

Aquatic Characteristic: Clay Substrates

Description

Clay substrates are predominately composed of natural earthy material which is plastic when wet, and consists essentially of hydrated silicates of aluminum, less than 4µm.

General Condition of Feature

No data available.

Associated Species of Greatest Conservation Need

CRAYFISH

devil crawfish (*Cambarus diogenes*)

FISH

grass pickerel (*Esox americanus*)

shortjaw cisco (*Coregonus zenithicus*)

Associated Threats

HABITAT CONVERSION

- Dams: Dams in rivers (low threat)
- Dredging and channelization: Dredging; Filling

CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Mining practices: Clay mining (low threat)

Conservation Actions Needed (Threats addressed)

LAND, WATER & SPECIES MANAGEMENT

- Avoid stream relocations (dredging and channelization)
- Engineered drainage channels should mimic natural stream channel stability (channel dimension, pattern, and profile) (dredging and channelization)
- Preserve woody riparian vegetation to reduce sedimentation (dredging and channelization)
- Rehabilitate channel diversity (dredging and channelization)
- Restrict dredging and channelization activities (dredging and channelization)

LAW & POLICY

- Limit dredging and channelization

EDUCATION & AWARENESS

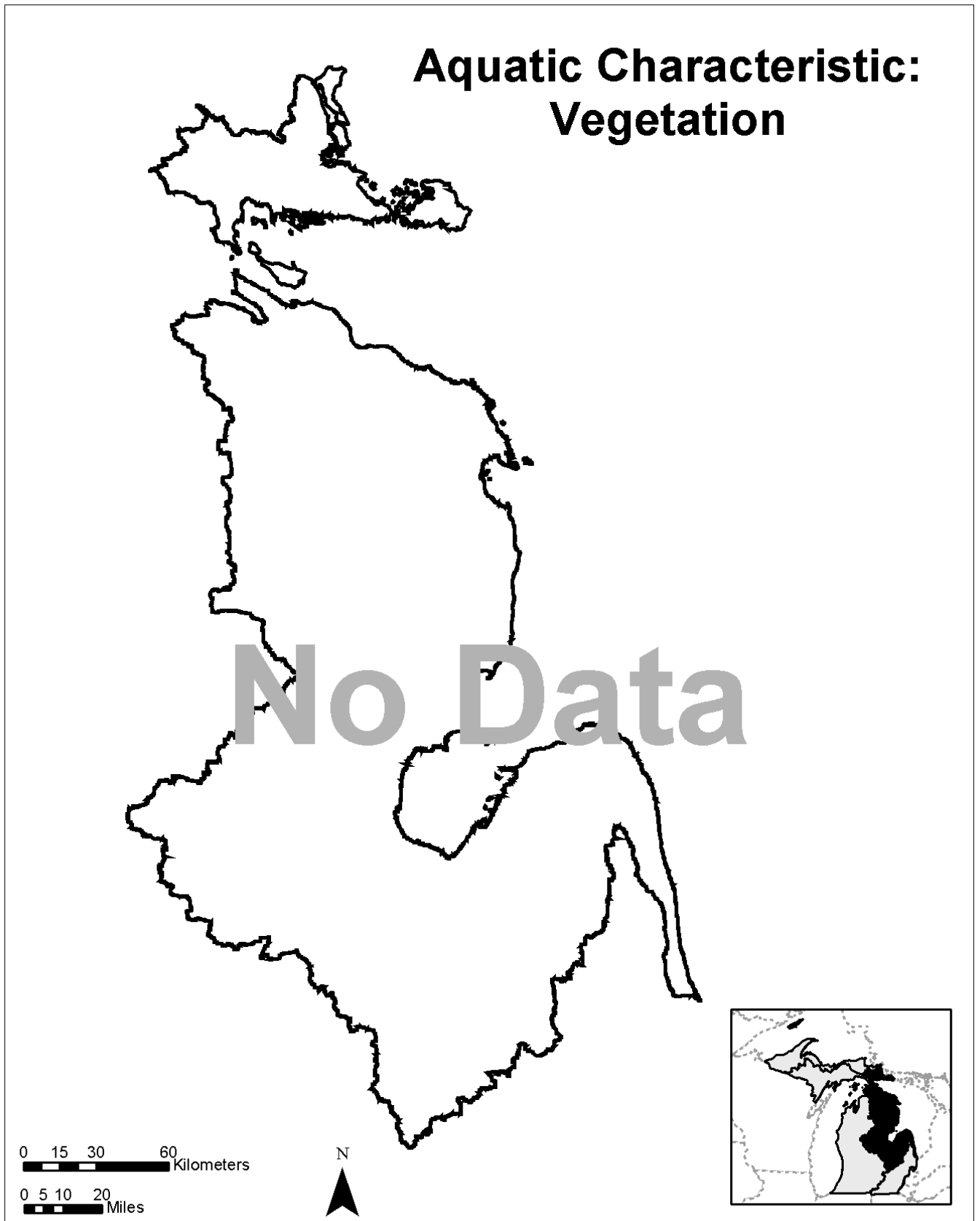
- Continue working with and educating Drain Commissioners (dredging and channelization)

Research and Survey Needs

- Determine life history requirements for SGCN crayfish associated with this landscape feature
- Determine the distribution of this landscape feature and its condition in the basin
- Determine severity of threats to this landscape feature

Monitoring

- Clay mining
- Hydrologic flow



Aquatic Characteristic: Vegetation

Description

Vegetation are plants that grow in and around water bodies and provide in-water cover and physical structuring.

General Condition of Feature

No data available.

Associated Species of Greatest Conservation Need

SNAILS

spindle lymnaea (*Acella haldemani*)

CRAYFISH

digger crayfish (*Fallicambarus fodiens*)

INSECTS

a sand minnow mayfly (*Siphloplecton basale*)

sedge darner (*Aeshna juncea*)

spatterdock darner (*Aeshna mutata*)

zigzag darner (*Aeshna sitchensis*)

rapids clubtail (*Gomphus quadricolor*)

Hine's emerald dragonfly (*Somatochlora hineana*)

incurvate emerald dragonfly (*Somatochlora incurvata*)

ebony boghaunter (*Williamsonia fletcheri*)

Hungerford's crawling water beetle (*Brychius hungerfordi*)

FISH

brassy minnow (*Hybognathus hankinsoni*)

pugnose shiner (*Notropis anogenus*)

finescale dace (*Phoxinus neogaeus*)

FISH cont.

lake chubsucker (*Erimyzon sucetta*)

spotted sucker (*Minytrema melanops*)

brown bullhead (*Ameiurus nebulosus*)

tadpole madtom (*Noturus gyrinus*)

grass pickerel (*Esox americanus*)

pirate perch (*Aphredoderus sayanus*)

slimy sculpin (*Cottus cognatus*)

least darter (*Etheostoma microperca*)

AMPHIBIANS

blue-spotted salamander (*Ambystoma laterale*)

four-toed salamander (*Hemidactylium scutatum*)

mudpuppy (*Necturus maculosus maculosus*)

Blanchard's cricket frog (*Acris crepitans blanchardi*)

pickerel frog (*Rana palustris*)

northern leopard frog (*Rana pipiens*)

REPTILES

spotted turtle (*Clemmys guttata*)

Blanding's turtle (*Emydoidea blandingii*)

Associated Threats

POLLUTION

- Altered sediment loads: Sedimentation; Erosion (low threat)
- Pesticides and herbicides: Herbicides (low threat)

HABITAT CONVERSION

- Dredging and channelization: Dredging; Filling
- Riparian modification: Land use practices (low threat)

BIOLOGICAL INTERACTIONS

- Invasive plants and animals: (low threat)

NON-CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Macrophyte removal: Beach grooming; Chemical control

EDUCATION

- Social attitudes: (low threat)

Conservation Actions Needed (Threats addressed)

LAND, WATER & SPECIES MANAGEMENT

- Avoid important nursery areas during macrophyte treatments (macrophyte removal)
- Control and prevent invasive vegetation while preserving 60-80% of native vegetation (macrophyte removal)
- Maintain and rehabilitate native flora (macrophyte removal)
- Provide incentives for the use and production of native flora (macrophyte removal)
- Rehabilitate channel diversity (dredging and channelization)
- Vegetation management should be performed in conjunction with watershed management practices that consider all physical, biological, and social factors (macrophyte removal)

LAW & POLICY

- Restrict beach grooming (macrophyte removal)
- Restrict dredging and channelization activities (dredging and channelization)
- Restrict herbicide use in lakes (macrophyte removal)

EDUCATION & AWARENESS

- Educate landowners on the value of macrophytes (macrophyte removal)