



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 50% in good to excellent condition, 40% in fair condition, and 10% in degraded to very degraded condition.

Associated Species of Greatest Conservation Need

INSECTS

stygian shadowdragon (*Neurocordulia yamaskanensis*)

FISH

finescale dace (*Phoxinus neogaeus*)

AMPHIBIANS

blue-spotted salamander (*Ambystoma laterale*)

eastern tiger salamander (*Ambystoma tigrinum tigrinum*)

four-toed salamander (*Hemidactylium scutatum*)

AMPHIBIANS cont.

mudpuppy (*Necturus maculosus maculosus*)

pickerel frog (*Rana palustris*)

northern leopard frog (*Rana pipiens*)

REPTILES

Blanding's turtle (*Emydoidea blandingii*)

wood turtle (*Glyptemys insculpta*)

MAMMALS

water shrew (*Sorex palustris*)

Associated Threats

MODIFICATION OF NATURAL PROCESSES

- Altered hydrologic regimes: "Flashiness" of local waterways can remove woody structure (low threat)
- Fragmentation: (low threat)

HABITAT CONVERSION

- Dams: Dams alter connectivity (low threat)
- Dredging and channelization: (low threat)
- Incompatible natural resources management: (low threat)
- Riparian modifications: Riparian removal of submerged trees on lake shoreline and rivers for canoeing; Riparian vegetation removal or alteration
- Wetland modifications

NON-CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Other structure removal: Removal of submerged trees on lake shorelines and rivers for canoeing; Removal by riparian landowners and removal in streams

EDUCATION

- Social Attitudes: Removal of wood by community groups; Improper addition of wood by NGO's (low threat)

Conservation Actions Needed (Threats addressed)

LAND, WATER & SPECIES MANAGEMENT

- Allow seasonal flooding (riparian modifications)
- Maintain or establish woody vegetation in riparian buffers of at least 50 ft., but 500 ft. or wider maximizes conservation benefits (other structure removal, riparian modifications)
- Rehabilitate native flora (riparian modifications)

LAW & POLICY

- Encourage green space planning (riparian modifications)
- Protect existing natural wetlands and rehabilitate degraded wetlands (wetland modification)
- Restrict beach grooming (riparian modifications)
- Strengthen wetland regulations, mitigation requirements, and enforcement (wetland modification)

EDUCATION & AWARENESS

- Educate landowners on the value of woody structure (variety of threats)
- Work with and educate canoeists and snowmobile users about the importance of woody structure to water bodies and the species that use them (variety of threats)

Research and Survey Needs

- Determine life history requirements for SGCN associated with woody structure
- Educate the public on the role and value of woody structure
- Work with watershed councils and conservation groups to rehabilitate wood habitats and teach its value

**MICHIGAN'S WILDLIFE ACTION PLAN
AQUATIC SYSTEMS: LAKE SUPERIOR BASIN**

Monitoring

- Dredging and channelization
- Erosion
- Logging practices
- Log salvage operations
- Macrophyte and woody structure removals
- Riparian modifications
- Sediment loadings
- Stream modification
- Wetland modification