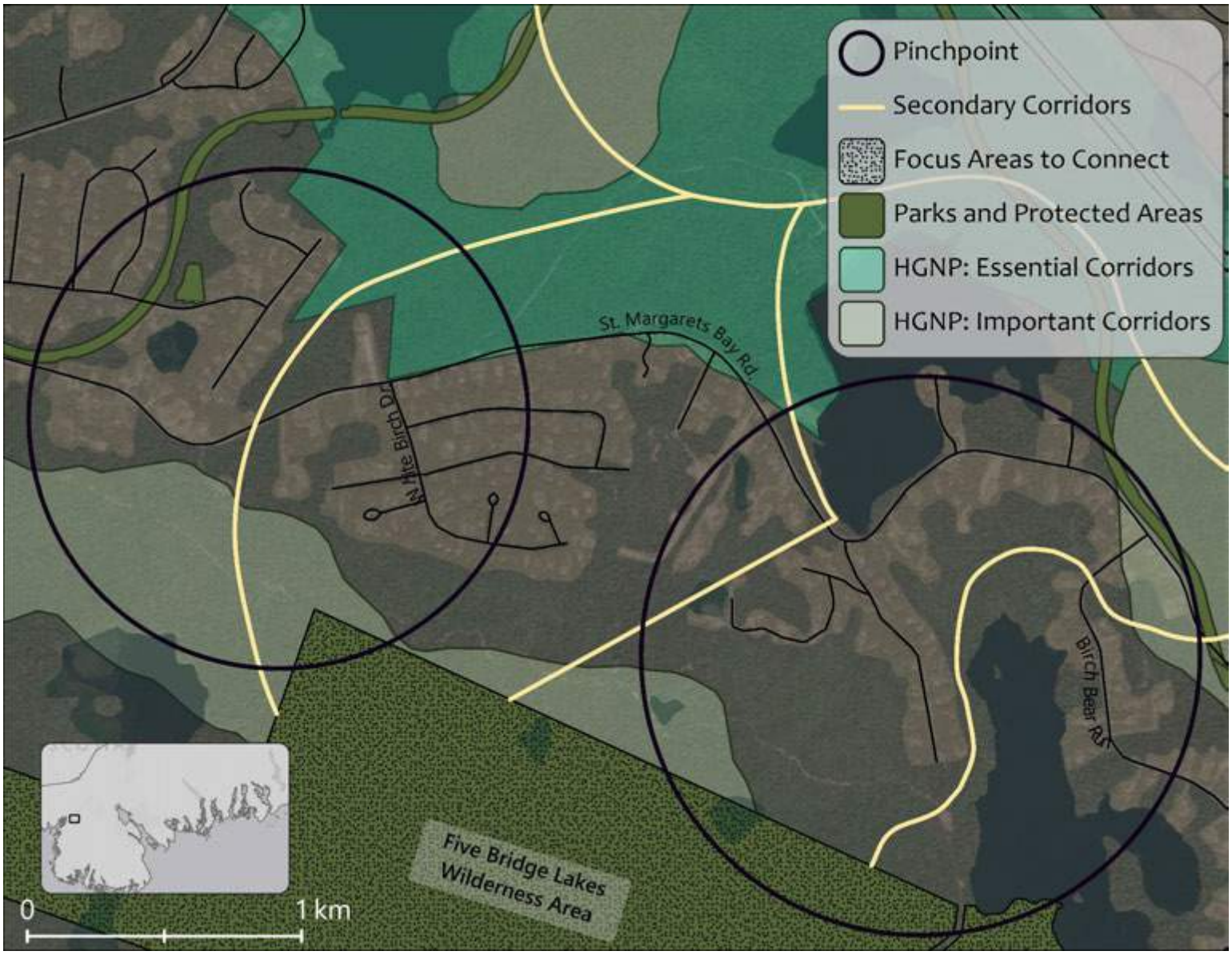


Figure 14 Pinchpoints identified that could connect the southern connection to the Five Bridge Lakes Wilderness Area

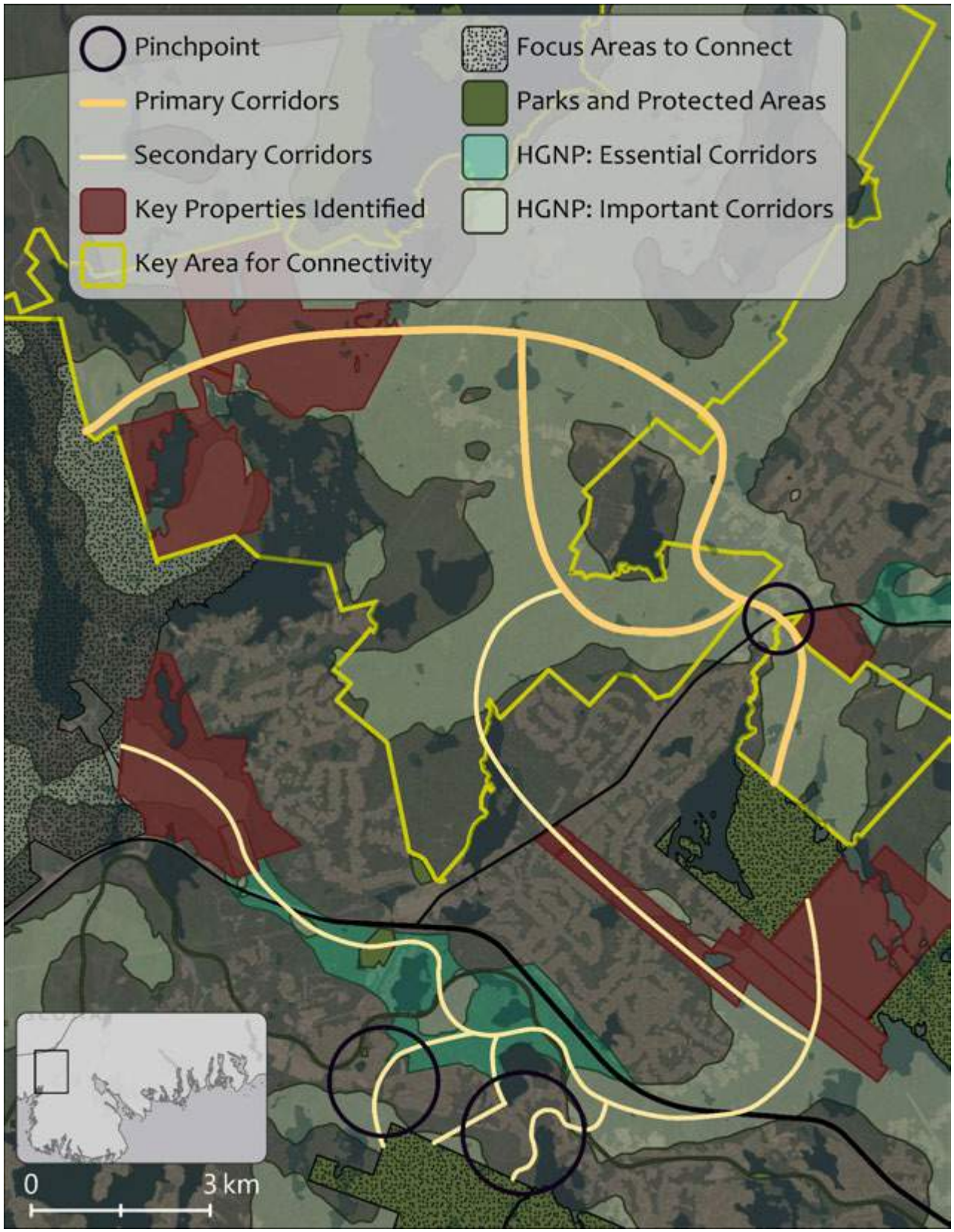


Figure 15 Summary map for the Blue Mountain Birch Cove Lakes to Ingram River Group

BLUE MOUNTAIN – BIRCH COVE LAKES TO FIVE BRIDGE LAKES WILDERNESS AREA

Overview of Area

A third group focused on opportunities for connectivity between two core wilderness areas: Blue Mountain Birch Cove Lakes (BMBCL) and Five Bridge Lakes (Figure 16). The area between the two wilderness areas is bisected by Highway 103 and St. Margarets Bay Road (Highway 3), which presents a challenge for connectivity.

The Halifax Green Network Plan identified three important corridors between the two wilderness areas. First is a corridor that crosses Highway 103 between the communities of Stillwater Lake and Hubley, as also identified as a corridor by the BMBCL–Ingram River group. The second corridor (and the widest of the three), flows from BMBCL through the Sheldrake Lake subdivision before crossing Highway 103 and entering Five Bridge Lakes. The final corridor utilizes the semi-developed land of the Links at Brunello golf course as a connector between the two wilderness areas.

The group noted that the Halifax Green Network Plan does a good job at identifying the corridors in this area. In part, this is because there is not a lot of land that remains undeveloped, so options for connectivity are limited. There are few remaining opportunities: corridors are narrow (generally just a couple of hundred meters wide) and are under threat from future urban development and road construction.

The group noted that while promoting connectivity in the area is important, so is working to expand the formal protection of land in these core areas, particularly BMBCL where several properties to prioritize for protected areas acquisition have already been identified, including lands that the Nova Scotia Nature Trust recently purchased, which are important for both connectivity and maintaining BMBCL as intact core habitat. This is consistent with the HGNP, which shows important corridors as infilling and encompassing the irregular boundaries of the wilderness areas, particularly BMBCL (Figure 16).



Figure 16. Overview of the area between Blue Mountain Birch Cove Lakes and Five Bridge Lakes Wilderness Areas

Primary Connection

The group identified the main connection between BMBCL and Five Bridge Lakes as the area between Glengarry Estates and Sheldrake Lake subdivisions (Figure 17). This area represents the widest area (about 1.5 km) of potential intact corridor between the two areas of interest. This potential corridor could go under Highway 103 by following the Beechville Lakeside Timberlea Trail, but the group also noted that there are spots along the Highway in this area that have the geological features that would be suitable to the construction of a wildlife overpass because the highway cuts through bedrock and the land is elevated on both sides of the highway. It was also pointed out that there is a potential barrier for terrestrial species in the form of Frasers Lake which runs the length of the gap between two subdivisions, across the path of the potential corridor. Accordingly, it remains important to seek out other opportunities for connectivity, including those requiring restoration.

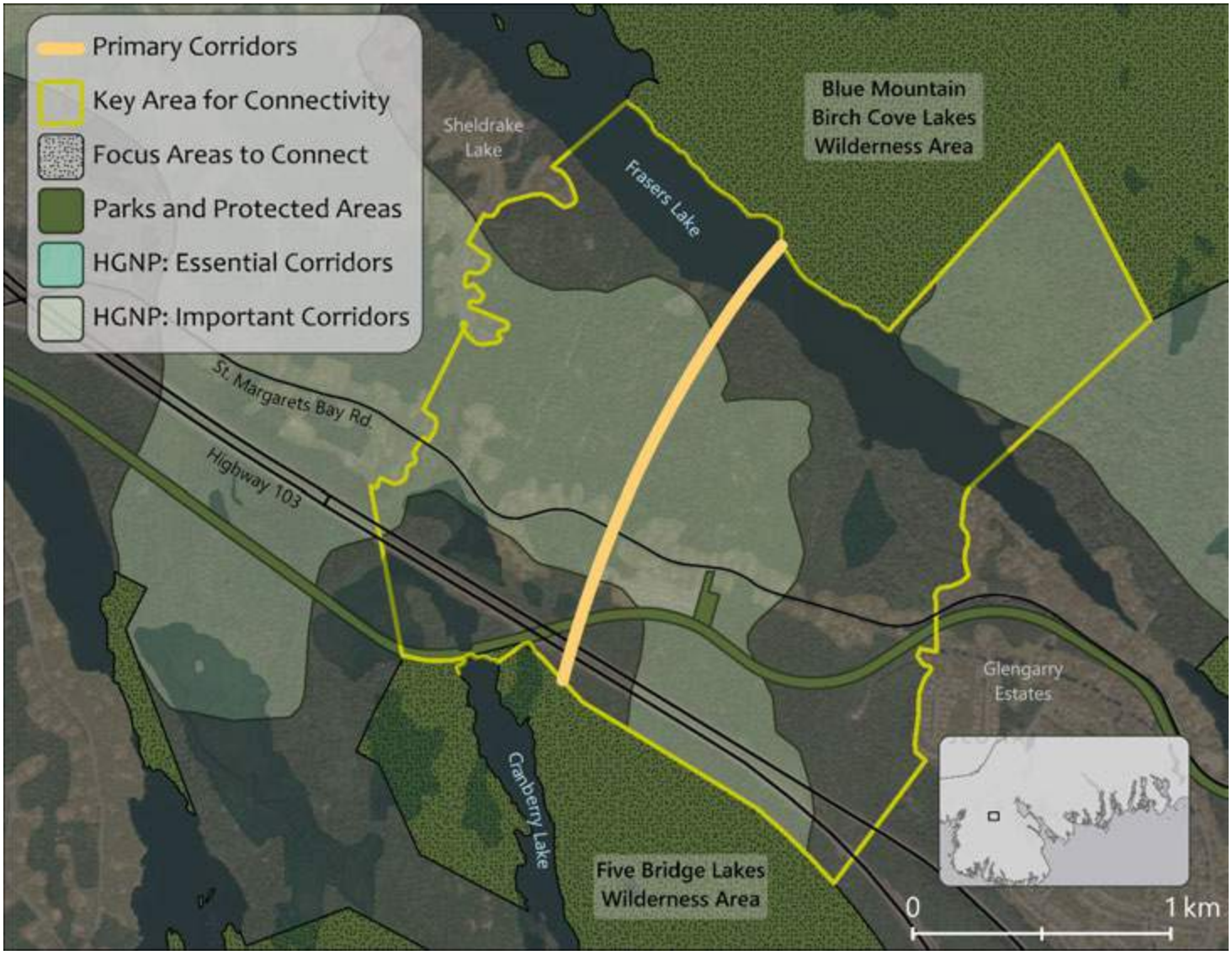


Figure 17. Primary Corridor Identified between Blue Mountain Birch Cove Lakes and Five Bridge Lakes Wilderness Areas

Secondary Connection

The group identified the same secondary connection as the BMBCL–Ingram River group, connecting the BMBCL to Five Bridge Lakes through NS Nature Trust lands, crossing Highway 103 between the communities of Stillwater Lake and Hubley along the corridor identified in the Halifax Green Network Plan (Figure 18).

Like the BMBCL–Ingram River group, this group identified Crown Land between the communities of Yankeetown and Stillwater Lake as being important for connectivity. Additionally, they point to the two properties between this piece of Crown Land and the lands NS Nature Trust recently purchased as being important to retain in an undeveloped state. In regard to the Crown land, the group notes that there may be the possibility of land swaps to benefit connectivity around Maple Lake (which was identified as being important for both north-south and east-west connectivity), which is under pressure from proposed development (both residential pressures and interest about a potential access road to connect Sussex Dr to Eider Dr.) that would block off potential for connectivity, which is currently key to connecting the Chebucto peninsula to the northern part of the province.

The group identified a potential corridor that branches off the one also identified by the BMBCL–Ingram River group, which goes between Maple and Upper Sheldrake Lakes before crossing Highway 103 and St. Margarets Bay. Once on the south side of the roads, the corridor branches in two, continuing south through the Sheldrake Lake subdivision, connecting to Five Bridge Lakes on the western side of Frederick Lake and following the Beechville Lakeside Timberlea Trail to Five Bridge Lakes near Cranberry Lake.

It was also noted that the Links at Brunello golf course is a relatively low impact development that could contribute to connectivity for some species across the southern extent of the area of interest (Figure 19). They note that there are existing culverts in place that may be able to be upgraded to an open bottom culvert or bridge to enhance connectivity in the area.

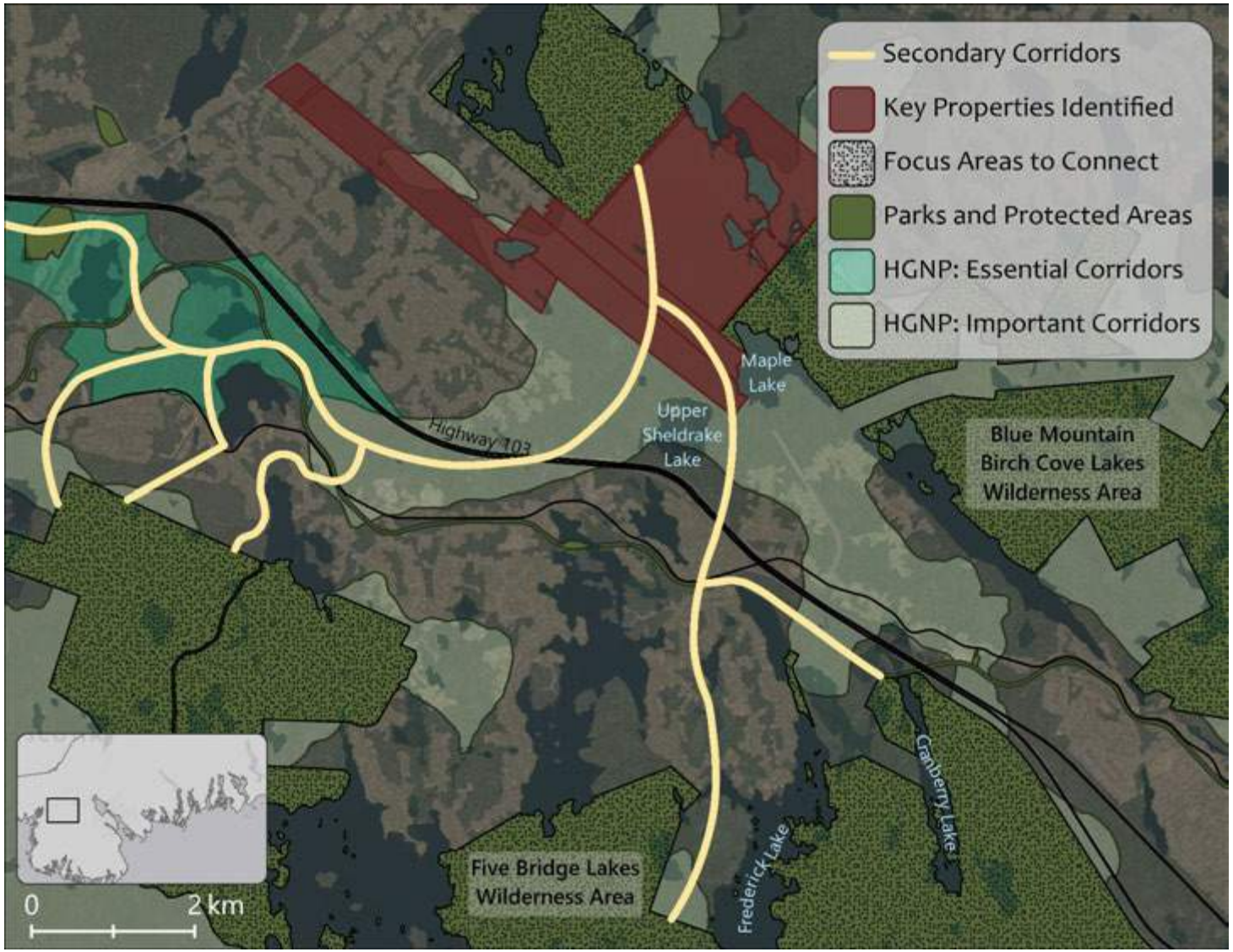


Figure 18. Secondary connection identified between Blue Mountain Birch Cove Lakes and Five Bridge Lakes Wilderness Areas



Figure 19. Secondary connection identified between Blue Mountain Birch Cove Lakes and Five Bridge Lakes Wilderness Areas that utilizes the Links at Brunello Golf Course

Riparian and Aquatic Connection

In addition to terrestrial connectivity, the group considered riparian and aquatic connectivity between the two wilderness areas, noting that there is the potential to connect the two areas of interest along the Nine-Mile River, as well as a couple of streams around Governor Lake, Lovett Lake and Black Duck Ponds in the Beechville/Lakeside area (Figure 20).

Points were also raised about aquatic connectivity between BMBCL and the ocean through the Kearney Lake River system to the Bedford Basin. This connection would also link up to the aquatic connections identified by the Sackville River-Sandy Lake to BMBCL group.

Combined, the terrestrial and aquatic areas of connectivity identified for this area of interest roughly support corridors identified in the HGN plan, while noting existing barriers to connectivity and opportunities for restoration (Figure 21).

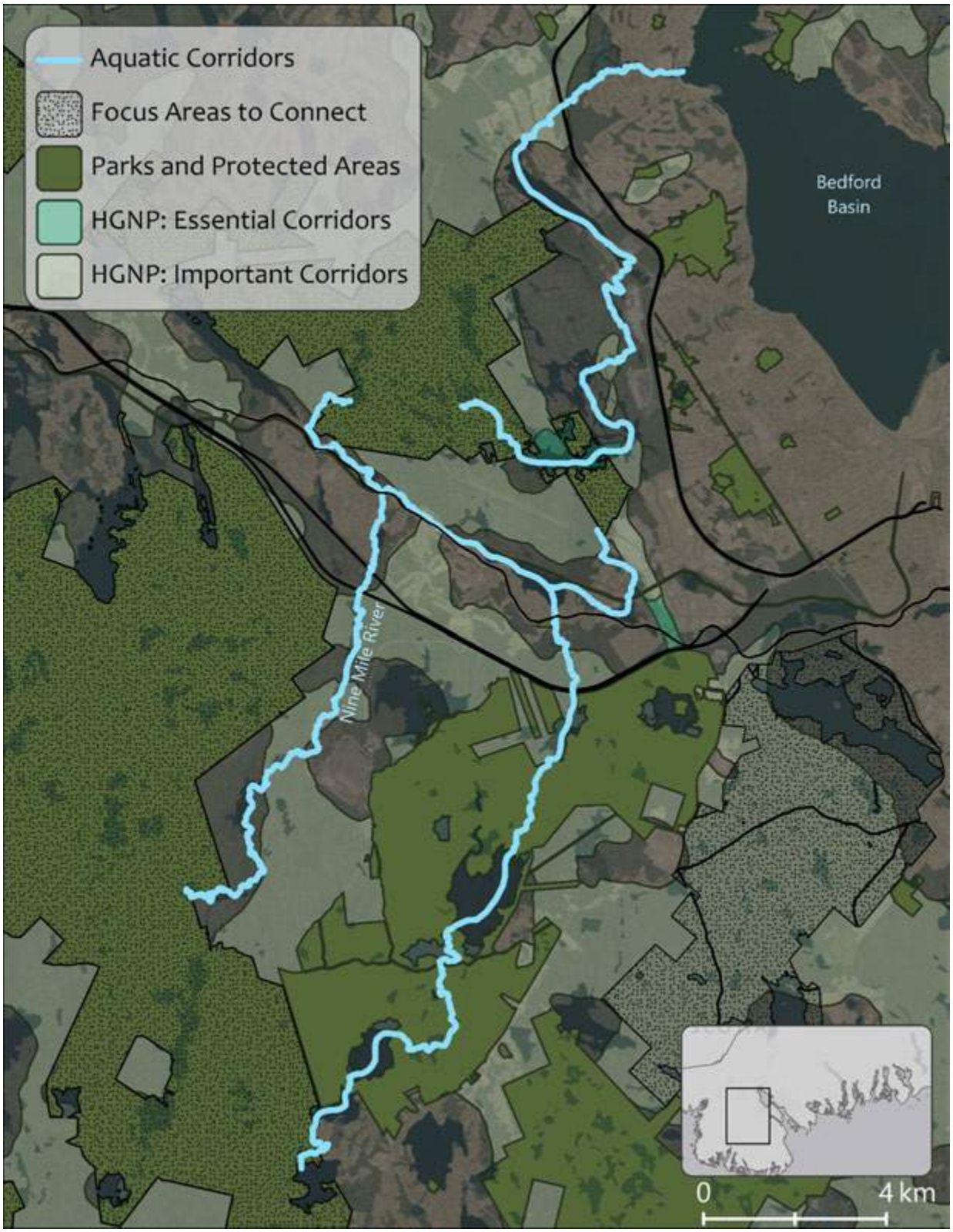


Figure 20. Aquatic Connectivity between Blue Mountain Birch Cove Lakes and Five Bridge Lakes Wilderness Areas as well as Blue Mountain Birch Cove Lakes Wilderness Area and the Bedford Basin via. the Kearney Lake watershed

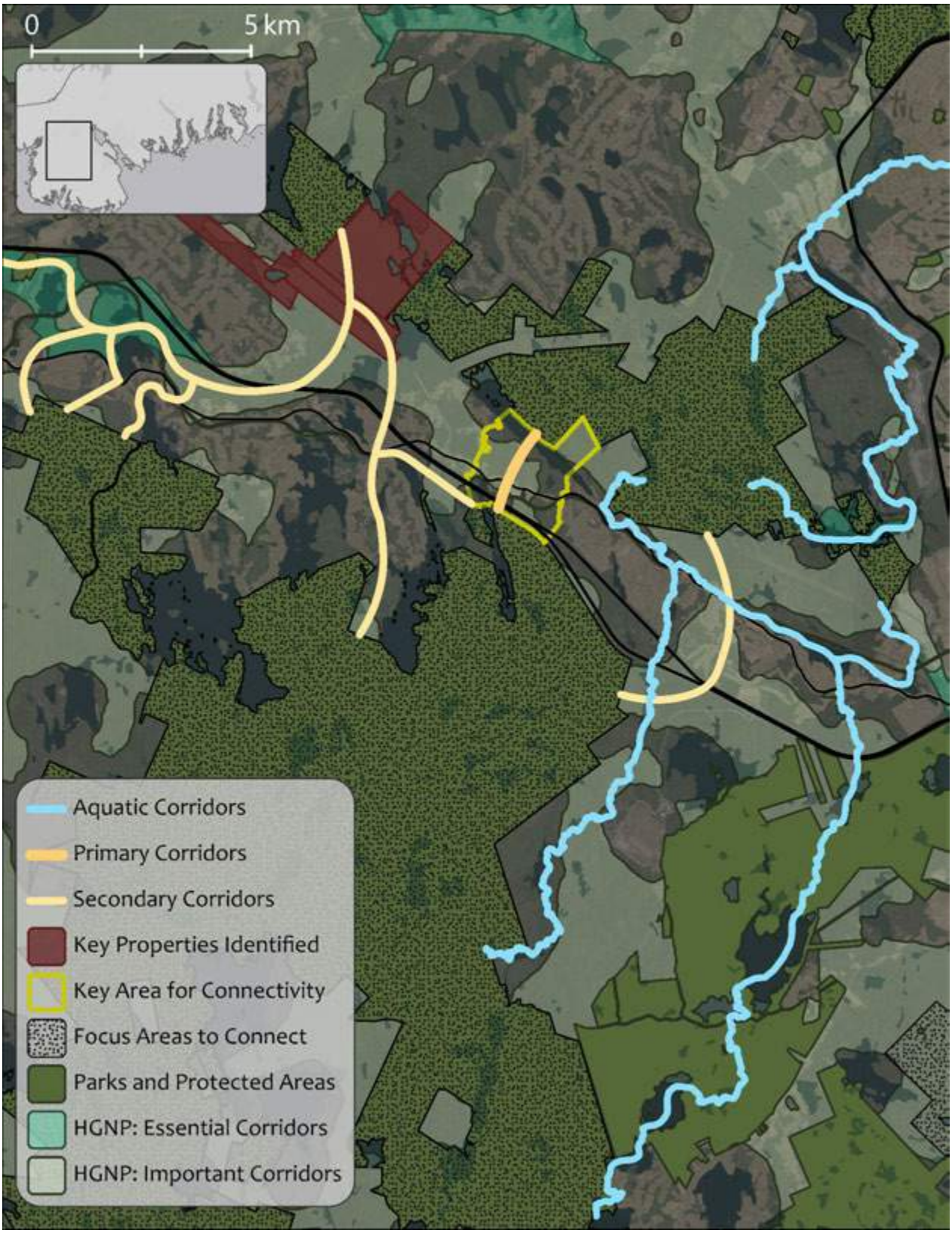


Figure 21. Summary Map for the Blue Mountain Birch Cove Lakes Wilderness Area to Five Bridge Lakes Wilderness Area group

FIVE BRIDGE LAKES WILDERNESS AREA TO LONG LAKE PROVINCIAL PARK AND THE BACKLANDS

Overview of Area

A fourth group focused on connectivity between Five Bridge Lakes Wilderness Area, Long Lake Provincial Park and the Backlands (Figure 22). While there are no major highways acting as barriers for connectivity between these areas, there are several major roads that impact connectivity in the area, namely Herring Cove Road, Old Sambro Road and Prospect Road. Within this area of interest there are several relatively large patches of natural habitat, including the Terrace Bay Wilderness Area, Western Common and several parcels of unprotected Crown Land.

Like the Blue Mountain Birch Cove Lakes to Five Bridge Lakes group, this group noted that while promoting connectivity in this area is important, so is working to expand the protection of core areas of habitat, as much of this area remains undeveloped, but also unprotected and under threat from future development. This is consistent with indications of wide areas of important corridors in the HGNP (Figure 22).

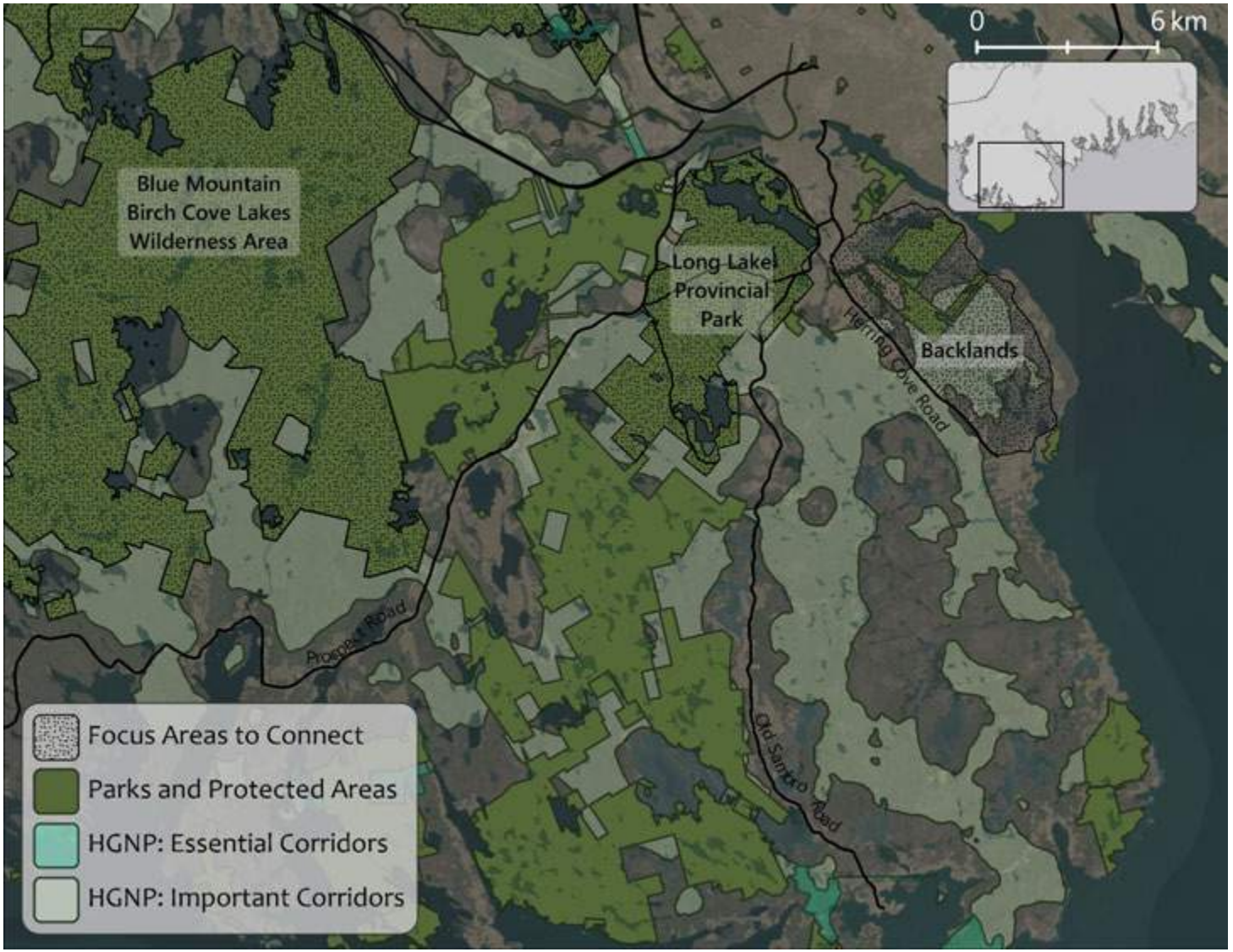


Figure 22. Overview of the area between the Five Bridge Lakes Wilderness Area, Long Lake Provincial Park and the Purcell's Cove Backlands

The Backlands

The group looked at connectivity within the Backlands and identified several properties that should remain undeveloped to maintain connectivity (Figure 23). The primary corridor identified connects Frog Pond Park and the Nova Scotia Nature Trust's Backlands property. The corridor first crosses Williams Lake Road and then goes through several key undeveloped properties before reaching Shaw Wilderness Park and Colpitt Lake (Figure 23). The group also identified a key pinchpoint along this corridor where it crosses Williams Lake Road (Figure 24). On the other side of the Wilderness Park, key properties were identified to ensure a connection to the Nova Scotia Nature Trust's lands. Another key connection was identified between Long Lake Provincial Park and the Backlands, flowing between Old Sambro Road and the Catamaran Ponds was identified as an important wildlife corridor (Figure 23).

Three smaller, secondary connections were identified linking a large, undeveloped piece of Crown land in the Backlands to Herring Cove Provincial Park Reserve, York Redoubt National Historic Site and Connaught Battery Park across Purcell's Cove Road and John Brackett Drive (Highway 253) (Figure 23).



Figure 23. Connectivity within the Backlands

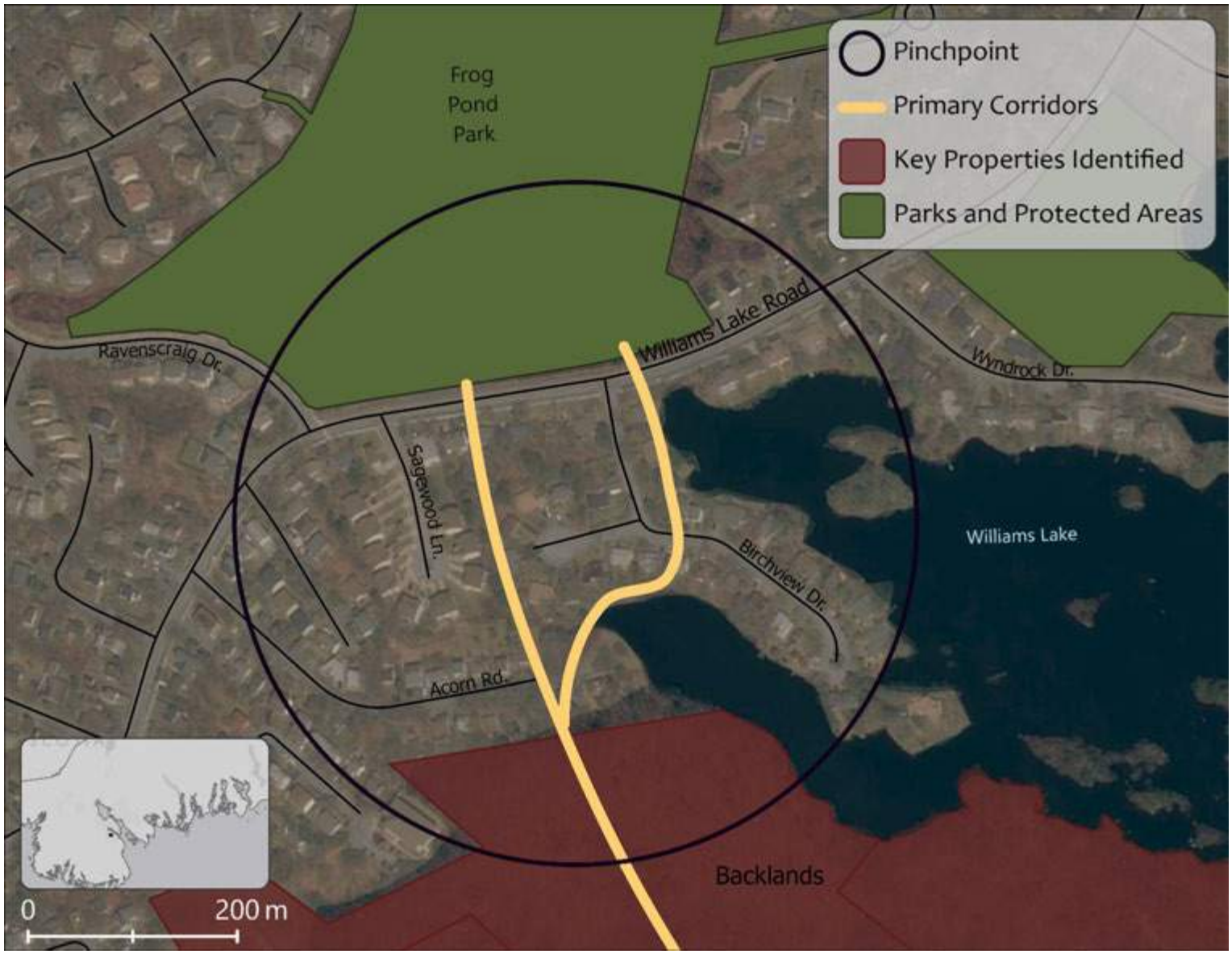


Figure 24. Pinchpoints identified around Williams Lake Road on the corridor connecting Frog Pond Park and the Backlands.

The Backlands to Terrace Bay Wilderness Area and Long Lake Provincial Park

Moving out of the Backlands towards the Terrace Bay Wilderness Area and Long Lake Provincial Park, the first major barrier to connectivity is Herring Cove Road. The group identified several places along the road where development on either side is relatively thin or non-existent between the communities of Herring Cove and Spryfield for potential wildlife crossings (Figure 25).

Beyond Herring Cove Road, a large parcel of Crown land was identified as critical to the conservation strategy of the area. If left undeveloped, the Crown land will continue to act as core habitat and provide contiguity with Long Lake Provincial Park and Terrace Bay Wilderness Area. The group also identified two opportunities for connectivity across Old Sambro Road at locations of large parcels of undeveloped land (currently owned by a development company), which provide natural habitat on both sides of the road in gaps between subdivisions.

The group discussed the importance of securing properties between Long Lake Provincial Park and Terrace Bay Wilderness Area for the long-term protection and expansion of these core habitats. They reported that there has been talk of constructing a road through these lands to connect Harrietsfield and Goodwood, which would disrupt the connectivity that currently remains between the two existing protected areas.

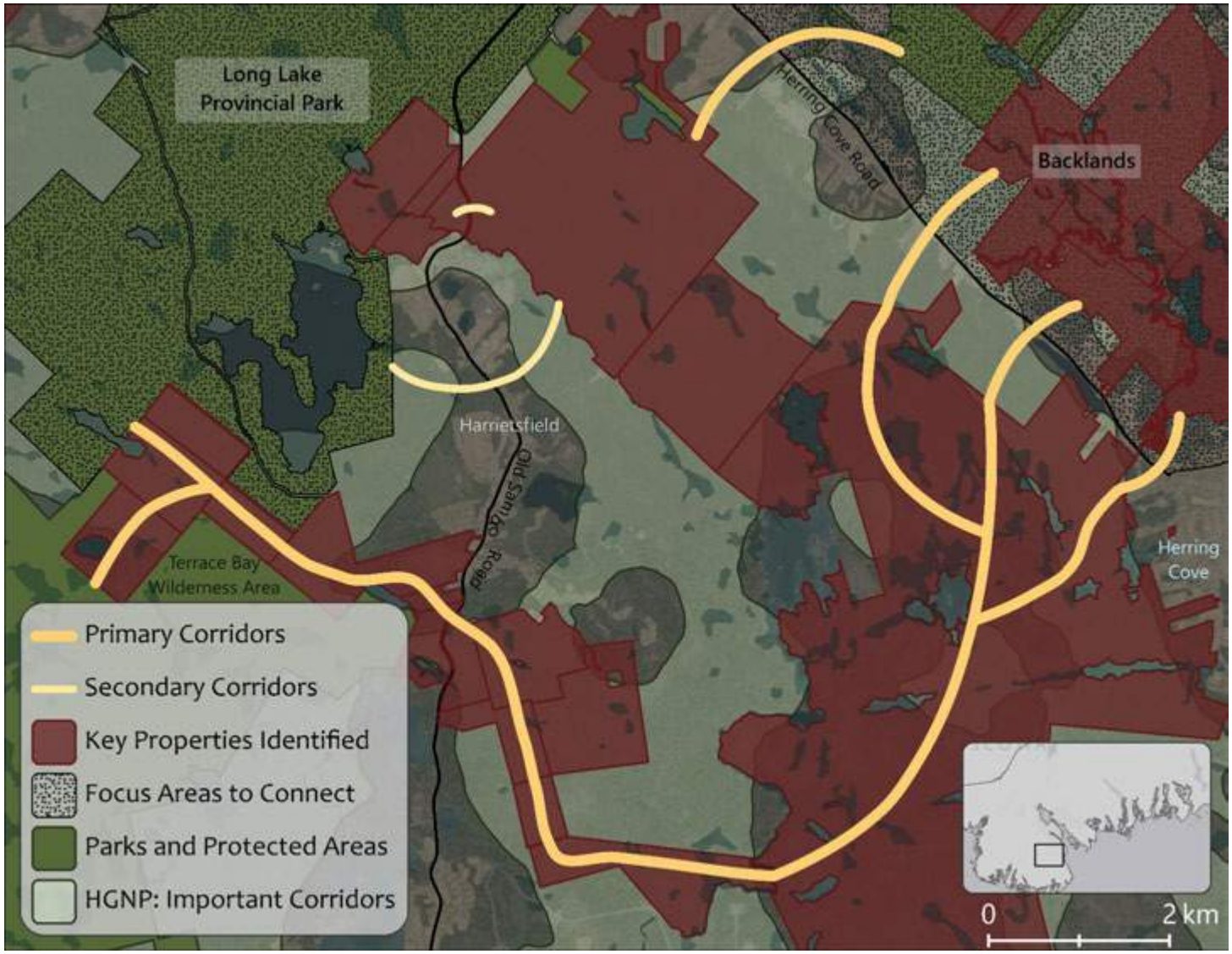


Figure 25. Connectivity between the Backlands and Long Lake Provincial Park and Terrace Bay Wilderness Area

Terrace Bay Wilderness Area and Long Lake Provincial Park to Five Bridge Lakes Wilderness Area

The Western Common and the HRM-owned lands adjacent to it provide opportunities for connectivity across Prospect Road, connecting Long Lake Provincial Park to Five Bridge Lakes Wilderness Area (Figure 26). The group noted that there are a few low-hanging fruits for connectivity across the road where there is parkland on both sides of the road. However, these are not the only opportunities for connectivity, but the others would require connections between currently unprotected (though undeveloped) parcels.

The group made the case that all of the lands and waters between Long Lake Provincial Park and Terrace Bay and Five Bridge Lakes Wilderness Areas should be managed for connectivity because, despite the Otter Lake Landfill and other areas of disturbance, there likely remains high permeability for many species of wildlife through the area. They also note that by doing so, it would provide a wide (~6 km) corridor which would serve black bear and other large and/or sensitive wildlife species.

A corridor between Five Bridge Lakes and Terrace Bay Wilderness Areas that also builds a connection to the Roges Roost Wilderness Area was identified (Figure 27). The corridor largely follows an important corridor identified in the Halifax Green Network Plan in the area to north of Shad and Prospect Bays.

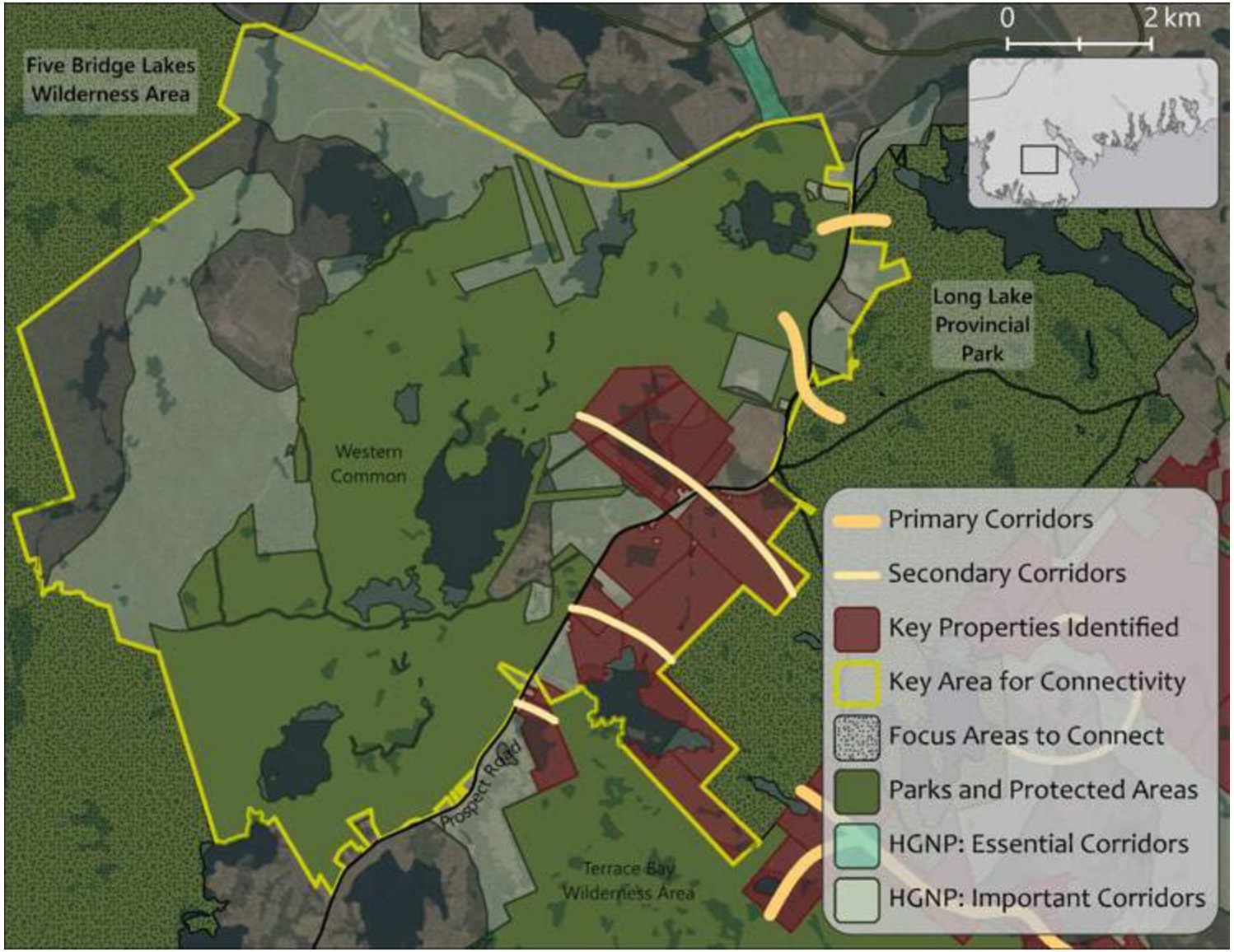


Figure 26. Connectivity between Long Lake Provincial Park and Five Bridge Lakes Wilderness Area, highlighting the key area around the Western Common and connections over Prospect Road.

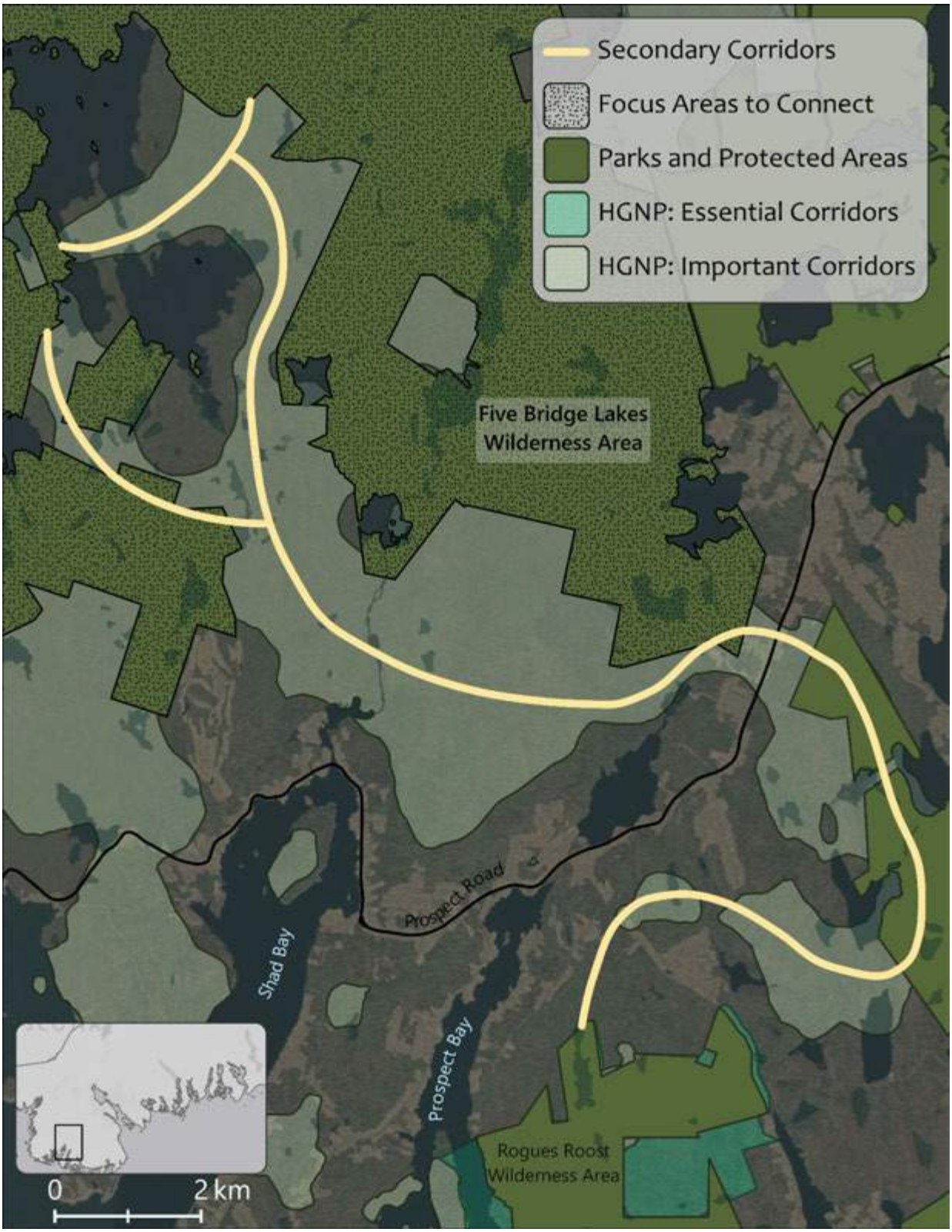


Figure 27. The corridor identified between Five Bridge Lakes, Terrace Bay and Rogues Roost Wilderness Areas.

Aquatic Connectivity

Several corridors for aquatic connectivity in the Backlands were identified (Figure 28). The first is Governor's Brook which flows from two Catamaran Ponds behind the Sobeys in Spryfield to Colpitt and Williams Lake. The Catamaran Ponds are the headwaters for Colpitt and Williams Lake and thus need to be adequately protected. Secondly, although it is a relatively built-up area, there is the possibility for aquatic connectivity between Long Lake and Kidston Lake through Spryfield. An aquatic connection between Long Lake and Herring Cove through the MacIntosh Run and Pine Islands Ponds was also identified.

Together, these key properties and corridors represent crucial opportunities for protecting core areas and connectivity in a region that comprises relatively large and intact parcels of Crown and other undeveloped lands (Figure 29). Much of these lands abutt and overlap important corridors identified in the HGNP. Despite their condition at present, important threats to connectivity exist due to existing and potential future road and other developments and or resource extractions.

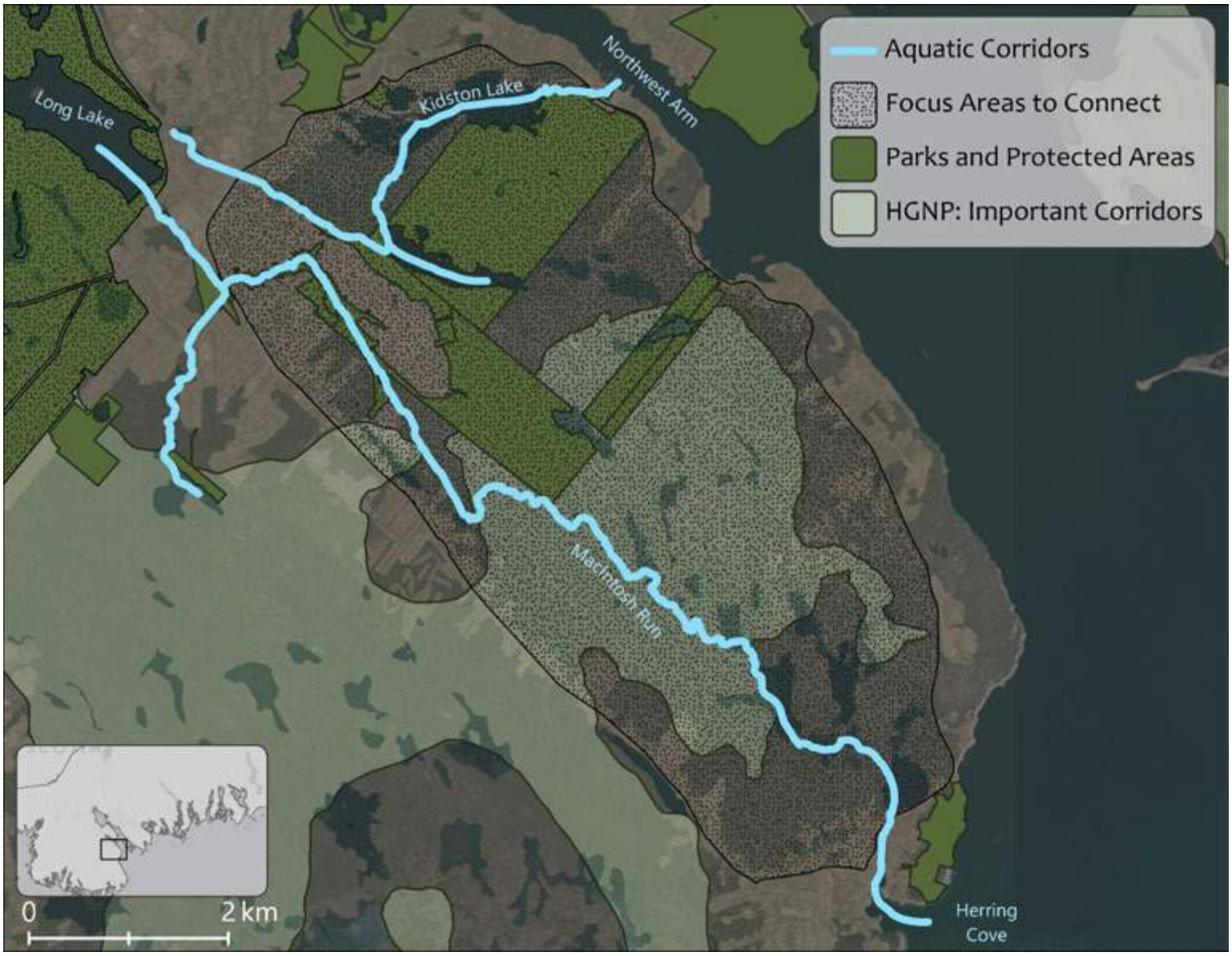


Figure 28. Aquatic Connectivity in the Backlands

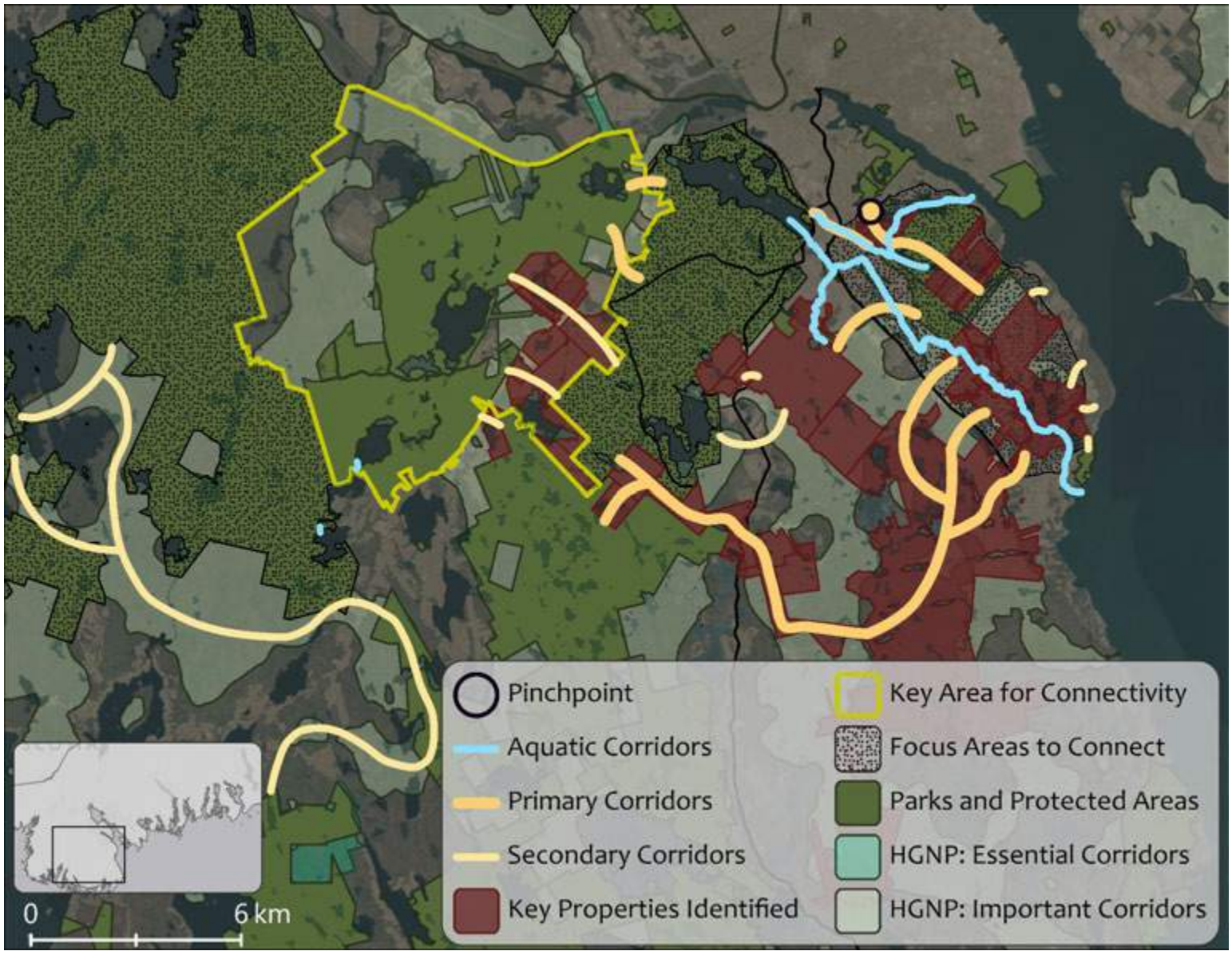


Figure 29. Summary map for the Five Bridge Lakes Wilderness Area to Long Lake Provincial Park and the Backlands group

Summary

Putting together the products of all four groups produces a conceptual map for wildlife corridors through a critical yet threatened part of HRM, where the Chebucto Peninsula connects with the rest of mainland Nova Scotia. The mapped area of interest extends from the Sandy Lake-Sackville River area through BMBCL to the Ingram River area and through Five Bridge Lakes, Terrance Bay and Rogues Roost Wilderness Areas and Long Lake Provincial Park to the Backlands. While many of these corridors follow those that were identified in the Halifax Green Network Plan, some are not, highlighting the importance of considering connectivity at the fine scale and communicating with those who have an intimate knowledge of the local landscape (Figure 30).

It is important to note that while the corridors in the maps throughout this document are symbolized by thin lines, they should not be interpreted as such. Rather, the lines showing the corridors represent the centerlines of corridors, the width of which should be as large as possible. In addition to the indicated corridors, numerous key properties for the maintenance or restoration of connectivity were identified. Currently, these properties are not explicitly managed for wildlife corridor conservation and are owned by a number of different landowners including the Crown, HRM, lumber and utility companies, and private developers. Each group also identified at least one broad swath of land which is crucial to connectivity, and also for expanding core areas for conservation. These areas represent prime opportunities for buffering, supplementing, or expanding core areas, and for securing corridors wide enough to serve large and sensitive species of wildlife while safeguarding against edge-effects and human land uses and activities along their boundaries. Other areas crucial to connectivity are currently limited to narrow corridors and several require restoration. Nonetheless, they are important to secure as remaining remnants of essential corridors and for planned redundancy within the connected network.

In the areas of HRM focused upon in this report, as is likely the case in much of HRM, opportunities for conserving wildlife connectivity are being lost daily. It is imperative that systematic planning that precisely identifies and delineates the boundaries of core areas and corridors in a green/ecological network design be completed in the very near future. Strategic short-term and long-term measures that implement the protection of core areas and corridors need to be developed and put in place. Moving forward, in addition to formal land conservation through land securement (e.g., land purchase, conservation easements), creative mechanisms for maintaining and restoring connectivity in key areas will be required, such as: zoning; right of first refusal for purchasing key private properties; formal easements and rights of ways along riparian areas, through subdivisions and along roadways; planned corridors associated with land development approvals; and road mitigation measures such as fences, overpasses, underpasses, bridges and box culverts.

Many local individuals and groups have formal and experiential knowledge of the land, wildlife, and connectivity planning. Collaborative partnerships between governments at all levels, including the Mi'kmaq, non-government organizations and other interested parties, and citizens would support the co-production of knowledge while building constituents of support.

The charrette has served to expand the understanding of issues, priorities and opportunities relating to ecological connectivity within the context of the Chebucto Peninsula and the greater Mainland and, by extension, within Nova Scotia and between Nova Scotia and continental North America.

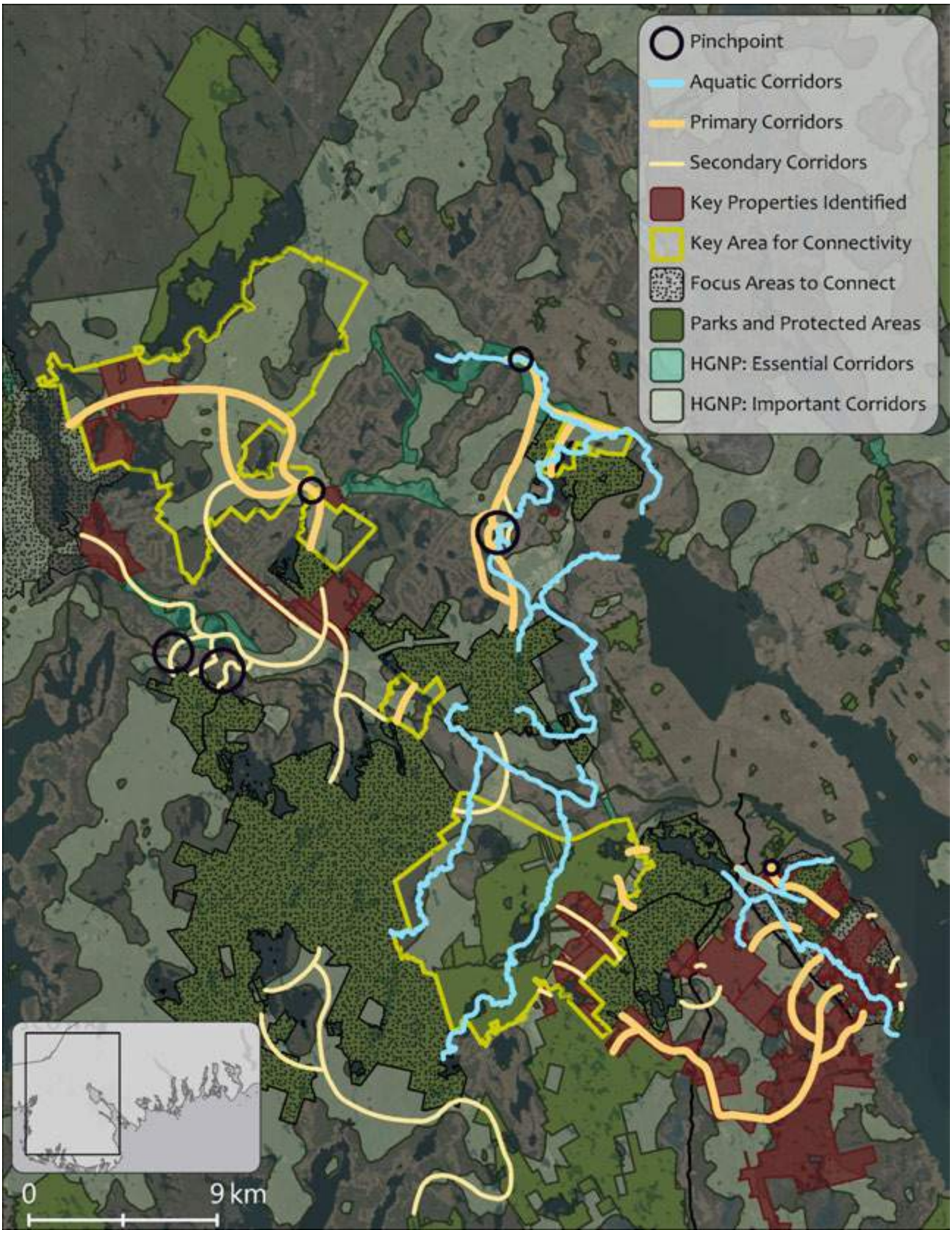


Figure 30. Summary map showing the work of all of the groups during the charrette

In order to move beyond understanding toward specific efforts to ensure ecological connectivity is protected (or restored where already compromised), it is useful to consider next steps as informed by the charrette exercise, including:

- advance recommendations through the ongoing review and update of the 2014 regional plan, relative to priority and direction with respect to ecological connectivity;
- build in ecological connectivity as a priority interest and requirement to be addressed where relevant at the local planning level;
- establish an ongoing relationship with the Department of Transportation and Active Transit to identify and address connectivity issues and opportunities associated with highway construction or upgrading;
- identify and delineate opportunities and options to protect, maintain and/or restore 'essential' and 'important' corridors through field study and ground-truthing and in consideration of existing patterns of property ownership and land use;
- coordinate field study, mapping and planning efforts amongst responsible agencies, organizations and/or advocacy groups; and
- identify funding sources and partnerships.

In the absence of focussed effort and action, development will continue to encroach on rapidly narrowing options and opportunities to maintain or restore ecological connectivity between the Chebucto Peninsula and the greater Mainland, and effective foreclosure soon will become the inevitable and ultimate outcome.

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APPENDIX I: CHARRETTE PARTICIPANTS

Organizers

Karen Beazley, Chair, Nova Scotia Crown Share Land Legacy Trust
Dale Smith, Trustee, Nova Scotia Crown Share Land Legacy Trust
Mary Ellen Donovan, Friends of Blue Mountain – Birch Cove Lakes Society, Sandy Lake – Sackville River Regional Park Coalition

Technical Organizers

Karen McKendry (Remote Platform Host), Ecology Action Centre
Dave MacKinnon (GIS Resource Person); Chair, Science Advisory Committee, Nova Scotia Crown Share Land Legacy Trust

MC/Host of Charette

Karen Beazley, Chair, Nova Scotia Crown Share Land Legacy Trust; Dalhousie University

Sandy Lake – Blue Mountain Birch Cove Lakes

GIS Resource Person: Caitlin Cunningham, Dalhousie University

Mary Ellen Donovan
Lisa Doucette
David Patriquin
Karen Robinson
Walter Regan
Clarence Stevens

Blue Mountain Birch Cove Lakes – Ingram River

GIS Resource Person: Kermit deGooyer, Nova Scotia Environment – Protected Areas

Emma Kinley
Mike Lancaster
Oliver Maass

Blue Mountain Birch Cove Lakes – Five Bridge Lakes

GIS Resource Person: Pat Nussey, Nature Conservancy of Canada

Rich LaPaix
Chris Miller
Megan Pagniello
Jan Skora
Dale Smith

Five Bridge Lakes – Long Lake Provincial Park and the Backlands

GIS Resource Person: Dave MacKinnon, Nova Scotia Environment – Protected Areas

Kathleen Hall
Martha Leary
Peter Lund
Patricia Manuel
Jillian Meredith

Observers

Kathleen Fralic, Planning and Development, Halifax
Leah Perrin, Planning and Development, Halifax

Summary Report Preparation and Cartography

Caitlin Cunningham

APPENDIX II: GIS LAYERS USED

Nova Scotia Provincial Datasets

CROWN LAND
A spatial dataset of all Crown lands in Nova Scotia. Crown lands are all or any part of the land under the administration and control of the Minister of Lands and Forestry as per the Crown Lands Act. The dataset includes land in which the Nova Scotia Department of Lands and Forestry has full or partial interest. Data download available at: https://data.novascotia.ca/Lands-Forests-and-Wildlife/Crown-Land/3nka-59nz

NOVA SCOTIA FOREST INVENTORY
Layers containing polygons for all lands in the province as described in the Photo Interpretation Specifications. Includes water, forested and non-forested areas with additional identification of freshwater wetlands and coastal habitat area classifications. Data download available at: https://novascotia.ca/natr/forestry/gis/forest-inventory.asp

NOVA SCOTIA PROTECTED AREAS SYSTEM
These lands help preserve Nova Scotia's natural values through a blend of legislation, ownership and management. Included here are: National Parks, National Wildlife Areas, Provincial Wilderness Areas, Provincial Nature Reserves, selected Provincial Parks and selected land trust properties and easements. This combination of federal, provincial and private lands contributes to both provincial and national land conservation and biodiversity goals. Data download available at: https://data.novascotia.ca/Environment-and-Energy/The-Nova-Scotia-Protected-Areas-System/ticv-5du5

NOVA SCOTIA ROAD NETWORK
Nova Scotia Road Network (NSRN) is a digital representation of all the roadways in Nova Scotia. The NSRN has several descriptive attributes to define a roadway such as number of lanes, surface type, and road class. The NSRN is a networked data set complete with linear entities such as roadways as well as point entities such as junctions and blocked passages. The NSRN data conforms to the federal government's National Road Network (NRN) and is regularly uploaded as a contribution to the NRN. Data download available at: https://data.novascotia.ca/Roads-Driving-and-Transport/Nova-Scotia-Road-Network-NSRN-/484g-adjn

NOVA SCOTIA PROPERTY LINES
Dataset that delineates property lines across the province.

NOVA SCOTIA HYDROGRAPHIC NETWORK
The Nova Scotia Hydrographic Network (NSHN) is updated and maintained from aerial photography. Hydrographic features (banks, network linear features, junctions, etc…) are collected and networked into a seamless database. Attribution has been applied to reflect network directionality as well as network priority (main vs. secondary path). Toponyms are included in the attribute table for named hydrographic linear, point and polygon features. Hydrographic feature codes and their descriptions are provided with the download in a NSTDB feature code table. Data download available at: https://nsgi.novascotia.ca/gdd/

Halifax Regional Municipality Datasets

HALIFAX GREEN NETWORK PLAN

TheHalifaxGreenNetworkPlanwasadoptedbyHalifaxRegionalCouncilonAugust14,2018.Theunderlying datatosupportthemapsintheplandocumenthavebeenreleasedthroughopendata.Pleasevisithttps://www.halifax.ca/about-halifax/regional-community-planning/community-plans/halifax-green-network-planforcompleteinformation Data download available at: https://www.halifax.ca/home/open-data/open-data-files#HGNP

HRM PARKS
Polygon representation of HRM owned and maintained parks. Includes areas that have been developed as parks and land with the primary function of providing active and/or passive recreation opportunities. Data download available at: https://catalogue-hrm.opendata.arcgis.com/datasets/3df29a3d088a42d890f11d027ea1c0be_0?geometry=-68.390%2C44.111%2C-57.937%2C45.475

C115

Dear Kathleen Fralic and Regional Plan Review team,

My name is Brenna Walsh and I am a active community member living in Dartmouth. I am writing as I am concerned about the amount of focus which was placed on climate change through the Themes and Directions Report and other engagement material, such as the Shape Your City survey. I think the actions which are laid out in the HalifACT plan are strong, but it will be very difficult to deliver on these actions and transform HRM into a truly sustainable community without integration of these principals throughout planning and all other decision making spaces within the municipality.

I would first like to say that I am very happy to see the expansion of focus on addressing climate change within HRM in the Regional Plan, going from a section with six lines to expanding the Environment, Energy and Climate Change chapter to incorporate HalifACT's net zero emissions targets. I would push the regional planning team to devote a full chapter to the issues and actions laid out in HalifACT as they will be integral to all planning going forward in HRM. In addition to this, I would urge you to ingrain the whole of community approach recognized as needed within HalifACT to build a low carbon and resilient community and elevate addressing climate change further within the Regional Plan. I would ask that you adopt the need to apply a climate change lens to all decisions which are encompassed by the Regional Plan, and establishing strict criteria to apply this climate lens to decision making. Additionally, decarbonization and building resilience to climate change should be explicitly included within the Principles of the Regional Plan.

Another important measure to adopt is the use of carbon budget approach, a framework for which explained within section 1.3 of HalifACT to make planning decisions. This would include the requirement to make accurate calculations of how future developments, or modifications to the ways in which neighbourhoods operate will stack up within the carbon budget that the city has between now and 2050 (from which the HalifACT plan commits to city to being carbon neutral going forward). Different models for how the carbon budget is assessed and integrated into city planning have been taken up in leading cities around the world, such as Edmonton, Alberta and Oslo Norway. I would urge the city to explore what has been done in other cities and establish specific accounting measures and criteria which must accompany development planning, and establish a system in which the full carbon budget for the year is shared with citizens. This can support transparency, build support for leading sectors, and provide examples for development proposals which will maximize benefits within the community and minimize carbon use.

Looking to the Themes and Directions report, I:

- (9.2) support adoption of policy to encourage net-zero and climate resilient new construction. Ways to make this policy more effective should be considered, such as incentives ro push developers to choose the lower carbon pathway. Strict criteria should be included in this policy and shared with the public.
- (9.3) support adopting policy to encourage alternative energy sources such as district energy and microgrids. I would also encourage the planning team to direct funding to research to assess which areas planned for intensification, or for redevelopment could benefit most from these alternative energy sources, provide this information to developers

and when possible, implement additional prioritization to selecting development proposals which include these alternative energy sources.

- (9.4) support adjustments of land-use bylaws to facilitate solar development and uptake of electric vehicles and installation of their infrastructure, particularly those which would benefit renters and citizens living in low-income housing and allow them to take advantage of associated benefits.
- (9.5) support adjustment to policy which would allow for implantation of large-scale wind energy generation.
- (9.6,9.7) support risk assessment to infrastructure and implementation of policy which would build in resilience to climate change for critical infrastructure, whether in retrofitting old buildings or in requirements for new builds. Additionally, the climate risks identified for critical infrastructure should also encompass the slower incremental changes (increased heat, rain) and requirements to build in resilience to these non-extreme climate risks should also be implemented into policy. Technological solutions (automated adjustments to heating/cooling) as well as low-tech solutions (building orientation) and green infrastructure solutions (green roofs) should all be considered and put forward as ways to build resilience.
- support the adoption of the IMP's delineation of 90 % of growth occurring in the central and suburban areas of HRM, with strong prioritization for densification, and building in grey and brownfield sites, and ensuring that the complete street approach is taken as densification and development occurs.

Leadership from the municipality on climate action, coming down strongly from its highest planning document, the Regional Plan will both allow for us to deliver on action directly, and push, influence and inspire other sectors and stakeholders which operate within the municipality to decarbonize and build resilience for a climate safe future in HRM. Clear measures and criteria must also be laid out within the Regional Plan as to how climate change will be considered, and how this will influence decision making, in ways which are clear and transparent for the general public. It is key that climate change, both transitioning to a low carbon community, and building the resilience and adaptation measures which will be needed to protect our community from incoming changes to our climate be a key framing through which we view all planning decisions now and going forward for HRM.

Sincerely,

Brenna Walsh

C119

Response to Regional Planning Committee
Re: Regional Plan and Dutch Village Road

Submitted By:
Hank Huizinga and Darlene Loke
[redacted]
June 29, 2021

We would like to provide feedback on the proposed and current changes in the Fairview area of Halifax. Thank you for providing us this opportunity. We are long time residents of the Fairview area (my wife has lived in this community for 50 plus years) and have been proud members of our community BOTH as renters and homeowners. Between us we have witnessed and experienced change in this community.

Background Information and Summary: (To help with context of my concerns)

FIRST, I have copied below from the Plan Dutch Village Road Goals from the 2016 Plan Dutch Village Road Report (https://www.halifax.ca/sites/default/files/documents/city-hall/regional-council/160719rc1462.pdf).

Plan Dutch Village Road Goals:

1. Maintain and encourage the retention of local businesses through zoning regulations
2. Create greater predictability of built form through an as-of right process
3. Create development that is respectful of the community
4. Allow commercial development along all parts of Dutch Village Road
5. Ensure new development transitions appropriately to low density residential neighbourhoods within the Dutch Village Road study area
6. Create new buildings that are better integrated with neighbourhood
7. Provide site design that creates livable and walkable communities
8. Generate a more defined commercial node
9. Regulate the lands under one By-law (Mainland Land Use By-law)
10. Permit consideration of high-rise development in Area A by development agreement

SECOND, I have referenced 2 articles from the Halifax Examiner to offset my own research. I felt it was important to include words from these 2 writers (one lives in Fairview) because they echo exactly many of our own concerns and fears:

The first is an article published March 16, 2021. The title is “A Fair View of the Future for Dutch Village Road” and written by Suzanne Rent. The link to it is:
https://www.halifaxexaminer.ca/featured/a-fair-view-of-the-future-of-dutch-village-road/

The second article was published March 23, 2021. The title is “Fairview Development Proposal Moves to Next Steps” and was written by Zane Woodford. The link is: https://www.halifaxexaminer.ca/city-hall/fairview-development-proposal-moves-to-next-steps-and-other-halifax-council-news/

THIRD, I have attached a copy of our Public Engagement Survey Westerwald which includes many of these concerns.

Summary

The original recommendations were published in 2016 for Dutch village road. Keeping in mind the original recommended goals which were supposed to be the basis of the new plan, please review our list of concerns as they relate to these goals. Please note that many of these concerns overlap. This is a Summary of them in no order of importance with details following:

1. 100% land usage
2. Traffic Considerations
3. Affordable Housing in Fairview
4. Greenspace for Community/Family Use
5. General Observations
6. A Request for information from the Regional Planning Committee

Concerns/Comments

1) 100% land usage

I am truly disappointed that 100% land usage is allowed within zone C-2C and has so adversely affected the area we call home.

It clearly does not fit the Dutch Village Road Goals. This by-law is most importantly unsafe and is in opposition to goals 3, 6, & 7 above. The only objective it accomplishes is allowing a building that is too big for the property it is on.

For example, the intersection of Dutch Village Road and Rosedale where the two new apartment buildings have been built.

i) The intersection is now **unsafe**. Drivers exiting Rosedale to Dutch Village: the drivers must almost pull into incoming traffic to be able to see if there it is clear to turn. Drivers turning left onto Rosedale Ave are unable see a vehicle advancing down to the corner and occasionally almost collide.
ii) Insufficient space for bus drivers to **safely** turn onto Rosedale from Dutch Village. We have witnessed bus drivers having to do a three-point turn. This is a bus route and now the bus drivers can not safely navigate their routes.
iii) It appears the balconies of the buildings are over-top of you as you are both driving and walking.

Additionally,

i) There were plans to include a bike lane and sidewalks on Dutch Village Rd. There is also a requirement for snow removal. To provide a livable and walkable community there should be safe passage and green space. This is in contradiction with the 100% land usage. I personally can not envision how this can be accomplished.
ii) The 100% land usage allows for all buildings to be connected in an unbroken line. How is this respectful of the community? I for one don't agree with creating a duplicate of the Dartmouth Crossing Village shops. That is not a community.
iii) Parking. Where will there be parking for all the new commercial development? Again, with the sidewalk and plans for bike lanes, where is there available space if 100% land use is permitted? (Where are the tree plantings that the city was promoting just recently?) Is the

proposal that parking structures be built where you can pay for parking? How will this be successful in drawing business to the area?

iv) The points below are taken from https://www.halifaxexaminer.ca/featured/a-fair-view-of-the-future-of-dutch-village-road/ which echoes many of the concerns I have noted and have

"- There are no sidewalks on the west side of the road! I cannot fathom housing dozens, if not hundreds more citizens and not have a place for them to safely walk. And the construction of the new buildings is so close to the road, it's hard to imagine how a sidewalk could even be installed. "

– "It is hard to see traffic when leaving the bottom of Rosedale to turn right or left onto Dutch Village. There are two new buildings that obstruct the view, so you must edge out into traffic to see. Then if the bus needs to turn up Rosedale as you're waiting to enter Dutch Village, there's not enough room for the bus to turn up! The entrance to Rosedale is now simply too narrow and if snow is going to be piled on the road as it was this year, it's going to cause perpetual problems."

– "Dutch Village is now a busy thoroughfare for people coming from Main Avenue, Washmill Lake Drive, Clayton Park to either get to Bayers Road or onto Joseph Howe. This is hugely problematic for pedestrians, especially having a childcare centre on that road, and being in the area of schools."

– "In the summer, the line up for Dairy Queen spills onto the road DAILY. It narrows the road and affects the safety of turning left onto Rosedale or right onto Dutch Village from Rosedale."

Westerwald Street: There are proposed buildings in this area to be built using the 100% land usage by-law. The problems on Dutch village road are only multiplied on this street. We have also attached our "Public Engagement Survey" which expresses our concerns. The plan calls for integration into the existing community. How can a "development transitions appropriately to low density residential neighbourhoods within the Dutch Village Road study area" when the land usage goes from 100% land usage to residential land usage.

The 100% land use policy is suitable for downtown Halifax, not a residential community. To my knowledge, 100% land usage is not allowed in any residential area except Fairview. Why is Fairview the exception? Why is this by-law only appropriate for this area? I can already see the impact of only a few buildings being built on Dutch Village Road. I can only see the situation getting worse as more buildings are erected. And I can not see how sidewalks under the balcony of buildings is of benefit to anyone or community centric.

It appears to me that this new 100% land use in zone C-2C should never have been agreed to and should be removed. It clearly does not fit the Dutch Village Road Goals. I plead with you again to please re-consider this by-law and remove it.

2) Traffic considerations

We live on Sunnybrae Ave. near the bottom. In the morning (pre-covid), cars were backed up the street to exit onto Dutch village road. I see no reason this behaviour will not start again after everyone returns

to work. I find it difficult to get out of my own driveway let alone exiting from Sunnybrae onto Dutch Village where I usually have to wait for traffic light timing during non-rush traffic.

There will now be all new residential areas and commercial areas without any changes to traffic flow. There are new apartments planned for Westerwald and this street exits very close to the Joseph Howe/Dutch village intersection.

Should there not be a plan in place BEFORE the buildings are put up to ensure the community can absorb all this new traffic with Dutch village being only a narrow two-way street. I would like to see what that plan looks like now since more changes have been added to it. I am hopeful that this is not a reactive plan where we will deal with the congested traffic and accidents after it happens.
We are assuming with all the new residential buildings there will be a requirement for more bus stops/bus routes. Dutch village road is a narrow two-lane road. Where will the bus stops be? With 100% land usage, there is no shoulder on the side of the road to pull over and not impact traffic flow.

3) Affordable Housing in Fairview

Fairview is (or was) one of the last affordable housing areas in Halifax. Numerous low-rent buildings are being replaced with new construction with rents that are much higher which the existing tenants can not afford. Where will all these existing tenants go now? There is a new affordable housing project being built on Joseph Howe, but there is no legal obligation for the building owner to offer affordable housing. *What work is the City Planning Department doing to make affordable rents a requirement in Fairview development?* Is there a clause that the new affordable housing units will not be converted to full rent since there is no legal obligation? *What is the PLAN to assist those displaced with new accommodations?* We need this work to help our displaced neighbors.

My concerns were researched and confirmed in the Halifax Examiner Article in the March 16, 2021, edition which I already referenced and provided link to above the new buildings all have much higher rents than existing units (starting rents were quoted by building). Even though the new building BANC Investments' 12-storey project proposed for Joseph Howe Drive will have affordable units, will they still be affordable in 10 or 15 years since there is no legal obligation?

4) Greenspace for Community/Family Use

It is important that we not loose all our green space. I can see no plan with the 100% usage for any on Dutch Village Road. There doesn't appear to be a plan for any green space or public outdoor/family meeting areas where we can meet and celebrate in the lower part of Fairview. Maybe still see things like the summertime farmer's table or the French fry truck that you see in a neighborhood. There is one (very small) family playground on Titus St. that already sits very close to a heavy traffic corner. It is not an interesting or engaging place for kids and not safe if they run out on the street. We also enjoy supporting the weekend Elderkin farm market; however, we see this type of open area will be disappearing. I recently learned there is green space near the Boss Plaza, but I was not even aware of it as a public space and assumed it was the property of the Boss Plaza. Again - another inadequate space.

5) General observations

I am excited that we are developing the Dutch village area. I agree that development is required but it needs to be both a benefit to the community and to the developers. I agree in PRINCIPLE with the plan goals but am struggling to see how the execution of the plan is functionally helping to create a neighbourhood that is better and more integrated.

My observation is that decisions are being made that are not beneficial for the community. It appears that the new construction is of the highest possible density buildings to fit the maximum number of occupants for maximum profit for the developer. Is this to make it more attractive for developers? I understand and agree that new housing is required. However, new housing must also fit the existing neighbourhood/community to be a successful example of what can be accomplished. Instead, it appears that the new construction is a contrast to the existing Fairview neighbourhood instead of an extension.

6) A Request for information from the Regional Planning Committee

i) We know that the original PLAN DUTCH VILLAGE ROAD has been modified since the original announcements. We would like you to present to the community the most recent version of the plan showing how it has been revised from the original and why.

ii) I would like to meet the original Committee members who presented the original Plan Dutch Village Road recommendations. Have they remained part of the process to ensure our input was acted on? Have they visited the work accomplished so far and does it match their original vision for us? How many of them are residents of Fairview and how many were developers and council members who are not residents?

PUBLIC ENGAGEMENT SURVEY: WESTERWALD AND MELROSE

Submitted May 26, 2021 by:

DARLENE MARIE LOKE
HENDRIK HUIZINGA
[redacted]

1a) What concerns do you have about allowing townhouses and more apartment buildings near Westerwald Street?

- Loss of affordable housing. What will happen to those families living in rented spaces now who will be displaced?
- Traffic – The exit from Westerwald is very close to the Joseph Howe/Dutch Village traffic light. Can this already tight intersection handle the additional traffic congestion? How about Sunnybrae Ave? Is there potential for the Trail next door to be compromised for the traffic to exit on Dutch Village?
- Lack of green space – the plans do not show any green space/common areas. Shouldn't this be a requirement for the density of people being added.
- Height of the buildings. The size and magnitude of the structures will affect the surrounding area. The proposal is six stories, but it often appears that a building permit amendment increases the number of stories. This affects all residences close to the site.
- Is this PHASE 1 of this plan? The plan seems to focus on one side of Westerwald and nothing is said about the area at the bottom of Melrose (Motel and apartment building) and the bottom of Sunnybrae(apartment building) that is also highlighted? Will there be more "phases" similar to what they did with Halifax West School area?
- **If a city is carefully planning for the future, new development should be both a benefit to the community and the developer. It appears that the benefit to the community has taken a back seat to the benefit of the developer where the main goal appears to be maximizing profit by putting the greatest number of units in the smallest possible space.**

1b) What concerns do you have about ground floor commercial?

- Parking – Where are tenants/visitors/potential customers going to park. The plan shows limited parking.
- Is the commercial area for the building tenants or for the community?
- We are not sure what types of ground floor commercial use is required in the area. Fairview is a residential neighbourhood. Fairview does not need more fast food takeout places (ie: Pizza, fish&chips, KFC etc.) and cosmetic outlets (Hair salons, Barbers, Tanning/ Spa salons) there are two supermarkets, 2 drugstores and a medium department store in close proximity.

2a) What benefits do you think allowing townhouses and more apartment buildings could bring to the area?

- Townhouses and apartment buildings can add to the community if they are built with a plan of integration and community use. We do not see this in the plans as presented.

2b) What types of ground floor commercial uses might be appropriate?

- Not sure what (if any) types of ground floor commercial use is required in the area. Fairview is a residential neighbourhood. Fairview does not need more fast food takeout (ie: Pizza, fish&chips, KFC) and cosmetic outlets (Hair salons, Barbers, Tanning salons) there are two supermarkets, 2 drugstores, medical offices and a medium department store in close proximity.
- Any type of community business such as children activities, meeting places, etc.

3) Please tell us what you think of the newer apartment buildings built in the area. How have these buildings changed the look and feel of the area? How do they fit with nearby residential streets.

- Severe encroachment issues: The apartment buildings at the bottom of Rosedale are too close to Dutch Village road and is a safety hazard. When exiting from Rosedale onto Dutch Village road, you almost have to pull onto Dutch village road before you can see the traffic. We do not understand how this building was allowed to be built so close to the street. On Dutch Village Road it looks like the we'll be walking on the sidewalk under the first story apartment decks.
- **If a city is carefully planning for the future, new development should be both a benefit to the community and the developer. It appears that the benefit to the community has taken a back seat to the benefit of the developer where the main goal appears to be maximizing profit by putting the greatest number of units in the smallest possible space. Where is the community?**
- We personally do not like the design of the buildings and feel they do not blend in with existing Fairview housing. They appear to be built to contrast what exists in Fairview. Looking at our skyline and seeing big black and red buildings that actually hide the views of our streets and sunshine does not feel like home anymore. The newest ones don't even have a strip of grass. It feels like a ghetto.

4) Are there any small changes you would like to see near Westerwald Street?

5) Is there anything else we should know about your neighbourhood?

- Fairview has been an affordable housing community allowing people to locate close to Halifax downtown. This allows younger families and new immigrants to purchase property in the area. Schools are close by as well as green spaces for recreation. We personally would be sad to see this replaced by highly priced/high density units.
- As indicated in a previous answer and in our opinion: **If a city is carefully planning for the future, new development should be both a benefit to the community and the developer. It appears that the benefit to the community has taken a back seat to the benefit of the**

developer where the main goal appears to be maximizing profit by putting the greatest number of units in the smallest possible space.

C167

PO Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

MEMORANDUM

TO: Regional Plan Review Team
CC: Haruka Aoyama, Legislative Assistant
Caroline Hemstock, Diversity and Inclusion Advisor
Tracey Jones-Grant, Managing Director of Diversity & Inclusion/ANSAIO
FROM: Jane McKay-Nesbitt, Chair, Women's Advisory Committee
DATE: July 8, 2021
SUBJECT: Regional Plan Review – Women's Advisory Committee

We, the Women's Advisory Committee of Halifax, are writing to provide input for the 2022 Review of the Halifax Regional Municipal (HRM) Planning Strategy.

First, it should be noted that, when the HRM Planning Strategy was first developed in 2006 and last reviewed in 2014, the HRM Women's Advisory Committee (WACH) had not yet been established. In establishing the WACH in 2019 (see Administrative Order Number 2019-004-GOV), the HRM signaled its intentions to ensure that the voice of women would be reflected in its policies and procedures. Thus, going forward it is important that the HRM's Planning Strategy also reflects the voice of women. To that end, in developing its 2022 updated Strategy document, we encourage the HRM to adopt a 'gender lens' and implement GBA+ in the process of strategy development.

We also encourage the HRM to incorporate specific references in the Strategy document to the role that WACH may play in future HRM strategy development and implementation. For example, Item 5.9 states that the Regional Plan Review will "continue to engage the Diversity and Inclusion Office as a resource during planning projects". We encourage you to add a statement about the role of WACH. Item 5.9 could read as follows (suggested changes have been **bolded** for ease of identification): The Regional Plan Review will "continue to engage the **Women's Advisory Committee** and the Office of Diversity and Inclusion as resources during planning projects". Similarly, Item 5.13 could be amended as follows: "Include the Accessibility Advisory Committee, the **Women's Advisory Committee**, and the Diversity & Inclusion Office in the review of the forthcoming engagement tool to ensure it uses best practices for inclusion of **women**, and residents with a wide array of disabilities".

Following are other important items for consideration as the Strategy Planning document is reviewed and updated.

1. The HRM is encouraged to consider intersectionality (e.g., women who are also disabled, women who are also members of a visible minority, etc.) in the development of its policies and procedures. For example, accessibility of community centers and public spaces is of particular concern for Muslim women, and the HRM is encouraged to consider their needs in its policies and procedures.

2. The HRM is encouraged to develop and implement policies for safer, more inclusive, and accessible transportation options for diverse groups of people (e.g., those of all abilities, racial identities, and age

groups), and for women. In this regard, the HRM is encouraged to consider recommendations arising from the HRMs' participation in the UN Safe Cities and Safe Public Spaces Programme.

3. 2SLGBTQ+ individuals and communities face violence, discrimination, and lack of accessible services in the HRM. The HRM needs to ensure that its policies ensure the safety of these individuals and communities and that accessible services are available to them.

4. Women are disproportionately impacted by the lack of affordable housing. In addition, women often have different needs than men (e.g., they are more likely to be a single parent). The HRM is encouraged to take into consideration the different needs of women as they address the housing affordability issue.

5. The HRM is encouraged to develop affordable housing alternatives within communities where people, especially Black and Indigenous peoples, have formed cultural attachments.

6. The notion of a 'complete community' [i.e., neighbourhoods where urban planning focuses on livability by prioritizing access to essential community services (like a local grocer, health services, library, community centre), affordable and accessible housing, active and public transportation and diverse recreation options, all proximate to where residents live] is very important in ensuring that all people, and especially women, have access to essential services both in both urban and non-urban areas of HRM. This is particularly important during lockdowns that may occur during a pandemic.

7. Adopting a 'gender lens' is particularly important when developing and implementing policies regarding the use of public spaces (e.g., adequate lighting), including public washrooms, and when considering food security and accessibility.

Thank you for taking our comments into consideration as the HRM Strategy Plan is updated for 2022.

Women's Advisory Committee
Haruka Aoyama, Legislative Assistant
Tel: 902.490.6517
Email: AoyamaHa@halifax.ca

C239

"for the use of the inhabitants of the town of Halifax as Common forever" (1763-2021)

July 16, 2021

RE: Friends of Halifax Common submission to HRM Review of Regional Plan

We at the Friends of the Halifax Common are deeply concerned about recent incursions into the Halifax Common from proposed multiple high rises (16-, 28-, 29- and 30-storey and ~900 cars – similar in mass to the Nova Centre) at the corner of Spring Garden Road and Robie Street; the expansion of major QE2 facilities onto parkland adjacent to the Natural History Museum and along Bell Road with two parking garages; the exclusive use of the Wanderer's Grounds by a professional soccer team; the overwhelming use of the remaining open space of the Common of organized sports and programmed uses; the eviction of the Common Roots Urban Farm from the area and the slow progress of the Halifax Common Master Plan by HRM Staff begun in 2017 and that has been without significant public input for nearly two years.

It is important to understand that the 240 acres of the Halifax Common from Robie to South Park and North Park Streets and Cunard to South Street, "given to the inhabitants of the Town of Halifax as Common forever," in 1763, has deep historical significance; that it is one of the defining features of the urban form of Halifax; that it serves as a neighbourhood park in an area of increasing density under the Centre Plan; that Centre Plan Package B currently calls for no new green space; and most importantly that the diminishment of the Halifax Common has been going on for generations and will not stop with this generation unless given protection.

While the city needs to increase density on the peninsula we believe that high-rises on and next to the Halifax Common are a most inappropriate and unnecessary built-form as these dominate the skyline, create shadows and wind, disrupt and demolish neighbourhoods as well as increase traffic. We are

especially disappointed that the streetscapes on the perimeter of the Halifax Common will now be transformed into walls of high-rises. For example, two blocks adjacent to Quinpool Road on Robie Street may soon have five towers on the western edge despite enormous public opposition and against HRM staff recommendations.

We believe the process for determining the height of these buildings at these locations has been illegitimate and without *any* public benefit. Where is the transparency for these decisions that one would expect in a democracy? What are the criteria *apart* from the drive of developers? Why is there no *balance of interests*?

A member of HRM Planning staff said during a recent Zoom meeting that unforeseen Covid restrictions on organized sports gave us a "unique social experiment" in which we caught a glimpse of a new vision of the Halifax Common, its spontaneous use by individuals and small groups for informal activities, and its full value to the people of Halifax. On a warm day, hundreds of people could be seen spread out over the Common, particularly on the broad spaces of the North Common. This must be protected. And the 20% of the Halifax Common that is surface parking must be renaturalized.

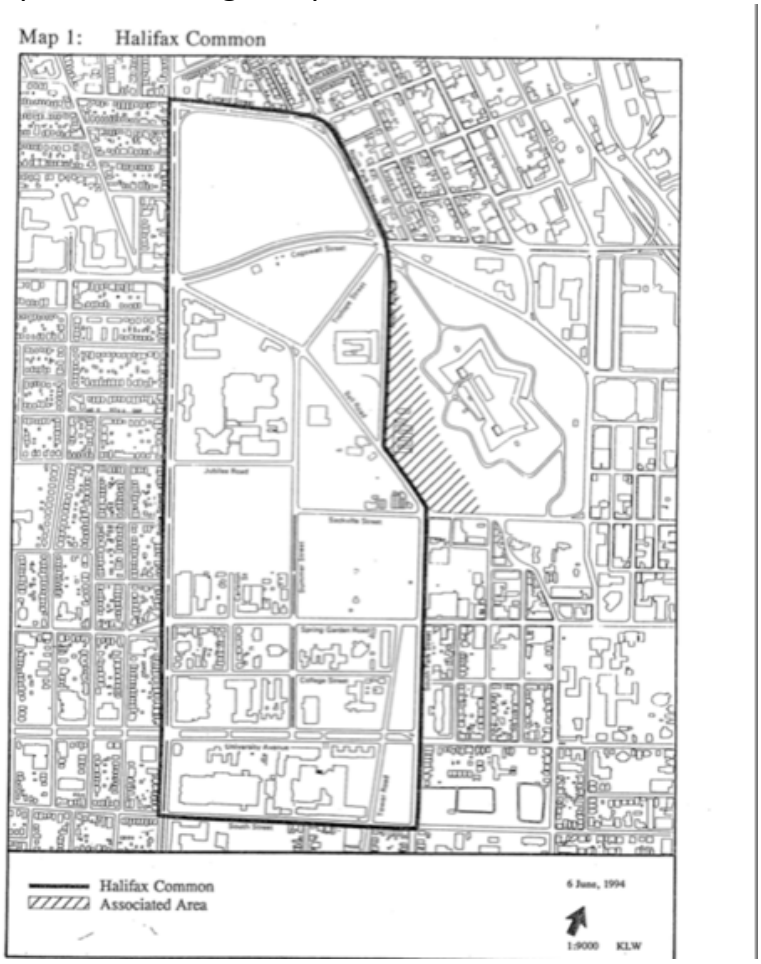
Protecting and adding new wilderness within HRM's entirety and planning for a greenbelt should be a top priority, but adding thousands of residents to the Peninsula also requires that the city ensure there is new green space added to the urban core too. We recommend that HRM not sell any public lands on the Peninsula and work to incorporate the Centennial Pool lands, the site of the former School for the Blind and in future, the hospital properties on the South Common into new park area that can extend a green network through the Halifax Common in all directions for humans and creatures that move through this area.

We also recommend a map be developed that shows potential green routing from the Halifax Harbour to the North West Arm and from Point Pleasant Park to Africville to create a vision of what our future can be and then work towards it. It is a climate crisis now, not in the future-we must work with nature to help handle its effects, to support biodiversity and to aid citizens' physical and mental health.

The Halifax Common as a gift to the people of Halifax must be protected. An example for this protection is the Provincial legislation given to the Dartmouth Common nearly thirty years ago. As executive members of the Friends of Halifax

Common we request the Regional Plan take our recommendations as they are intended and that HRM Council and planning staff begin steps to give equal protection to the Halifax Common as the Dartmouth Common currently enjoys and take all opportunities to expand public open green space on the Peninsula.

This map from the 1994 Halifax Common Plan shows the boundary of the Halifax Common's 240 acres and the area that Halifax committed to plan for and to recapture, to not give up and to retain. Let's make this happen.



Sincerely,

Friends of Halifax Common Board of Directors,

Peggy Cameron
Howard Epstein
Judith Fingard
PM McCurdy
Beverly Miller
Alan Ruffman
David Garrett

C245

Submission to the Regional Plan review
Prepared by Patricia Manuel, PhD MCIP LPP
July 16, 2021

Dear regional planning review team and HRM council

Thank you for the opportunity to provide comments to the first phase of the HRM regional plan review. I am familiar with the Regional Plan, I have read the Regional Plan Themes and Directions report, the issue papers, watched the presentations on the regional plan review themes, and participated in the on-line survey. I very much appreciate the work that the regional plan review team has prepared for public comment and the opportunities to engage in the process so far.

I am a geographer and a planning researcher and educator at Dalhousie University, specialized in community and environmental planning. I also volunteer with community-based environmental organizations. My areas of expertise include watershed planning; wetlands interpretation and assessment; coastal planning; climate change adaptation planning (coastal systems, watershed impacts, risk assessment, nature-based approaches; heat stress); and marine spatial planning. I view land use planning through an environmental lens and advocate for watershed and community-based approaches to land planning and land use.

I am submitting comments concerned mostly with Themes 8 - Environmental Protection and Theme 9 - Climate Action Planning, some aspects of Theme 7 - Integrating Community Facilities and Parks, and Theme 1 - Considering Regional Scale First, specifically the Urban Reserve land use designation. I will also draw attention to the need for coastal planning in a coastal region -- HRM Is a coastal region. Coastal planning provides a context for coastal climate adaptation planning and a planning context for the provincial coastal protection act regulation.

Also, I want to acknowledge that HRM has developed priority plans since 2014 that provide excellent direction for shaping our region: the Integrated Mobility Plan, the Halifax Green Network Plan, HalifACT, the Economic Growth Plan, and the Cultures and Heritage Priorities Plan. Plan reviews are opportunities to reassess and, if needed, realign the overarching plan objectives with the advances that have emerged through priority plans and the environmental, societal, and economic changes since the last plan update. There have been many of both since the last review in 2014!

General:

I urge Council, through this review, to

- **use the Halifax Green Network Plan to guide land use planning and growth in HRM.**

Action 1 of the Halifax Green Network Plan (HGNP) establishes the environmental framework for general land planning and growth in HRM: “Refine and incorporate the Green Network Ecology Map (Map 5 on page 35 [of the HGNP]) into the Regional Plan and use it to guide regional planning decisions related to the location and shape of: Urban service boundaries, Rural centres, Nature parks, Conservation design developments.”

The HGNP is a strong plan built from landscape ecology and environmental planning principles and methods. Planning in accordance with environmental opportunities and constraints integrates social, cultural, and economic health with ecosystem health.

The HGNP and the Green Network Ecology Map describe how natural patches and corridors weave the green network for the municipality. Attention to both large and small patches and wide and narrow, short and long corridors is essential for ensuring the integrity of the green network. Protecting the network is challenging in the urban context. Therefore, the new Regional Plan should contain policies to

- protect three of Halifax's last, large wild areas near rapidly urbanizing areas: Sandy Lake – Sackville River; Blue Mountain - Birch Cove Lakes; and the Purcell's Cove Backlands (extending the protection now afforded by the Shaw Wilderness Park to adjacent lands vulnerable to development). HRM has already demonstrated commitment to some protection, but the work is not yet complete.

Urban reserve and regional planning

One challenge to the large wildland protection opportunity is the Urban Reserve (UR) land use designation. Reviewing the UR is a priority in the Regional Plan review, identified under Theme 1 Considering regional scale first: "Revisiting the urban reserve designation where conditions have changed."

Conditions have changed in two ways: urban wilderness parks are taking shape adjacent some UR lands and the development potential could threaten the wilderness integrity and environmental quality of these parks which are becoming highly valuable municipal assets; and, Covid-19 has greatly enhanced people's need for and appreciation of outdoor spaces and wild spaces in particular. Urban wildlands are difficult to manage because they are relatively small as far as wilderness areas are concerned and are accessible to many people. Therefore, the larger the parks, with large buffers to accommodate use, the better.

The HGNP Action 29 states "Amend the Regional Plan to ensure that the Green Network map (Map 5 on page 35), is considered when reviewing changes to the Urban Service Area boundary, Urban Settlement Designation, Urban Reserve Designation, and when preparing Secondary Planning Strategies.

The regional plan review team is already examining the UR designation in the Williams Lake area of the Purcell's Cove Backlands and is well-aware of the challenges the UR presents for contiguous wildland park planning in the suburban area of HRM. The Regional Plan review must reflect on the past development impacts of UR lands on the landscape and natural heritage values and interruption of the green (and blue) network and consider implications of future UR development on wildlands. Societal values are shifting toward protecting nature. Climate change and the pandemic are driving the shift.

Local planning

Local planning and land development patterns can deliver a lot of cuts to the micro-fabric of the green network. Similarly, land use practices, even at the individual property level, can weave a lot of small patches and threads into the network. The HGNP addresses the need for natural area protection at all scales, and the review documentation addressing Themes 8 (Environmental Protection) and 7 (Integrating Community Facilities and Parks) similarly identify the treats to and opportunities for protecting small scale natural structures. Protection mechanisms range from protecting riparian vegetation along stream corridors of all sizes (addressed below) to encouraging property owners to use native plants in landscaping and naturalize the municipal right-of-way bordering their property.

- Introduce a policy to ensure that Green Network Plan principles are incorporated intro local area planning from land use zoning and by-laws to policies that support community development, gardening, and recreation. Don't lose sight of the importance of many small actions to protect and restore natural connectivity.

- Examine the impact of densification policies on the Halifax Urban Forest Management Plan and the integrity of the urban forest and other natural environments. Infill development might direct development into the serviced urban areas to protect undeveloped areas beyond the urban service boundary, but it can also replace remnant woodland, meadows, small wetlands (considered expendable). Consider opportunities for how to protect these areas in developments and identify their value as green infrastructure for urban stormwater management.

There is already extensive reference to the HGNP in the regional plan review documentation. Clearly, the regional plan review team is looking to the HGNP for direction. Leveraging the HGNP supports achieving the desired environmental foundation for the Regional Plan. The "Regional Plan Review Issue Paper: Planning Tools for Conserving and Protecting Land" (Also called the Open Spaces Issue Paper) specifically identifies seven actions in the HGNP for consideration in the Regional Plan review. The Background document, the Suburban Community Design Issue Paper, and the Rural Community Planning Issue Paper also reflect content of the HGNP although without reference to specific HGNP actions.

The HGNP is only as good as the extent of its implementation, however. Therefore, I hope this encouraging focus on the HGNP objectives and actions in review documentation is reflected in the updated plan.

I would like to highlight a few additional considerations for the regional plan review and revision that might not be fully covered in the HGNP or that might require drawing from the HGNP in a different way.

Protect wetlands, watercourses, and watersheds

The plan review documentation specifically references

- HGNP Action 6, addressing the objective to protect riparian corridors and wetlands from degradation, pollution, and other threats by reviewing "the Regional Plan and Land Use By-Law requirements for watercourse and wetland protection"

- HGNP, Actions 11, 12, and 13 addressing storm water management objective by working with Halifax Water to manage water quality and quantity through stormwater management guidelines, using green stormwater management infrastructure and developing low-impact site design guidance; and

- HGNP actions 5 and 18 relating to better protect environmental protection by managing environmentally sensitive lands by managing erosion, for example, and through acquisition vi the land development and subdivision process.

Implementing these actions and more in the HGNP are critical for improving and protecting all aspects of watershed health. The HGNP recommendations concerning the distance increases for riparian buffers are essential for this objective, and in particular protecting watercourses; but, **the regional plan needs to include recognition and protection for wetlands to the fullest extent possible.**

Wetland protection

HGNP Action 6 includes the statement: ”Consolidating environmental protection zones and applying these zones to sensitive riparian areas and wetlands, such as coastal marshlands, floodways and large wetland complexes, based on detailed mapping and analysis”. The HGNP omits most inland wetlands from consideration because it refers to large wetland complexes, only. HGNP does not define how large is large, nor does it define wetland complexes. Provincial wetland policy and regulation apply to wetlands 100 square metres and larger. Where a wetland is threatened by encroaching development, or where a wetland is preserved but situated within a development complex, the wetland needs protection from development impacts. Currently, buffers are encouraged, but not required. The HRM Regional Plan policy 2.3.2 Wetland Protection does not include buffers. The Regional Plan can strengthen wetland protection in HRM by applying a buffer to all wetlands covered by the provincial wetland policy and regulations. A buffer of 30 m would match the HGNP recommendation in Action 6 for watercourses: to “increase the standard watercourse buffer requirement from 20 to 30 m for watercourses that are greater than 50 cm wide”, and “maintaining a watercourse buffer requirement of 20 metres for watercourses that are intermittent or less than 50 cm wide.” If a buffer is recommended for small, intermittent streams, then the same protections should be extended to wetlands – small as well as large. Without buffers wetlands are polluted by overland runoff carrying nutrients and sediment, which can speed up succession to upland vegetation. The buffer is also habitat for animals that use upland habitat in combination with the wetlands. Small wetlands are critical amphibian habitat; removing a buffer between the wetland and development diminishes the habitat value of the wetland. Furthermore, wetlands are part of a stream network either directly connected as part of the stream corridor, or indirectly through overland and groundwater replenishment or discharge. Not including buffers for wetlands weakens the effectiveness of buffers for other parts of the network.

Watershed planning

Watershed planning should lead secondary planning, not the other way around.

Implementing HGNP Actions 5, 11, 12, 13, and 18 (all referenced in the review documents) along with Action 6 (above) and multiple other HGNP actions, is necessary to improve overall watershed environmental health, including the natural and developed areas of the watershed. The HGNP does not refer specifically to watershed planning and management, but a watershed approach is necessary for achieving the water quality and quantity objectives. Combining Action 1 of the HGNP and watershed planning would be a powerful structure for directing land use planning, growth, and development in the HRM.

Section 2.4 of the Halifax Regional Municipal Planning strategy describes Watershed Planning. It is a strong section of the Regional Plan in principle. However,

- the Regional Plan review should identify the extent to which watershed planning (Section 2.4 HRMP 2014) has delivered in practice; and

- the Regional Plan review should identify if reliance on watershed planning through the secondary planning strategy process is achieving the level of watershed planning needed to protect watercourses and wetlands expressed in Section 2.3 Water Resources of the Regional Plan or envisioned in the HGNP.

Watershed planning should produce **structured watershed plans** for all HRM plan areas and watersheds. Watershed planning means using targets of water quality (habitat and recreation for non-water supply watersheds) and quantity to guide and control development. Targets should be clear; opportunities and constraints that link land use and water protection identified; development suitability identified; and policies and by-laws controlling development defined based on the water protection objectives.

The updated regional plan needs a reliable and effective watershed planning implementation policy and a mechanism to ensure protection of water resources.

- If incremental planning initiated by secondary planning is not delivering the level of watershed planning necessary to achieve water quality and quantity protection objectives, then regional level approach is needed. Watershed planning should lead secondary planning, not the other way around.

Climate change adaptation planning, coastal protection, and coastal planning

Climate change adaptation planning is wide ranging because climate change impacts environment, society, and economy comprehensively. HRM has two strong priority plans and a management plan to deliver climate resilience, if they are implemented through the Regional Plan (revising the Regional Plan to reflect the priority plans). HalifACT 2050 directly addresses climate change mitigation and adaptation. The HGNP and the Urban Forest Master Plan work with HalifACT to deliver on many aspects of mitigation - carbon sequestration (mitigation) by protecting the urban forest canopy (absorbing carbon) and wetlands (storing carbon); and adaptation -- providing shade (tree canopy) for relief from heat (lowering heat risk); controlling runoff, flooding and erosion (increased precipitation, sea level rise/storm surges) by protecting the absorption capacity of the landscape and stabilizing banks and shorelines; and protecting the food production capacity of the land and food security (HGNP rural working landscape protection). Climate change will be a widely discussed topic in the plan review. My comments specifically address a few aspects of coastal adaptation to climate change, and I am relating them to some aspects of the HGNP, land use regulation, and the need for coastal planning.

The review team has already described the need for coastal protection -- identifying hazard, exposure, vulnerability and risk to residents, property, and infrastructure; and, the need to update the coastal vertical setback. The review team also notes that there are policy gaps for coastal protection, but does not specify where the gaps exist (Climate presentation and transcript, June 15, 2021). The provincial Coastal Protection Act regulations will define a coastal protection zone that combines an updated vertical setback to protect development from flooding exacerbated by sea level rise, and the mechanism to define a site level horizontal setback to protect land use and structures from impacts of shoreline erosion and to control activities that could harm coastal ecosystems.

Climate change adaptation and coastal protection

The HGNP and HalifACT 2050 are strong supports for coastal protection and the benefits for climate change adaptation because they include actions to protect natural landscape structures and natural vegetation, including at the coast, as well as actions to restore natural ecosystems. For example, objective 4.1.3.6. or the HGNP prioritizes "the preservation of open spaces as a low cost and sustainable approach to both mitigating and adapting to climate change" via Action 16 to "Continue to update the Region's flood scenario mapping and, through individual project work, **prioritize the preservation and restoration of riparian areas and shoreline vegetation as an effective method for mitigating flood impacts**." HalifACT Action 26 is to "Acquire more land to **preserve natural areas and ecosystem health in alignment with the Green Network Plan",** which also aligns with the HGNP Action 18 which is to build a reserve of environmentally sensitive lands "through the land development and subdivision process, in addition to existing parkland dedication provisions".

The Regional Plan needs to incorporate these actions to ensure that the existing natural shoreline in HRM is protected. That will also ensure easier compliance with the Coastal Protection Act regulations. The Regional Plan could be explicit with the intent of shoreline protection at the coast, in the service of climate change adaptation and protecting biodiversity.

- If the Regional Plan adopts Action 18 (above) acquisition could prioritize coastal lands to build a coastal land reserve for coastal protection that goes beyond the minimum requirements of the provincial Coastal Protection Act Regulations (discussed below) in new coastal subdivisions.

- Introduce a policy to prioritize nature-based approaches to climate adaptation over hard engineering approaches, **beginning with municipal, publicly owned coastline**. Nature-based approaches provide room for coastal process and ecosystem development. A vegetated shoreline, coastal wetlands, and dunes, for example, protect land use and other environments to the landward side from flooding and erosion. From a land and storm water management perspective, they are considered green infrastructure. They also increase green network connectivity by linking upland with the coast and into the near shore waters. Tidal wetlands are especially important for connectivity because they often transition to freshwater systems.

- Introduce a policy to use hard engineering solutions (e.g., seawalls, revetments, armouring) only in those circumstances where assets require the highest level of protection in the shortest period of time and can't be moved. Such assets might include critical safety and security infrastructure; valued cultural assets like heritage waterfronts; residential areas that can't be moved.

The Regional Plan must also address some problematic aspects of coastal protection in HRM if they are not addressed in the Coastal Protection Act regulations.

- Extend the restriction for development in the vertical setback to prohibit any new development not required for operation of marine activities. Currently, only residential occupancy in new construction is prohibited. [Regional Plan Policy E-22, 2.3.5 Coastal Inundation, 3.8 m vertical elevation above CGVD28]. Climate adaptation action does not advocate using the accommodate approach as a first principle; first principle should be to avoid developing in the hazard zone. For

example, locating the new Art Gallery of Nova Scotia, or the Queen's Marque Development, or Kings Warf complex in the projected coastal flood zones is not good climate change adaptation practice. None of these uses are essential for marine enterprise. All of them use accommodation site design and architectural design techniques to justify their location. HRM needs to move away from maladaptation practices.

- Introduce a policy or amend an existing one to control infilling of water lots along the shorelines of the HRM. Water lots are falling between the jurisdictional cracks and the problem has been highlighted recently in HRM by infill problems along the shore of the Northwest Arm. The problem potential isn't limited to this inland coastal waterway, however. The presumably responsible jurisdictions, including the provincial and federal governments, seem unable or unwilling to address the problem. HRM should apply to change the Halifax Regional Municipality Charter so that the municipality can extend land use planning to water lots for oversight and permitting of this infilling practice. The original intent of water lots did not include infilling to extend the dryland portion of the property to increase the lot area. Infilling water lots infringes on public access to the shoreline along the tidal zone (the public area of the shoreline, regardless of property ownership); may impact navigation in narrow waterways (which should be a concern for the federal government); may impact critical marine habitat; and may impact longshore drift (transfer of sediment along the shore) and therefore natural adaptation to climate change impacts.

- Introduce a policy to control development of undersized lots at the coast. Allowing development of lots with inadequate area to ensure safety from coastal flooding and erosion and placement of on-site services puts the developed property at great risk of climate change impacts and destroys coastal ecosystems. There are already enough existing properties and structures at risk of coastal flooding and erosion in HRM; allowing continued residential building in harms way is not responsible coastal land use permitting.

- Introduce a policy for rolling setbacks, if the mechanism for such a setback is not implemented in the Coastal Protection Act regulations. A rolling setback is one where the horizontal setback for development adjusts with the retreat of the coastline, i.e., the benchmark highwater mark or some other defined benchmark line. A rolling easement can be approached in a variety of ways, and can put greater or lesser limits on existing landowners wishing to develop on their properties as the tideline moves inland due to sea level rise or erosion. However, when a property changes hands, the coastal protection zone setback should be redefined according to the benchmark line (such as the highwater mark) at the time of deed transfer. A rolling easement ensures that the protection zone at the coast reflects the reality of the erosion or flood hazard.

Coastal Planning

Halifax Regional Municipality is a coastal region, but it lacks coastal planning. There is a patchwork of land use by-laws controlling coastal land uses and limited coastal expression in the current regional plan. Between 2009 and 2012 the provincial government attempted a coastal management strategy, organized through Department of Environment, but the initiative was abandoned. The new Coastal

Protection Act and Regulations is not coastal planning or management. The regulation is a protection zone that will be implemented by municipalities, along with other zones in the land-use by-laws. The provincial regulation addresses two aspects of concern from the 2009-12 coastal planning initiative – coastal ecosystem and habitat protection, and protection against sea level rise and storm events; and, partially addresses the concern for unregulated coastal development. But, four other problems are unresolved: coastal water quality, working waterfronts, public coastal access, coastal governance. Three of the four can be directly addressed through municipal planning for the coast.

HRM is a large municipality with a long and diverse coastline. HalifACT recognizes the lack of coastal planning is a problem for climate change action. The lack of coastal planning is also a problem for protecting coastal ecosystems; for protecting space for working waterfronts and coastal industries – traditional and new; and for ensuring just and equitable access to the coast for all HRM residents, other Nova Scotians, and visitors.

Specific to climate change action, HalfACT Action 28 stipulates "Develop a coastal-specific adaptation strategy with coastal communities" – in this case climate adaptation is driving coastal planning. HalifACT Action 28 informs Action 27: "Conduct a detailed spatially-based risk and vulnerability analysis of Halifax's coastal, waterfront, and shoreline area."

- Introduce a policy that provides guidance for coastal local planning areas on coastal adaptation planning. Integrate coastal adaptation planning with land use planning. Coastal and land use planning should be one and the same in coastal communities.

Climate change is an excellent motivator for coastal planning; comprehensive coastal planning would go further, however.

Coastal environmental quality:

- Introduce a policy to connect coastal planning with watershed planning (described earlier) to develop integrated land-coast-sea planning and management. Connecting land and sea via water ensures attention to and control of the land-based impacts on coastal and ocean (marine) environmental quality and protects habitat connections (especially along rivers systems). Municipalities control land use and development and therefore have a key role in managing impacts on coastal environmental quality.

- Extend the re-introduced municipal water quality monitoring program to coastal water quality in valued coastal recreation areas of the municipality. HRM recently announced a new lake water quality monitoring program -- an excellent initiative. Coastal waters also require monitoring, especially estuaries and recreational beaches. HRM could justify municipal monitoring of some areas (coastal parks) and should partner with the province for monitoring of other areas where provincial jurisdiction prevails.

Working waterfronts:

- Introduce a policy to protect or reserve coastal lands for traditional marine industries and activities and anticipated new industries, reflecting the emerging 'blue economy' opportunities for coastal regions. Coastal working landscapes are not specifically identified in Section 4.2 HGNP Working Landscapes of the HGNP, but they are implied and mapped in Map 7 Working Landscapes in the HGNP. Coastal working landscapes integrate both socio-culture and working landscapes on this map. A policy to protect or reserve coastal space for marine enterprise as

part of a coastal plan would also address the Rural Community Planning issues paper description of the need to support rural working landscapes.

Public coastal access:

- Introduce a policy to protect existing and increase opportunities for public coastal access. Only 14 percent of Nova Scotia's coastline is publicly owned (federal, provincial, or municipal ownership). Access to publicly own coastline in HRM is similarly limited. Public access to the coast and walking the shore, either at sea level or along bluffs is becoming increasingly difficult. Climate change threatens coastal access by flooding low-lying public land and destabilizing bluffs; subdivision and sale of coastal properties is challenging tradition accesses across private land; shoreline hardening, water lot infilling, and building docks are impeding access along the tidal zone.

A policy that becomes part of coastal planning could support many actions to improve public coastal access, including: inventory existing access; identify climate change risks to coastal access; work with the province to ensure public coastal lands are not transferred or sold to private interests); and explore opportunities to work with private coastal land owners to increase access to the shore (identify existing private-public access; identify impediments to otherwise legal public access – such as blocking passage along the shore below the ordinary highwater mark; explore opportunities for easements working with groups like NS Nature Trust, to acquire access).

Conclusion

Thank you for the opportunity to highlight opportunities for review and improvement of the Regional Plan from my perspective. Good luck with the continuing review process.

Respectfully submitted,
Patricia Manuel, PhD MCIP LPP
Halifax NS

C249

It's Time to Commit to 2030

A Climate Emergency Response to the Halifax Regional Plan Review



Sierra Club Canada Foundation, Atlantic Chapter
July 16, 2021

Introduction

The Halifax Regional Municipality has made some important strides in addressing the climate crisis and advancing the local conversation around climate change. The Sierra Club Canada Foundation would like to acknowledge those efforts.

The following recommendations include a number of ways that the HRM Council can respond to the climate emergency more quickly and effectively by incorporating more decisive action and earlier time frames in its Regional Plan.

This response also identifies areas in which the HRM Council's decisions have been inconsistent with its stated climate commitments. The Council has declared a climate emergency and regulated beneficial measures to reduce greenhouse gas (GHG) emissions and protect biodiversity. But it has also approved contradictory measures that will harm the environment and increase the municipality's carbon footprint.

Our goal is to identify policies and measures that the HRM Council can include in the Regional Plan to better address the climate emergency, and ensure a rapid transition to an equitable, sustainable, low-carbon future for all people living in the Halifax Regional Municipality..

Tynette Deveaux
Communications Coordinator, Beyond Coal Campaign
Sierra Club Canada Foundation, Atlantic Chapter

1. Plan for a 2030 Net-Zero Emissions Time Frame

Many of the climate strategies discussed in the *Themes & Directions* report are aligned with achieving net-zero emissions by 2050, the ultimate goal of the HalifACT climate action plan. However, it has become increasingly clear that a net-zero target date of 2050 will not prevent catastrophic climate effects, including in the Halifax Regional Municipality.

According to a new scientific report, *Climate Reality Check* (2020):[1]

- A 2°C global rise in temperature is likely to occur before 2050, even *with* stronger climate actions that go beyond the current Paris Agreement commitments
- The world's current trajectory of greenhouse gas (GHG) emissions could cause global temperatures to rise by 3°C between 2050 and 2075 and by 5°C by 2100
- The current 1.2°C of global warming is already dangerous to humans and ecosystems
- An increase of 2°C would be extremely dangerous, 3°C catastrophic, and 4°C unlivable for most people

The HalifACT plan is designed to keep global temperature rise below 1.5°C, a goal that no longer reflects the severity or extent of the crisis.

The federal government's 2019 *Canada's Changing Climate Report* reveals that the annual average temperature in Canada has increased by 1.7°C since 1948. In northern Canada, the temperature has increased by 2.3°C.[2]

In the past month alone, Canada has experienced:

- devastating wildfires that continue to rage with no end in sight
- record-breaking temperatures that have caused hundreds of heat-related deaths
- extreme weather events, including flooding, tornadoes, mudslides, hail storms, and more

1. Climate Reality Check 2020, p. 43, Breakthrough – National Centre for Climate Restoration, October 2020
2. Canada's Changing Climate Report, p. 116, Government of Canada, 2019

WEATHER

Invermere pelted by hail despite raging wildfires, smoky skies in other regions of B.C.



By Doyle Potenteau · Global News
Posted July 3, 2021 7:50 pm



The District of Invermere, B.C., was pelted by hail on Friday afternoon. **Avalily Permaculture and The Earthskills Institute**

Source: Global News, July 3, 2021[3]

Key Recommendation

To meet the rapidly worsening climate emergency, the HRM Council must frame all policies and future developments with a net-zero emissions target of 2030, rather than 2050.

3. Invermere pelted by hail despite raging wildfires, smoky skies in other regions of B.C., Global News, July 3, 2021

2. When Growth Is Necessary, Consider the Needs of the Environment First

2.0 Future neighbourhood planning should not result in continued urban sprawl, as it has in the past. We urge the HRM Council not to expand developments into undisturbed areas; careful regional planning can utilize previously developed land, instead.

Many of the suburban areas in HRM have forests, wildlife, marshes, and lakes. While these neighbourhoods are serviced by municipal water and sewer, it's important to limit any future expansion in these areas. We encourage the HRM Council to honour the Halifax Green Network Plan by preserving areas the Plan identified as priorities for protection, such as greenways, riparian areas, and wildlife corridors.[4]

The forests of HRM act as much-needed carbon sinks, provide habitat for wildlife, and preserve biodiversity. Lakes are already suffering from the effects of climate change, with decreasing water levels and warmer waters that produce toxic blue-green algae. As urban sprawl diminishes natural habitat, deer increasingly roam in many suburban streets and yards; with deer come ticks and concerns about Lyme disease.

Preserving the natural environment and biodiversity needs to be an important component of HRM's response to the climate emergency. The municipality's actions, as well as its plans, must reflect this.

2.1 Many of the new housing developments that the HRM Council approved over the last decade were for oversized single-family homes, particularly in the suburban and rural regions of HRM.

The lots in Boscobel on the Arm, a short drive from the Armdale Roundabout, range from 8,372 sq ft to 110,088 sq ft. The homes built on these lots range from large single-family homes to "McMansions."[5]

4. Halifax Green Network Plan, Halifax Regional Municipality, June 2018
5. Boscobel Pricing, Boscobel



One of the oversized single-family homes in the Boscobel on the Arm housing development off Purcell's Cove Road[6]

This housing development was opposed by members of the community, who pointed out that some of the trees that would be cut to make way for the housing project included 250-year-old Hemlock stands.[7]

Nevertheless, the land was cleared and the mega-homes were built.

2.2 Residents in efficient, densely planned neighbourhoods (which contain accessible services and transportation) produce less CO_2 per capita than residents in surrounding suburbs.[8] The transportation sector already accounts for 35 percent of all GHG emissions produced in the province.[9] HRM can limit the growth of transportation-related emissions by focusing on densification in the Regional (urban) Centre.

6. Boscobel Gallery, Boscobel
7. Paving paradise in Jollimore. Clearcutting, lack of consultation and damage to cemetery have residents upset, Halifax Media Co-op
8. Cities and Greenhouse Gas Emissions: Moving Forward, 2020
9. Climate Change Plan for Clean Growth: Discussion Paper, p. 4, NS Department of Environment and Climate Change, May 2021

Key Recommendations

The Sustainable Development Code is a US-based think tank that helps municipalities develop zoning regulations, ordinances, and by-laws that favour environmentally responsible housing, business, and infrastructure projects.[10] The Sustainable Development Code outlines three ways municipalities can foster local solutions to the climate crisis:

1. Remove obstacles (What in the existing code is harming your community?)
2. Create incentives (How can we encourage developers, homeowners, and others to adopt sustainable development practices?)
3. Fill regulatory gaps (What are the minimum standards your community will accept?)

We urge the HRM Council to pass new by-laws and bring in regulations that:

- prioritize the needs of the environment when reviewing and approving housing and building development projects
- limit the size of new single-family homes and prevent any further development of McMansion communities
- restrict new residential and business construction to lands that are already developed
- limit further expansion of municipal services for new developments in suburban and rural areas
- facilitate approvals and funding for housing developments that provide smaller, affordable, energy-efficient housing and use existing municipal services and infrastructure
- offer incentives to homeowners, businesses, and developers to accelerate the adoption of densification over urban sprawl

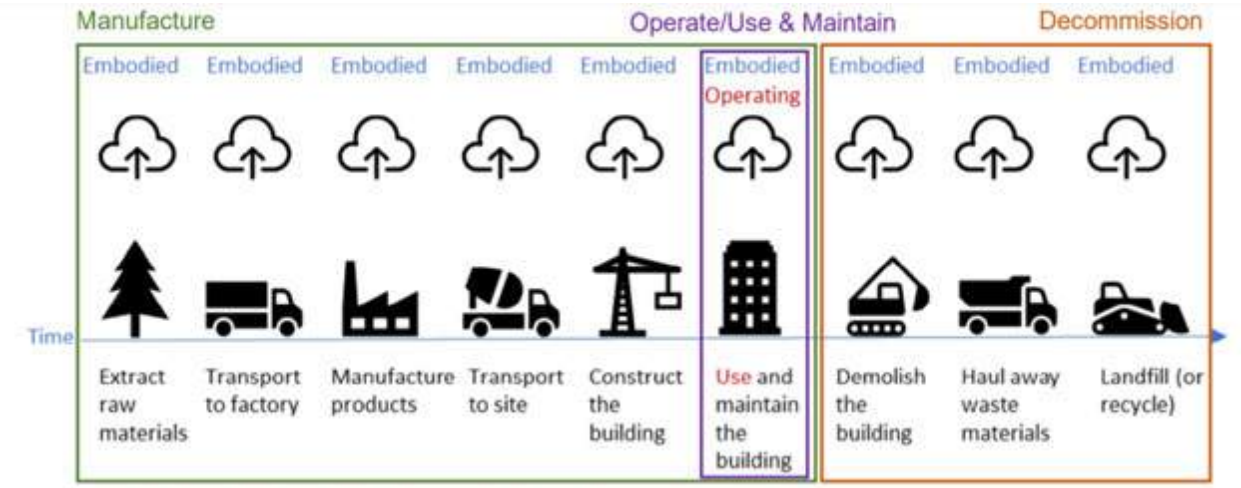
We also urge the Regional Council to take swift measures to formally protect ecologically sensitive and valuable areas within its purview, including Sandy Lake–Sackville River, Blue Mountain Birch Cove Lakes Wilderness Area, and the Purcell's Cove Backlands. We encourage Council to pass a by-law requiring that assessment and mitigation of impacts on wildlife and wildlife habitats be considered in development proposals.

10. About – Sustainable Development Code, Sustainable Development Code

3. Renovate Before You Demolish and Rebuild

Only operational building emissions (energy consumed for heating, cooling, ventilation, and plug loads) are accounted for in building emissions totals for Nova Scotia (and most of Canada).

Embodied carbon, in the context of buildings, refers to emissions associated with the materials extracted for construction, transportation, manufacturing, on-site construction, as well as decommissioning (including demolition, recycling, and landfill). [11]



Source: Embodied Carbon in Construction[12]

"Embodied carbon emissions account for up to 75% of a building's total emissions over its lifespan."[13]

The City of Vancouver's 2020–2025 Climate Emergency Action Plan commits to reducing embodied carbon emissions from new building and construction projects by 40 percent (compared to 2007 levels) by 2030. [14]

11. Embodied Carbon in Construction, p. 2, Zizzo Strategy, December 2017
12. Embodied Carbon in Construction, p. 2, Zizzo Strategy, December 2017
13. The Carbon Footprint of Construction: Briefing Note, p. 1, Architects Climate Action Network, February, 2021
14. How we build and renovate | Climate Emergency Action Plan, City of Vancouver

HRM can reduce embodied carbon emissions by:

- building smart (using low-carbon materials)
- building efficiently (using fewer resources and wasting less)
- building circular (designing for reusing and recycling)
- building durable (designing for longevity)

This will require:

- accurately and transparently accounting for embodied carbon emissions in the sector
- reducing embodied carbon emissions through new building regulations, monitoring, and enforcement
- mandating a whole life-cycle carbon assessment for new construction projects
- ensuring that projects meet specified carbon targets in order to obtain a building permit

A whole life-cycle carbon assessment is a way to measure the environmental footprint of a building or infrastructure project over its complete lifespan, from the sourcing and transportation of building materials, to its end-of-life decommissioning.[15]

Using scientifically validated CO_2 ratings for raw materials, builders can estimate the carbon footprint of a new building and consider its impact on the air, water, soil, global warming, and more. It helps to see the potential environmental benefits of using local and robust materials that last longer and can be recycled.

These life-cycle carbon assessments, and the data used to inform them, should be transparent and readily accessible to the public.

15. Embodied Carbon in Construction, p. 4, Zizzo Strategy, Embodied Carbon in Construction Policy Primer for Ontario, December 2017



Source: Life Cycle Assessment (LCA)[16]

"The greenest building is the one that is already built."[17]

The best way to reduce any new embodied carbon emissions is by reusing existing homes and buildings rather than demolishing older ones and starting over again.

The Royal Institute of British Architects recently came out strongly against demolishing older buildings, saying that they should instead be refurbished to reduce embodied carbon emissions.[18] Unfortunately, many buildings are written off much earlier than necessary to make way for something shiny and new.

16. Why Should Architects Understand and Care About Carbon and Life Cycle Assessment? ArchDaily, May 20, 2021
17. The Greenest Building Is One That Is Already Built, The Journal of the National Trust for Historic Preservation 21, no. 4, Elefante, C., 2007
18. RIBA Architects say building demolitions cause of carbon emissions, BBC, July 8, 2021

Currently, HRM Council is considering two proposed development projects that would result in the demolition of more than a dozen mixed-use, small-scale, historic buildings in the Carlton Street block (bounded by Spring Garden Rd, Robie St, College St, and Carlton St). These historic buildings provide numerous affordable housing and commercial units. The proposed plans would replace these with 4 highrises, ranging from 16 to 29 stories, plus penthouses.[19] [20]



Some of the houses in the Carlton Block that would be demolished to make way for new highrises if the HRM Council approves the development project. (Photo: Heritage Advisory Committee)[21]

When a community, such as Halifax, is full of demolitions and new construction projects, it is not a sign of sustainable prosperity or economic growth; rather, it is an indication that there is still a lack of understanding or disregard when it comes to the impact of embodied carbon on climate change.

Key Recommendations

The HalifACT plan says very little about embodied carbon emissions in new construction, except that HRM should begin accounting for embodied carbon in the building sector in six to ten years.[22] The Plan does not propose any targets to reduce embodied carbon emissions or regulations to bring them about.

It's imperative that the HRM Council fully understand the impacts of embodied carbon emission in construction and enact strong measures to rapidly reduce it. The Council must also implement measures that prohibit or disincentivize demolition and incentivize refurbishing buildings and homes, instead.

19. Embodied Carbon Report, Peggy Cameron, July 2021
20. Carlton block's "upward creep" proposals ignore both public concerns and HRM Regional Plan policy considerations, Nova Scotia Advocate, July 4, 2021
21. Halifax Heritage Advisory Committee: Case 20776, Halifax Regional Municipality, June 23, 2021
22. HalifACT: Acting on Climate Change Together, p.49, Halifax Regional Municipality, 2020

4. Prepare for Sea-Level Rise

In addition to eliminating embodied carbon emissions in the building sector, HRM must quickly enact measures to prevent new construction close to the coastline.

HRM has one of the most severe rates of sea-level rise in Canada; about half of the increase can be attributed to global sea-level rise and the other half is a result of land subsidence (sinking of the ground surface).[23] It's already become more difficult and costly to get flood-protection insurance for coastal properties.

Despite the risks of coastal sea-level rise and subsidence, there are plans to build a new Art Gallery of Nova Scotia on the Halifax waterfront. As local Halifax residents know, the waterfront has experienced major storm surges and flooding in recent years, resulting in significant and costly damages.[24] [25]

Sea-level rise models suggest that parts of the Halifax waterfront could be underwater in a matter of decades.[26]

"If you look at the history of climate change modelling and prediction over the past 15 years, usually it turns out worse than the models predicted."[27]

When we consider the projected lifetime of new buildings on the Halifax waterfront (40 to 100 years), it's clear that such plans would be detrimental to the environment and efforts to reduce GHG emissions.[28]

Key Recommendations

The HRM Council needs to use every power available to prohibit and disincentivize new construction near the shoreline and in coastal areas.

HRM Council must reopen discussions with the Province and the Nova Scotia Art Gallery to select a new, less vulnerable location for the project before construction gets underway.

The HRM Council must also urge the Province to implement regulations to guide and enforce the 2019 Coastal Protection Act.

23. The big picture: The looming threat of rising sea levels — and what we can do about it, Dal News - Dalhousie University, December 12, 2019
24. Maritime Coastal Flood Risk Map - NS, Nova Scotia Community College, Applied Geomatics Research Group
25. Coastal Risk Screening Tool, Climate Central
26. Coastal Risk Screening Tool, Climate Central
27. Rising seas and climate change: Everything you need to know, The Globe and Mail, May 14, 2020
28. With increasing sea level rise, does it make sense to build a new Art Gallery of Nova Scotia on the waterfront? Halifax Examiner, May 7, 2019

5. Net-Zero Buildings by 2030

Halifax Regional Municipality still has a lot of work to do to reduce the operational carbon emissions in the residential and commercial building sectors.

As the HalifACT plan points out, "Fuel and electricity consumption in residential, commercial and industrial buildings accounted for 70% of all energy use in Halifax" (according to 2016 data).[29]

The Canada Green Building Council offers guidance on building and retrofitting buildings to achieve net-zero carbon emissions; it also provides Zero-Carbon Building Design and Performance certifications for those that do.[30] The completed building projects are truly inspiring.

Evolv1: the first Zero Carbon Building – Design Certification

Canada Green Building Council[31]



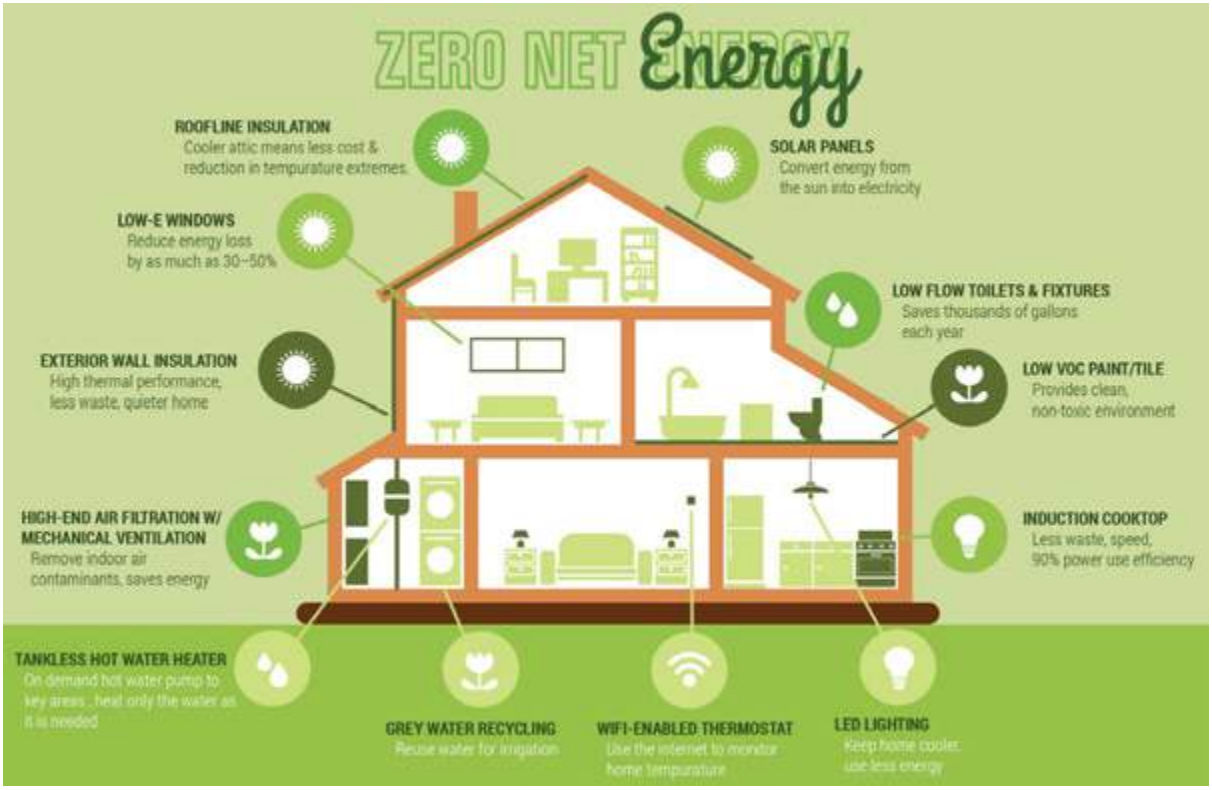


Humber College Building NX: first retrofit Zero Carbon Building – Design Standard certification

Canada Green Building Council[32]

29. HalifACT: Acting on Climate Change Together, p. 28, Halifax Regional Municipality, 2020
30. Canada's Zero Carbon Building Standard Celebrates First 10 Certifications, Canada Green Building Council, November 27, 2019
31. The First Zero Carbon Building- Design Certification, Canada Green Building Council- CaGBC, Youtube
32. Humber College Building NX: First Retrofit Zero Carbon Building- Design Standard Certification, Canada Green Building Council- CaGBC, Youtube

"As of January 1, 2022, the Vancouver Building By-law will require zero emissions equipment for space and hot water heating, as well as additional roof insulation, in new low-rise residential buildings."[33]



Source: CREARTE[34]

The money saved on energy costs will "more than offset the upfront capital costs" to achieve net-zero building standards.[35] Net-zero buildings—whether achieved through deep retrofits or new construction—can be designed to produce more green energy than they require. They can then provide surplus energy back to the local communities to help support the clean energy transition.

Key Recommendations

The HalifACT plan calls on HRM to "develop, adopt and apply a standard for net-zero and climate resilient new construction" by 2030.[36] However, the technology to build to net-zero standards is already readily available—and affordable.

As the climate crisis accelerates, so too must HRM's response.

We urge the HRM Council to require that any new homes and buildings be net-zero or net-zero ready beginning in 2022.

33. Zoning amendments to support the Climate Emergency Response, City of Vancouver
34. BASIX / NatHERS: Zero Net Energy, Crearte
35. The First Zero Carbon Building- Design Certification, Canada Green Building Council- CaGBC, Youtube
36. HalifACT: Acting on Climate Change Together, p. 36, Halifax Regional Municipality, 2020

6. Prioritize Deep Energy Retrofits

Canada's Climate Retrofit Mission, a new report by Efficiency Canada and Carleton University, sets out the pathways for achieving net-zero retrofits. It also presents an ambitious mission — mass climate retrofits — to get all building stock to net-zero carbon by 2035:

> By 2035, we will have retrofitted all of Canada's existing building stock to eliminate the direct use of fossil fuels and made our buildings zero-carbon ready, via a high level of energy efficiency and use of a decarbonized energy supply. Building retrofits will also contribute to the decarbonization of transportation and industry by redirecting existing clean energy resources away from energy waste.[37]

This mission is not just about reducing carbon emissions; it's also about doing it in a way that helps mitigate the local impacts of climate change and address energy poverty:

> Our buildings will be better prepared for extreme weather events brought on by climate change and become more comfortable, healthy, and productive places to be. In the process, Canada will have eliminated energy poverty and created high-quality housing conditions for Indigenous Peoples.[38]

Today, there are turnkey and streamlined options for deep energy retrofits, which can be done more quickly and efficiently—and with less disruption—than conventional retrofits. The ReCover Initiative is introducing an energy-efficient, prefabricated, modular approach to Canada's deep energy retrofits, based on the success of EnergieSprong in the Netherlands.[39] The Dutch refer to it as a "net-zero energy makeover," and it can be done in a week.[40]

37. Canada's Climate Retrofit Mission, Efficiency Canada & Carleton University, June 2021
38. Canada's Climate Retrofit Mission, Efficiency Canada & Carleton University, June 2021
39. ReCover Initiative—Our Story, ReCover
40. Energiesprong explained, Energiesprong Foundation



Source: Energiesprong explained[41]

ReCover is working to prioritize deep energy retrofits for people experiencing energy poverty. In Nova Scotia, 37 percent of the population experiences energy poverty.[42]

The ReCover Initiative is currently looking for municipalities with candidate buildings that can be fitted with deep energy retrofits by 2023 for demonstration purposes.[43]

Key Recommendations

The HalifACT plan calls on HRM to "develop a retrofit program to enable and fast-track deep energy and climate resilience retrofits in residential and non-residential buildings" by 2040.

We urge the HRM Council to adopt the 2035 target set out in Canada's Climate Retrofit Mission to complete the retrofit of all existing building stock to net zero.

We also encourage Council to partner with the ReCover Initiative to retrofit a building in Halifax that can be showcased as an example of a cost- and time-effective net-zero energy retrofit makeover.

41. Energiesprong explained, Energiesprong Foundation
42. The ReCover Initiative: Our Principles, ReCover
43. The ReCover Initiative: Our Results, ReCover

Conclusion

HRM's Regional Plan requires more ambitious climate action and by-laws with enforceable regulations. The Regional Plan must prioritize the well-being of the natural environment over corporate profit and the demands of developers. As Professor William Lahey concluded, "Ecosystems and biodiversity are the foundation on which the other values, including the economic ones, ultimately depend."[44]

The municipality should dedicate HRM's remaining carbon budget to creating small-scale affordable housing units in the Regional Centre rather than mansions in the suburbs.

Old habits die hard. It will take a concerted effort to change how homes and buildings are designed and built, how we travel within the municipality, and how we treat our natural ecosystems. We must learn to view these decisions through an environmental lens to protect what biodiversity remains.

This effort will require an amplified public awareness campaign about climate change and ways that decision-makers, residents, and businesses can effectively respond to the crisis.

An independent commission is necessary to oversee this process and ensure that building developers, large business owners, and industries with a vested interest in fossil fuels and resource extraction do not have an inordinate influence over HRM Council decisions.

The climate crisis and ecological breakdown we are facing are greater and more rapid than we could have imagined. The current situation requires HRM to implement stronger and more rapid measures to reduce GHG emissions, preserve remaining green spaces, and carefully guide HRM's growth and footprint.

This can be achieved through greater public accountability, independent and transparent carbon accounting, and science-based decision-making.

It's time to take decisive action, commit to net-zero by 2030, and double down to ensure a sustainable future.

44. An Independent Review of Forest Practices in Nova Scotia, p.3, William Lahey, August 2018

It's Time to Commit to 2030

A Climate Emergency Response to the Halifax Regional Plan Review



Produced by:

Tynette Deveaux

Mukhnaam Kaur

Alex Torrealba

Lindsay Lee

Gretchen Fitzgerald

Graphic Design by:

Oshean Juneja

C293

From: [redacted]
Sent: Wednesday, July 21, 2021 11:04 AM
To: Regional, Plan
Subject: [External Email] Halifax Regional Plan Submission
Attachments: HRM Regional Plan.pdf

[This email has been received from an external person or system]

On visiting the HRM Regional Plan Review website I was disappointed to see that the deadline for public submissions was July 16th. I have been following the process from inception almost 20 years ago! My family moved to Halifax in 1996 and being and very keen on exploring the outdoors we really appreciated the opportunities HRM offered to be able to get out into at least semi-wilderness within minutes of leaving downtown. However, during the following years we have see most of these areas being encroached upon or lost entirely to what appears to be uncontrolled development and urban sprawl. I have prepared a submission (attached) which I hope can at least be considered for inclusion in the comments from the public.

Sincerely,

Peter Lewis
Halifax

The Long-Awaited Halifax Regional Plan, Regional Wilderness Parks etc.

Similar to Rome burning while Nero was fiddling vast tracts of irreplaceable wilderness lands around HRM are being "chewed up" or otherwise desecrated by developers while the Provincial and Regional Governments continue the interminable Regional Planning process. I remember becoming aware of this process in the early 2000's. At that time there seemed to some agreement that more "Kingswood Like" urban sprawl development with acre plus lots to accommodate well/septic systems were "unsustainable" due to costs of servicing for garbage pick-up, snow clearing, school busing etc. not to mention the total dependence on private car and non-viability of public transport. Yet what has happened since - literally hundreds of sq kms and numerous formerly pristine lakes have been eaten up with just this type of development all around HRM – both sides of Hammonds Plains Road, Highway 3 in Tantallon, McCabe Lake in Sackville to mention just three of many.

Meanwhile Environment Advocacy Groups such as the Ecology Action, NS Nature Trust, Nature Conservancy of Canada, the Blue Mountain- Birch Cove Lakes (BMBCL) Wilderness group, Purcell's Cove Backlands, Sandy Lake groups etc, battle on trying to preserve a small portion of what is left of what makes Halifax almost unique amongst North American cities in truly being able to escape into a semi-wilderness area literally within 10 mins of downtown and even reachable by public transport. Not to mention the ecological value of maintaining an interconnected viable area for endangered wildlife habitat.

For the HRM to allow themselves to be blackmailed by developers like the Annapolis Group trying to extort the developed value of land in an essential section of the proposed Blue Mountian-Birch Cove Lakes Wilderness park is a disgrace. Land speculation (which applies to all of the above-mentioned areas) is a gamble – the developers cannot win every time. Fair compensation would be the cost of the land plus inflation.

The three areas mentioned above are currently under considered for "wilderness protection" BMBCL, Purcells Cove Backlands and Sandy Lake in Bedford and are championed by Volunteer Groups. My family have been exploring and leading informal hikes in these areas since moving to HRM in the mid-nineties. It has been

disheartening to see all three being eroded and under continuous threat of further development.

The BMBCL Wilderness as originally designated in Map 11 of the HRM Regional Plan could be considered the “Jewel in the Crown” of Wilderness Areas so close to the core of HRM and the envy of outdoor recreationists and environmentalists in most North American cites. So it is encouraging to hear that HRM council has finally agreed in principal to create a steering committee to guide an monitor the creation of the Wilderness Park. Saving a large portion of the BMBCL Wilderness area is a great achievement but there are vital areas which are still not protected notably Fox lake and Charlies Lake and the Western Flank. It is so refreshing to be able to stand on Fox Lake lookoff and not be able to see any building except a water tower and transmission lines and yet know “as the ‘the crow flies” it is only about 2 km to Bayers Lake business park. How may cities the size of Halifax can boast this? It is a pity that more politicians and decision makers can’t see the value of this.

When we moved to HRM in the 1990’s the trail to Blue Mountain used to be approachable from what is now Blue Mountain Drive. Ragged Lake and Lewis Lake were still pristine – in fact our now 29 year old son’s first wilderness camping experience was on the shores of Ragged Lake. Now the area is an à la Kingswood sprawl of mostly unserviced large lots with no public access to any of these lakeshores. So sad to see this loss of lakeshore access happening across so much in HRM. Isn’t it time to put a moratorium on any further private lakeshore development on the few remaining “pristine” lakes within the municipality or at least require a significant section is left for public access?

The recent acquisition of land in the Purcell’s Cove Backlands is really encouraging but it was dismaying to see the For Sale signs at the end of Drysdale Avenue and elsewhere which if a sale went through, would see development at the ends of both Williams and Colpitt Lake’s. The latter is one of the last “still development free” lakes in HRM. Any development along it’s shoreline would be significant ecological loss. It was encouraging to see, at least or now, that this parcel may now have been re-zoned as “urban reserve”.

Back in the 1990s there was a network of cross-country ski and hiking trails around the back of Jack Lake in Bedford – alas this area fell victim to the political

vandalism of the proposed Jack Lake prison site. A vast area of land was cleared – a large section of which has still not experienced any significant regrowth. The prison was never built there due to electoral promises and a change of the Provincial Government who then promptly cleared more woodland and built the prison in Burnside! Then, in an adjacent area, a huge tract of land was clear cut by a developer at the northwest end of Sandy Lake – none of which has since been developed. Are there no laws/rules to prevent developers behaving in this way? It seems as though their attitude is "let's get as much land cleared as we can before the environmentalists and advocacy groups try to preserve more wilderness". The "sprawl development" around McCabe Lake in Middle-Sackville (which after Grand Lake is probably the largest in the Region) is an absolute travesty!

In the past I have made the effort to write to politicians and have made submissions to the Regional Plan but I am afraid I have become somewhat cynical that "public consultation" is merely part of a development exercise and the developers still have more influence and ways around any decisions that don't suit them. Unlike in the UK and Europe where I grew up and where the use of "Compulsory Purchase Orders" are far more common, in North America the private individual's "rights" seem to outweigh the greater good of the community. Land speculation is a gamble and like any other form of gambling you shouldn't always expect to win.

C298

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HALIFAX REGIONAL MUNICIPALITY

JUL-19-2021

MUNICIPAL CLERK

Singh, Sweta

Subject: FW: [External Email] Sandy Lake Protection

From: Margot Metcalfe [redacted]
Sent: Sunday, July 18, 2021 9:22 PM
To: Office, Clerks <clerks@halifax.ca>; Mayor <mayor@halifax.ca>; Mason, Waye <Waye.Mason@halifax.ca>
Subject: [External Email] Sandy Lake Protection

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Hello All,

Regarding Sandy lake protection: I would like to endorse this letter sent by Katherine Kitching. A shortened version follows.

My understanding is that the proposed development area in Sandy Lake represents an important animal corridor. Beyond that, as Katherine points out, the population of our city is increasing rapidly and our current parks are not sufficient to accommodate the increasing demand.

"..... you are aware how incredibly popular and beloved (Sandy Lake) has become for folks who live nearby it, and now for those who live all over Halifax.....People absolutely love that park and are making amazing use of it - dog walking, jogging, wilderness adventuring, family walks, swimming - you name it! And, despite all the use, the forest was still beautiful and full of creatures.

I beg you to reconsider allowing any type of zoning or policy that could lead to development there. It would be bad planning (and even heartless in my view!) to allow development in a place that thousands of people are showing you (voting with their feet!) that they love and treasure just as it is.

I think it's important to reflect that we were madly promoting more people to move to Halifax during (the pandemic) - and yet the current parks and trails are all already bursting at the seams. If we want to keep growing we have to plan for the recreation space the new residents will need. Places that used to be almost empty are crawling with people now. This is a good thing (and it is) also putting strain on the facilities - more garbage, more wildlife disturbance, parking issues.... and to some extent a degradation in the wilderness experience....

We need much more local wilderness protection for recreation and health for our citizens, as our population grows! And we need to be aggressively planning ahead - once these areas are lost to housing we will never ever ever get them back. It is absolutely clear that Haligonians love and value natural spaces and need plenty of it. The more we grow, the more we need. And with Indigenous peoples now rightfully clamouring for "land back" for their own purposes, we need even more!

....HRM has other goals related to sustainable transportation, low carbon emissions and "complete communities" that directly tie in to the urgent need to protect all remaining green space under threat in the urban and suburban areas of Halifax.....

In addition to protecting the entire Sandy lake area of trails, I would ask that the Regional Plan ensures protection for 100 percent of the remaining Backlands area (including the land that recently was listed for sale between Williams and Colpitt lake before being taken off the market again), and for 100 percent of the lands in the BMBC.

In addition, I urge you to please have a look at the large swath of land south of Kidston Lake, between Herring Cove rd and Sambro lake road. As far as I can tell none of that is protected - and yet it is beautiful land full of animals and birds and as we grow even more, I think it will be really important to add chunks of that wilderness to our protected areas as well, and help develop some walking trails.

Thank you for considering my feedback on the regional plan, and please keep me updated on further developments!"

Margot Metcalfe
[redacted]

I am grateful to live in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaw people. We are all Treaty People.
I identify as she/her and also accept 'they' as a generic pronoun.

Municipal Clerks Office
Date Distributed: July 23, 2021
Mayor, Councillors, CAO, Solicitor, Communications, Public Affairs, Gov. Relations,
Other: *Kate Greene, Leah Perrin, Kathleen Fralic, Shilo Gempton, Emilie Pothier, Eric Lucic, Kelly Denty, Jill MacLellan, Leen Romaneh*
Meeting: COW
Meeting Date: June 08, 2021
I**tem Number:** 5

C301

Halifax Regional Municipality
Shape Your City Halifax
Regional Plan Review

July 13th, 2021

Re: Interest in Regional Plan Review Public Consultation Opportunity

Dear HRM Regional Plan Project Team,

It is with great enthusiasm that we write to express our deep interest in HRM's Phase Two Regional Plan Review. Our team of Central Zone Health Promotion Specialists within Mental Health and Addictions (MHA) from Nova Scotia Health and IWK Health, have come together to discuss the Regional Plan, as well as, contribute to the public consultative survey. It is through this engagement that we were motivated to reach out to your project team with a request for a further discussion around enhancing and embedding mental health protective factors within the Regional Plan that will shape the conditions of our community in the coming years.

During our team's discussions we noted that the Regional Plan is described as "*the vision on how to improve the quality of our lives through the growth of healthy and vibrant communities, a strong economy, and a sustainable environment.*" As Health Promotion Specialists within MHA, our roles are committed to promoting positive mental health by influencing socioeconomic, political and cultural contexts that sustain and perpetuate inequitable conditions. Health promotion practice in MHA focuses on the social determinants of health that influence positive mental health outcomes and health equity, while concentrating on preventing or reducing stigma, risks, harms and injuries from poor mental health, substance use and gambling.

It is for these reasons that we feel a conversation between your project team and our central zone health promotion teams would add value to the public consultation process on shaping our city as well as provide a health promotion lens to ensure mental health protective factors and a health equity are brought to the forefront of decision making when possible.

We look forward to hearing from you.

Sincerely,

Lila Pavey, Erica Adams, Jenna Hopson, Liane Khoury and Rose Walls

C302

Singh, Sweta

Subject: FW: [External Email] Preservation of Sandy Lake lands as compatible with the green plan for carbon sequestration and to protect the ecology

From: Shane O'Neil [redacted]
Sent: Saturday, July 17, 2021 12:06 AM
To: Mayor <mayor@halifax.ca>
Cc: Office, Clerks <clerks@halifax.ca>
Subject: [External Email] Preservation of Sandy Lake lands as compatible with the green plan for carbon sequestration and to protect the ecology

[This email has been received from an external person or system]

Dear Mayor Savage and Councillors with HRM and HRM Planning staff

There has been correspondence to your office (s) to respect the ecological integrity of the land around Sandy Lake for parkland and to protect the lands for wildlife, wilderness preservation, and to be compatible with the HRM Greenplan.

Halifax is the largest municipality east of Montreal in Canada. Yet we are one of the smallest provinces in Canada. The largest watershed that discharges into Halifax harbour is the Sackville River watershed. Yet when you examine the HRM preserved lands in the entire municipality, there is almost no portion of the Sackville River watershed protected. You have been made aware of the unique or sensitive features of the Sandy Lake area, so now is the time to act to protect a portion of the Sackville River Watershed while respecting ecological integrity of the Sandy Lake lands.

I respectfully request that you take the necessary steps to secure this land for the future of the residents of HRM and Nova Scotia and to ensure a portion of this very unique watershed remains protected for the benefit of all residents. I understood that comments were expected by July 16. I began this note in the late evening and see that it is now 12:04. Please accept this note as a provision of comments with respect to the Sandy Lake Lands as of July 16.

Thank you
Shane O'Neil
[redacted]

HALIFAX REGIONAL MUNICIPALITY

JUL-19-2021

MUNICIPAL CLERK

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Municipal Clerks Office
Date Distributed: July 23, 2021
Mayor, Councillors, CAO, Solicitor, Communications, Public Affairs, Gov. Relations,
Other: *Kate Greene, Leah Perrin, Kathleen Fralic, Shilo Gempton, Emilie Pothier, Eric Lucic, Kelly Denty, Jill MacLellan, Leen Romaneh*
Meeting: COW
Meeting Date: June 08, 2021
Item Number: 5