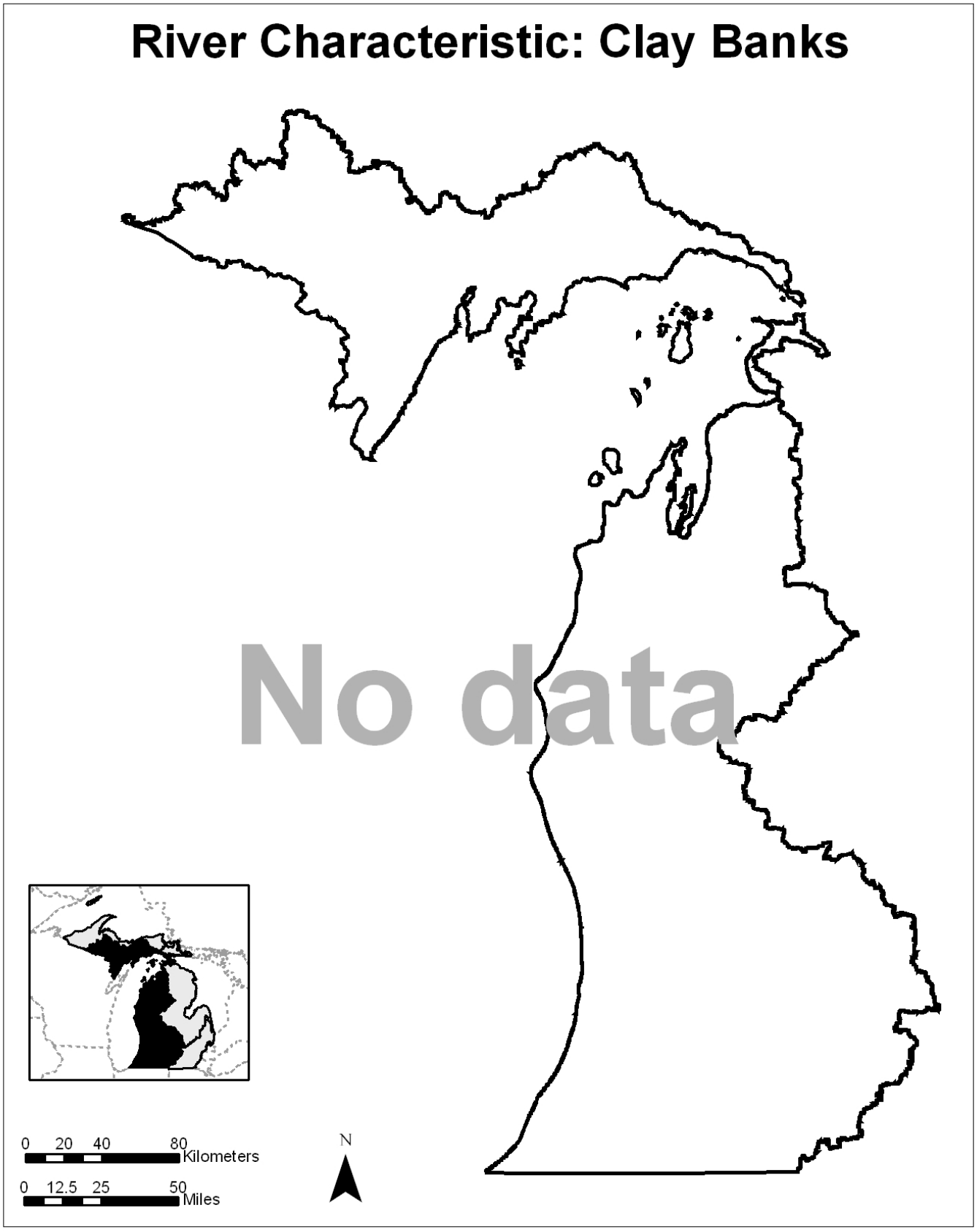
River Characteristic: Clay Banks



River Characteristic: Clay Banks

Description

Banks are the ground bordering a channel above the streambed and below the level of rooted vegetation that often has a gradient steeper than 45^{o} and exhibits a distinct break in slope from the stream bottom; the portion of the channel cross section that restricts lateral movement of water during normal streamflow. Clay banks are predominantly composed of natural earthy material which is plastic when wet, and consist essentially of hydrated silicates of aluminum, less than 4µm.

General Condition of Feature

This habitat is considered 45% in good to excellent condition, 30% in fair condition, and 25% in degraded to very degraded condition.

Associated Species of Greatest Conservation Need

SNAILS
brown walker (*Pomatiopsis cincinnatiensis*)

Associated Threats

MODIFICATION OF NATURAL PROCESSES
- Altered hydrologic regimes: Hydraulic flow changes due to landscape usage, causing bank slumping, and erosion

POLLUTION
- Altered sediment loads: Erosion; Sand deposition over clay layers
- Pesticides and herbicides: Molluscicides (low threat)

HABITAT CONVERSION
- Riparian modification: Seawalls; Shoreline and riparian development

CONSUMPTIVE BIOLOGICAL RESOURCE USE
- Mining practices: For making pottery (low threat)

Conservation Actions Needed (Threats addressed)

LAND, WATER & SPECIES MANAGEMENT
- Allow seasonal flooding (altered hydrologic regimes)
- Decrease amount of impervious surfaces (altered hydrologic regimes)
- Maintain or establish riparian buffers of at least 50 ft., but 500 ft. or wider maximizes conservation benefits (altered hydrologic regimes, altered sediment loads, riparian modification)
- Maintain or rehabilitate river to original flow path and hydrologic functions, i.e., connect meanders, throughflow, wetlands (altered hydrologic regimes, altered sediment loads)
- Soften or remove hard river structures (riparian modification)

LAW & POLICY
- Limit water withdrawals in flow-limited or groundwater-fed systems (altered hydrologic regimes)
- Protect the natural seasonal flow patterns of the river by incorporating best management practices (altered hydrologic regimes, altered sediment loads)
- Remove dams to rehabilitate natural hydrology (altered hydrologic regimes)
- Work with local governments to develop and refine planning and zoning regulations and ordinances that consider natural processes (variety of threats)
- Work with local officials on setback and buffer ordinances (riparian modification)

Research and Survey Needs
- Determine the importance of this landscape feature in individual watersheds
- Determine the species that require this habitat (e.g., amphibians and reptiles, snails, crayfish)
- Model hydrologic flows for each watershed
- Inventory erosion sites and determine rehabilitation needs
- Survey sediment loads to watersheds and develop strategies to reduce identified problems

Monitoring
- Erosion sites
- Riparian modification
- Shoreline modification