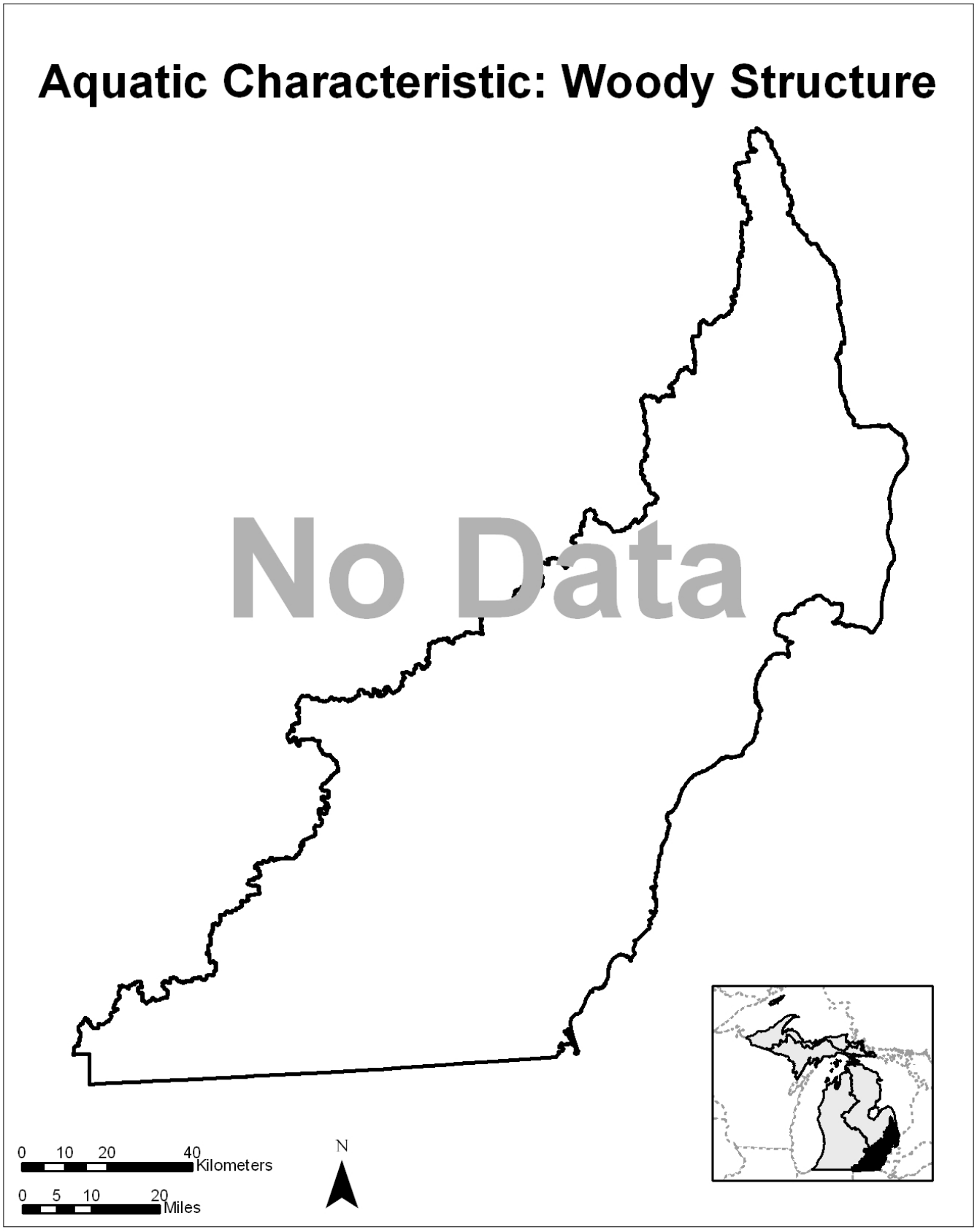
Aquatic Characteristic: Woody Structure



Aquatic Characteristic: Woody Structure

Description

Woody structure is the physical structuring under water by woody material of various sizes both live and dead. This can include coarse (logs) and fine (twigs) woody debris, as well as tree or shrub roots within the water.

General Condition of Feature

This habitat is considered 10% in good to excellent condition, 20% in fair condition, and 70% in degraded to very degraded condition.

Associated Species of Greatest Conservation Need

INSECTS
- splendid clubtail (*Gomphus lineatifrons*)
- smoky rubyspot (*Hetaerina titia*)
- a stonefly (*Taeniopteryx burksi*)
- a stonefly (*Taeniopteryx maura*)
- a stonefly (*Paracapnia opis*)

FISH
- southern redbelly dace (*Phoxinus erythrogaster*)
- finescale dace (*Phoxinus neogaeus*)
- golden redhorse (*Moxostoma erythrurum*)
- pirate perch (*Aphredoderus sayanus*)

AMPHIBIANS
- blue-spotted salamander (*Ambystoma laterale*)
- smallmouth salamander (*Ambystoma texanum*)

AMPHIBIANS cont.
- eastern tiger salamander (*Ambystoma tigrinum tigrinum*)
- four-toed salamander (*Hemidactylium scutatum*)
- mudpuppy (*Necturus maculosus maculosus*)
- Blanchard's cricket frog (*Acris crepitans blanchardi*)
- western chorus frog (*Pseudacris triseriata triseriata*)
- pickerel frog (*Rana palustris*)
- northern leopard frog (*Rana pipiens*)

REPTILES
- copperbelly water snake (*Nerodia erythrogaster neglecta*)
- queen snake (*Regina septemvittata*)
- Blanding's turtle (*Emydoidea blandingii*)

Associated Threats

MODIFICATION OF NATURAL PROCESSES
- Altered hydrologic regimes: Changes in flow due to urbanization; Lower base flows; Flow regimes with more "flashy" events; Hydraulic instability (flow regime, channel adjustment)

POLLUTION
- Altered sediment loads: Sedimentation and surface runoff

HABITAT CONVERSION
- Dredging and channelization
- Riparian modification: Riparian land use alterations; Shoreline modification; Clearing of riparian zone

NON-CONSUMPTIVE BIOLOGICAL RESOURCE USE
- Other structure removal: River and stream "cleanup" efforts without proper understanding; Physical removal; Removal of logs from rivers and lakes for navigation, increased flow, etc

EDUCATION
- Social attitudes: Lack of understanding by society of the importance of woody structure

Conservation Actions Needed (Threats addressed)

LAND, WATER & SPECIES MANAGMENT
- Allow seasonal flooding (altered hydrologic regimes)
- Maintain and rehabilitate woody structure (other structure removal)
- Protect wetlands and floodplains (riparian modification, wetland modification)
- Rehabilitate and maintain riparian buffers of at least 50 ft., but 500 ft. or wider maximizes conservation benefits (riparian modification)
- Rehabilitate native flora (riparian modification)
- Rehabilitate original hydrologic functions i.e., reconnect meanders and floodplains (altered hydrologic regimes)
- Use natural materials or soft engineering techniques for any shoreline or riparian modification (riparian modification)

LAW & POLICY
- Restrict beach grooming (riparian modification, other structure removal)
- Use sediment barriers and Best management practices during construction (altered sediment loads)

EDUCATION & AWARENESS
- Educate landowners of the value of riparian areas, macrophytes, and woody structure (social attitudes)
- Educate legislators, local planning boards, and other policy makers on the value of woody structure (social attitudes)

Research and Survey Needs
- Determine life history requirements for SGCN associated with woody structure

- Work with watershed councils and conservation groups to rehabilitate wood habitats and teach its value

Monitoring

- Dredging and channelization
- Macrophyte, woody, and other structure removals
- Riparian modification