

Smileys Provincial Park

Public Information Session





AGENDA

- Welcome and introductions
- Mandate and planning process
- History and overview of Smileys
- Flood risk study
- Operational changes and updates
- Future planning update
- Group discussion
- Next steps and adjourn

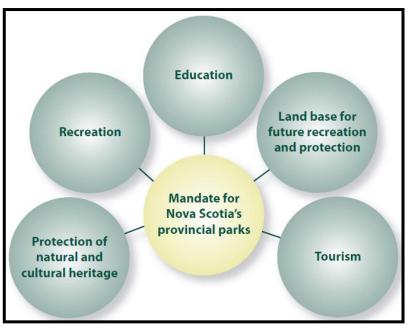




BROOKLYN FIRE HALL SEPT 17, 2024

Nova Scotia Provincial Parks



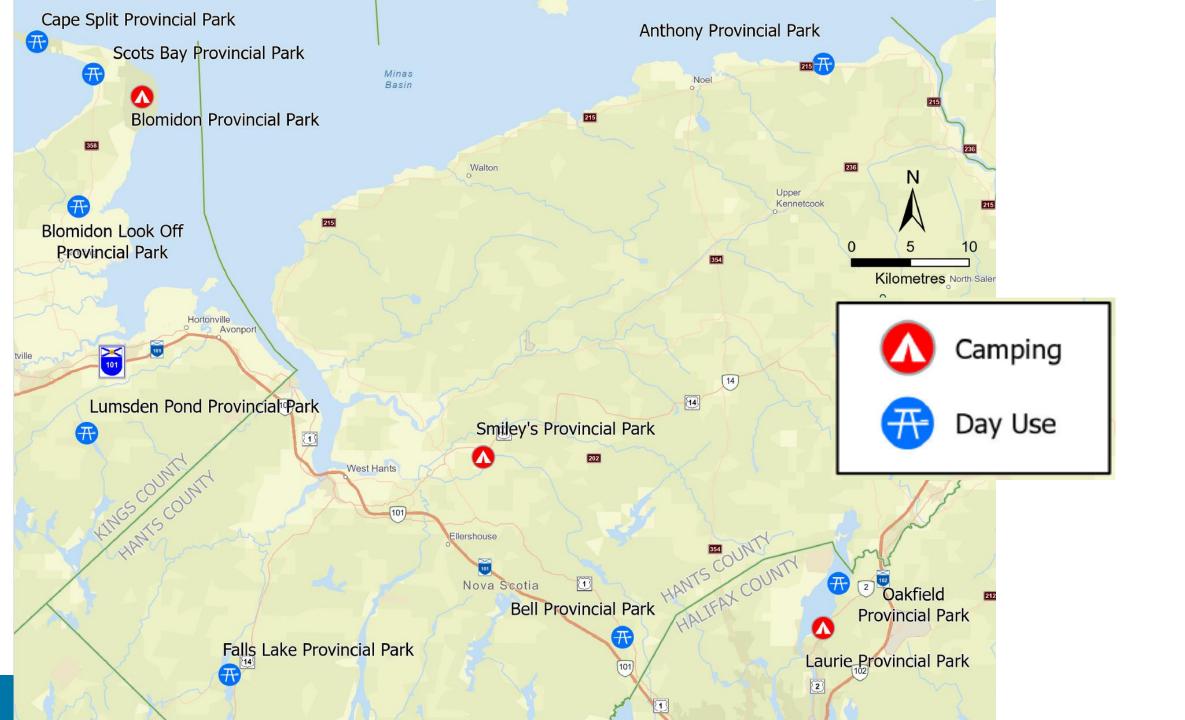


203 Provincial Parks

131 operational (20 Camping, 111 Day-Use)

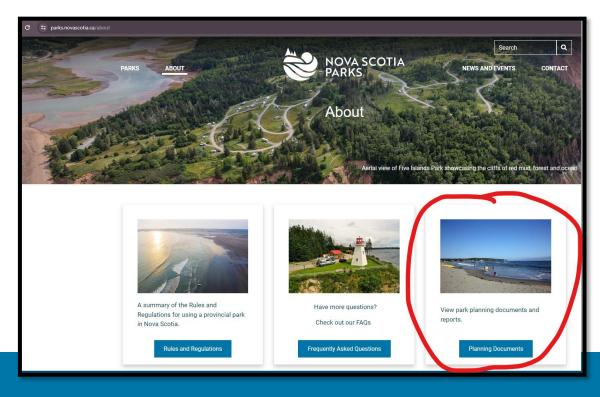






Park Management Planning

- A management statement sets the vision and provides guidance
- Ensures each park is managed consistently
- Includes public engagement



| Park Planning | | | | | |
|---------------|---|---|--|--|--|
| + | 0 | Cole Harbour-Lawrencetown Coastal Heritage Park System (Rainbow Haven and Lawrencetown Beach) | | | |
| + | 0 | McNabs and Lawlor Islands Provincial Park | | | |
| + | 0 | Pondville Beach Provincial Park | | | |
| + | 0 | Rissers Beach Provincial Park | | | |
| + | 0 | Smileys Provincial Park | | | |

The Department of Natural Resources and Renewables (DNRR), Parks & Outreach Division is currently undergoing a management planning process for Smileys Provincial Park. This process will result in a Management Statement which will guide future management activities. Public engagement is an important part of the management planning process, and we invite you to attend a public information session on Tuesday, September 17, 2024

6:00 pm – 8:00 pm, Brooklyn Fire Hall 955 Highway 215, Newport

The session is an opportunity to learn about the flood study, hear about changes at Smileys, and to gather input for future planning for Smileys Provincial Park.

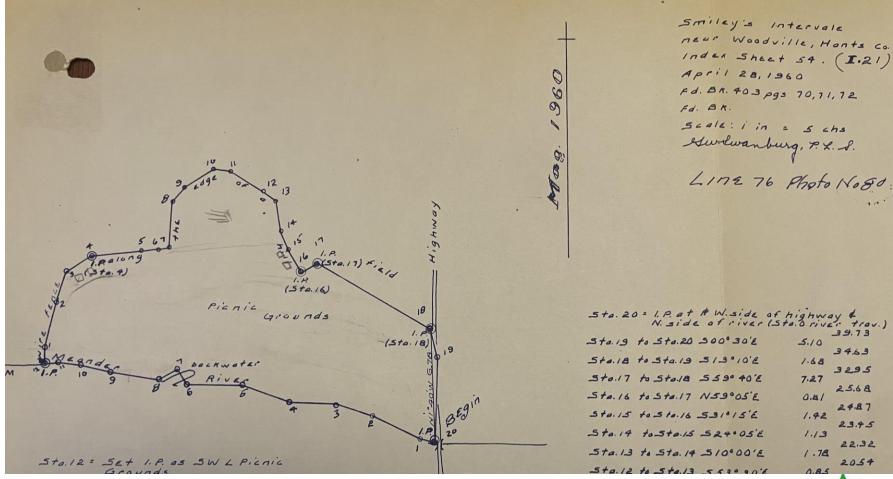
Additional Information: Flood Study Executive Summary Smileys Provincial Park

Planning Timeline

| Item | Description | Engagement | Dates |
|------------------------|---|---|-------------|
| Scoping | RationaleSchedule & Engagement Strategy | | Summer 2024 |
| Background Information | Collect background information on: Natural values Cultural values Recreation values Threats | Community Information Session | Fall 2024 |
| Develop Management | Management Statement | Posted to website | Winter 2025 |
| Statement | policies, approaches and development concept | Web-based opportunity to provide feedback | |
| Phased Implementation | Site level planning & design Subject to available funding & resources | | TBD |



Park History Smiley's Interval – 1960 survey data

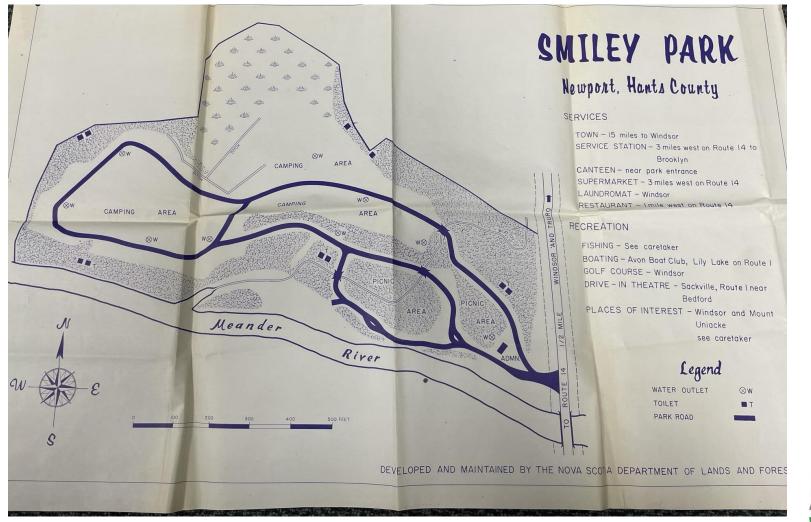




NOVA SCOTIA

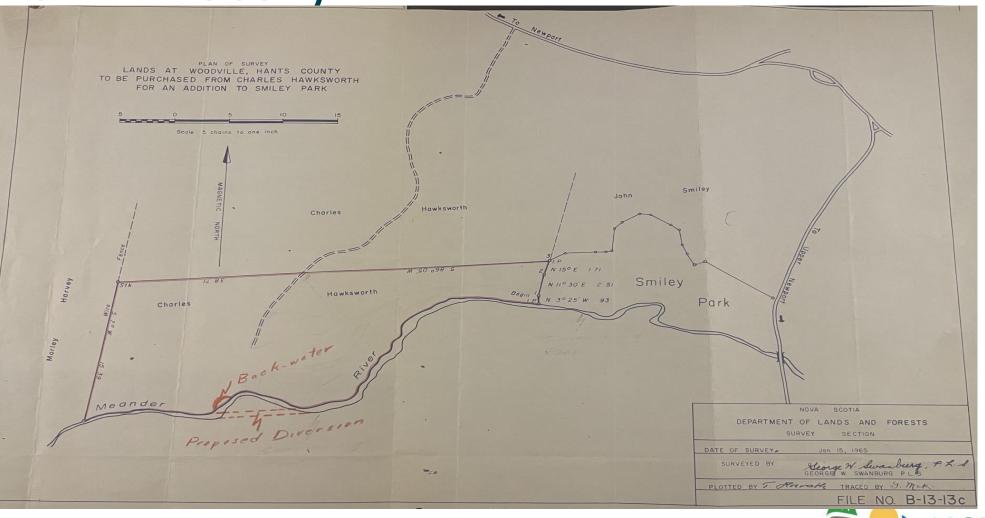
PARKS

Park History Smiley's Interval – 1960's camping



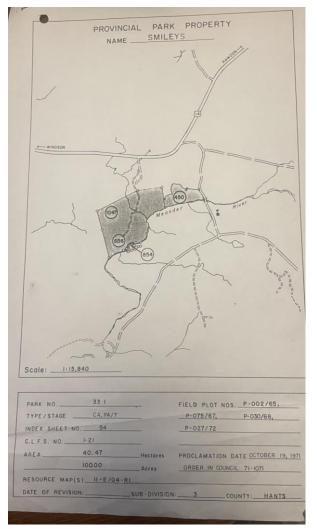


Park History Additional Lands - 1965





Park History

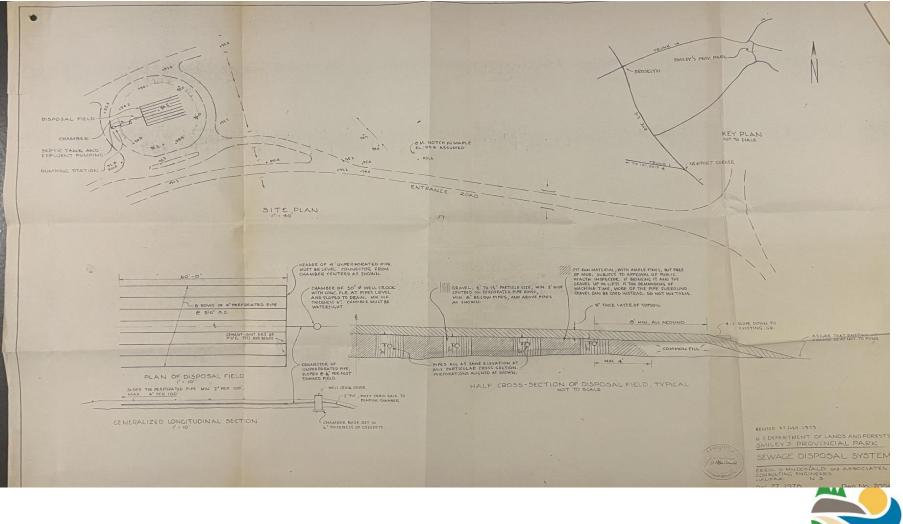


Designated Provincial Park Oct 19, 1971

Smiley's Provincial Park Designation made under Section 8 of the *Provincial Parks Act* R.S.N.S. 1989, c. 367 O.I.C. 71-1071 (October 19, 1971), N.S. Reg. 93/71



Park History Septic System 1978



NOVA SCOTIA PARKS

Park History Entrance area upgrades 1980





Park History

1980's upgrades, fire and Earwigs

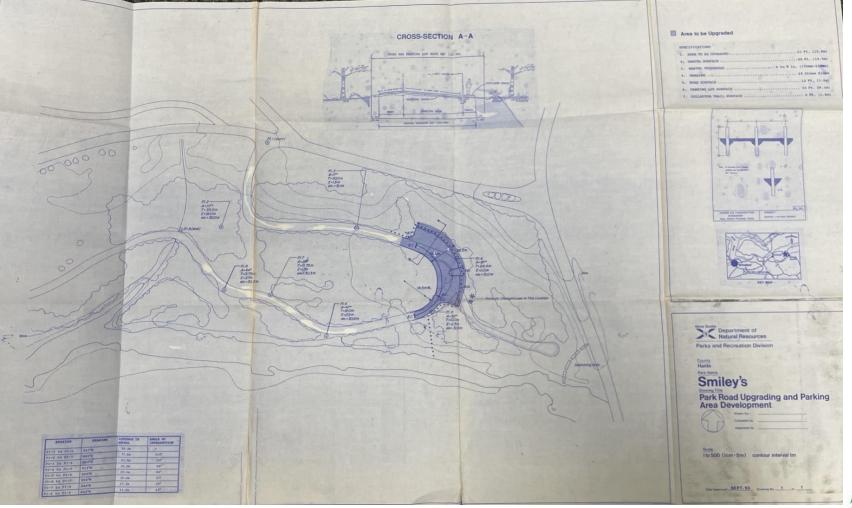
- 1980 first report of Earwig in park, again in 1983
- 1981 New entrance building constructed \$26, 150
- January 1982 fire 2 park building and all equipment, including a tractor. \$37,000 loss
- 1985 Campsite rehabilitation through campground
- 1986 Dutch Em Disease report in park
- 1987 Water system study completed
- 1988/1989 Playground equipment bought/installed
- 1988 to 1998 Bank and stream stabilization







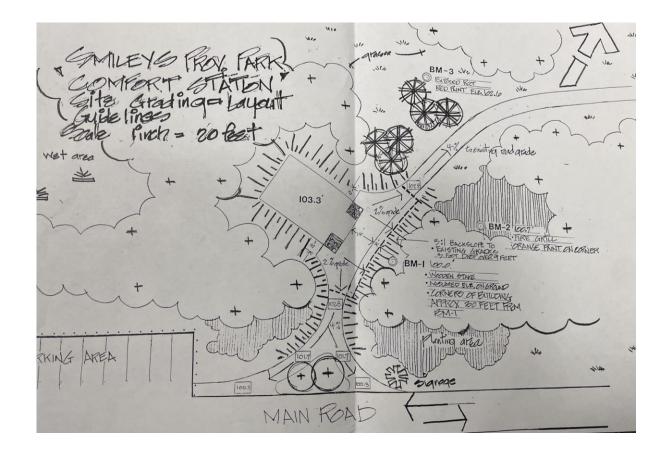
Park History Park and Road upgrades 1993/1994





Park History

Comfort Station Construction 1994







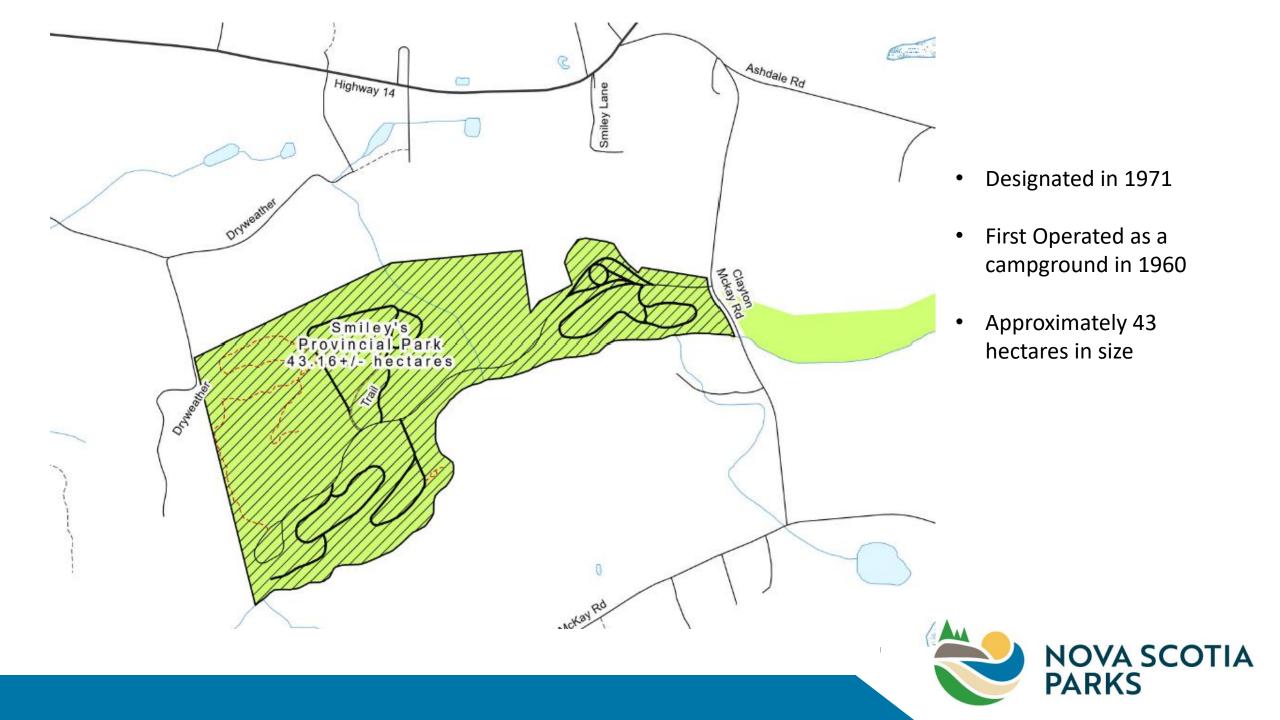
Park History

- Well drilled 1996
- Rehabilitation Brich loop 1999
- Solar Panels Comfort station
- Trail development
- Dishwash station
- Group Use building

More recent updates







1938 AERIAL PHOTO









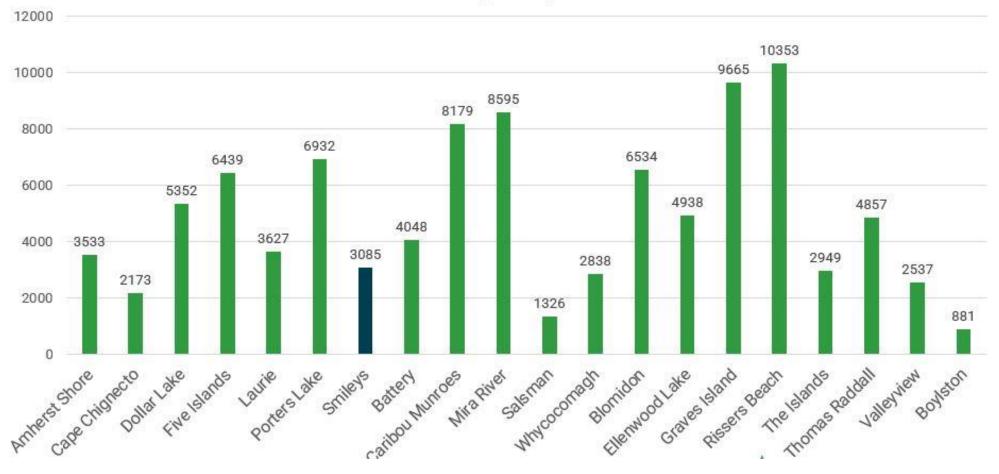




NOVA SCOTIA PARKS

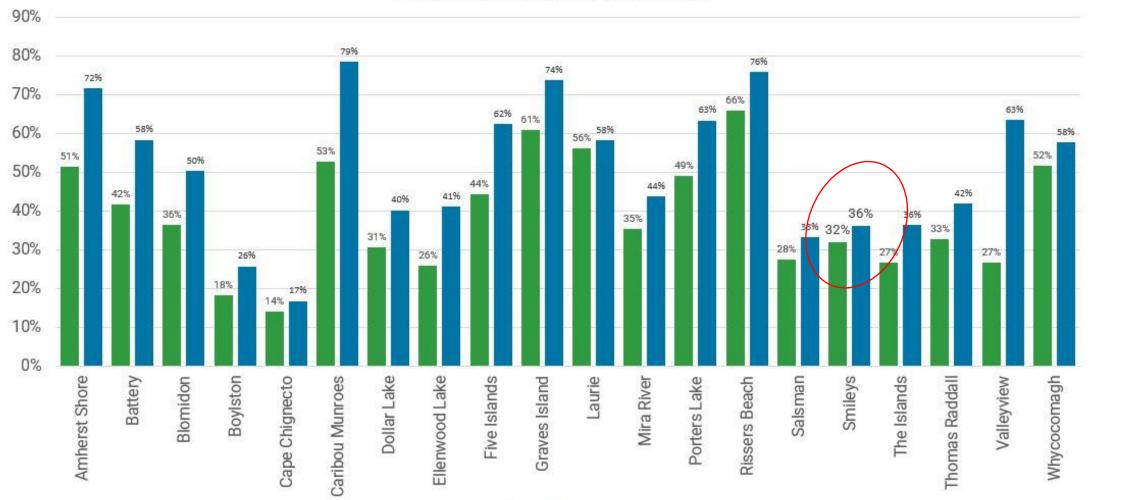


Paid Overnight Stays - 2022







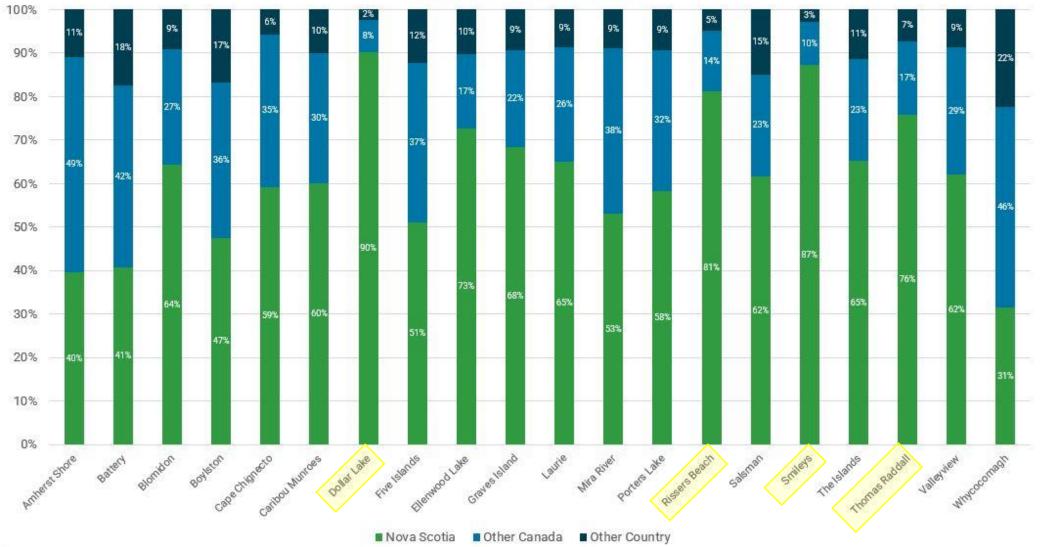


2018 2022

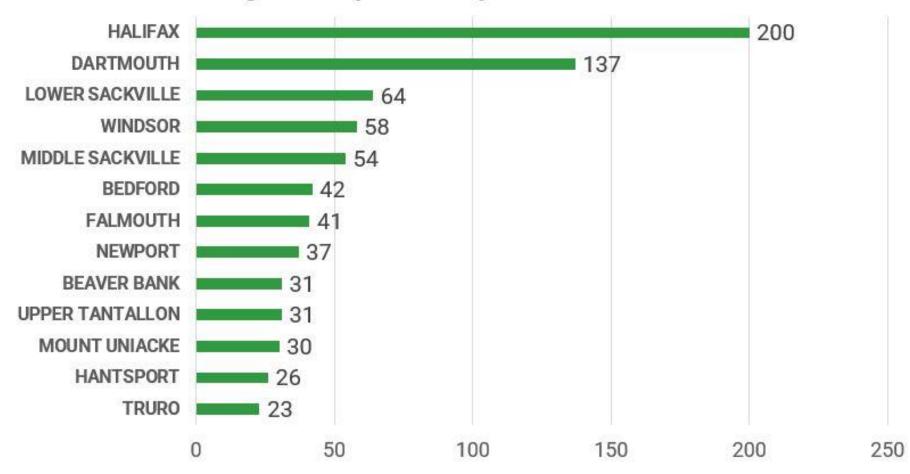
Percent Occupancy by Park - 2018 vs 2022



% Origin of Visitors by Park 2022



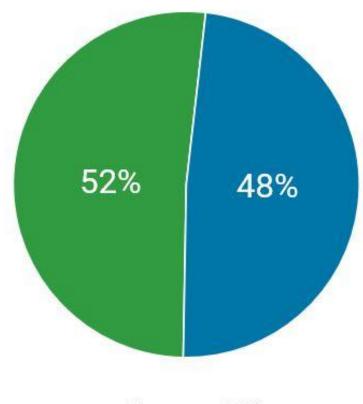








Tent vs RV at Smileys - Reservations 2022



■ Tents ■ RV's













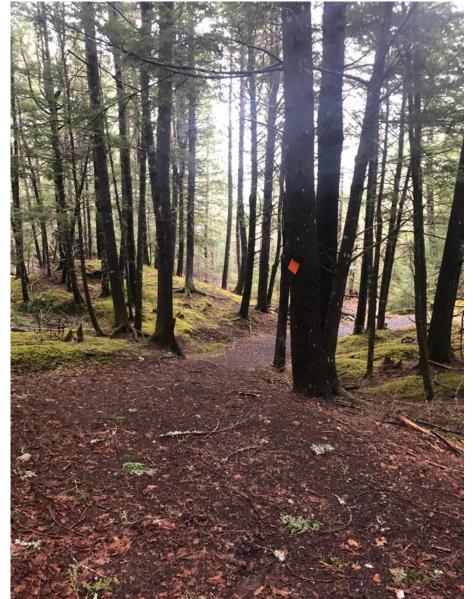
















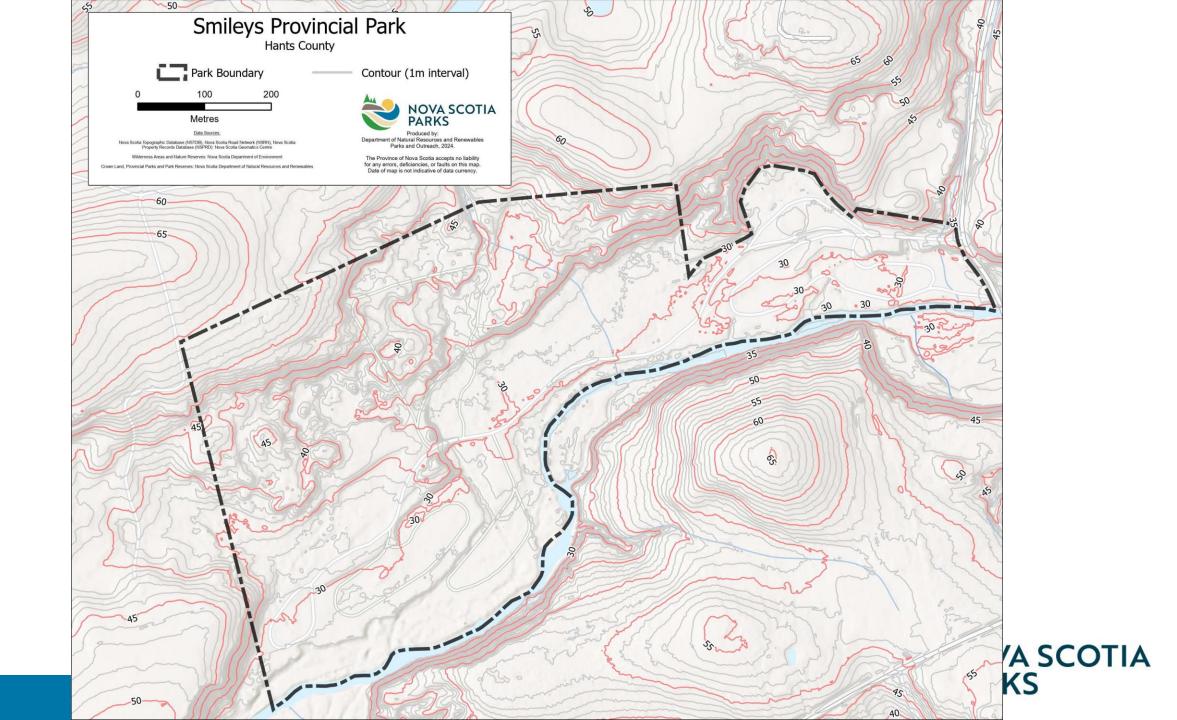




Showy Lady's Slipper (Cypripedium reginae)

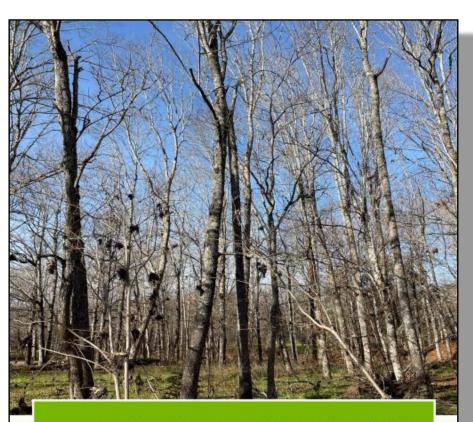












Smileys Provincial Park Flood Risk Study Final Report

> NOVA SCOTIA PARKS

> > NOVA SCOTIA PARKS

СВС

- The purpose of the study was to develop a hydrologic and hydraulic model of the Smileys Provincial Park, using technology developed by Computational Hydraulics International (CHI).
- The model is able to simulate hydrologic processes such as runoff, infiltration, flooding, snowmelt, evapotranspiration and low impact development measures.
- It is also applied for performing unsteady hydraulic flow calculations to simulate water backup, pooling, and detention ponds.

- HYDROLOGY the study of transforming rainfall amounts into quantity of runoff as it relates to the hydrologic cycle.
- HYDRAULICS is concerned with the conveyance of flows and fluids water in a channel.



HYDROLOGIC AND HYDRAULIC MODEL

- HYDROLOGY MODEL COMPONENT
 - Watershed Characteristics
 - Hydrologic parameters included
 - Watershed, Slope, Land Cover, and Soils
 - Rainfall Analysis
 - Rainfall amounts from Environment Canada Climate Change (ECCC) stations
 - Extreme Flow Estimation
 - hydrometric station, and flow gauges
 - Climate Change Projections
 - Increase in extreme precipitation, primarily due to the ability of warmer air to hold more moisture.



Figure 2: Contributing Watershed to Smileys Provincial Park



HYDROLOGIC AND HYDRAULIC MODEL

- HYDRAULIC MODEL COMPONENT
 - Channel sections in the Meander River
 - Floodplain areas and overland flow paths.

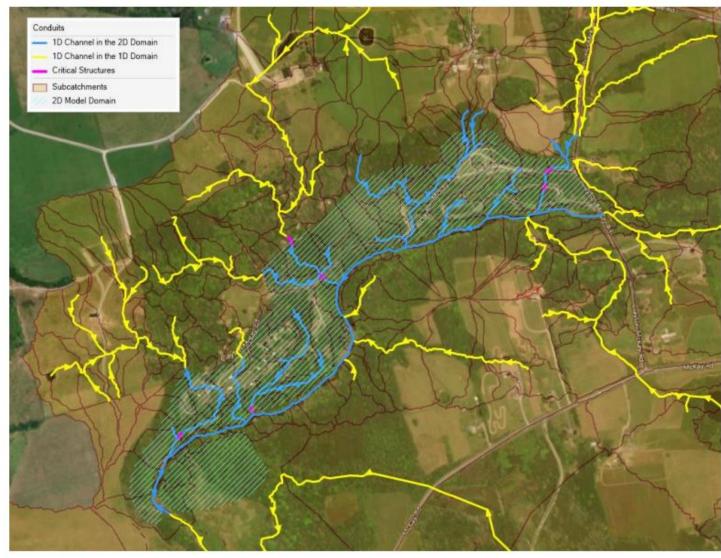


Figure 9: Smileys Provincial Park Domain

HYDROLOGIC AND HYDRAULIC MODEL

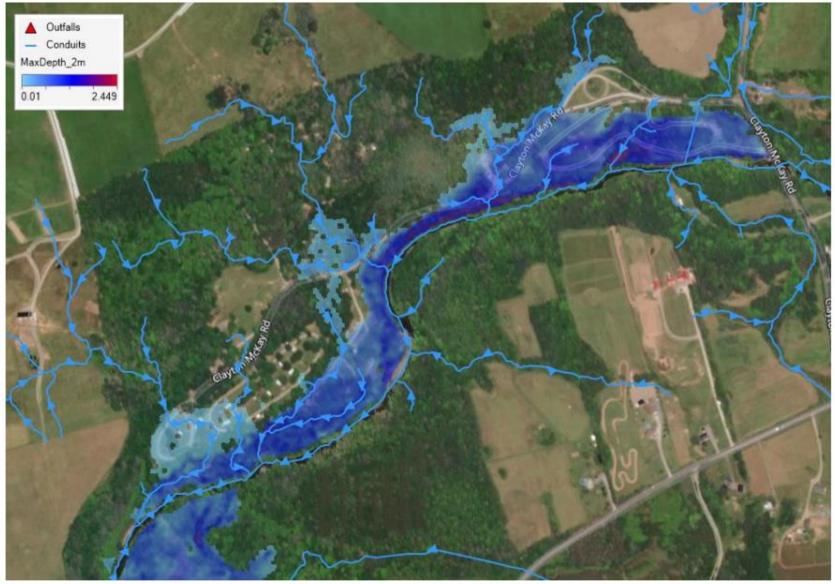


Figure 11: Water Levels calculated by the model across the park

- Water depths reach 2 to 2.5 m in lower areas of park (dark blue)
- Upper areas of park have lower depths
- (light blue)
- In keeping with antidotal information from Park staff
- Very similar to a 1 in 100-Year Event.



FLOOD DEPTHS

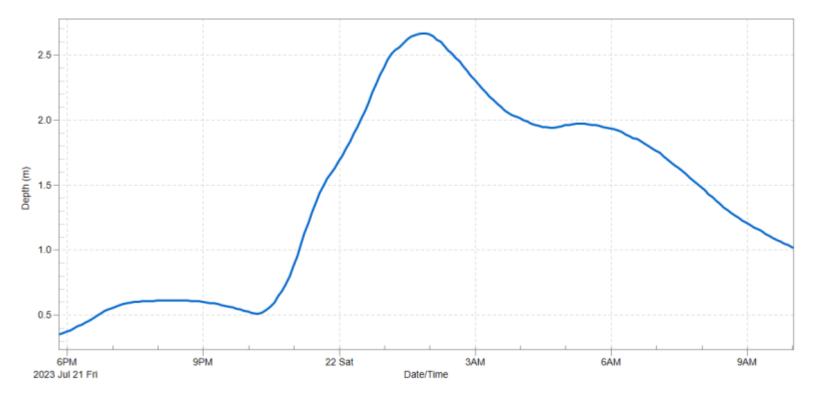
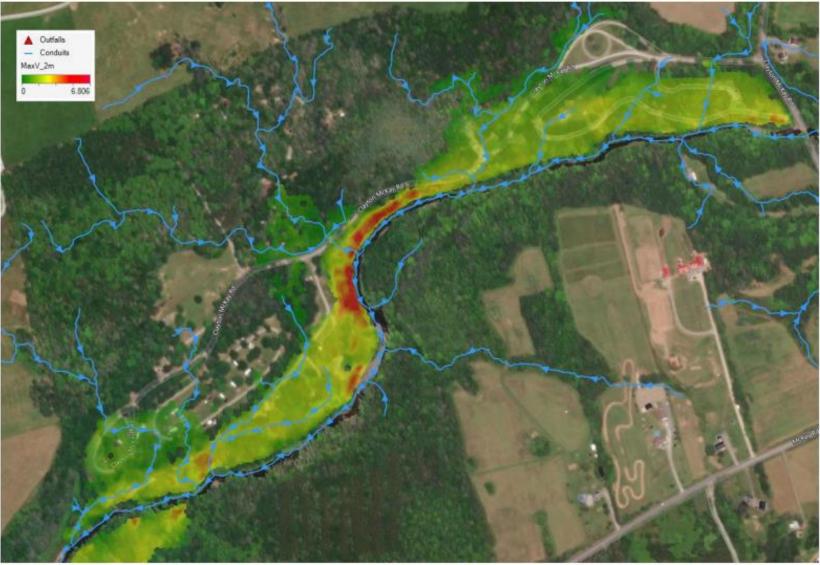


Figure 12: Water Depth in one of the lower areas of the park.

WATER LEVEL

- Water levels rose very fast (1.5m over 2 hours during its fastest rise) in one of the lower areas of the park
- Consistent with what Park staff reported





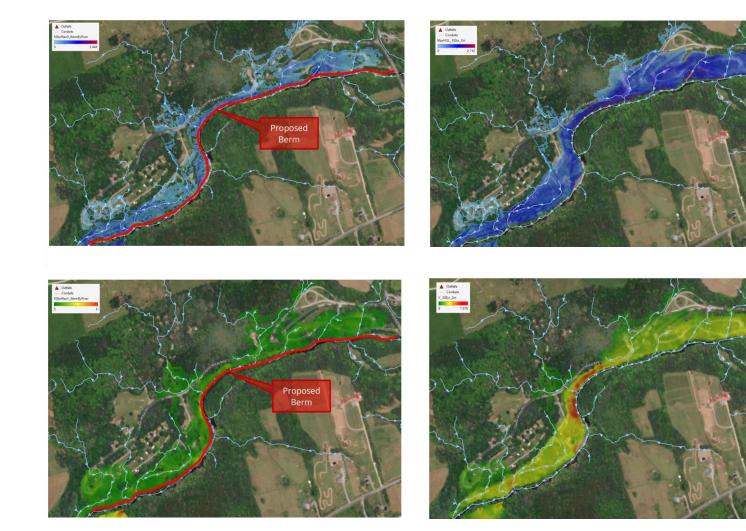
- The velocities calculated by the model reach very high values (>5 m/s)
- The model results for the peak velocities (peaks and patterns) are consistent with that of 1 in 100-Year Event

Figure 13: Calibrated Model for July 21-22 Event showing model results for Peak Velocities



VELOCITY PATTERNS

• Construction of a berm along the river to prevent floodwaters from inundating low-lying park areas.



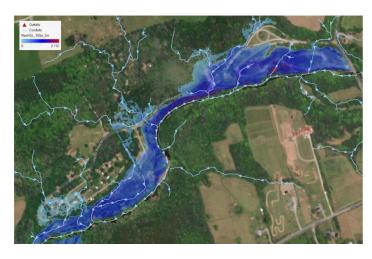
- Constricts the overall capacity of the drainage path, and causes water levels to increase, to the point that a 5m high berm would be necessary.
- The McCay Road and Bridge would have to be raised by 1-2 m.
- Flooding would still occur and
- Velocities although reduced would still be significant at rates of 2-m/sec.



FLOOD MITIGATION OPTIONS

• Modifying the river channel by doubling its width to increase the river's flow capacity.





- Park area does not just function as a floodplain that fills with water, but also as a supplemental channel to the river, to help it drain the vast flows from the watershed.
- Although velocities were slightly reduced, in the western portion of the park, they were increased.

•

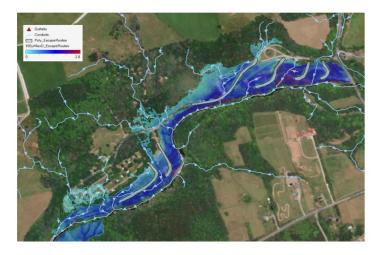




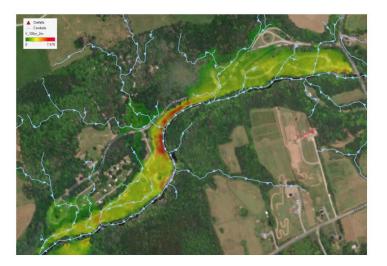


FLOOD MITIGATION OPTIONS

• Constructing, at regular intervals, egress routes, which are elevated roadways that connect the lower and higher sections of the park for emergency evacuation







 Waters are not decreased, and even though the surface of the roads are above the flood waters, accessing the roads may be unsafe, since the velocities are highly increased, up to 7 m/s, in the areas close to the river (since the roadways constrict the flow of water).

FLOOD MITIGATION OPTIONS





- STUDY RECOMMENDATIONS
 - Given that the water levels at the site tend to rise very rapidly, the risk to public safety is very high.

It is recommended that:

- The lower area be allowed to flood during extreme rainfall events, and that public safety be protected by only allowing day-time use of the lower areas of the park (No camping).
- Warning signs be visibly placed to make sure that all visitors are aware of the exit points and ready to leave within a few moments' notice.
- An emergency management plan be developed for this park that includes considerations for communication with the park users and emergency services prior to, during and following flood events, safe access into and out of each area of the park, safe gathering and sheltering areas, as well as keeping emergency supplies of water and food.







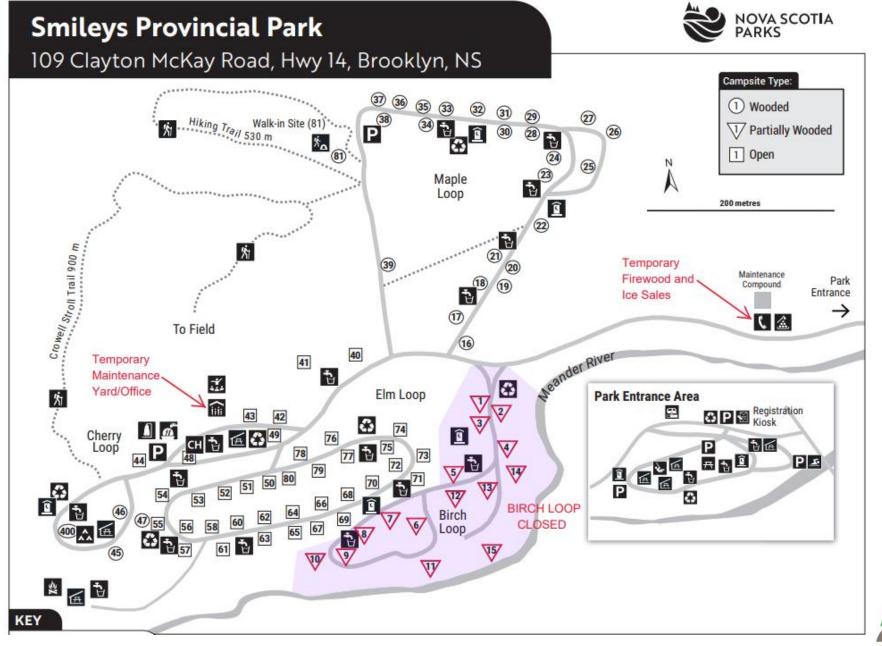












- Sites 1 15 (Birch Loop) have been closed to future overnight camping
- A remaining total 66 campsites remain available for camping

2024 SITE CLOSURES



Operational Changes and Updates

- Updated emergency response procedure
- Re-purpose of event building
- Relocation of wood and ice sales to former maintenance shed
- New safety signs
- Improving communications infrastructure
 - Wi-Fi
 - Payphone
 - Yellow phone
 - Telecommunications







Future planning update

- Preparing a management statement for Smileys (fall/winter 2024/25)
 - Document values, conditions, trends
 - Identify management focus areas and long-term priorities
- Playground project (spring/summer 2025)







Natural Playgrounds

Blomidon Provincial Park, 2024 Photo: Cobequid Consulting



Dollar Lake

Proposed site

Proposed site

87 MA



Group Discussion

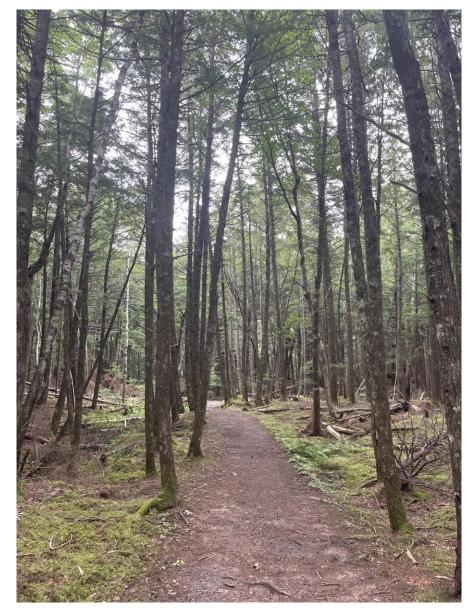
- Entry building
- Camping experience
- Improved accessibility
- Day use
 - Birch loop
- Playground
- Other ?





Next steps

- Fall 2024
 - Compile information and draft management statement
- Winter 2025
 - Finalize management statement
 - Posted to website
 - Opportunity to review and comment
- Spring/Summer 2025
 - Playground build





Thank you for your participation.

