

Biodiversity Investment Areas Integration

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Biodiversity Investment Areas Basis for Progress

- Original concept at SOLEC 1996
- SOLEC 1998 – background papers on terrestrial, wetlands, aquatic
- Need for a single over-arching BIA system
- IJC recommendation

Biodiversity Investment Areas (BIAs)

- Broad areas
- Clusters of values
- Coastal areas
- High potential for restoration as well as pristine



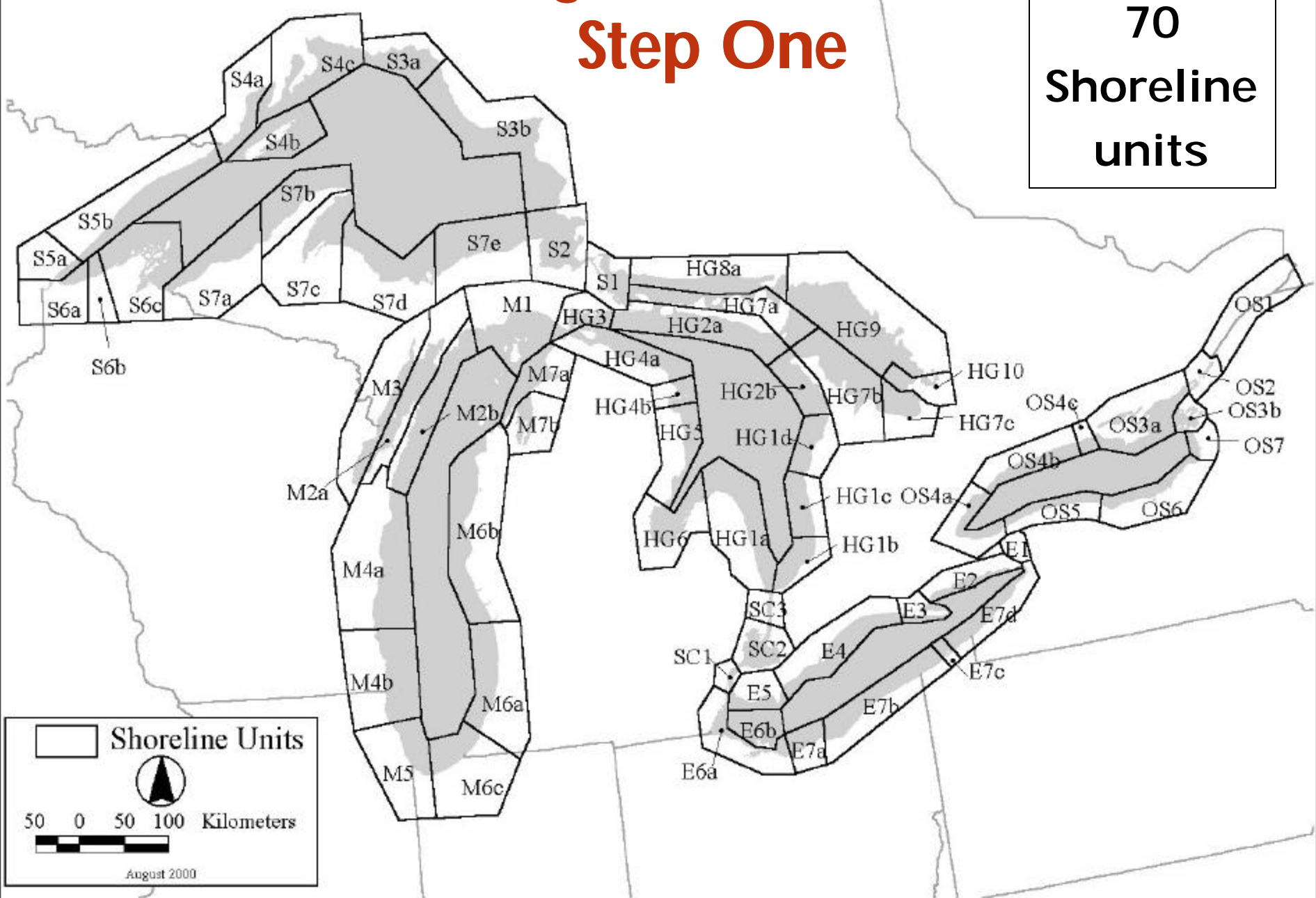
Why BIAs?

- Focus attention
- Engage citizens and agencies
- Great Lakes Water Quality Agreement goal
- International commitments
- Benchmarks for ecological indicators



Integration Process Step One

70
Shoreline
units



Integration Process

Step Two

- Develop integrated over-arching criteria
- *Criterion 1: Species or communities of special interest*
- *Criterion 2: Diversity of habitats, communities and species*
- *Criterion 3: Productivity and integrity*



Integration Process

Step Three

- Identify available data sets to assess each criterion
- 10 data sets used
- For each data set, compare relative values for each shoreline unit - adjust for shoreline length
- Compile to derive a relative rank for each criterion

Data sets for Criterion 1

Special communities/species

- Rare species and community occurrences
- High-quality habitat areas
- Coastal wetlands
- Important Bird Areas

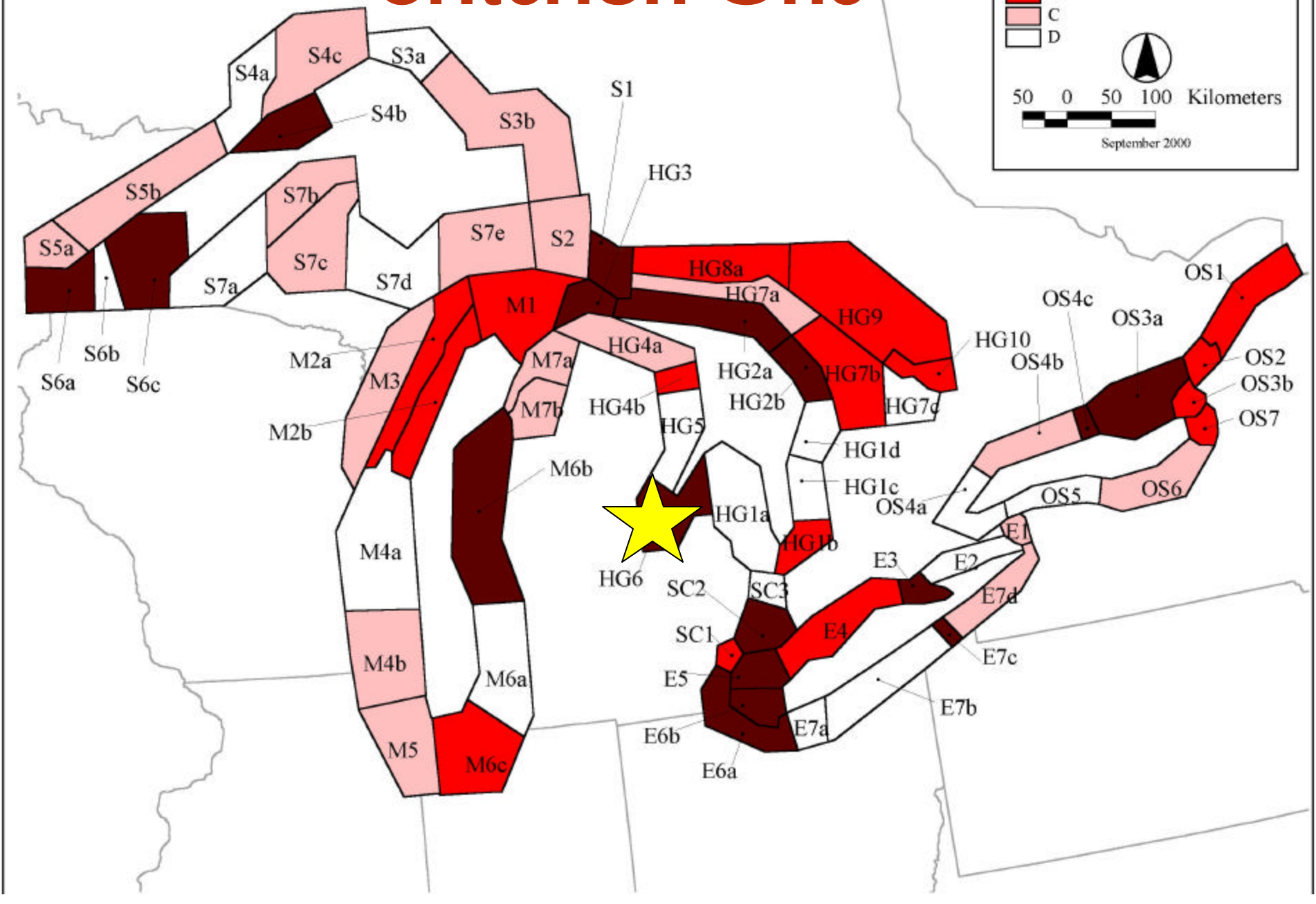
Criterion One

Criterion 1 (Special Interest) Ranking

Dark Red	A
Red	B
Light Red	C
White	D

50 0 50 100 Kilometers

September 2000



Data sets for Criterion 2

Diversity

- Shoreline substrate diversity
- Shoreline complexity
- Fish spawning and nursery areas

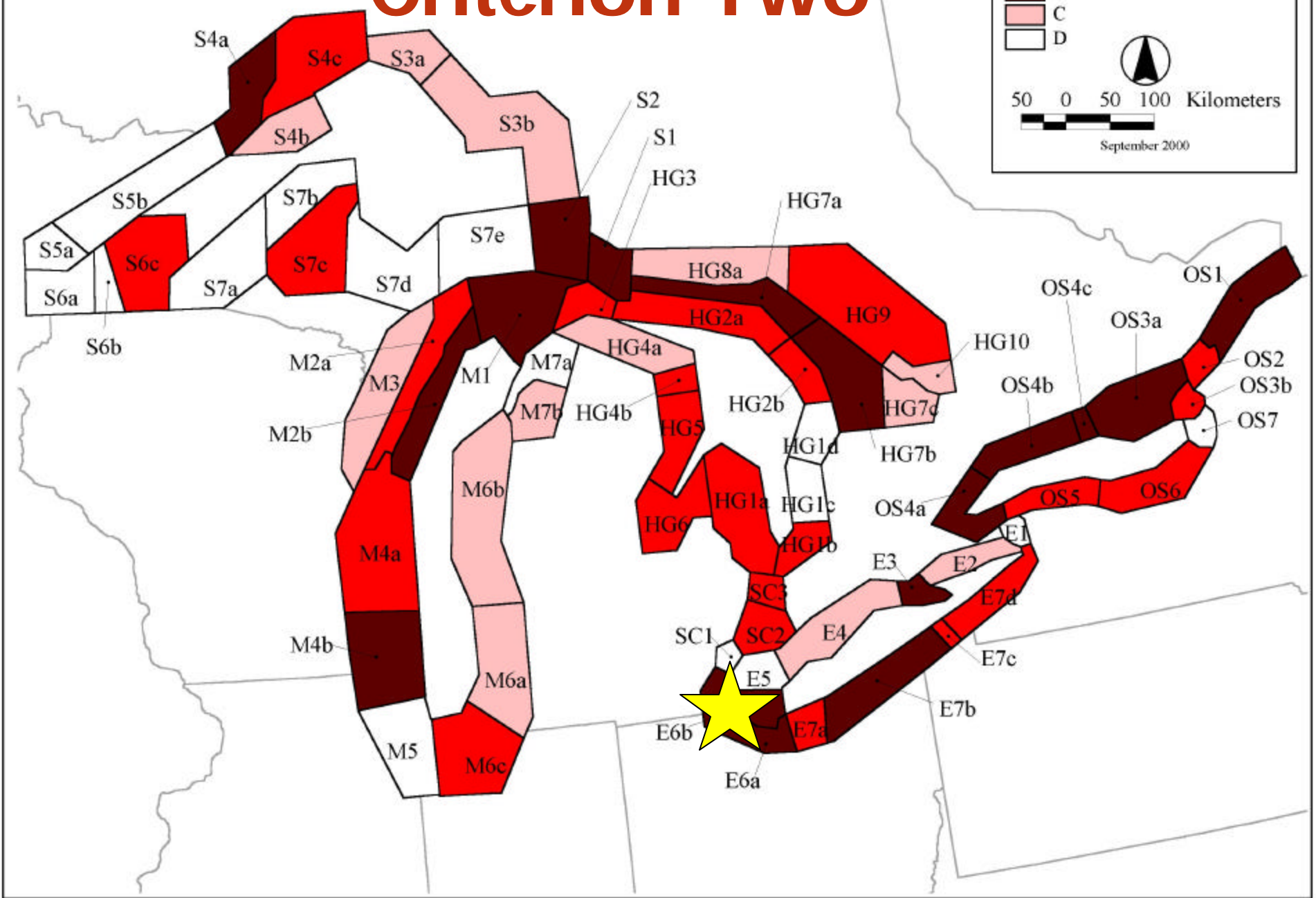
Criterion Two

Criterion 2 (Diversity) Ranking

Dark Red	A
Red	B
Light Red	C
White	D

50 0 50 100 Kilometers

September 2000

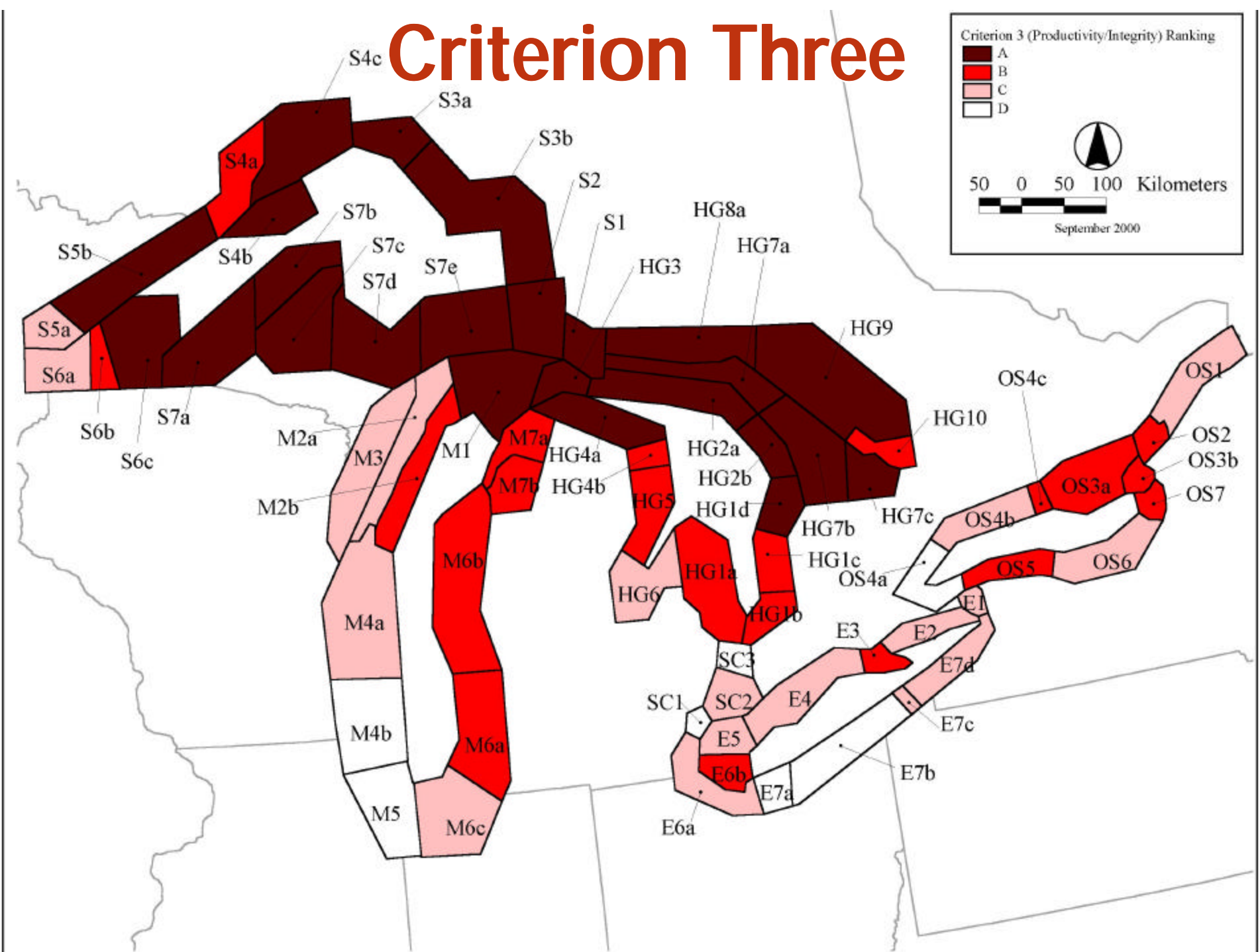


Data sets for Criterion 3

Productivity and Integrity

- Percentage of shoreline hardened
- Trophic degradation of nearshore waters
- Historic wetland loss

Criterion Three

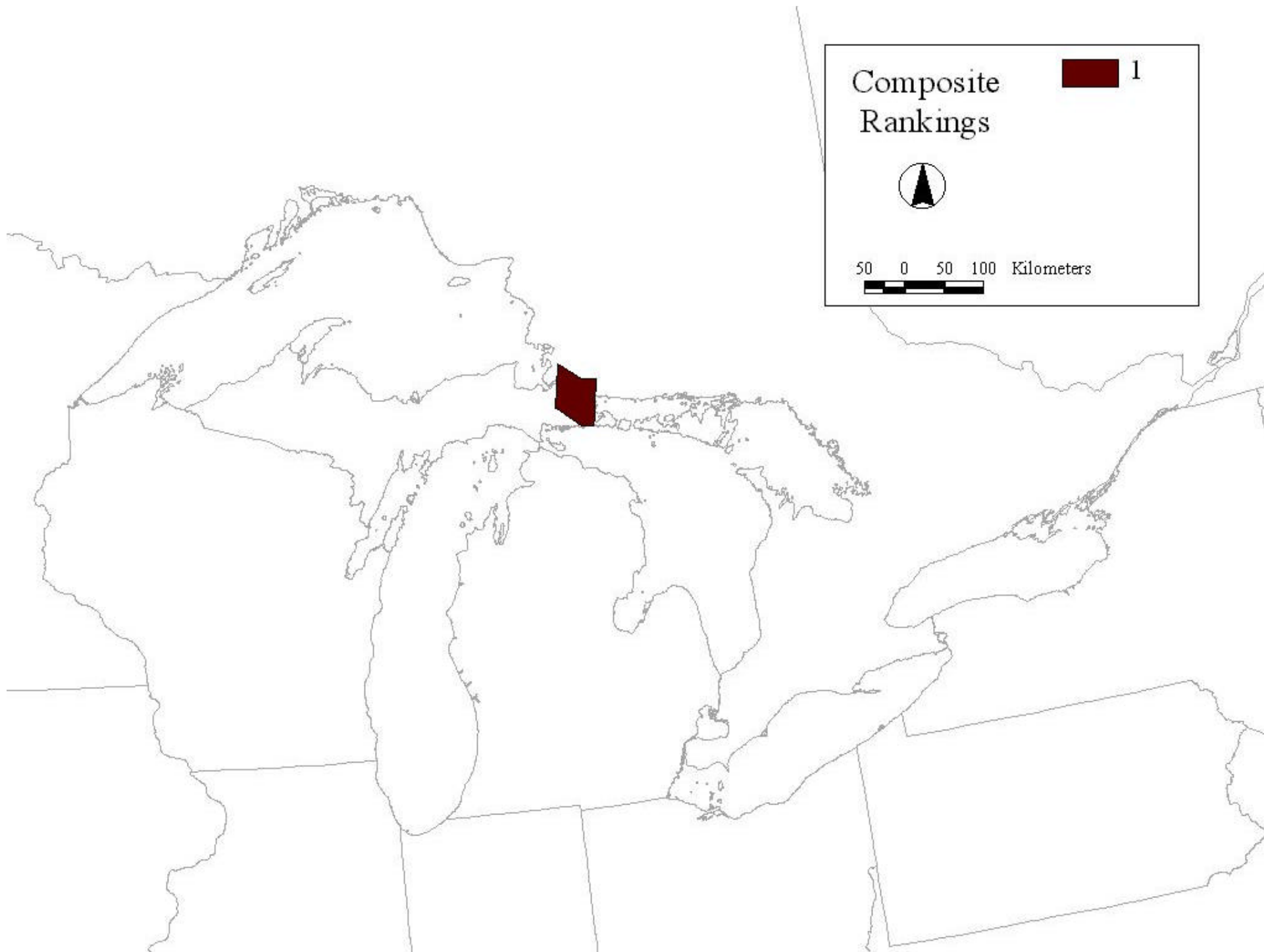


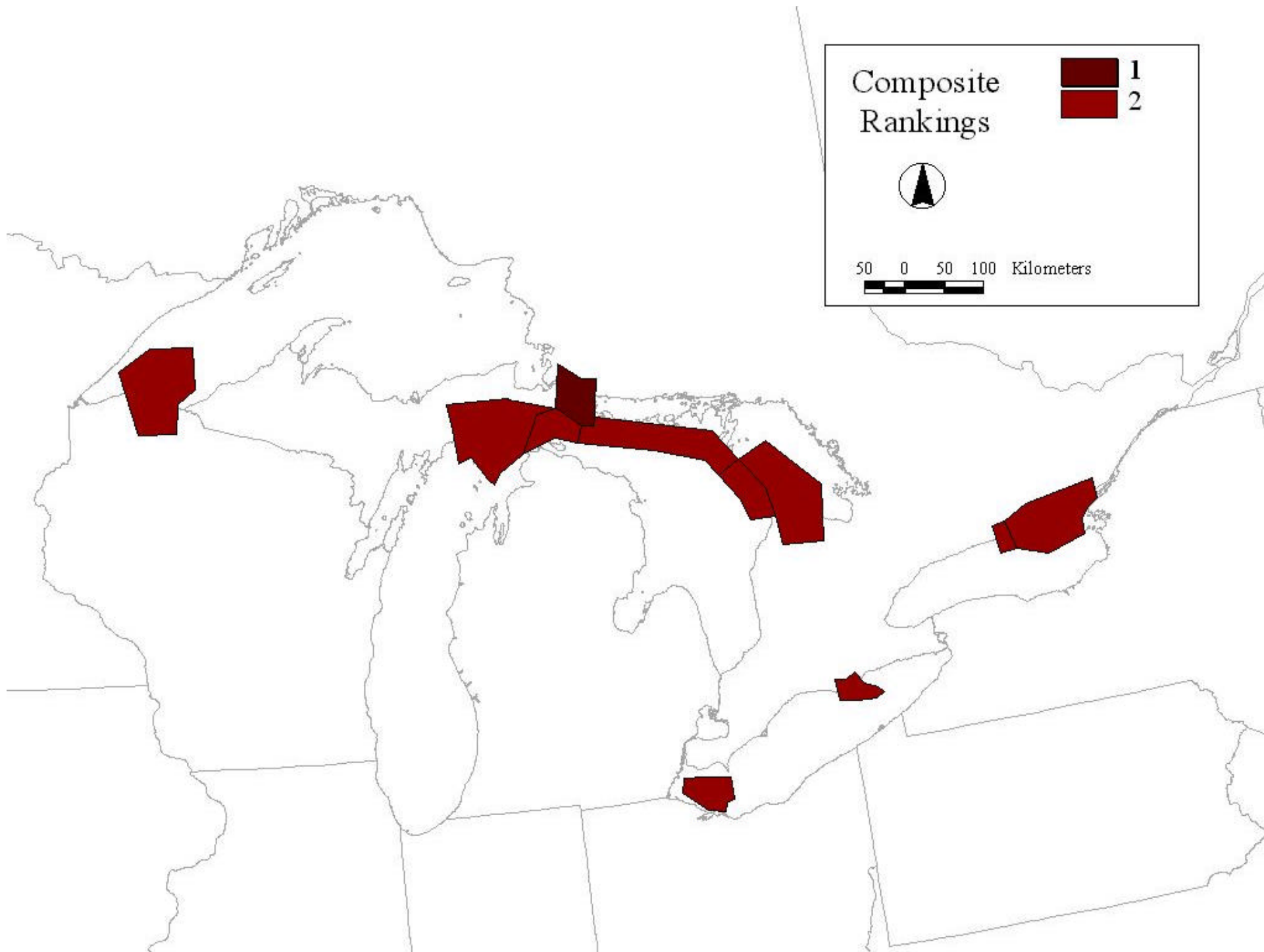
Integration Process

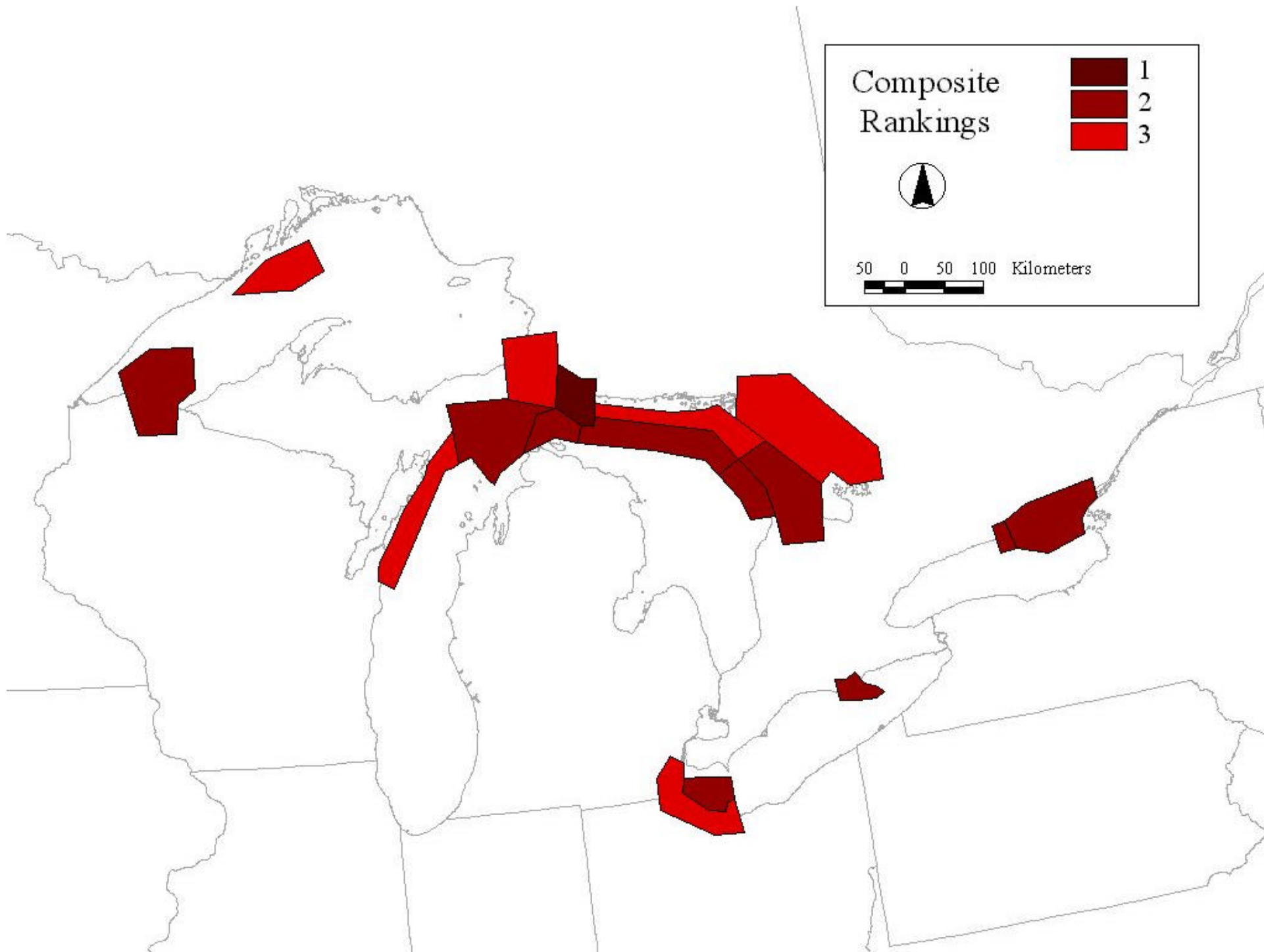
Step Four: Composite Rankings

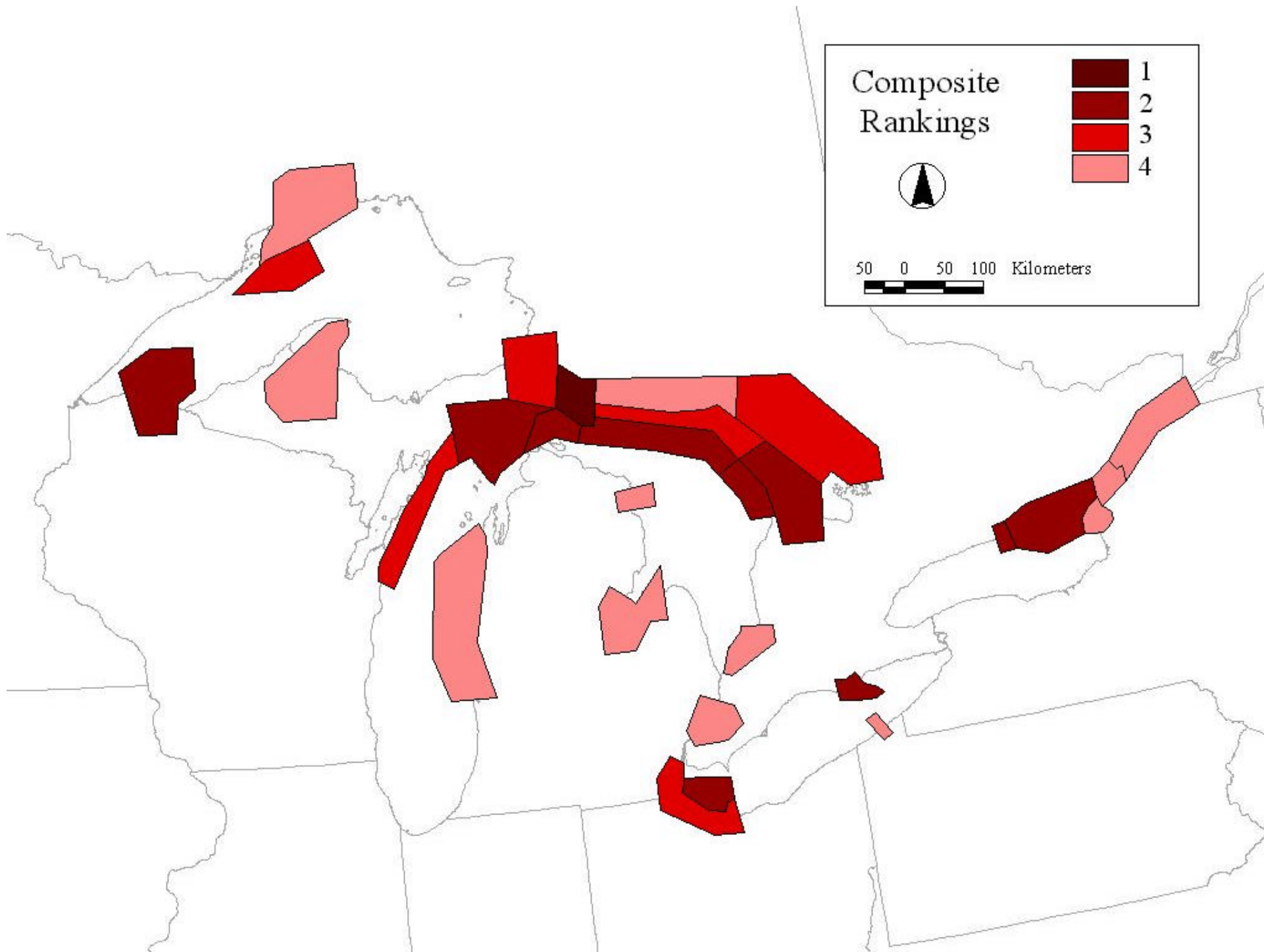
- Overlay rankings for all 3 criteria
- Areas with highest composite ranks

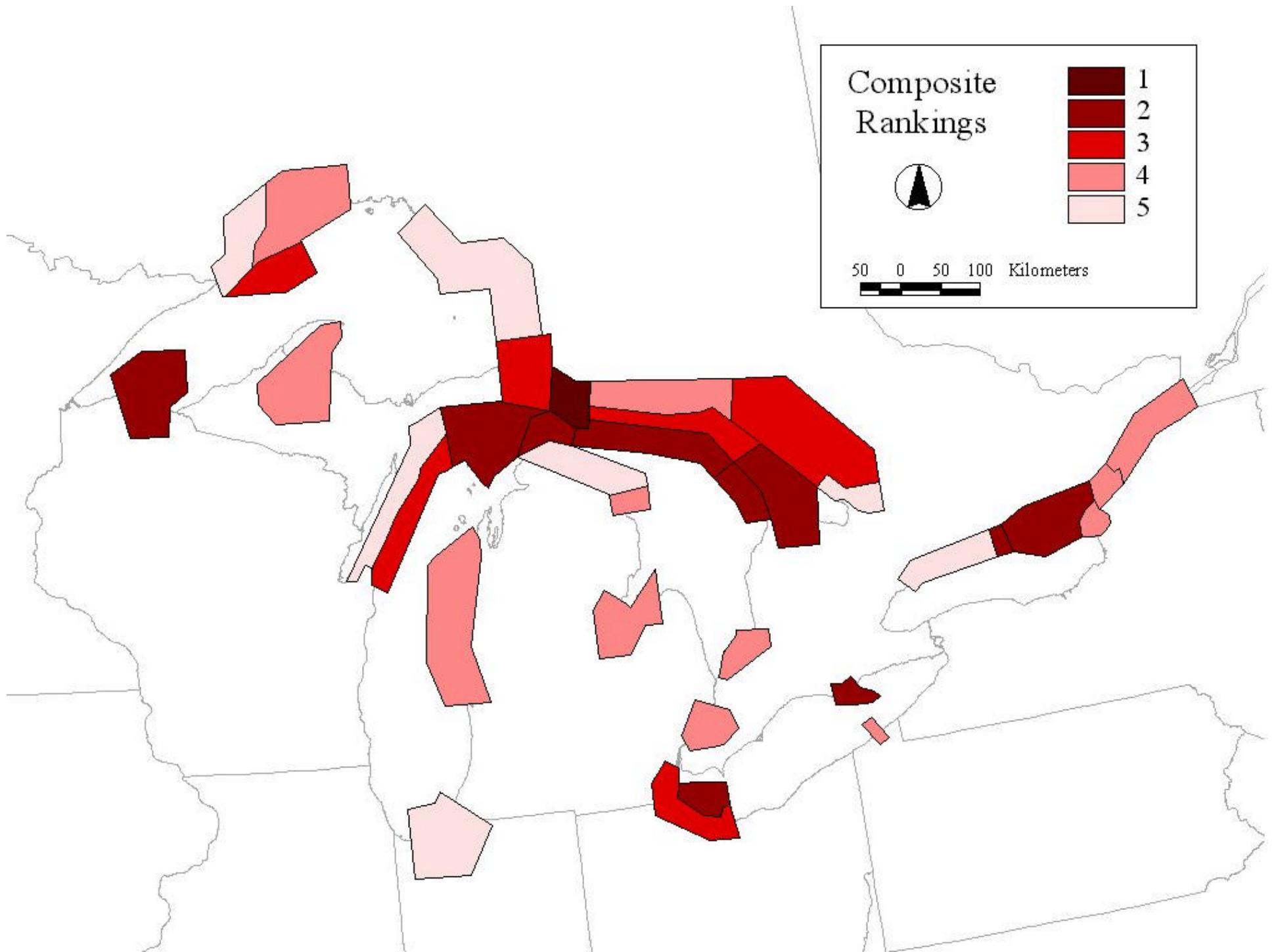
=> potential BIAs

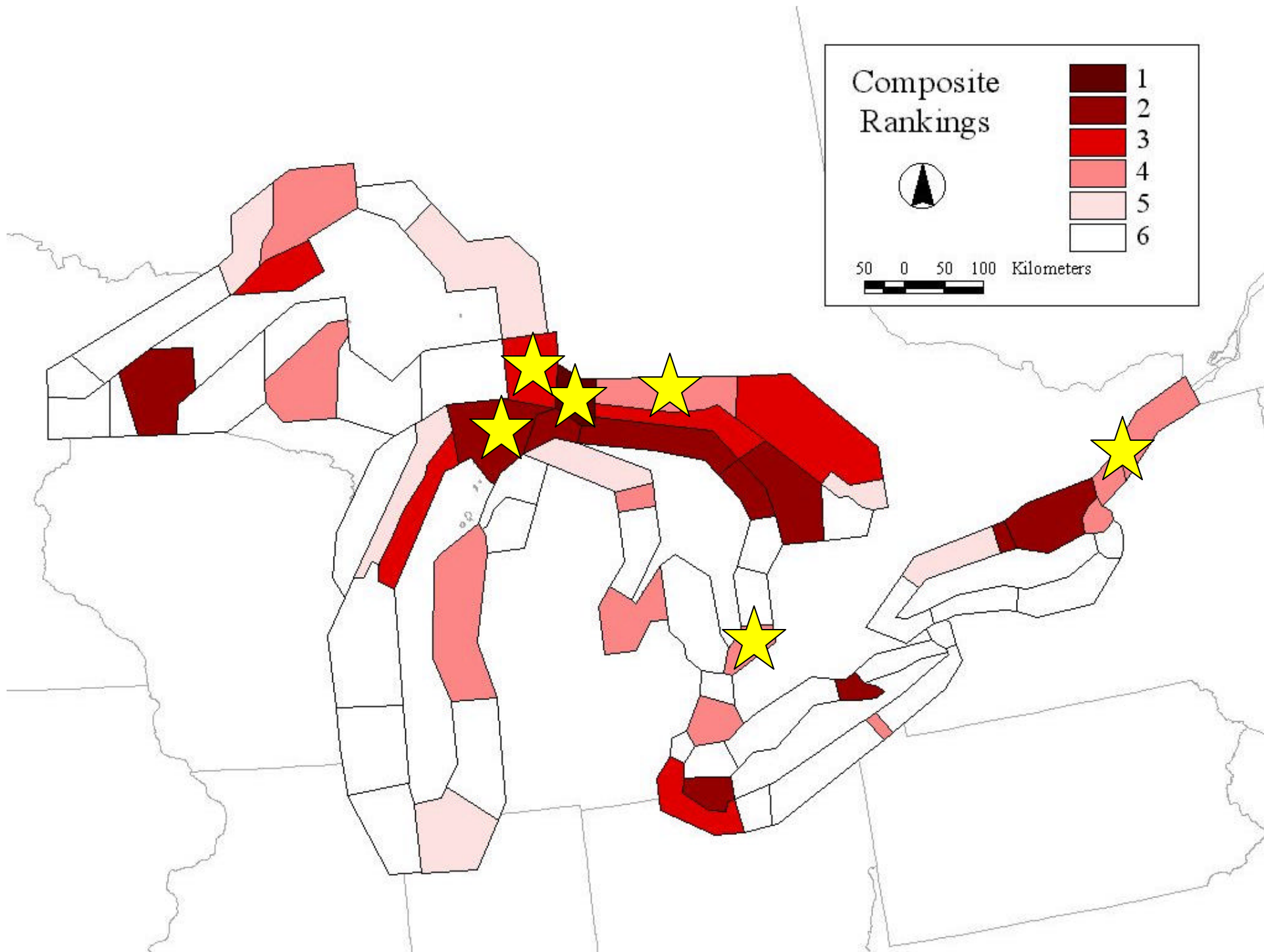














Case Studies

Long Point -
Lake Erie

Western
Lake Superior

Les Cheneaux
Lake Huron





Integrated BIAs: Stressors

- Changing land use
- Non-native species
- Climate change

Integrated BIAs: Successes

- Georgian Bay - Littoral Biosphere Reserve
- Door Peninsula - Stewardship Council
- Manitoulin Island - collaborative land purchase

Ontario Living Legacy Heritage Coast



Biodiversity Investment Areas



Maintaining...
Key Habitat Areas
Protecting...
Shoreline Habitats





**Biodiversity
Investment
Areas**

The Challenge