



WRWEO respectfully acknowledges that we are located in Mi'kma'ki, the unceded and unsundered ancestral land of the Mi'kmaq (L'nu). We are all treaty people.

July 19, 2018

Re: **Halifax Green Network Plan**

clerks@halifax.ca

To: Community Planning and Economic Development Committee of Council (CPED)

WRWEO is the Woodens River Watershed Environmental Organization (WRWEO). The headwaters for the Woodens River system occur in area of Hubley, NS. It includes 19 lakes, some partially settled and some lying partially or entirely in the Five Bridge Lakes Wilderness Area (FBLWA). A recognizable river (the "Lower Woodens") is formed at the outflow from Hubley Big Lake and it finally flows into St. Margaret's Bay at Woodens Cove, just below Seaforth. From early on we were involved in efforts to protect the large block of Crown land wilderness in the center of the Chebucto Peninsula that includes some of the upper lakes of the Woodens River system and to that end negotiated with DNR and fundraised to build The Bluff Wilderness Hiking Trail (completed in 2005) as a venue to introduce people to the wilderness area and thereby garner their support in efforts to protect it.

Those efforts, in conjunction with those of the Chebucto Wilderness Coalition comprising 35 community groups, were successful and the wilderness area was formally designated the Five Bridge Lakes Wilderness Area in 2011. In 2008, The Bluff Trail was recognized as one of the eight best urban wilderness trails in Canada. Because of greatly increased use of The Bluff Trail beginning circa 2015, our efforts in recent years have been focussed almost entirely on maintaining The Bluff Trail and developing and implementing an innovative stewardship program; only through that program have we been able to both maintain ecological integrity of the area and continue to provide recreational access to the FBLWA via The Bluff Trail.

As an organization concerned with both ecological conservation and facilitating leave-no-trace recreational activities in wilderness lands in HRM, we have been highly supportive of the Green Network process which addresses both of these areas on the scale of all HRM/Halifax Co. and across its borders. We have been very pleased with the process to date which has involved a lot of citizen participation, and with the result: the Halifax Green Network Plan (HGNP) released on June 21, 2018 recognizes the unique natural assets of HRM, their multiple values to the community, sets out actions for conserving and capitalizing on those assets, and provides some essential tools for implementing it.

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**Woodens River Watershed Environmental Organization/The Bluff Trail**

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We offer some suggestions for strengthening the plan in regard to landscape connectivity as outlined below but they could be pursued after adoption of the HGNP as they are not in any way negated by the HGNP as presented on June 21, 2018. Also we offer some comments about recreational uses of the Green Network based on our experiences with The Bluff Trail; overall those support the Actions recommended in the HGNP in regard to recreation.

Thus we urge the CPED and HRM Regional Council to act quickly to pass The Halifax Green Network Plan (HGNP), use it as an amendment to the Regional Plan and to get on with the business of implementing the recommended Actions.

## FURTHER COMMENTS

### I Connectivity between PPA on the Chebucto Peninsula and with the mainland

A major argument for protecting what we now know as the Five bridge Lakes Wilderness Area was that it was a large central patch of Crown land on the Chebucto peninsula which, as well as serving as a core conservation area, would connect or close-to-connect smaller, already protected patches and underdeveloped Crown and HRM lands around its periphery. With protection of the FBLWA, approx. 29% of the Chebucto Peninsula is now in Parks and Protected Areas (PPA), and another 12% still remains as undeveloped Crown land or HRM land, making the Chebucto Peninsula a significant conservation area (for comparison, 12.4% of the land area of NS is in PPA, ~15% of Halifax Co./HRM). However, there remain significant breaks in connectivity between protected lands on the Chebucto Peninsula and across the neck of the peninsula to the NS mainland, as identified in the HGNP (Map 5). Thus we strongly support the concepts of connectivity outlined in the HGNP and related actions:

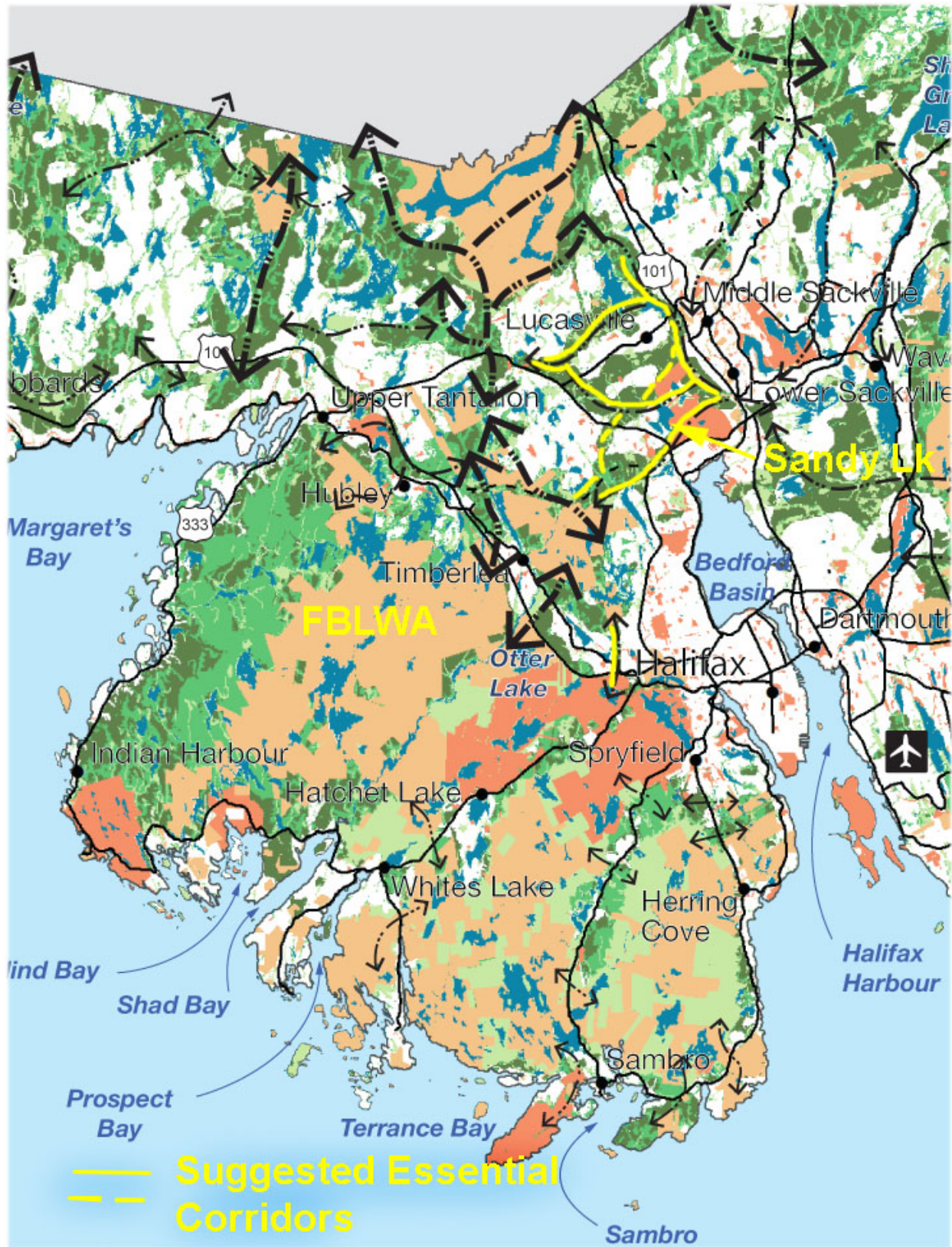
**Action 32:** Amend the Regional Plan and Municipal Planning Strategies to prioritize the preservation and creation of natural connections to the Chebucto Peninsula (Map 9) from the Mainland when reviewing development proposals and updating planning policies and zoning in the area. Specific connections to review and prioritize are highlighted on Map 9.

**Action 33:** Consider the preservation and creation of natural connections to the Chebucto Peninsula when planning the development of the Ragged Lake Business Park.

**Action 34:** Work with the Nova Scotia Department of Transportation and Infrastructure Renewal, as opportunities arise, to identify opportunities to construct wildlife crossings under Highway 103 and the planned Highway 113.

We further encourage planners/HRM Regional Council to:

- (i) **Consider raising the status of the corridors identified in the area of Sandy Lake (Bedford)/the proposed Sandy Lake Regional Park as Important Corridors to Essential Corridors.** (See Map on the next page). As it stands, connectivity between the Chebucto Peninsula and the mainland would be heavily dependent on the more westerly Essential Corridors; adding a second set of Essential Corridors would



Section of HGNP Map 5 with modifications to show suggested 2<sup>nd</sup> Essential Corridors



provide some risk-reducing redundancy, especially given the pinch point nature of connections across major roads etc. Studies conducted over the past year by one of our board members in response to a request from the Sandy Lake Conservation Association have shown Sandy Lake and Environs to support a large expanse of mature to Old Growth forest surrounding the Sandy Lake to Sackville watercourse which in itself is an important aquatic corridor and habitat for sea-going fish including salmon.<sup>1</sup> Those studies have also underscored the need to reverse a trend of increasing eutrophication/declining deep water oxygen of Sandy Lake. We support efforts by the Sandy Lake Conservation Association, the Sackville Rivers Association and the recently formed Sandy Lake Regional Park Coalition to see approximately 1000 acres added to existing protected land in the area including lands to the west of Sandy Lake currently designated Urban Reserve<sup>2</sup>; this is essential for the corridor function, protection of the Sandy Lake to Sackville River watercourse/aquatic corridor and to reduce the flooding hazard downstream in Bedford.

- (ii) **Take a highly precautionary approach to the development of new highways, including Hwy 113, with a default position of No New Major Highways/Provide Wildlife Corridors Across All Major Highways.** Language in the text of the HGNP recognizes the challenges to connectivity posed by highways, but it's not well reflected in the three Actions listed under 4.1.3.1. Maintain wildlife habitats, biodiversity and landscape connectivity. We encourage planners/HRM Regional Council to re-examine the advisability of constructing Highway 113, as it would further reduce connectivity of the Chebucto Peninsula with the mainland, particularly towards the eastern side of neck of the Chebucto Peninsula. The 2009 EA was conducted well before HRM's heightened interest in Landscape Level Planning while construction of the highway would take place well after receipt of the HGNP. In 2010 WRWEO strongly contested the conclusions of the EA regarding the Chebucto group of moose, in particular that "this small population limits its range to the Chebucto Peninsula and the range would not be fragmented by the proposed highway", and pointed out that landscape connectivity is important for many or all species, not just for moose.<sup>3</sup> In the context of the HGNP, the EA for 113 has to be considered insufficient and the implications for landscape connectivity reexamined before proceeding further with Hwy 113.
- (iii) **Recognize that at some future time, planners and citizens may want to conduct much more "retrofitting" or "ecological restoration" of some of the developed landscape/highways etc. to increase connectivity and that we should plan accordingly.** It's a common comment to the effect that "there is already too much settlement in area X for a corridor anyway, so why not have *more* development there". This can lead to more development in an area that might otherwise be "retrofitted" in the future to increase connectivity.

Retrofitting/Ecological Restoration does not necessarily require elimination of roads, building etc., but can involve for example, some wilding of parks, lawns etc. and a

whole range of modifications of existing structures.<sup>4</sup> The work of the Sackville Rivers Association is an excellent example, rather than giving up on the river as a natural system, they have enhanced it, reversed some deleterious trends, increased public support etc.<sup>5</sup>

Halifax is extending its settled footprint much more rapidly than we are seeing the consequences of increasing habitat fragmentation and loss of landscape connectivity for biodiversity and ecosystem services. We think “OK, we still have lots of natural spaces” but it’s clear from ecological sciences that even if we stopped all usurping of natural habitat now, those same spaces will still have reduced biodiversity, and reduced functionality to provide ecosystem services in the not-so-distant future.<sup>6</sup> By the time we actually realize that is happening, it will be much more expensive (or impossible) to begin retrofitting to increase connectivity if we don’t do more planning ahead for it. The retrofitting concept is embedded in much of the language of the HGNP, but we suggest there should be more explicit consideration of the topic and use of the term “retrofit”. (It is not found in the current document, nor is “Ecological Restoration” which is a more or less equivalent term; “restoration” occurs only once in the HGNP in connection with riparian areas.)

## **II The need to provide many more trails, active transportation routes in HRM**

The Bluff Trail is a single track wilderness hiking trail comprising four successive loops that go progressively deeper into the FBLWA, in total amounting to approx. 28 km of trail. Until recently, it was maintained by volunteer activities with support mostly from HRTA/HRM for contracting professional help to cut back brush and do some of the trail hardening (installing stone tread over wet areas), some of the maintenance of the few boardwalks, and capital and some maintenance work on a parking lot. Volunteers, mostly the board, did all of the routine clean-up of the trail and parking lot, monitoring of conditions and usage of the trail, preparation of maps, administrative work etc.

Over the period 2005 to about 2014, our public efforts were directed at enticing people to visit the trail. More recently, our organization had to make significant changes in the way we operated because of the very success of those efforts: we were becoming overwhelmed by the popularity of The Bluff Trail. Numbers increased about ten fold in 2015 and included probably a majority of people who were not familiar with the ethics and practices of wilderness hiking, for example cutting down trees to make fires and camp sites, leaving refuse including doggy bags on site. At one point we had to consider closing the trail because the maintenance and remedial efforts were simply too big a task for the board and other volunteers. However we decided to move in a different direction which in brief was to fundraise to hire a part time wilderness stewardship coordinator who would gather and organize volunteers to do these tasks and more importantly, spend time on The Bluff Trail itself talking to visitors and changing behaviours. We were fortunate at the time that the St. Margaret’s Bay Stewardship Association (SMBSA) had experience in those types of endeavours and with the collaboration of the SMBSA, we were able to hire their coordinator (Mike Lancaster) to help us on The Bluff Trail. The full details of

how this program operates can be viewed at <https://wrweo.ca/wp/the-bluff-trail/the-bluff-trail-stewardship-program/><sup>7</sup> We interacted closely with Nova Scotia Environment/Protected Areas Branch (NSE/PA) in the development of a new trail agreement & regulations for The Bluff Trail. The Bluff Trail is viewed by NSE/PA as leading the way for wilderness trail management in Nova Scotia.

In the process, the activities of WRWEO have shifted from being focussed on both the Woodens River Watershed and The Bluff Trail, to a virtually exclusive focus on The Bluff Trail. Still, we find ourselves asking each year, if we can indeed, keep up with the demands.

We recount this brief history to make several points.

***First, from our own experience and through our interaction with colleagues in HRTA and other trail organizations, it is clear that use of trails is increasing rapidly in HRM reflecting both increasing population and an increasing proportion of people wanting to walk (hike , run, bike) in nature, so anticipating future needs, we need all we can get.*** We mustn't say, "look we already have a lot of greenspace and trails". Wilderness trails (including trails in Nature Reserves) in particular are a challenge because of the requirement to truly minimize impacts on the wilderness areas, and they are designed really for light, not heavy, use. The Duncan's Cove Nature reserve is an example of a Nature Reserve that is currently being highly challenged by overuse. The still-to-be-finalized Backlands Urban Wilderness and the Blue Mt Birch Cove Lakes Wilderness Area/Regional Park have yet to develop formal trail systems, but because of their proximity to core population areas, we can expect them to be well used. Halifax North West Trails Association folks tell us that the informal trail head/trail into the BMBCL Wilderness Area behind Kent Building Supplies is experiencing issues similar to those described above for The Bluff Trail. We have heard that the Crowbar Wilderness Trail, further away from HRM, has also been facing some difficulties with rising use.

Part of the answer to reducing pressures on wilderness trails is to provide more opportunities for activities in natural settings but closer to HRM and on soft surface trails (preferably just brush cut, or grass, or woodchips, more marginally finer gravel) where possible, so it is a more natural experience than provided by hard surfaces (asphalt, concrete, coarser gravel). The currently existing Jack Lake Park, for example, provides many such venues through mixed mature to old growth Acadian forest in the form of old logging roads and a plethora of informal trails, while the proposed Sandy Lake Regional Park which would incorporate the existing Jack Lake Park and Sandy Lake Park and add an additional 1000 acres, provides more. Currently, most of the those trails are not managed at all or even mapped and are not well known, yet the area lies within minutes of heavily settled areas.

***Second we want to emphasize the importance of fostering a leave-no-trace ethic in the public at large through programs such as that we have developed for The Bluff Trail.***

***Third, we want to underscore the need to support organizations maintaining trails and to foster more of the same.*** As we understand it, HRM places highest priority on development of multiuse, hard surface venues as those are the most highly used, and it is getting more difficult

for trail groups to get funding for the narrower, softer-surface trails. We urge that HRM develop comprehensive monitoring and a strategy for management and support of all types of trails. Many people, especially runners and the more elderly are sensitive to hard surface trails, the soft surfaced trails are easier on joints, muscles etc. so we need a good balance of trail types. It may be necessary in future to limit use of some wilderness trails, so we need alternatives that offer similar experiences.

We are very pleased that essentially all of our concerns about recreational use of trails are addressed in the Green Network Plan Section 4.4 on Outdoor Recreation, pp 54-61 including Actions 42-70, although perhaps not specifically in regard to the issues highlighted above.

## **Conclusion**

Through the development of the HGNP, Haligonians have come to appreciate that Halifax is unique amongst major North American cities: the urban core is surrounded not by farms or endless burbs but by forested and coastal landscapes which are still largely pristine. Even within 30 km of downtown Halifax where approximately three quarters of the population resides, developed areas are interspersed with substantive wild spaces. Numerous and diverse trails provide access to our wild spaces while the many lakes and rivers and 2000 km of coastline are a paddler's dream. In Halifax, a few hours off is all it takes to enjoy a wild setting, and increasingly the active transportation routes are providing day to day benefits for all citizens.

The HGNP provides us with an opportunity to conserve and augment these resources with attendant benefits for our citizens, tourism, and wildlife. In many respects, if Halifax moves forward with HGNP, it will be on the vanguard of such planning for urban regions.<sup>8</sup> Thus we strongly support adoption of the HGNP, recognizing the need to address or better highlight the issues discussed above.

Respectfully,

*David Patriquin*

David Patriquin  
On the behalf of the WRWEO Board

## FOOTNOTES

1. View **Forests and surface waters of Sandy Lake & Environs (Bedford, Nova Scotia)** at [www.sandylakebedford.ca](http://www.sandylakebedford.ca)
2. View **Pamphlet promoting formation of Sandy Lake Regional Park in Halifax, Nova Scotia**: web version at <http://versicolor.ca/sandylakepamphlet/index.html>  
View **Sandy Lake Conservation Association** <http://sandylake.org/>  
View **Sandy Lake Regional Park Coalition** [www.sandylakecoalition.ca/](http://www.sandylakecoalition.ca/)  
View **Sackville Rivers Association** <http://sackvillerrivers.ns.ca/>
3. View **wrweo.ca > Moose and Corridors**  
<https://wrweo.ca/wp/five-bridges-lakes-wa/moose-corridors-1/>  
View WRWEO letter of 2010 to Environmental Assessment Branch of Nova Scotia Environment, subject: Comments on the Highway 113 EA  
<https://wrweo.ca/wrweo2014/wrweoFiles/misc2010/CampbellPatriquin.pdf>
4. See for example:  
**Modifying Structures on Existing Roads to Enhance Wildlife Passage**. DJ Smith et. al, Ch 10 in Handbook of Road Ecology Wiley 2015... 208-228;  
[https://www.fs.fed.us/psw/publications/jacobson/psw\\_2016\\_jacobson004\\_smith.pdf](https://www.fs.fed.us/psw/publications/jacobson/psw_2016_jacobson004_smith.pdf)  
And Ch 1: **The Ecological Effects of Linear Infrastructure and Traffic: Challenges and Opportunities of Rapid Global Growth**  
[https://media.wiley.com/product\\_data/excerpt/84/11185681/1118568184-4.pdf](https://media.wiley.com/product_data/excerpt/84/11185681/1118568184-4.pdf)  
Pages 1-9
5. Website for **Sackville Rivers Association**  
<http://sackvillerrivers.ns.ca/>
6. See for example:  
**Habitat fragmentation and its lasting impact on Earth's ecosystems**. Nick M. Haddad et al., *Science Advances* 1(2): 9pp.  
<http://advances.sciencemag.org/content/1/2/e1500052.full> ABSTRACT We conducted an analysis of global forest cover to reveal that 70% of remaining forest is within 1 km of the forest's edge, subject to the degrading effects of fragmentation. A synthesis of fragmentation experiments spanning multiple biomes and scales, five continents, and 35 years demonstrates that habitat fragmentation reduces biodiversity by 13 to 75% and impairs key ecosystem functions by decreasing biomass and altering nutrient cycles. Effects are greatest in the smallest and most isolated fragments, and they magnify with the passage of time. These findings indicate an urgent need for conservation and restoration measures to improve landscape connectivity, which will reduce extinction rates and help maintain ecosystem services.



7. See: **The Bluff Trail Stewardship Program**  
<https://wrweo.ca/wp/the-bluff-trail/the-bluff-trail-stewardship-program/>and: **The Bluff Trail Stewardship Program (BTSP) Final Report of 2017 Year in Review** 23 February 2018 Prepared by Kimberly Berry, Fiona Brooks, Mike Lancaster [Link](#)  
<https://drive.google.com/file/d/1-bXqGIPUDnn-mOu4DlxOfpfu2njYR2BT/view>
  
8. **Making habitat connectivity a reality** Annika T.H. Keeley et al., *Conservation Biology* 19 June 2018. <https://www.ncbi.nlm.nih.gov/pubmed/29920775>  
From the Abstract: “We argue that connectivity conservation must more rapidly move from planning to implementation and provide an evidence-based solution made up of key elements for successful on-the-ground connectivity implementation. The components of this new framework constitute the social processes necessary to advance habitat connectivity for biodiversity conservation and resilient landscapes under climate change. “