

Dark Sky Designation Proposal for the South Shore



What is a Dark Sky Preserve?

Dark-Sky Preserves are protected areas that make a special commitment to protect and preserve the night, reducing or eliminating light pollution in all forms (Parks Canada).



What is Light Pollution?

Light Pollution is the combined effects of glare, light trespass and sky glow which adversely affects flora and fauna as well as denying humanities cultural heritage, our access to the stars.



RASC DARK SKY DESIGNATIONS

The background of the slide features silhouettes of two people against a twilight sky. On the left, a person is looking through a large telescope mounted on a tripod. On the right, another person is holding a camera up to their eye, likely taking a photograph of the sky. The sky transitions from a deep blue at the top to a lighter, orange-tinged glow near the horizon, suggesting the time is either dawn or dusk. The overall scene is dark and atmospheric, emphasizing the theme of dark sky preservation.

Dark Sky Preserve (DSP) - Sites with very dark skies with minimal sky glow are generally far from urban centres and are therefore less accessible to astronomers and the public, though these usually do contain public campgrounds.

Nocturnal Preserve (NP) - Some dark sites are remote with few resources for active outreach programs, and are designated more for the protection of the night for flora and fauna than for public amenities.

Urban Star Park (USP) - These are sites within, or close to, urban areas that are not consider "dark", but provide good access to the public



PRINCIPLE REQUIREMENTS OF DSP

1. Compliance with RASC Canadian Guidelines for Outdoor Lighting (CGOL)
2. Accessibility – Public Night Sky Viewing Site
3. Quality of the night sky
4. Outreach program

Loss of Darkness

In accordance with a recent study, there has been a 7–10% annual increase in sky brightness over 12 years.

This loss of direct contact with the natural sky is further supported by the population concentrations in Canada. As Statistics Canada reports, 'In 2021, nearly three in four Canadians (73.7%) lived in one of Canada's large urban centres, up from 73.2% five years earlier.'

IMPACT OF LIGHT POLLUTION

Plants are affected by the colour and duration of lighting.

Artificial lighting also affects the biological rhythm in animals and thus modifying their behavioural patterns.

• Illuminated shorelines impact fish and aquatic plants.

○ Urban sources of artificial lighting at night (ALAN) broadly effect avian migratory behavior and may have a role in shaping migratory routes of individual species.

- Ecological Consequences of Artificial Night Lighting, C. Rich, T. Longcore, Island Press, 2006, Pg. 405
- Light pollution is greatest within migration passage areas for nocturnally migrating birds around the world, Sergio A. Cabrera-Cruz, Jaclyn A. Smolinsky & Jeffrey J. Buler, Scientific Reports, 19 February 2018, Pg. 5

Bortle Scale



1

Excellent
Dark Sky
Site

2

Dark Sky
Site

3

Rural Sky

4

Suburban/
Rural
Transition

5

Suburban
Sky

6

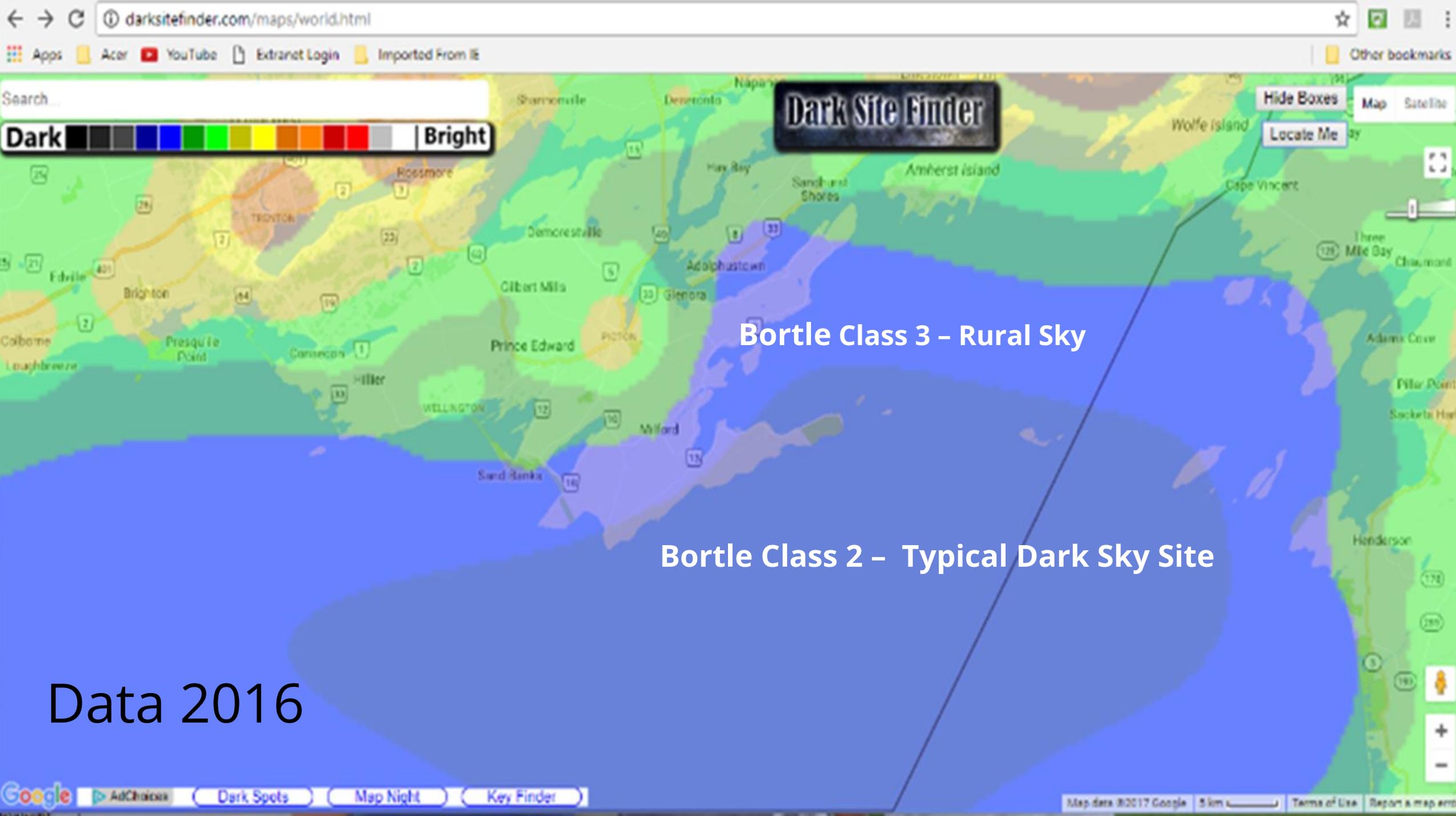
Bright
Suburban
Sky

7

City/
Suburbia
Transition

8/9

City/Inner
City Sky



Bortle Class 3 - Rural Sky

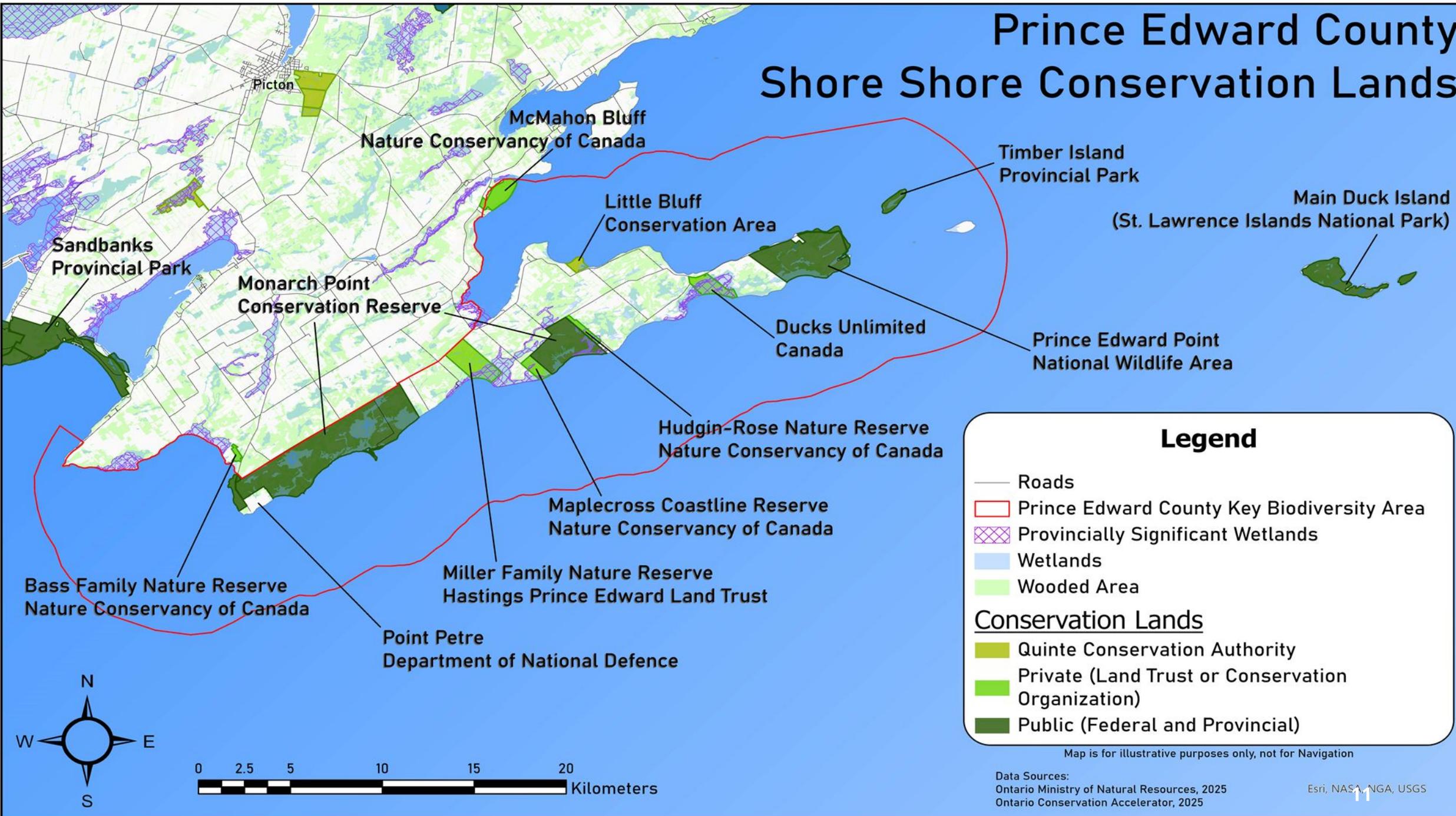
Bortle Class 2 - Typical Dark Sky Site

Data 2016



Data 2022

Prince Edward County Shore Shore Conservation Lands



Sandbanks
Provincial Park

Monarch Point
Conservation Reserve

Bass Family Nature Reserve
Nature Conservancy of Canada

Point Petre
Department of National Defence

Miller Family Nature Reserve
Hastings Prince Edward Land Trust

Maplecross Coastline Reserve
Nature Conservancy of Canada

Hudgin-Rose Nature Reserve
Nature Conservancy of Canada

Ducks Unlimited
Canada

Little Bluff
Conservation Area

McMahon Bluff
Nature Conservancy of Canada

Timber Island
Provincial Park

Main Duck Island
(St. Lawrence Islands National Park)

Prince Edward Point
National Wildlife Area

Picton

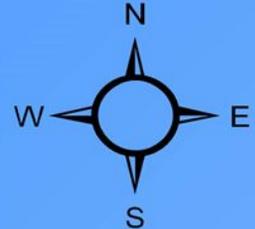
Legend

- Roads
 - ▭ Prince Edward County Key Biodiversity Area
 - ▨ Provincially Significant Wetlands
 - ▭ Wetlands
 - ▭ Wooded Area
- Conservation Lands**
- ▭ Quinte Conservation Authority
 - ▭ Private (Land Trust or Conservation Organization)
 - ▭ Public (Federal and Provincial)

Map is for illustrative purposes only, not for Navigation

Data Sources:
Ontario Ministry of Natural Resources, 2025
Ontario Conservation Accelerator, 2025

Esri, NASA, NGA, USGS



The South Shore

The South Shore is a Key Biodiversity Area (KBA) and should be protected.

The South Shore PEC is a critical avian and myotis migratory pathway.

The South Shore is home to various plants, amphibians, and reptiles.

The South Shore is the last undeveloped area on the north coast of Lake Ontario.

Why a Dark Sky Preserve?

Ecological Benefits

Protection of Cultural and Natural Heritage

Education Value

Foster Community Pride and Engagement

Aligns with Sustainability goals

How Municipal Government can Lead

- Adopt Light Pollution Bylaws
- Retrofit Municipal Lighting
- Provide a letter of support to the SSJI/RASC
- MOU with the SSJI & RASC to allow astronomy for events at the Mariners Park Museum & designate the park as a Night Sky Viewing Area.

North Frontenac Dark-Sky Preserve

North Frontenac Township was designated a Dark-Sky Preserve in 2013 in partnership with the Township of North Frontenac, North Frontenac Economic Development Task Force, and the RASC Kingston Centre.

It is the first municipality in Canada to achieve Dark-Sky Preserve status and covers an area of 1164km².



Summary

Loss of Darkness - 7–10% annual increase in sky brightness over 12 years resulting in a loss of direct contact with the natural sky.

Light pollution affects plants, animals and humanity

Dark Sky Preserve Provides:

- Environmental Protection
- Cultural Enrichment
- Educational Opportunities
- Community Engagement

