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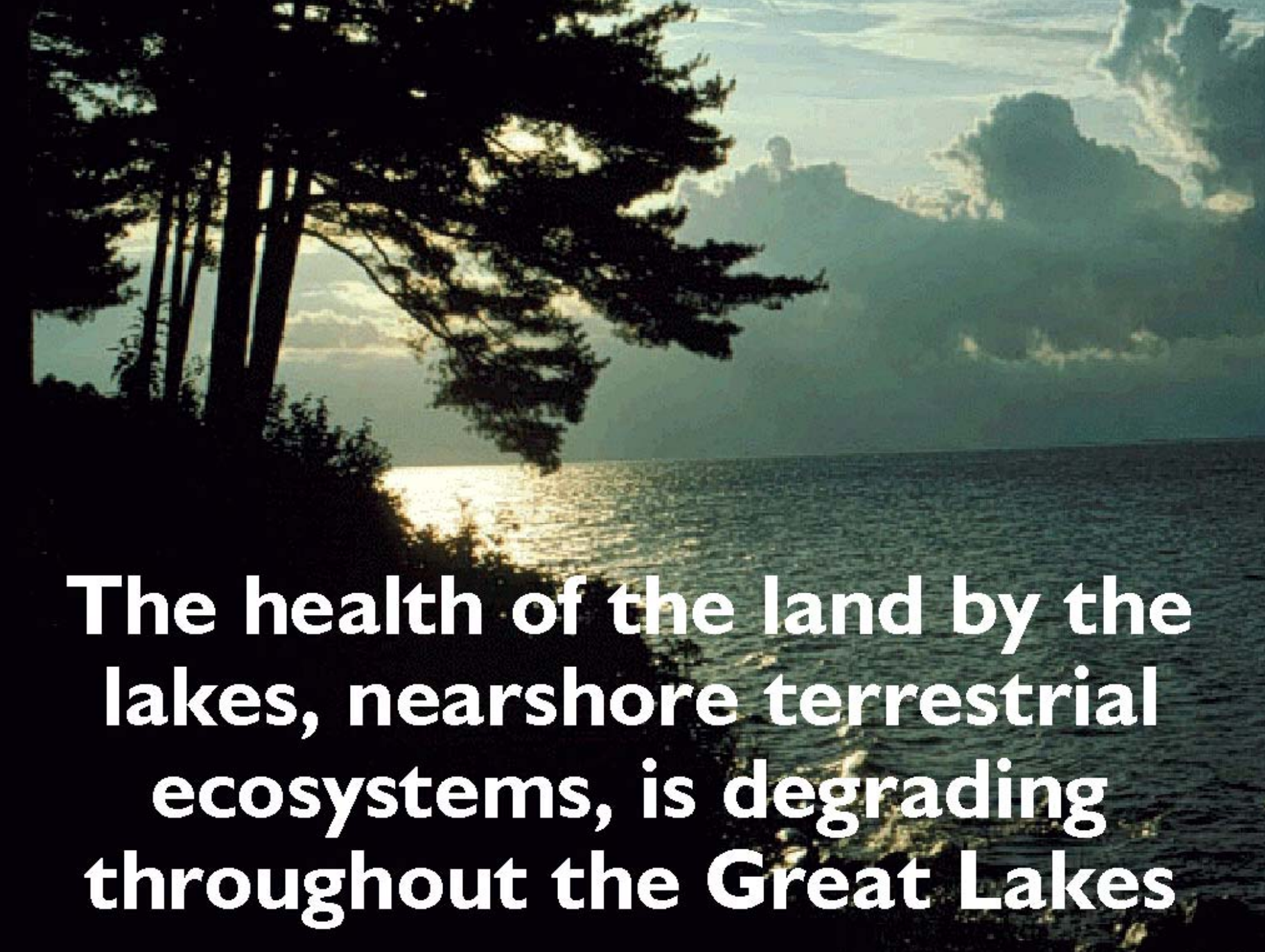
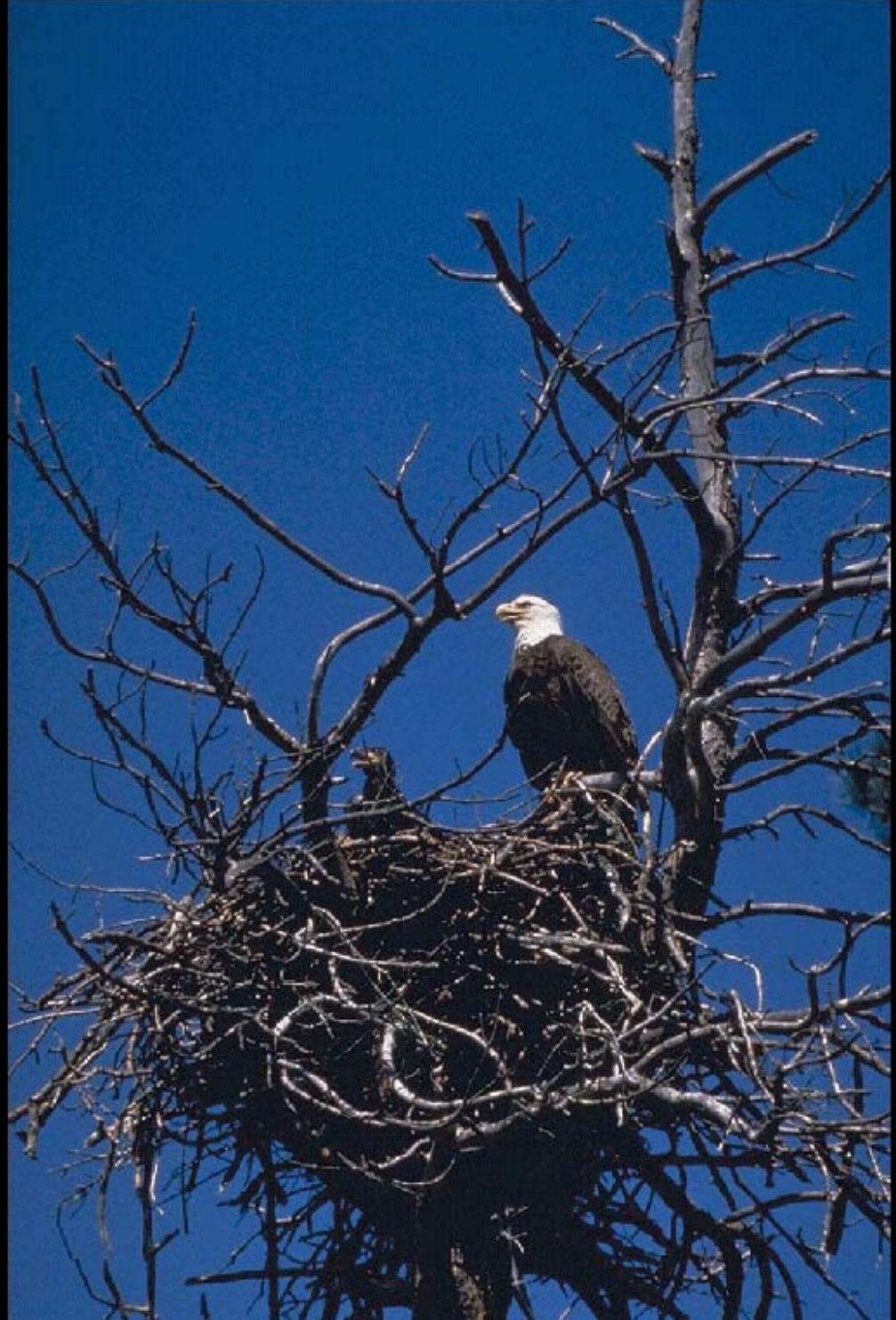
The Land by the Lakes

Nearshore Terrestrial Ecosystems

Karen Holland, presenting
U.S. EPA
Chicago, Illinois

Ron Reid
Bobolink Enterprises
Washago, Ontario


The health of the land by the lakes, nearshore terrestrial ecosystems, is degrading throughout the Great Lakes




CASE
The Piping Plover

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What does all this information mean?

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Three sets of indicators help us determine:

- What's happening to significant ecosystems,
- Why the results are significant,
- How ecosystems are being affected, and
- What we are doing about it.

Ecoregions are large landscape areas defined by climate, physical characteristics, and the plants and animals living there.

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Factors used in determining Great Lakes coastal ecoregion quality:

- Characteristic shoreline types
- Significant natural communities
- Existing representation in parks/protected areas
- Priority unprotected features
- Urban area within shoreline watersheds

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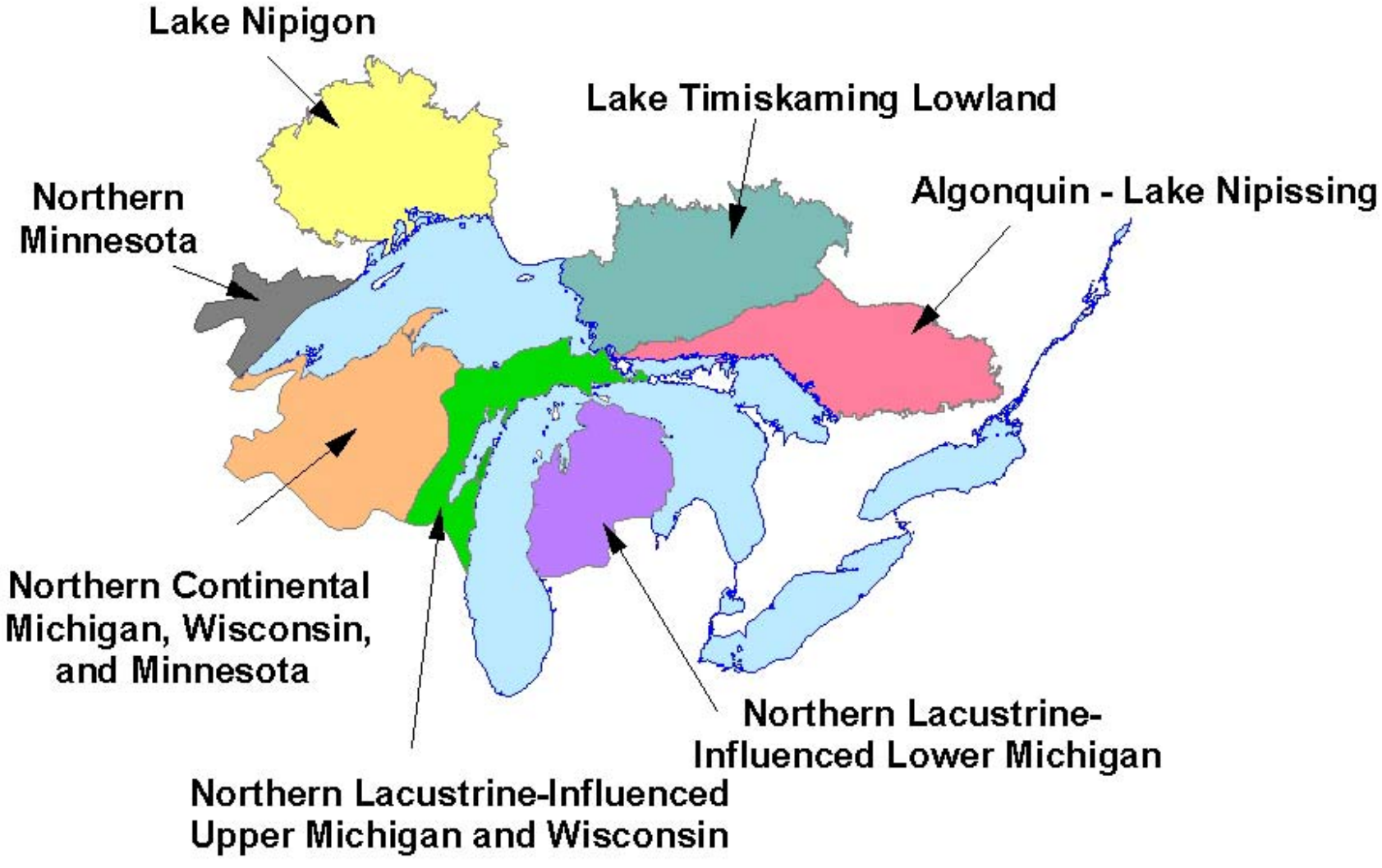
Factors used in determining Great Lakes coastal ecoregion quality:

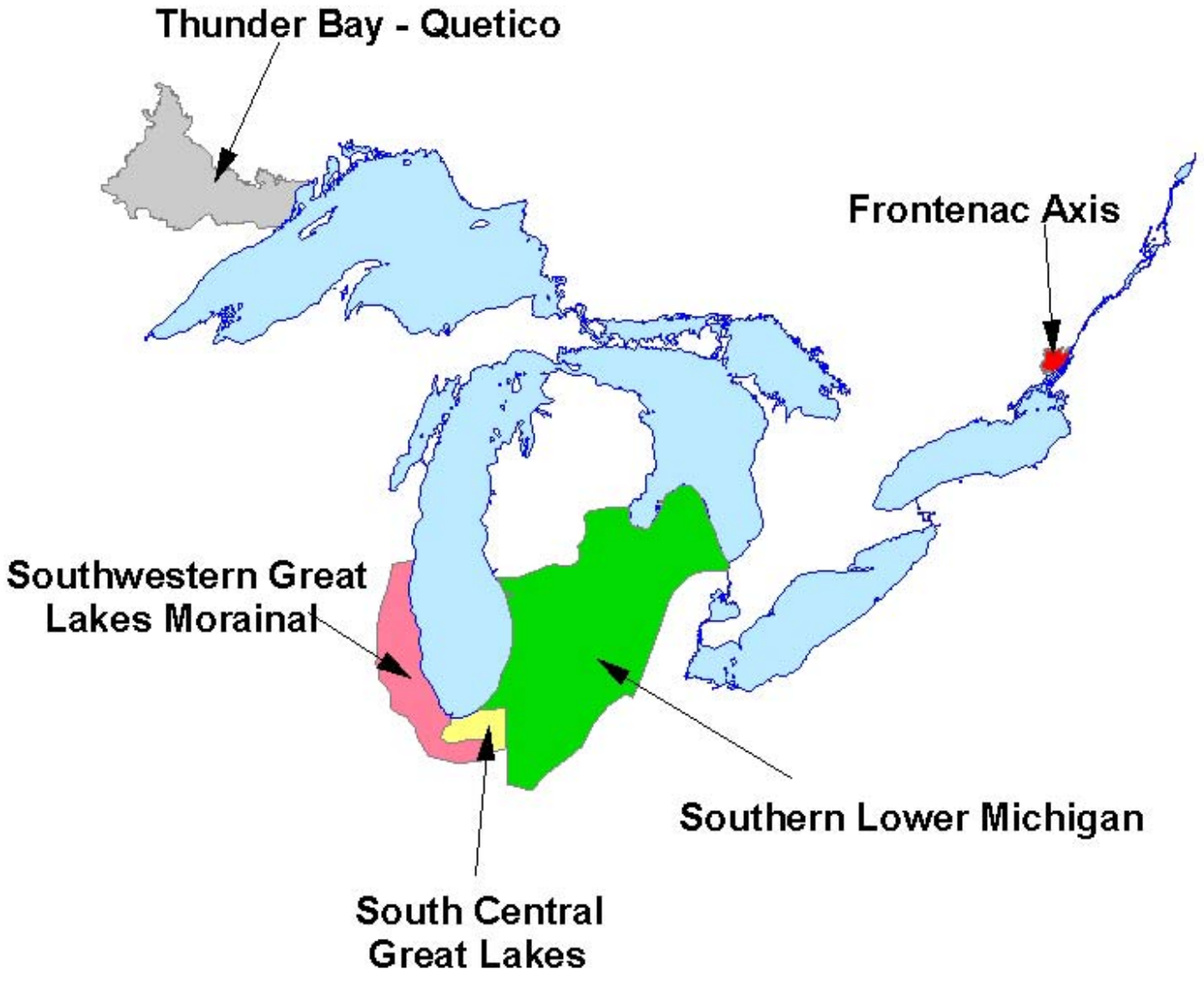
- Agriculture within shoreline watersheds
- Residential/cottage/marina shoreline use
- Lake edge armoured against erosion
- Rate of land-use change
- Planning/restoration activities under way
- Trend in shoreline health

“A” Rated Ecoregion

“B” Rated Ecoregions



“C” Rated Ecoregions



“D” Rated Ecoregions

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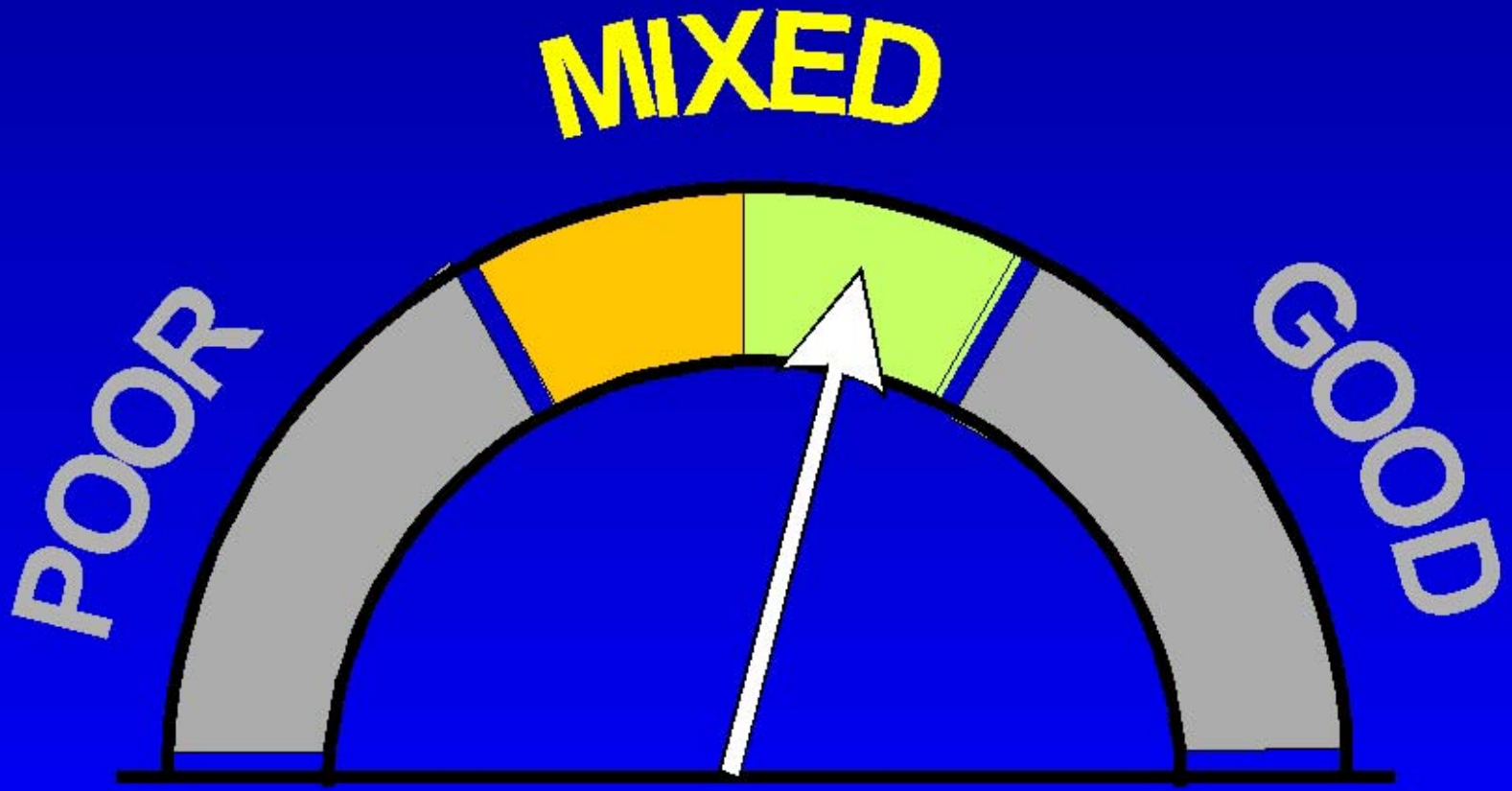
Overall Quality of 17 Great Lakes Ecoregions



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For our purposes, significant ecological communities are places having unique physical features and habitats supporting unique plant and animal life.

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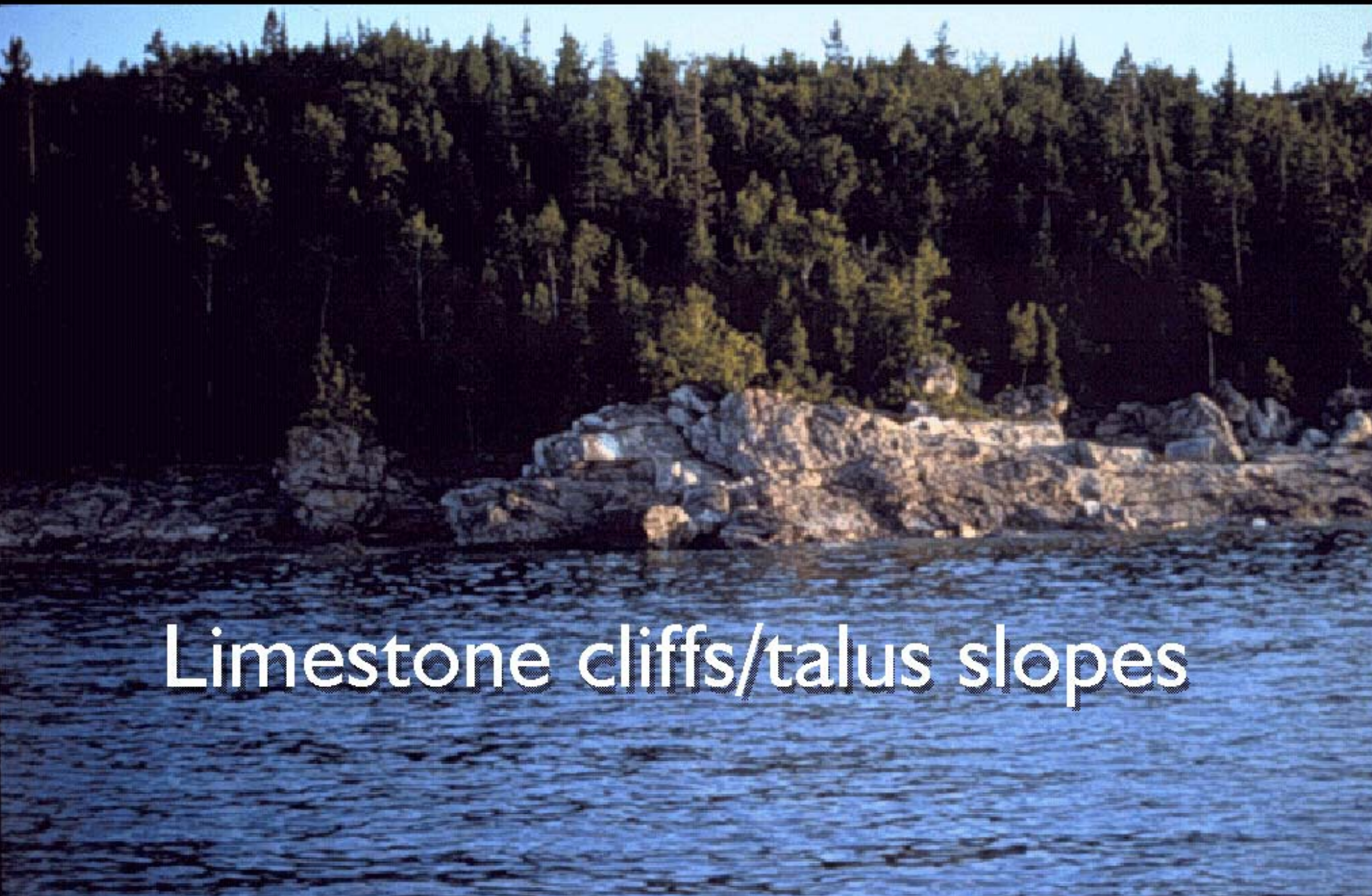
Factors used in determining the quality of Great Lakes ecological communities:

- % remaining in a healthy state
- Major stresses
- Sources of stress
- Processes/functions impaired
- Species/communities threatened/endangered
- Stewardship activities in place
- Trend from no change to severely degrading

"B" Rated Ecological Community



"B" Rated Ecological Community

Arctic-alpine disjunct communities

"C" Rated Ecological Community

Sand beach

"C" Rated Ecological Community

"C" Rated Ecological Community

"C" Rated Ecological Community

Atlantic coastal plain communities

"C" Rated Ecological Community

"D" Rated Ecological Community

"D" Rated Ecological Community

Bedrock beach

"D" Rated Ecological Community

Sand barrens

"F" Rated Ecological Community

"F" Rated Ecological Community

Shoreline alvars

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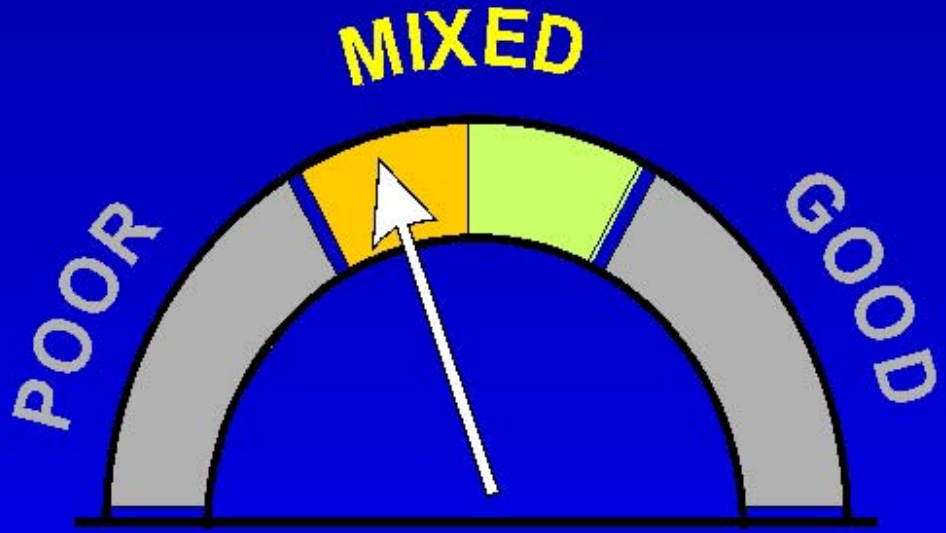
Overall Quality of 12 Significant Ecosystems



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Loss of shoreline species/communities

Good: Lake Superior

Mixed/Deteriorating: Lake Michigan
Lake Huron
Lake St. Clair
Lake Erie
Lake Ontario

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Interruption of shoreline processes by armouring

Good:	Lake Superior
Mixed/Improving:	Lake Huron
Mixed/Deteriorating:	Lake Michigan
Poor:	Lake St. Clair Lake Erie Lake Ontario

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Respresentation of Biodiversity in Lakeshore Parks and Protected Areas

Good:	Lake Superior
Mixed/Improving:	Lake Huron
Mixed/Deteriorating:	Lake Michigan
	Lake St. Clair
	Lake Erie
	Lake Ontario

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Gains in Biodiversity Investment Areas

Mixed/Improving:	**Lake Superior** **Lake Michigan**
Mixed/Deteriorating:	**Lake Huron** **Lake Ontario**
Poor:	**Lake St. Clair** **Lake Erie**

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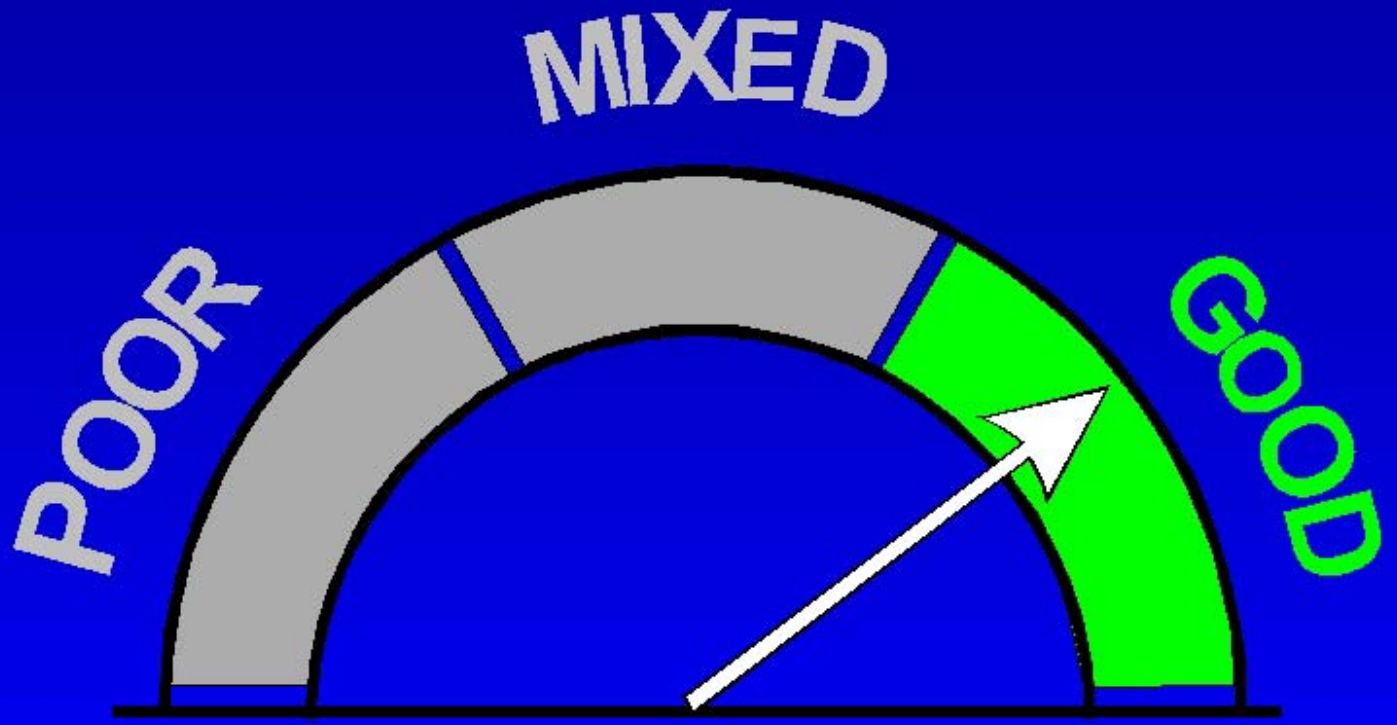
Lake Superior



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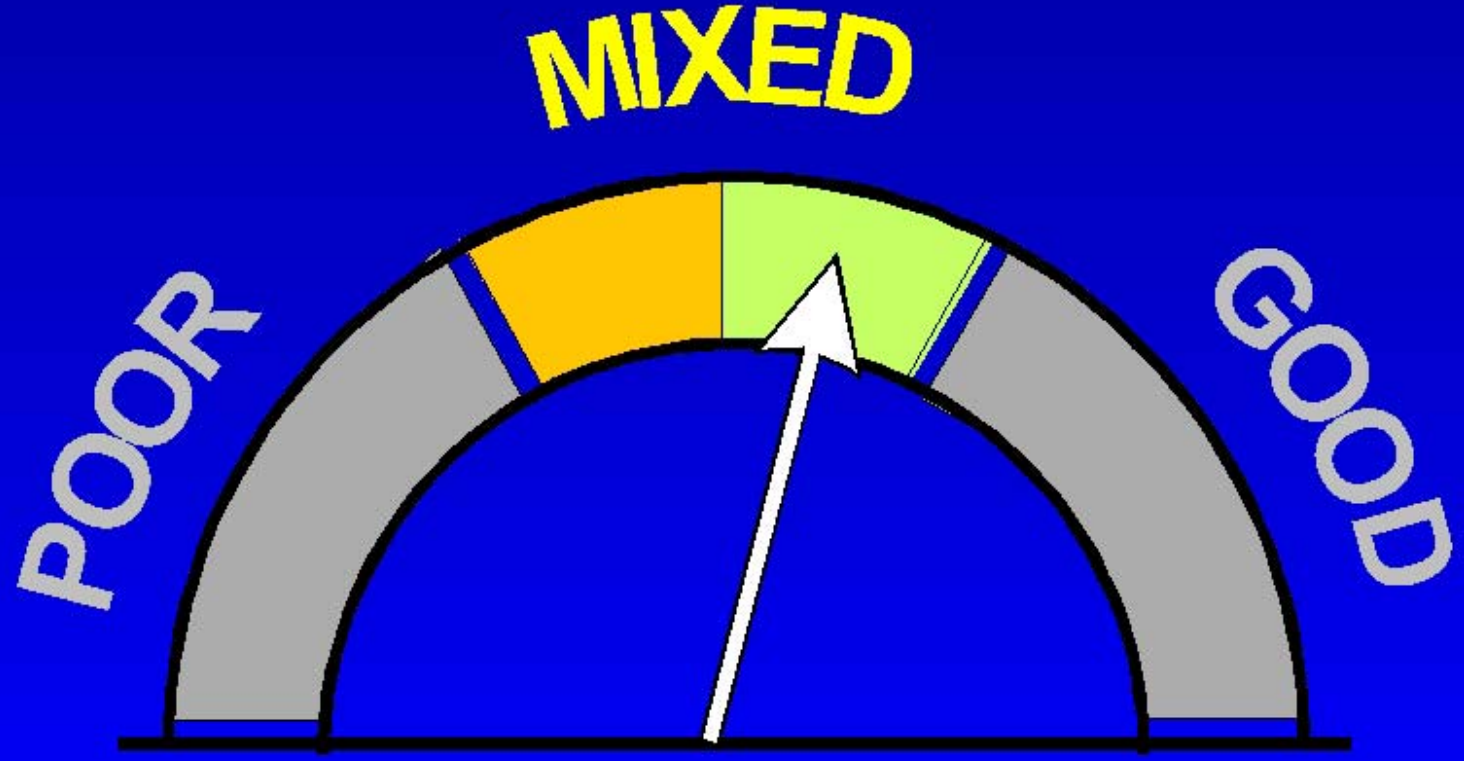
Lake Huron



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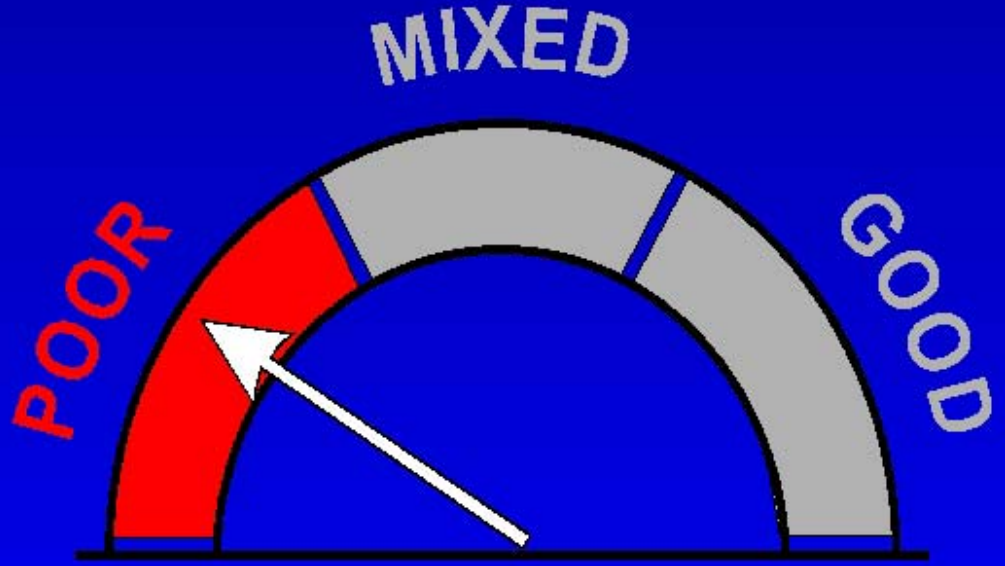
Lake Michigan
Lake St Clair/Lake Erie
Lake Ontario



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Challenge 1:

Recognize that landscapes range from the unique and rare to degraded by human impacts

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Challenge 2:

Acknowledge rich shoreline biodiversity

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Challenge 3:

Address shoreline ecosystem fragmentation

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Challenge 4:

Sustain physical processes

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Challenge 5:

Understand seasonal and geologic timetables

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Challenge 6:

Combine appropriate planning and stewardship tools

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Challenge 7:

Invite participation by all citizens

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Conservation Needs:

- Identify the effects of human-induced water-level changes on the functioning of shoreline natural ecosystems;
- Increase understanding of the long-term effects of beach and dune erosion or nourishment;
- Establish the synergistic effects of human-induced stressors on the 12 special lakeshore community types; and,
- Assess the representation of coastal biodiversity within ecoregions and ecodistricts.

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One Over-arching need:

A conservation strategy for Great Lakes coastal areas

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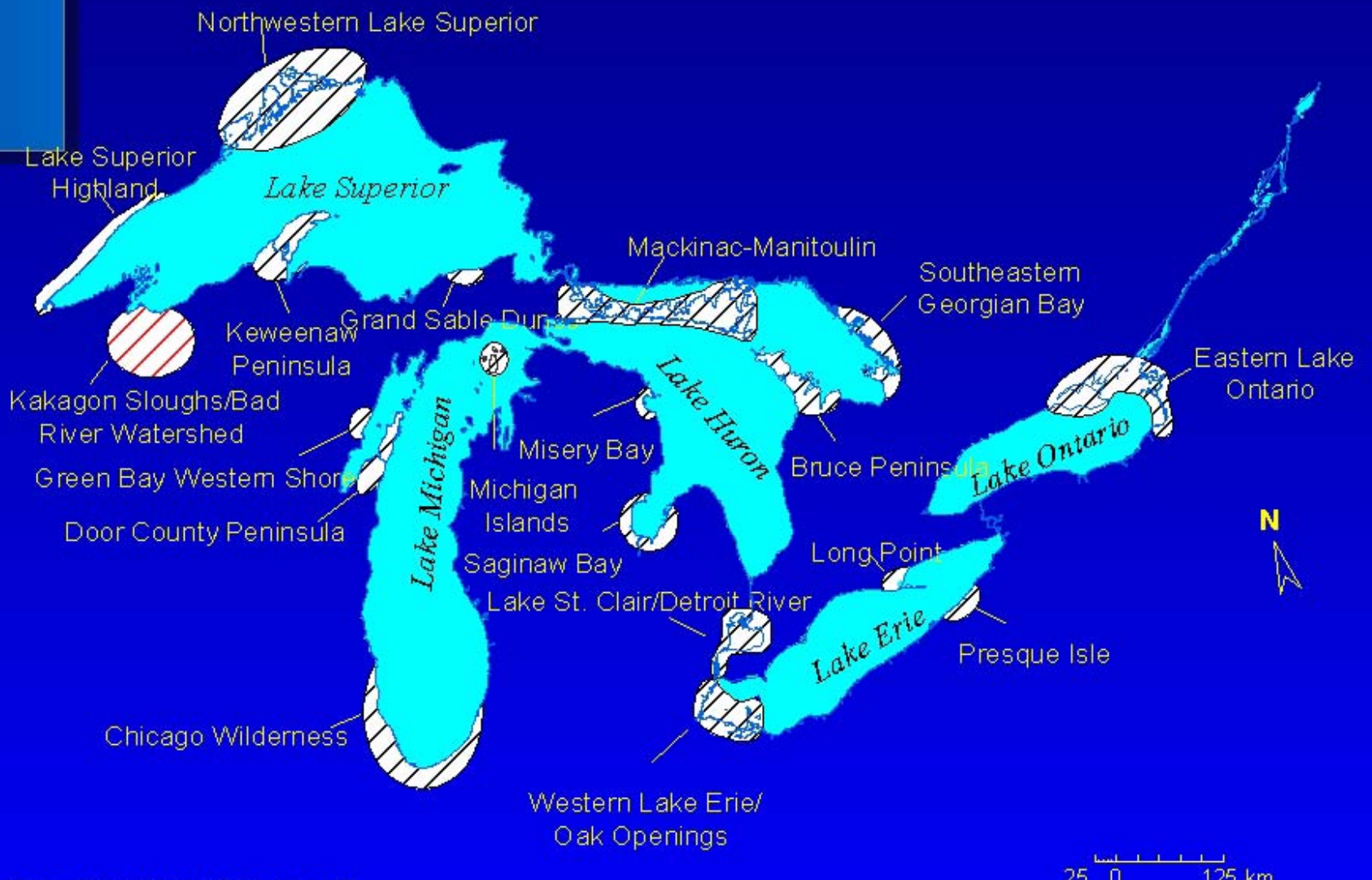
Biodiversity Investment Areas



Note: areas are not drawn to scale