

***Sandy Lake - Sackville River Regional Park Coalition
115 Farmers Dairy Lane, Bedford, B4B 2C9***

October 28, 2019

**The Environment and Sustainability Standing Committee
c/o Simon Ross-Siegel
Legislative Assistant
rosssis@halifax.ca**

Members of the Environment and Sustainability Committee:

I am writing on behalf of the Sandy Lake - Sackville River Regional Park Coalition to request an opportunity to make a brief presentation to the Committee about relevant ecological issues including proactive steps to avoid the Banook Lake scenario at Sandy Lake given the reality of significant development pressures.

The Sandy Lake - Sackville River Regional Park Coalition is working hard to protect the lands and waters of the Sandy Lake - Sackville River area within a regional park. The Sandy Lake - Sackville River Regional Park Coalition member list to date is at the bottom of this letter.

These Sandy Lake to Sackville River lands were seen as ecologically critical as far back as 1971 when the Dean Report chose the area as one of Halifax - Dartmouth's seven "gems". The others were The Cole Harbour Salt Marshes, Admiral's Cove, Hemlock Ravine, the Shubenacadie Canal, McNab's Island, and Long Lake. Because of their ecological role, the Town of Bedford was actively acquiring lands around the lake for the park; however, like many local issues, it was lost in the chaos of the 1996 amalgamation.

There are some 20+ property owners of undeveloped, natural, land in the proposed park area. The major property owner is a developer which owns about 600 of the 1000 acres we are trying to preserve for their unique ecological substance. They are 600 acres of the essential watershed. The good news is that the developer has told us in writing and in follow up communications that they are willing to trade for other lands of equal value if we can interest the city in making a trade. This trade will require some creativity,

but we have been assured by planners that this is completely doable. We are encouraging the city to protect other key properties within the proposed park as well.

To help you better understand the current thinking around the ecological importance of the 1000 acres, including the Clayton lands, I refer you to a video presentation by Dr. David Patriquin which can be seen at: <http://goo.gl/ipYCR2> and also to Dr. Patriquin's Sandy Lake and Environs website: www.sandylakebedford.ca.

The Halifax Green Network Plan (HGPN) identifies the area as having several important wildlife corridors and also as a major sub-watershed to the Sackville River, which is one of five primary natural corridors of the HGNP. What we are doing is also designed to avoid the lake health problems as discussed in the Save Our Lakes meeting about Dartmouth lakes on August 22nd.

Could our core committee members meet with you to make a short presentation?

Most sincerely,

ORIGINAL SIGNED

Karen Robinson

Karen L.H. Robinson

Co-chair, Sandy Lake – Sackville River Regional Park Coalition

Chair, Park Land Committee, Sandy Lake Conservation Association (SLCA)

902-452-3002

SLCA Website: www.sandylake.org

SL-SRPCoalition website: www.sandylakecoalition.ca

Dr. Patriquin's Sandy Lake and environs website: www.sandylakebedford.ca

Dr. Patriquin's Sandy Lake and Environs talk: <http://goo.gl/ipYCR2>

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

Canoe/Kayak Nova Scotia

Ecology Action Centre

Five Bridges Wilderness Heritage Trust

Friends of Blue Mountain Birch Cove Lakes Society

Friends of McNabs Island Society

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
WRWEO / The Bluff Wilderness Hiking Trail

Why Expand Sandy Lake Sackville River Regional Park by 1000 acres? Sept. 2019

The Sandy Lake Sackville River Regional Park is currently one thousand acres. It has been recognized for five decades, provincially and municipally and in multiple reports and studies, to be a special landscape worth protecting, but the final 1000 acres have never been saved.

In 1971, P.B. Dean identified the Sandy Lake to Sackville River area as one of seven “jewels in the crown” - areas that are "Unique in the Halifax Dartmouth area or important on a regional or provincial scale - priority areas to be protected for their ecological richness and for community education and recreation."

In 2006, HRM created Sandy Lake/Jack Lake Regional Park, leaving over 1000 acres of the originally identified lands in private ownership and not protected. Housing development, on a parallel path, will happen if action is not taken.

The public is working to save this irreplaceable natural area. The city acquired 160 acres in 2015 and has more in mind. The developers who own 600 of the 1000 acres are willing to trade. Professional planners indicate this is very possible.

Why expand the park by the further 1000 acres?

The area is a long-recognized unique ecological unit. Sandy and Marsh lakes are bordered by rich drumlins that support magnificent mixed, multi-aged Acadian forest with significant old-growth stands, some trees over 200 years old, and striking "pit and mound" topography. In Nova Scotia less than 1% of forests are old growth. This is one of few remaining large Acadian forest stands near Halifax. A variety of significant natural elements exist all in one place - The 3 lakes are examples of diverse yet related ecologies - one a big marsh, one a deep "blue lake" (Most in this part of NS are "brown lakes") and the third a boreal forest lake. The lands and waters west and north of Sandy Lake are species-rich, including rare species including wild Atlantic Salmon and American Eel, and important turtle and moose habitat. Their ecological value remains intact today.

Watershed protection: The watershed west of the lakes is slated for housing development. Instead, we must protect this area where most of the surface waters enter the system. Dirty water already enters there. Damaging organics and salts need to be reversed rather than added to. To understand why in more detail, refer to the observations at www.sandylakebedford.ca. Hear the presentation at <http://goo.gl/ipYCR2>, and see the attached, **Map 1**.

The Halifax Green Network Plan (HGNP) identifies Sandy Lake's rich lands and waters as essential to the welfare of the Sackville River system, one of HRM's five major natural corridors in the Green Network Plan. See attached, **Map 2**. Also, the area contains at least 3 important wildlife corridors plus “stepping stone” links that connect the mainland to the Chebucto Peninsula which is of primary importance to the Green Network Plan.

Outdoor Recreation: “The objectives for Regional Parks are to preserve significant natural or cultural resources, and to be large enough to support both ecosystem protection and human enjoyment at the same time.” The area proposed for Sandy Lake Sackville River Regional Park is already used unofficially by citizens for multi-recreational purposes through a network of existing trails, for birdwatching, dog-walking, mountain biking, cross-country skiing and snowshoeing, swimming, paddling, fishing, to name a few. **Map 3**, attached, shows the integration between Conservation and Recreation. The west side is needed primarily for conservation. The east side is conservation and recreation.

Sandy Lake is a popular location for research for schools, universities and community. Since the 1970s, aquatic studies point to deterioration in oxygenation and increased salt loading of Sandy Lake related to urbanization and some clearcutting. Significant further settlement within the Sandy Lake watershed would make the lake inhospitable to the migratory fish, reduce wildlife diversity, as well as increase flooding downstream in the Sackville River flood plain.

What of the disturbed land to the west of Sandy Lake? It is already a young Acadian Forest with vigorous regeneration of the full suite of Acadian forest species that is already protecting the lakes and rivers as the ecological system re-establishes itself. Park planners can make educational use of it as a living example of how Acadian forests recreate themselves. The three main tributaries flow across this essential land. By letting the 200 acres heal, they will heal the watershed so it can once again help maintain water quality in the lake for wild Atlantic Salmon, other fishes and wildlife, and will benefit the watershed all the way to the Bedford Basin.

In a nutshell: why we need to protect lands on the west side of Sandy Lake

<http://versicolor.ca/sandylakebedford/2019/01/19/in-a-nutshell-why-we-need-to-protect-lands-on-the-west-side-of-sandy-lake/#more-2410>

Posted on January 19, 2019 by admin: Dr. David Patriquin

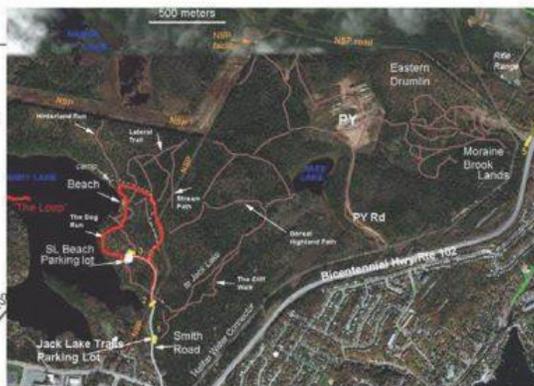
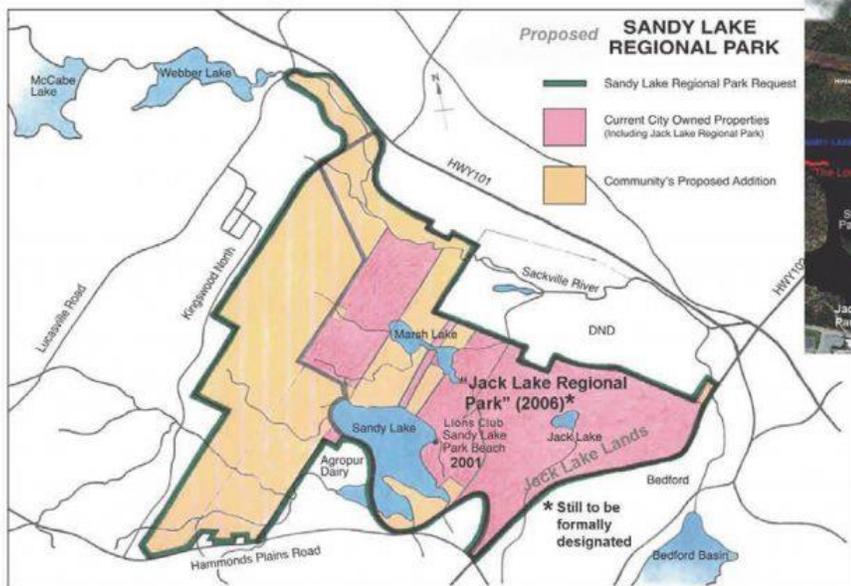
(These slides are taken from or modified from slides that were in Dr. David Patriquin's *presentation to the SRA on Dec 6, 2018*.

View the slides/audio for more explanation of it all: <http://goo.gl/ipYCR2>

We already have ~1000 acres protected, most of it on the east side of Sandy Lake. So why did Walter Regan ask at the Dec 6, 2018 presentation: "Why do we need those lands on the west side?" (I am pretty sure Walter knew the answer.)

The following slides/maps explain it all "in a nutshell":

Map 1



Jack Lake Lands:

- Many trails, multiple uses all seasons; mostly informally managed

Sandy Lake Beach Park:

- Formally managed; swimming, paddling, fishing

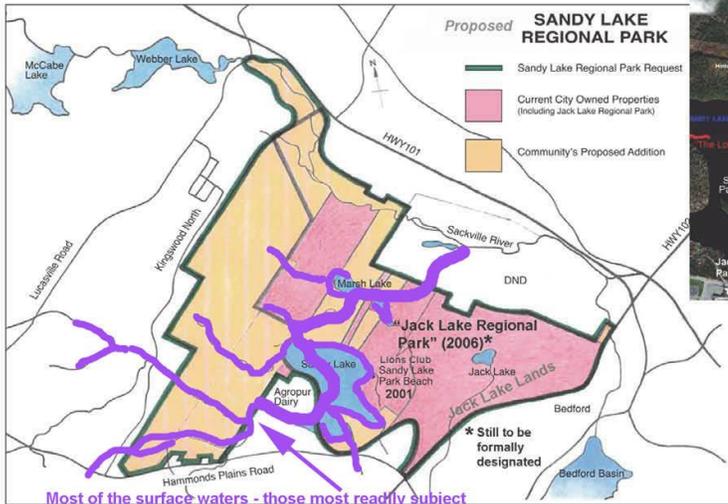
The proposed SLRP embodies more of the original concept of a Regional Park at Sandy Lake, which was for parkland around the lake, not to one side of it, and that of the 1979 MAPC plan which would "include more area on all sides, from the Sackville River to the Hammonds Plains Road and from the Bedford Rifle Range west toward the Lucasville Road (including buffers and flood plains)."

Major reasons to expand the Park

#1 - Historical

- Protection of the Sandy Lake to Sackville River watercourse for migratory fish, reptiles, amphibians, waterfowl, otters... water quality/aquatic recreation; reduce downstream flooding
- Provide a forested wildlife corridor connecting lands of the Chebucto Peninsula with central and eastern mainland

Map 2



Jack Lake Lands:
- Many trails, multiple uses all seasons; mostly informally managed

Sandy Lake Beach Park:
- Formally managed; swimming, paddling, fishing

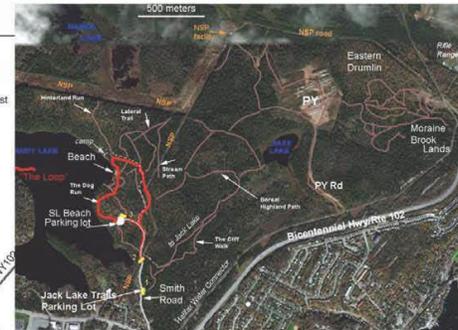
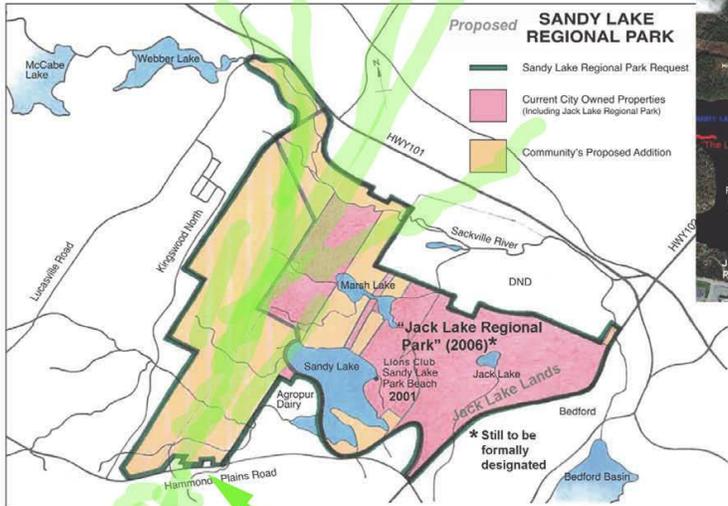
Most of the surface waters - those most readily subject to salt and organic pollution - entering Sandy Lake are on the west side of the lake where a large development is planned. Already these waters are the major source of pollutants entering Sandy Lake

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Major reasons to expand the Park

- Historical
- #2 - Protection of the Sandy Lake to Sackville River watercourse for migratory fish, reptiles, amphibians, waterfowl, otters... water quality/aquatic recreation; reduce downstream flooding**
- Provide a forested wildlife corridor connecting lands of the Chebucto Peninsula with central and eastern mainland

Map 3



Jack Lake Lands:
- Many trails, multiple uses all seasons; mostly informally managed

Sandy Lake Beach Park:
- Formally managed; swimming, paddling, fishing

CHEBUCTO PENINSULA

The proposed SLRP embodies more of the original concept of a Regional Park at Sandy Lake, which was for parkland around the lake, not to one side of it, and that of the 1979 MAPC plan which would "include more area on all sides, from the Sackville River to the Hammonds Plains Road and from the Bedford Rifle Range west toward the Lucasville Road (including buffers and flood plains)."

Major reasons to expand the Park

- Historical
- Protection of the Sandy Lake to Sackville River watercourse for migratory fish, reptiles, amphibians, waterfowl, otters... water quality/aquatic recreation; reduce downstream flooding
- #3 - Provide a forested wildlife corridor connecting lands of the Chebucto Peninsula with central and eastern mainland**

Map 4: Putting it all together: Conservation Priority on west side



Mixed Recreation and Conservation on east side (where recreational activities are currently focussed)

A couple of related questions:

(i) OK, but what about the clearcuts of the West Side – Isn't it already too late?

(ii) OK, but with some development already in place at the upper part of the corridor, isn't it already too late?

My answers to both questions: NO. I will explain in subsequent posts.

I should have added "The Big Picture". Here it is:

SANDY LAKE & ENVIRONS/PROPOSED SANDY LAKE REGIONAL PARK

Services	Major Assets	Components
<p>Conservation of Regional Biodiversity & Ecosystem Services</p> <p>Social & Health benefits</p>	<p>FORESTS</p>	<ul style="list-style-type: none"> - Diverse forest types/ All major tree species of the Acadian Forest - ~50% multi-aged OG Forests - Wildlife Habitat, e.g. bear, bobcat, goshawk, pileated woodpecker, parula warbler - Connectivity Chebucto Peninsula to central & eastern Mainland
	<p>SURFACE WATERS (streams, lakes wetlands)</p>	<ul style="list-style-type: none"> - Water storage - Stratified lake pH=6.5 - Seagoing Fish incl salmon - Frogs and Turtles +++ - Otter, beaver...waterfowl
	<p>WILDLAND RECREATION close to high density residential areas/new developments</p>	<ul style="list-style-type: none"> - Power lines, Logging roads - Many trails, Hfx Water Road - "Amphitheatre"/The Yard - Sandy Lake Beach Park - Diverse activities: Mt biking, Hiking, motorized bikes, skiing, swimming, fishing, forest bathing, dog-walking

ECOLOGICAL ATTRIBUTES OF PROPOSED SANDY LAKE-SACKVILLE RIVER REGIONAL PARK

Comments by David Patriquin¹ for a Meeting of Sandy Lake- Sackville River Regional Park Coalition Reps with Nova Scotia Nature Trust on Sep. 5, 2019

The area of the proposed Regional Park is dominated by the Sandy Lake to Sackville River watercourse² and associated wetlands set in a broad sweep of mixed Acadian Forest. The area provides a critical wildlife corridor/stepping stones between the wildlands of the Chebucto Peninsula and the central and eastern mainland.

SANDY LAKE TO SACKVILLE RIVER WATERCOURSE (PANEL I): Sandy Lake, with its deep seasonally stratified waters and the Sandy Lake to Sackville River watercourse and associated wetlands maintain habitat for brook trout, seagoing salmon and alewife, otters and beavers amongst other species. The invasive small mouth bass is present and popular with sport-fishers on Sandy Lake, which helps to control it to some extent. The watercourse and wetland also support large populations of amphibians and reptiles which are increasingly rare in HRM and globally, e.g., snapping turtle is reportedly now found in only 3 (incl. Sandy Lake) of the 22 lakes in the Halifax area where it was known historically.

Most of the surface waters drain land on the western side of Sandy Lake (see Panel III), making protection of that area particularly important to maintain water quality and aquatic habitats and to moderate downstream flooding on the Sackville River floodplain. Sandy Lake was oligotrophic historically, and is now mesotrophic and needs to be returned to the former state to maintain well oxygenated deep waters for salmon and trout, especially given climate warming.

FORESTS (PANEL II): The forests include a full suite of species of intact old forest* with many pockets of Old Growth. Many trees, including both hardwoods and softwood species, are over 125 years old, some over 200 years old. Such landscapes are increasingly rare in Nova Scotia at large. The 2013 clearcut of mature/Old Growth forest to the west of the lake is regenerating well; with some other land to the north previously clearcut, it now complements the older forests with habitat for species of earlier successional stages, and the regenerative growth protects the surface waters.

*These include, for example, hawks, owls, snakes, foxes, weasels, bobcats and coyotes, which with mink in the wetlands and racoons in edge habitats are important predators on deer mice and chipmunks, major vectors of Lyme disease.³

CONNECTIVITY (PANEL III): This same expanse of forest and the Sandy Lake to Sackville River watercourse provide a critical wildlife corridor/stepping stones between the wildlands of the Chebucto Peninsula and the central and eastern mainland. The Chebucto Peninsula is a significant conservation area with ~29% of the land now in Parks and Protected Areas (versus 12-13% for the province as a whole, ~15% for HRM as a whole) and an additional 12% as Crown and HRM land that remains undeveloped. However, the neck of the peninsula is a pinch point, and without protection and enhancement of existing corridors/stepping stones across the neck

of the peninsula, biodiversity of the Chebucto Peninsula lands will unquestionably decline.

MANAGEMENT (PANEL IV): As we envisage the proposed park, areas to the east of Sandy Lake which are currently under low to moderate use for a wide range of recreational activities would be managed for both recreation and conservation. Areas to the west and north of Sandy Lake would be managed primarily for conservation/wildlife corridor functions.

For more details, view

- **Forests and surface waters of Sandy Lake & Environs (Bedford, Nova Scotia)** (<http://versicolor.ca/sandylakebedford> or www.sandylakebedford.ca)
- **Presentation on “A natural history perspective of the forests, wetlands and surface waters of Sandy Lake (Bedford) & Environs”** (<http://goo.gl/ipYCR2>)

Notes

1. I retired from a position as Professor of Biology at Dalhousie University in 2008. Since then I have been active in several natural history and trail organizations and conducted extensive field work related to seeking protection for the Five Bridge Lakes Wilderness Area, the Williams Lake Backlands, and most recently, Sandy Lake (Bedford) and Environs. In 2017/18, I conducted extensive surveys of plant communities and limnological variables at Sandy Lake and Environs. Those observations and related literature are reported at <http://versicolor.ca/sandylakebedford/> (“**Forests and surface waters of Sandy Lake & Environs (Bedford, Nova Scotia)**”)

2. The proposed SLSRRP encompasses portions of three sub-watersheds of the Sackville River Watershed (Sandy Lake subwatershed, South McCab Lake subwatershed, Bedford West subwatershed), and the Jack lake subwatershed (within the Paper Mill Lake watershed). The largest portion lies within the Sandy Lake subwatershed, itself the largest or second largest subwatershed (depending on how they are aggregated) of the Sackville River watershed.

3. This is cited as just one, in this case a newly appreciated, benefit of intact forest landscapes. View species lists at <http://versicolor.ca/sandylakebedford/species-lists/> There is clear evidence that forest fragmentation/reduced predator populations has contributed to increased occurrence of Lyme in N.Y. State. View, e.g., [Forest ecology shapes Lyme disease risk in the eastern US](#) in *Science Daily*, July 9, 2018. The scientific paper cited: Richard S. Ostfeld et al. 2018 [Tick-borne disease risk in a forest food web](#). *Ecology* 99(7), 2018, pp. 1562–1573; and [Deer, predators, and the emergence of Lyme disease](#) Taal Levi et al., 2012 In *PNAS* 109 (27) 10942-10947

ATTACHED: four panels of photographs and maps



Morraine Brook forest



Upper Peverill's Brook



Marsh Lake



Gaspereau



Snapping turtle habitat



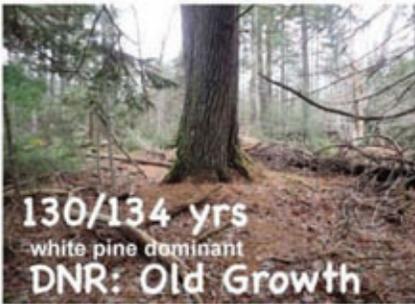
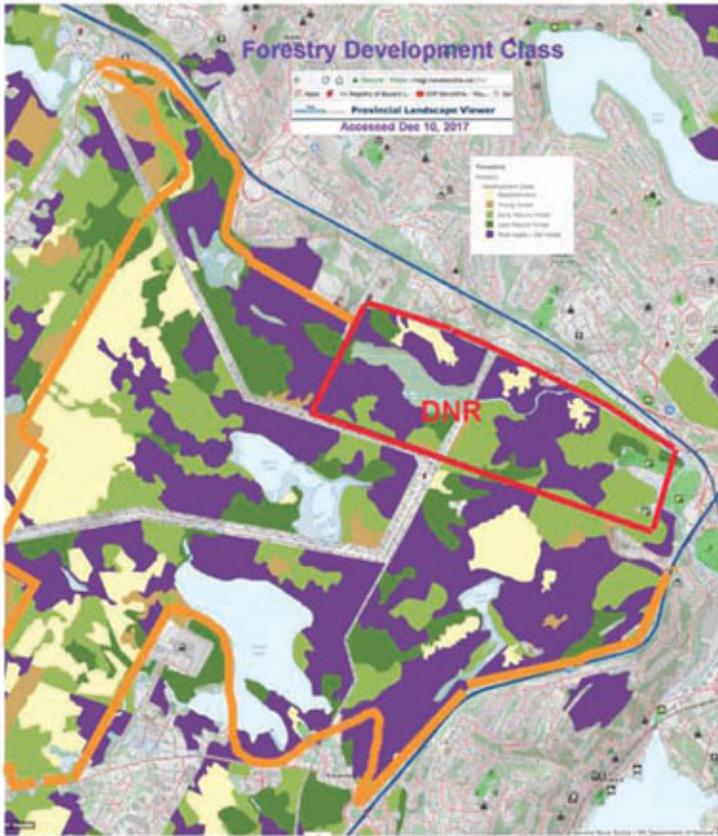
Sandy Lake



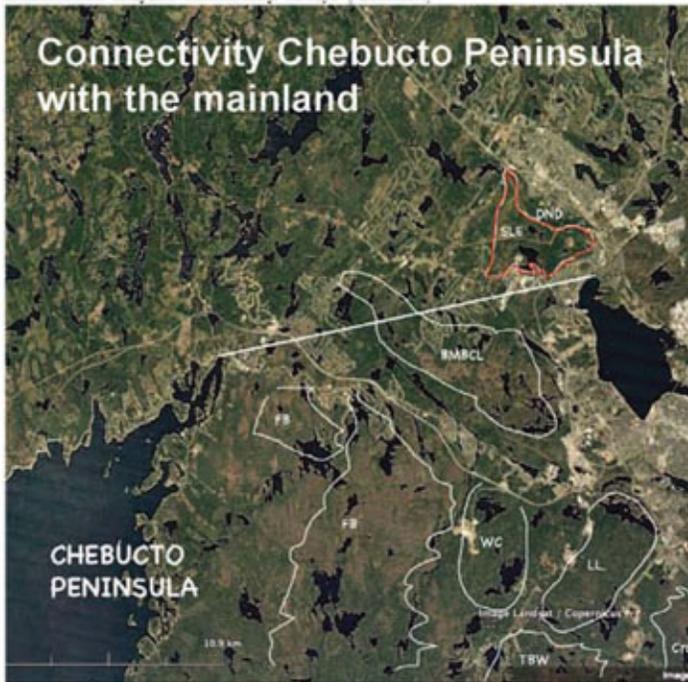
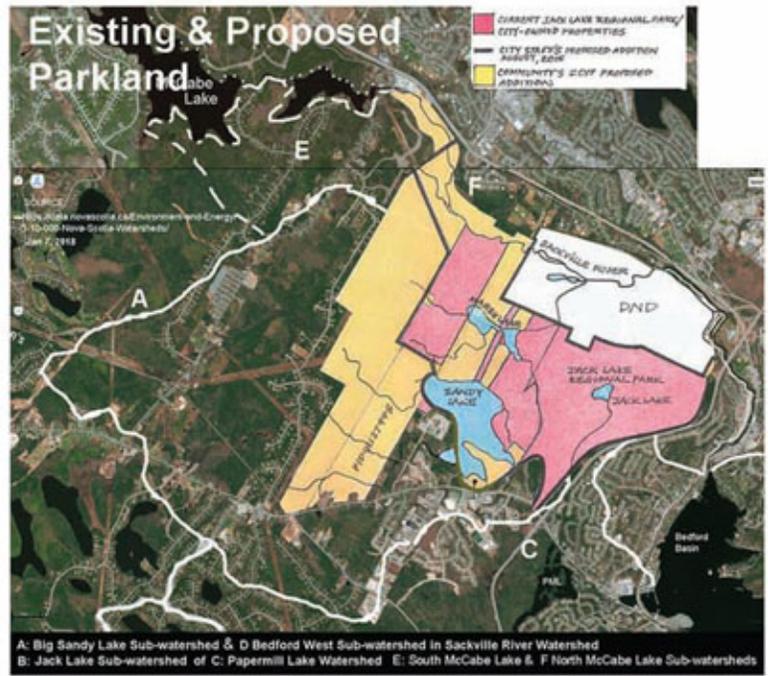
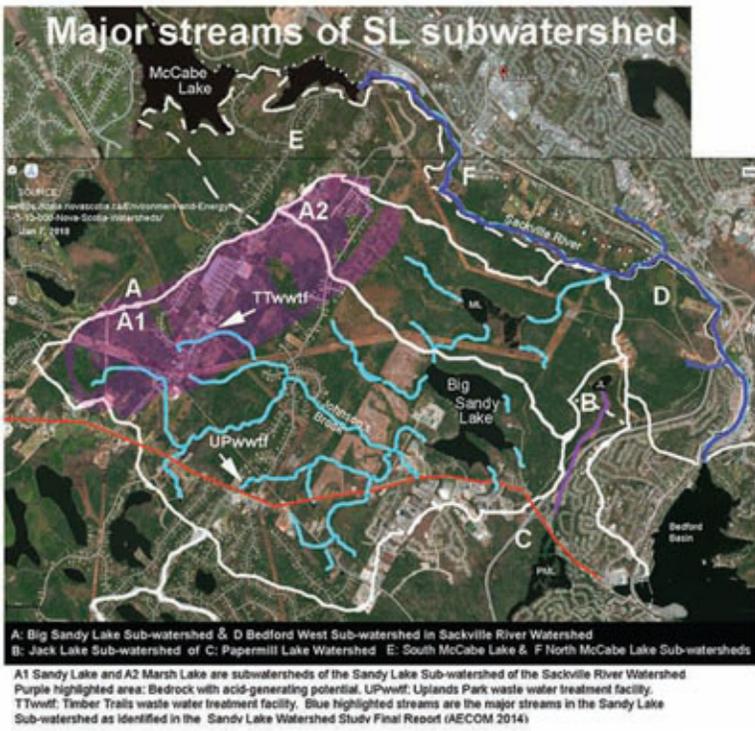
Jack Lake

Forest, Wetlands
Streams, Lakes

Panel I

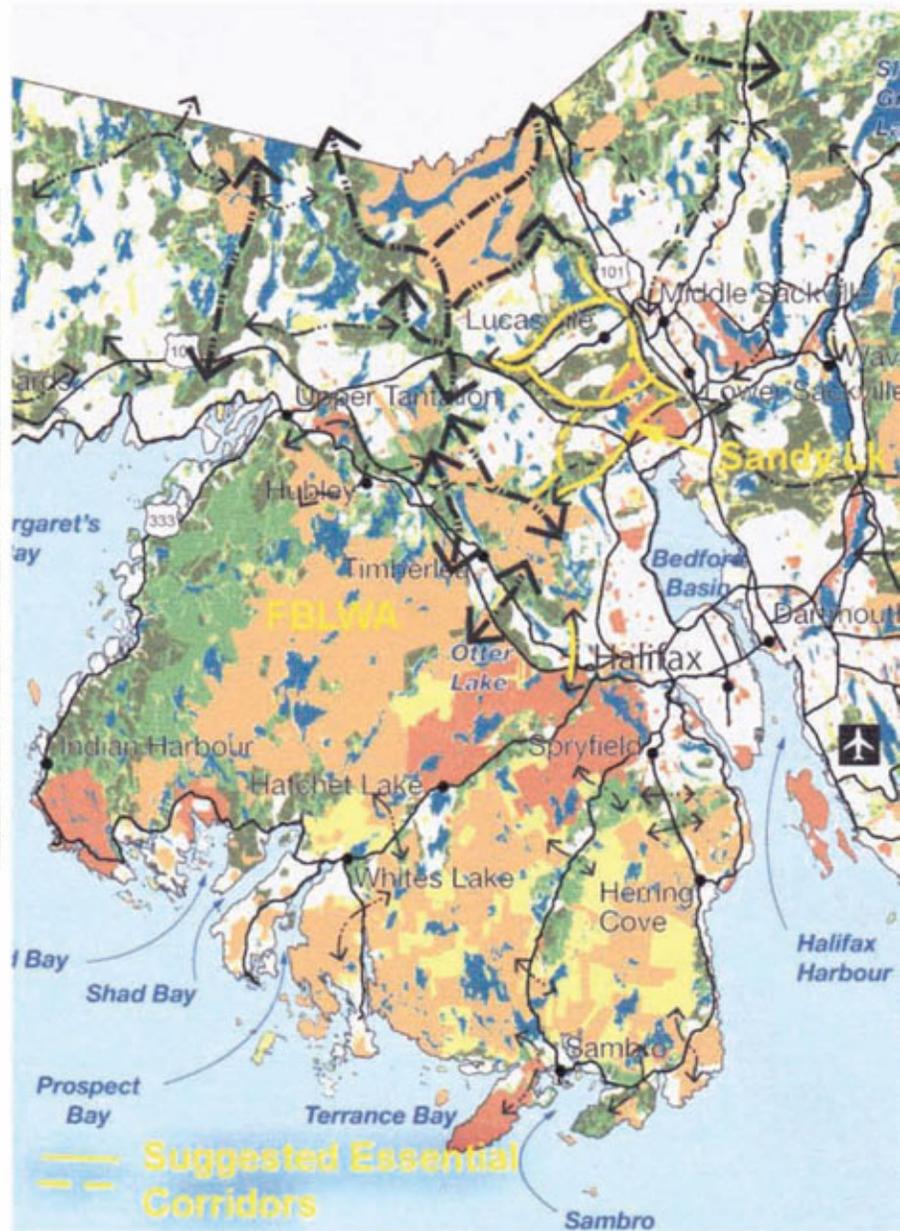


Panel II



The Chebucto Peninsula is a significant conservation area

Panel III



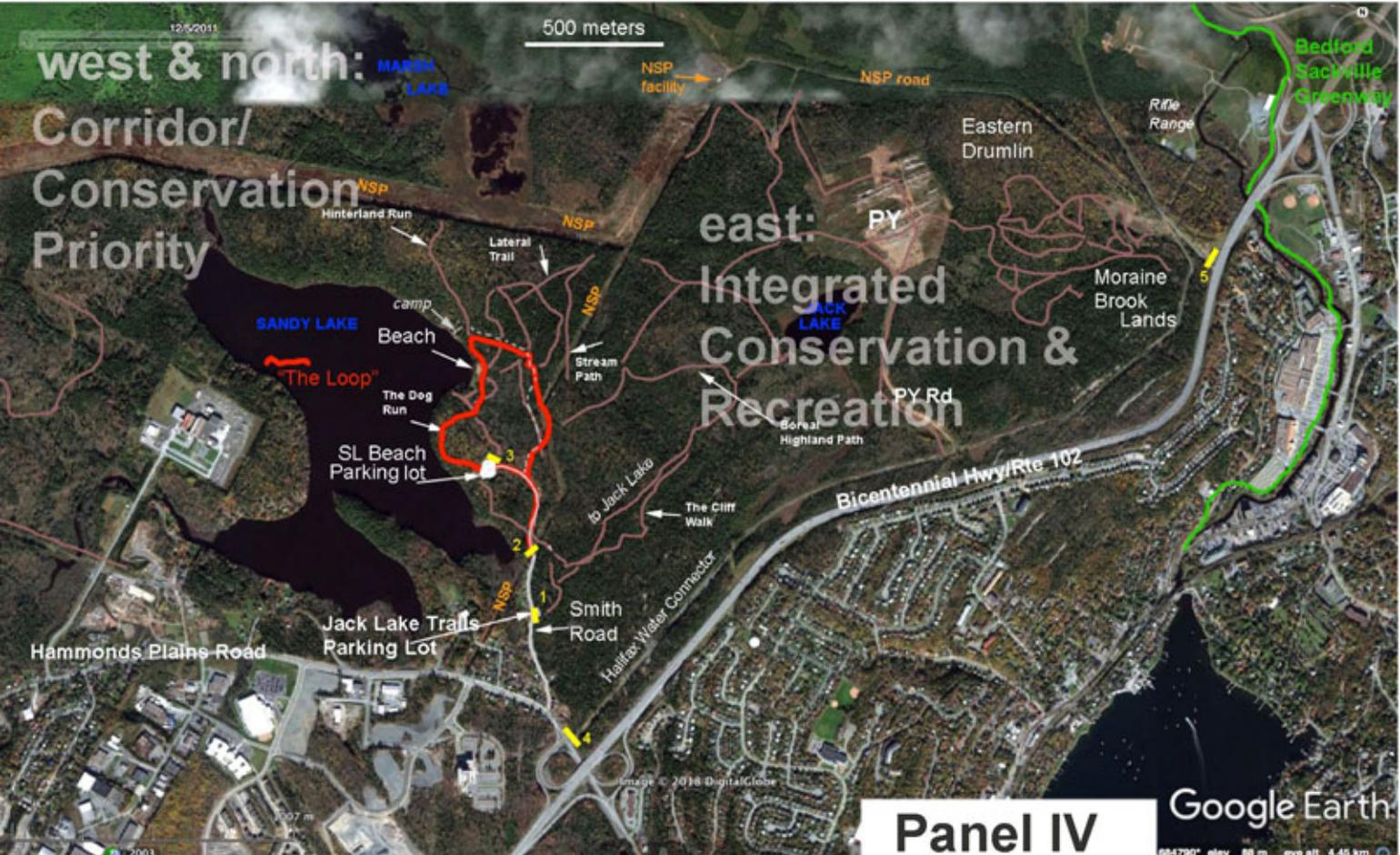
Section of HGNP Map 5 with modifications to show suggested 2nd Essential Corridors

west & north:

MARSH LAKE

Corridor/
Conservation
Priority

east:
Integrated
Conservation &
Recreation



Panel IV

Google Earth

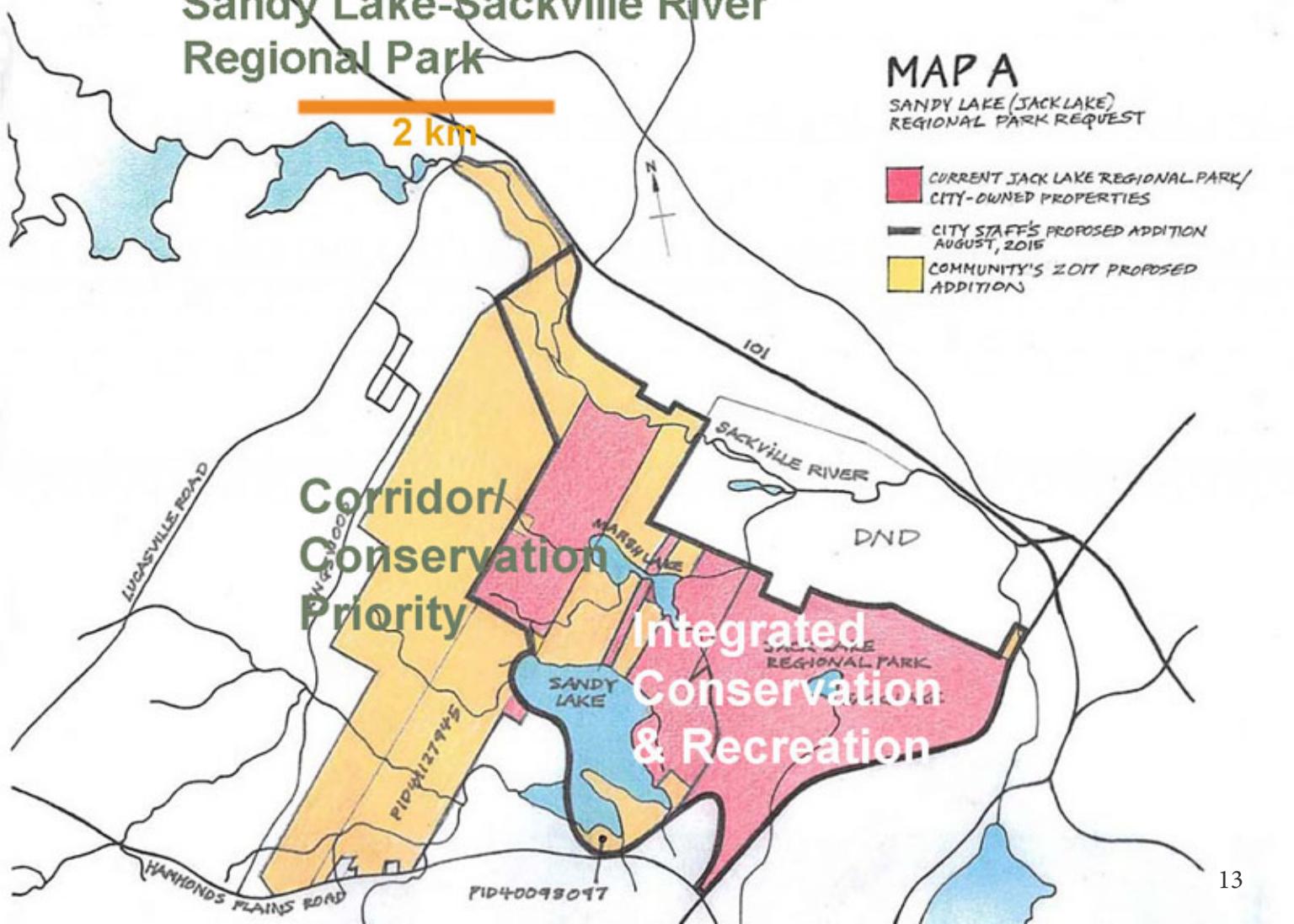
Sandy Lake-Sackville River Regional Park

2 km

MAP A

SANDY LAKE (JACK LAKE) REGIONAL PARK REQUEST

- CURRENT JACK LAKE REGIONAL PARK/ CITY-OWNED PROPERTIES
- CITY STAFF'S PROPOSED ADDITION AUGUST, 2015
- COMMUNITY'S ZOIT PROPOSED ADDITION



SPECIES of INTEREST SURVEY: Surveys conducted on the lake areas of the proposed Sandy Lake-Sackville River Regional Park lands during the 2017 & 2018 breeding seasons by Clarence Stevens detected the following 20 species as *species of interest to Federal and Provincial conservation bodies*. The river area would be expected to contain further species, including Atlantic Salmon.

American Woodcock - Federal Bird Conservation Strategy- NS Priority Species

Barn Swallow - COSEWIC Threatened, SARA Threatened, Sara Schedule 1, - NS=Endangered (2013). Federal BCS- NS Priority Species

Bay-breasted Warbler - Federal Bird Conservation Strategy- NS Priority Species

Belted Kingfisher - Federal Bird Conservation Strategy- NS Priority Species

Boreal Chickadee - Federal Bird Conservation Strategy- NS Priority Species

Canada Warbler - COSEWIC Threatened, SARA Threatened, Sara Schedule 1 - NS=Endangered (2013). Federal BCS- NS Priority Species

Cape May Warbler - Federal Bird Conservation Strategy- NS Priority Species

Common Nighthawk- COSEWIC Special Concern, SARA Threatened, Sara Schedule 1, NS=Threatened(2007), Federal BCS- NS Priority Species

Common Snapping Turtle - COSEWIC Special Concern, SARA = Special Concern. Sara = Schedule 1, NS=Vulnerable(2013)

Eastern Painted Turtle - COSEWIC Special Concern, SARA = No Status.

Eastern Wood-Pewee - COSEWIC Special Concern, SARA Special Concern, Sara Schedule 1, NS=Vulnerable(2013), Federal BCS- NS Priority Species

Evening Grosbeak - COSEWIC Special Concern, SARA = No Status, NS=Vulnerable(2017),

Little Brown Myotis- COSEWIC Endangered, SARA Endangered, Sara Schedule 1,- NS=Endangered (2013).

Monarch - COSEWIC Endangered, SARA Special Concern, Sara Schedule 1, NS=Endangered (2017).

Moose(Mainland Population) -NS=Endangered(2003)

Olive-sided Flycatcher - COSEWIC Special Concern, SARA Threatened, Sara Schedule 1, NS=Threatened(2013)

Pine Grosbeak - Federal Bird Conservation Strategy- NS Priority Species

Ruffed Grouse - Federal Bird Conservation Strategy- NS Priority Species

Rusty Blackbird - COSEWIC Special Concern, SARA Special Concern, Sara Schedule 1 - NS=Endangered (2013) Federal Bird Conservation Strategy- NS Priority Species

Spruce Grouse - Federal Bird Conservation Strategy- NS Priority Species