Ecotourism Along New York’s Eastern Lake Ontario Coast

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7 Public Areas:

- 3 state wildlife management areas
- 2 state parks
- 1 state natural area
- 1 TNC preserve
Eastern Lake Ontario
Dune and Wetland Area
Current recreational uses
Interpretive Program

Signage
Interpretive Program

Sand, Wind, & Water

Guidebook and brochures

A recreational guide to eastern Lake Ontario’s dunes and wetlands
Interpretation Program

Dune Steward Program
Other visitor management
Other visitor management
Other visitor management
Questions to be answered...

- Are our visitor management efforts working to reduce dune erosion?
- How should we allocate our staff and budgetary resources?
  - Where is visitor use concentrated?
Evaluating the program

- Visitor use study
- Visitor survey
- Photomonitoring study
Visitor Use Study

**Purposes:**

- To identify trends in visitor use.
- To identify locations where use is concentrated.
- To identify factors that influence visitor use (e.g., weather).
Methods

- Review existing data
- Assess each property open to the public
- Based on access points and observed use, designate “Zones”
Indirect Count Method

For each zone, collect:
- Full counts on randomly selected days
- Daily spot counts (AM & PM)
- Weather data (NOAA)

An equation was calculated for each zone in each public area. For example:

Visitor Use = a + b₁(Day) + b₂(Avg. Spot Count) + …
Results

Eastern Lake Ontario Dune Area

Estimated number of visitors

- 2000: 180,000
- 2002: 160,000
- 2004: 140,000
- 2007: 180,000
- 2008: Estimated number
Results

Public areas within ELODWA

Estimated number of visitors

- Sandy Pond
- Black Pond
- Lakeview
- Southwick
- Deer Creek
- Sandy Island

Year:
- 2004
- 2005
- 2006
- 2007
- 2008

Visitors:
- Sandy Pond: 80,000
- Black Pond: 60,000
- Lakeview: 70,000
- Southwick: 80,000
- Deer Creek: 30,000
- Sandy Island: 40,000
- Total number of visitors: 300,000
Results

Sandy Pond Natural Area

Estimated number of visitors

<table>
<thead>
<tr>
<th>Year</th>
<th>Zone 1</th>
<th>Zone 2</th>
<th>Zone 3</th>
<th>Total</th>
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<td>25000</td>
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<td>2008</td>
<td>20000</td>
<td>15000</td>
<td>15000</td>
<td>25000</td>
</tr>
</tbody>
</table>
Visitor survey

Purposes:

- To identify visitor demographics.
- To identify interpretive media and facilities used by visitors.
- To identify if the ELODWA’s interpretive message is being successfully communicated to visitors.
Visitor survey

- Two-page on-site survey:
  - 1997: 93 visitors surveyed
  - 2003/04: 359 visitors surveyed
Results

- Demographics
  - 40% from within ELODWA counties
  - 90% came with family and/or friends
  - 80% repeat visitors
  - 5 hours average length of stay

- Facilities
  - Walkovers (70%) and trails (40%)

- Educational materials
  - Signs
Results: Signs

- Small interpretive signs
  - 91% (2003/04) had seen the signs.
  - 93% (of the 91% above) indicated that signs encouraged them to stay out of the dunes.
- Approval of signs:
  - 83% yes, 16% neutral, 1% no
Results

- Is the interpretive message getting across?
  - Used two open-ended questions:
    - “Why is it important that beach grass and other plants grow on the sand dunes?”
      - 78% (2003/04) and 94% (1997) stated that beach grass anchors sand.
    - “Can you list two activities that people do that cause erosion of the sand dunes?”
      - 93% (2003/04) and 98% (1997) were able to identify one visitor behavior that causes erosion.
Photomonitoring

- Purposes:
  - To identify changes in vegetative cover on dunes.
  - To identify changes in dune profile.
Photomonitoring

- 35 sites throughout ELODWA between 1997 and 2005 by The Nature Conservancy

- 5-point scale of changes in dune appearance:
  - 0 = no change
  - 1 = slight change in vegetation (less than 25% on exposed sand)
  - 2 = 25 to 50% vegetation cover change
  - 3 = over 50% vegetation coverage change
  - 4 = complete vegetation coverage + increased dune profile
Results

- Ratings of 2 to 4 in 74% of sites

Rating = 4, Sandy Pond Natural Area
Results

- Ratings of 2 to 4 in 74% of sites

Rating = 2, Black Pond WMA
Results

- 9% slight change (rating of 1)
- 17% had no change (rating of 0)

Rating = 1, Black Pond WMA
Conclusion

- **Visitor use study:**
  - Establish a data collection protocol
  - Able to monitor use by day of week and location
  - Identify where staffing increases were needed

- **Visitor survey:**
  - Assess effectiveness of educational materials at encouraging positive behaviors
  - Assess facility use

- **Photomonitoring:**
  - Assess restoration of impacted areas
Any questions?

- Thanks to the Dune Stewards, SUNY ESF, NY Sea Grant, & The Nature Conservancy for making this study possible.

- Visitor use report: www.esf.edu/for/kuehn/reports.htm