

# Public perceptions and beach management.


A parks role in managing habitat,  
recreational opportunities and  
public opinion.

Dolf DeJong B. Ed, M.E.S.  
Assistant Park Superintendent  
Ontario Parks- Bronte Creek Provincial Park

# Abstract

Over the past 100 years, the beach at Presqu'île Provincial Park in Brighton, Ontario has been subjected to a wide range of management techniques. Recent efforts to promote sand deposition, encourage foredune growth and promote natural succession have been met with mixed reaction from interest groups. Outreach programs have been initiated and promoted significant discussion on what constitutes a "healthy" beach.

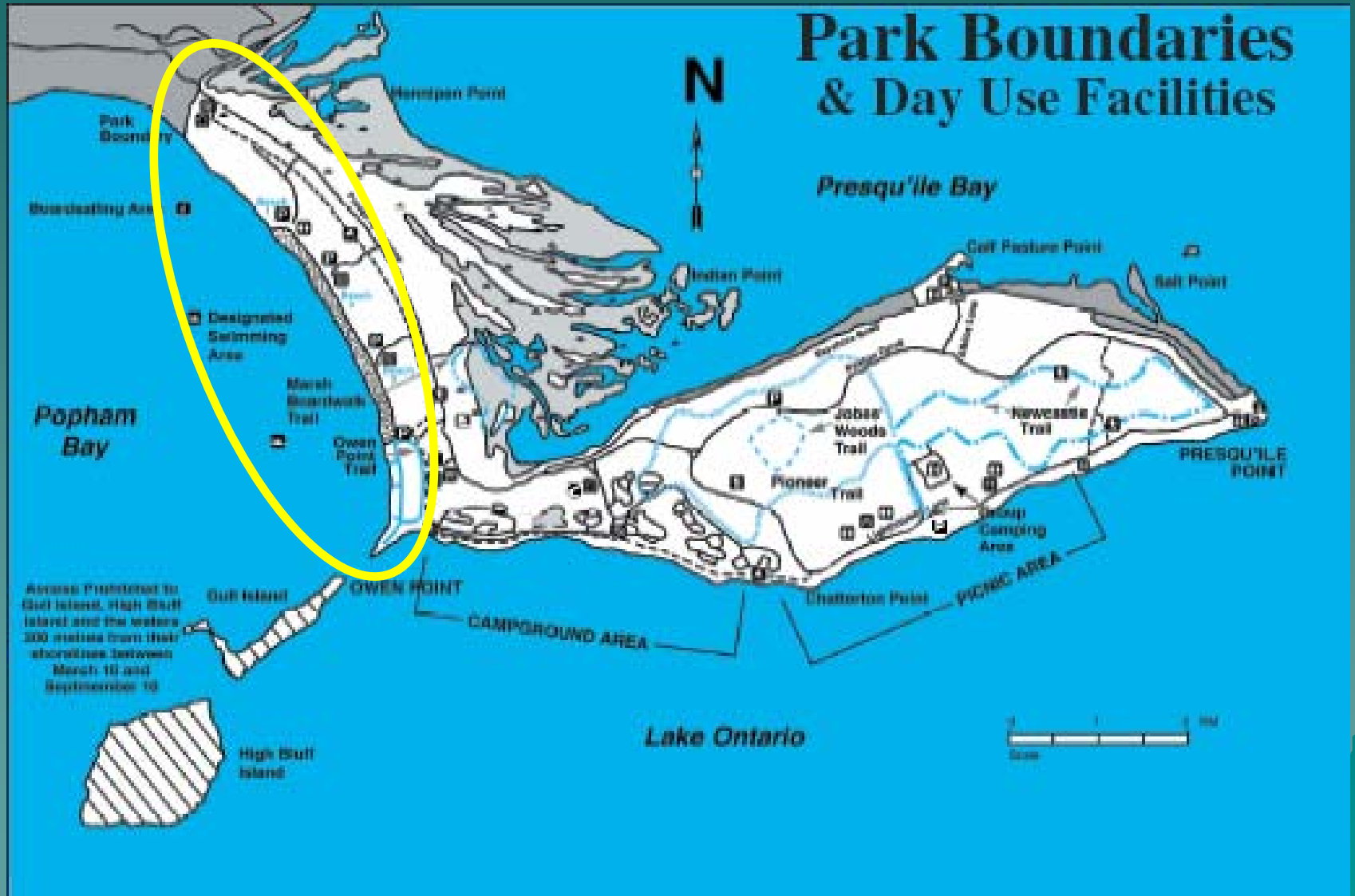
# Introduction

- ◆ Background on beach management at the park
  - ◆ Current practices
  - ◆ Issues and Stakeholders
  - ◆ Managing the issues and successes
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# Presqu'ile Provincial Park, Ontario, Canada



# Presqu'ile Provincial Park





# Park usage

- ◆ 400 campsites
- ◆ Trail system
- ◆ Educational programs
- ◆ Destination campground



# Park usage

- ◆ 1998- 257,000 visitors
- ◆ 2005- 217,000 visitors
  - Campground usage appears to be steady
  - No longer seeing line ups at the park gates for day use entry
  - Anecdotal evidence suggests use of the park beach has been declining over the past decade

# Park usage

- ◆ Potential Causes of the decline:
  - Perceived lower beach quality/ aesthetic value
  - Increasing number of e-coli related beach closures
  - Public awareness over the dangers of the sun
- ◆ Regardless of the cause, the decline is of concern to park staff and local businesses.
- ◆ Management techniques are under constant scrutiny.





# Beach management techniques- a brief history

- ◆ In the 1920s
  - Presqu'île Park commission opens in 1922.
  - Begin sporadic beach maintenance and raking in the summer for aesthetics / recreational opportunities.

# Beach management techniques

## ◆ In the 1950s

- Presqu'île becomes a provincial park in 1954.
- Images of cars lining the beach.



# Beach management techniques

## ◆ In the 1950s

- Regular beach raking begins in the summer for aesthetics / recreational opportunities.
- Park staff collect algae and aquatic vegetation by hand and with tractors. Collected material is transport in trucks to be stored elsewhere.

# Beach management techniques

In the 1970s

- Park purchases an “beach cleaner” to collect algae, scrapped after one season.
- The quest for a “fluffy” tropical beach continues.



# Beach management techniques

In the 1970s

- Raking continues to promote aesthetics / recreational opportunities
- Focus on the clean up Algae and Alewives
- 1975 beach cleaning costs are \$14,400.



# Beach management techniques

In the 1980s

- Significant decline in algae growth and deposition on the beach due to the regulation of phosphorus in detergents.
- Park continues to rake beach.





# Beach management techniques

## Early 1990s

- Park continues to rake for aesthetics / recreational opportunities.
- Zebra mussels arrive in Lake Ontario.
- Algae growth per unit area remains close to 1980's levels, but increased clarity of water through zebra mussels opens up new habitat for algae to grow.



# Beach management techniques

Early 1990s

- Establishment of dunes with marram grass to prevent having to plough sand out of parking lots.
- Snow fence the length of the beach to capture sand



# Beach management techniques

## Mid to late 1990s

- Park continues to rake for aesthetics / recreational opportunities.
- Algae deposits on the beaches increase.
- Large quantities of Zebra mussels begin to be deposited in the fall.





# Beach management techniques

1999

- The park collects algae deposits with tractors and trucks and store on beach- 95% of the contents is sand.
- 248 5-ton truck loads collected in one summer...



# Beach management techniques

2001 to 2004

- Begin redistributing sand along littoral zone where it was collected and foredune destroyed





# Beach management techniques

2001 to 2004

- The scale of the task required heavy machinery.





# Beach management techniques

2001 to 2004

- The new “embryo” foredune, returning the sand to where it was collected from.



# Beach management techniques

2001 to 2004

- After the winter, grading the dune to reduce the slope. Note the change in water level.



# Beach management techniques

2001 to 2004

- Fence erected perpendicular to dominant wind direction instead of parallel to the beach.



# Beach management techniques

2001 to 2004

- Managing to provide suitable shorebird habitat
- Recognizing the importance of beach pools





# Beach management techniques

2001 to 2004

- Begin reducing the width of the beach and encouraging vegetation growth at the rear of the beach.





# Impacts of Beach Management

- ◆ Absence of foredune





# Impacts of Beach Management

- ◆ Low profile



# Impacts of Beach Management

- ◆ Waterlogged





# Impacts of Beach Management

- ◆ Raking in the summer to speed drying also encourages erosion



# Impacts of Beach Management

## ◆ W I D E beach



# A heavily modified landform...

- ◆ Human influence has significantly altered the natural processes for almost a century.
- ◆ These changes have resulted in the “new beach” being of interest to a broad range of stakeholders.



# Stakeholder Conflicts

- ◆ Each group has an agenda that alienates at least one of the other stake holders:
  - Swimmers/kites/joggers/dogs flush shorebirds.
  - Dogs chase people and kites.
  - No one can be on the beach when waterfowl hunters present.
  - Carts run over people.
  - The geomorph's plans will make the beach less appealing for shorebirds.



# Managing the Issues

- ◆ Timing is critical- we can ensure operations suit the user groups by choosing wisely:
  - Spring- Important to migrating shorebirds / naturalists
  - remove snowfence prior to shorebird arrival



# Managing the Issues

- Mid June- begin beach maintenance and “clean up”.
- Summer- Maintain for Park users



# Managing the Issues

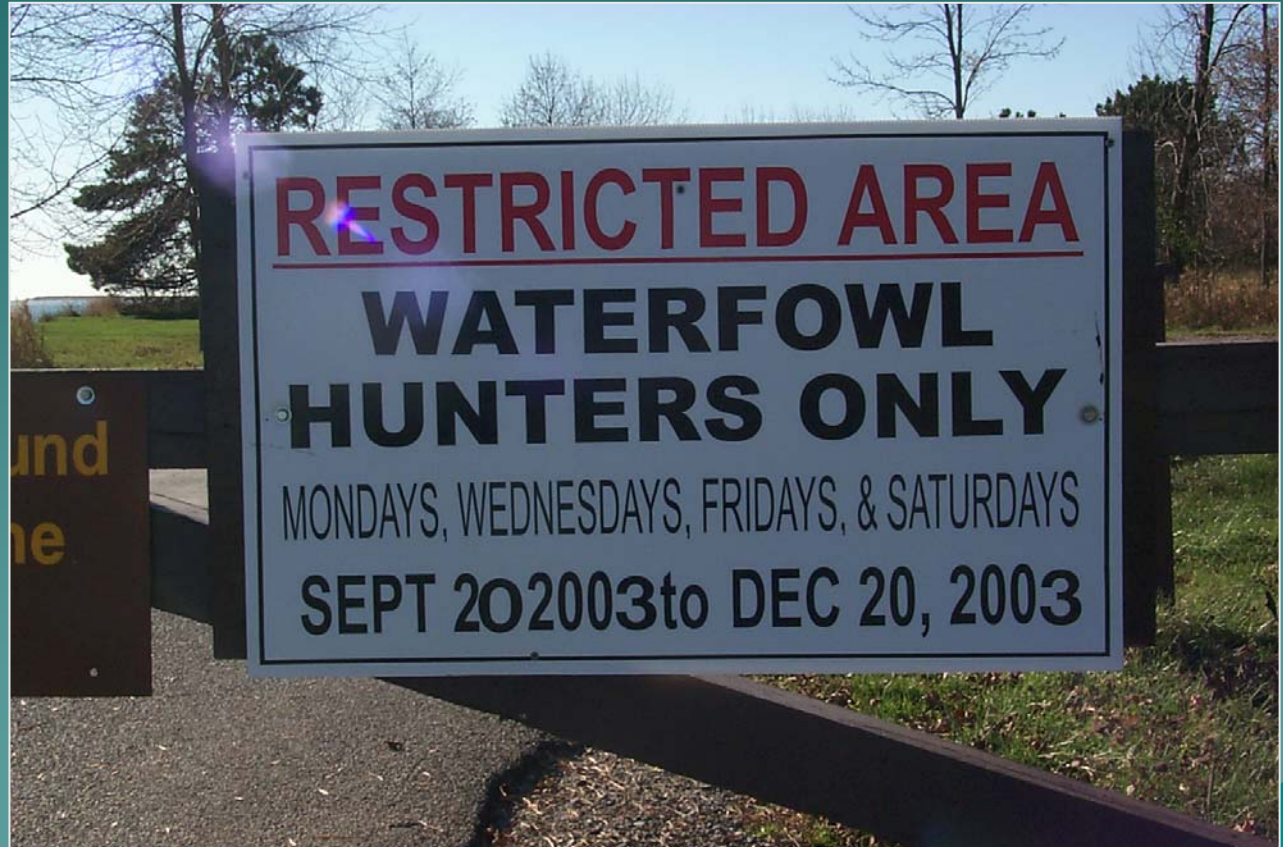
- Mid August- stop beach maintenance as it marks the return of migrating shorebirds





# Managing the Issues

- Fall-  
Waterfowl  
hunters
- Erect  
snowfence  
and  
redistribute  
collected  
sand





# Managing the Issues

- Winter- key period for sediment transport.



# Managing the Issues

- ◆ Other management approaches used include:
  - Kites, kite carts and dogs are all prohibited on the beach.
  - Redistributing sand, using snowfence and letting Owen Point naturalize has reduced the amount of “ideal artificial habitat” for shorebirds.
  - Encouraging foredune growth has also promoted beach pools, good for shorebirds but...
  - Beach users feel the beach is no longer maintained properly since it is smaller and “less fluffy”
  - Beach management does continue at the tail end of spring migration and beginning of fall migration
  - Waterfowl hunting continues

# Managing the Issues

- ◆ A beach management committee was formed in 2004 to get feedback from the user groups.
- ◆ Park signage has been erected.
- ◆ Educational programs are offered on beach.
- ◆ Articles in Park tabloids and newspapers.

# Education Programs

- ◆ Promoting the value of dunes and beaches as habitat
  - Guided Hikes
  - Evening Programs
  - Childrens Programs
- ◆ Modifying the public perception that a bigger beach is a better beach



# Where to from here

- ◆ Encouraging natural processes and public support
- ◆ Encouraging Dune protection- from parking lot to waters edge



# Where to from here

- ◆ Expanding interpretive signage / publications






# Where to from here

- ◆ Research on the impacts of the management techniques
- ◆ Explore other management techniques such as artificial shorebird pools



# Where to from here

- ◆ Continue to cultivate partnerships with stakeholders and researchers to update beach management strategies and incorporate them into park operating plans.
  - ◆ Build on some of the successes and establish new policies.
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- A decorative graphic at the bottom of the slide consisting of a dark teal silhouette of a mountain range with jagged peaks, extending from the right side towards the center.



# Parks doing things well

- ◆ Inverhuron- before and after

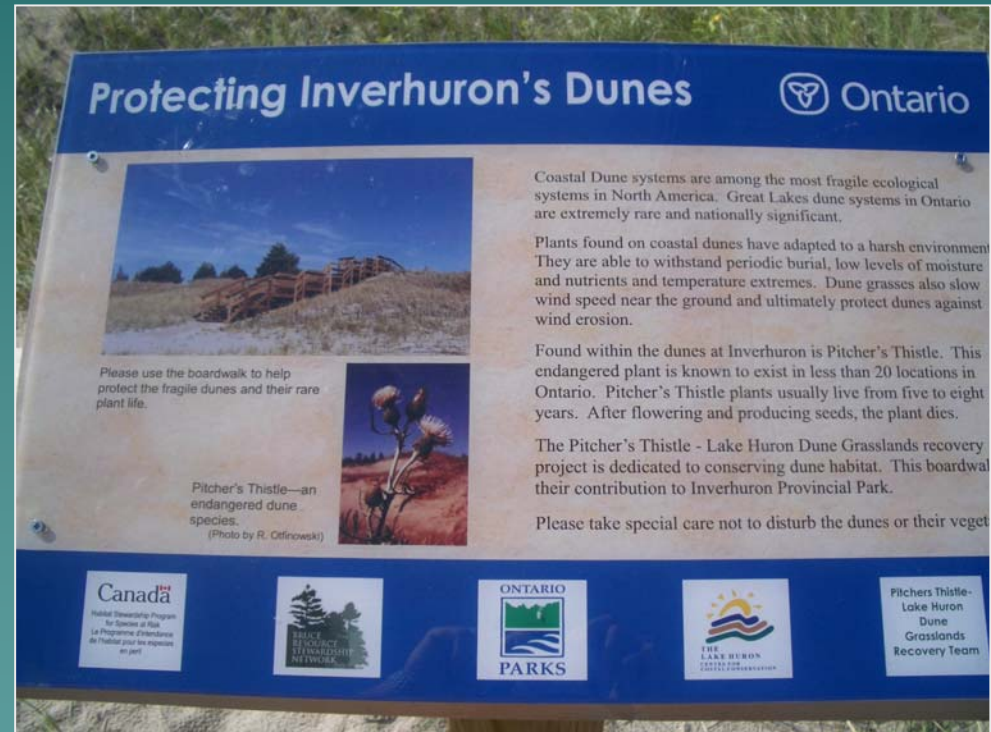


2004



2005

# Parks doing things well



# Parks doing things well

## ◆ Presqu'île

- Removal of buildings from Dune area



2003



2004



# Parks doing things well

- ◆ Presqu'île
  - Owen Point Trail





# Thank You

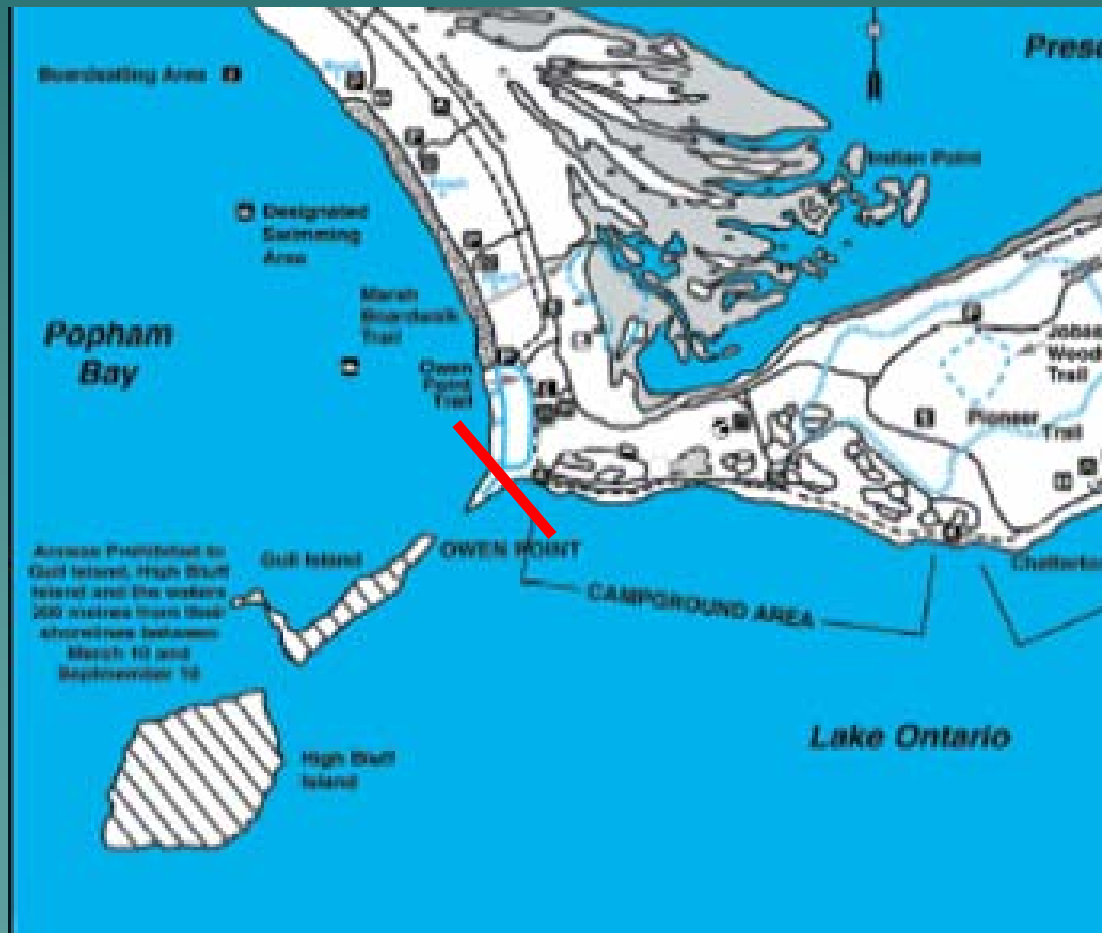
◆ Any Questions?





# Significant changes to local geomorphology since 1950

- ◆ A channel and marina at Owen Point has been filled in.



# Significant changes to local geomorphology since 1950

- ◆ Establishment of dunes with marram grass to prevent having to plough snow out of parking





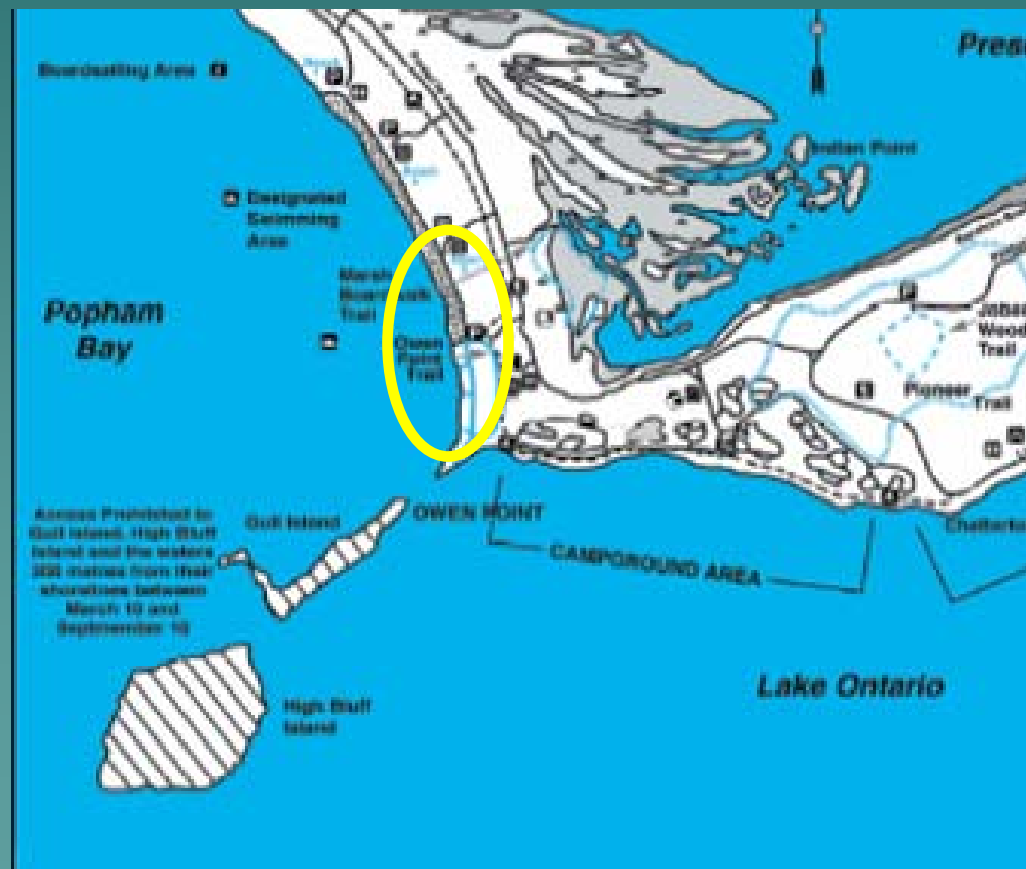
# Significant changes to local geomorphology since 1950

## ◆ Naturalizing south of Beach #4



# Significant changes to local geomorphology since 1950

- ◆ Naturalizing south of Beach #4



# Today's Park users

- ◆ Traditional beach visitors
  - In search of the sandy, fluffy beach



# Today's Park users

- ◆ Birders / naturalists
  - In search of the large flat beach with pools
  - Need minimal disturbance by other users to ensure birds are not disturbed





# Today's Park users

- ◆ Waterfowl Hunters
  - Need everyone else out...



# Today's Park users

- ◆ Dog owners

- Need space, issues with excrement and dogs chasing other users, shorebirds.



# Today's Park users

- ◆ Extreme sports
  - Need large, flat and open area.
  - Conflicts with other users and shorebirds



# Today's Park users

- ◆ Kite enthusiasts
  - Need open area with wind
  - Frighten shorebirds





# Today's Park users

## ◆ Joggers

- Prefer to run along the shoreline
- Tend to flush migrating shorebirds



# Today's Park users

- ◆ Geomorphologists
  - Trying to have a stable beach and dune system operating under natural conditions.

