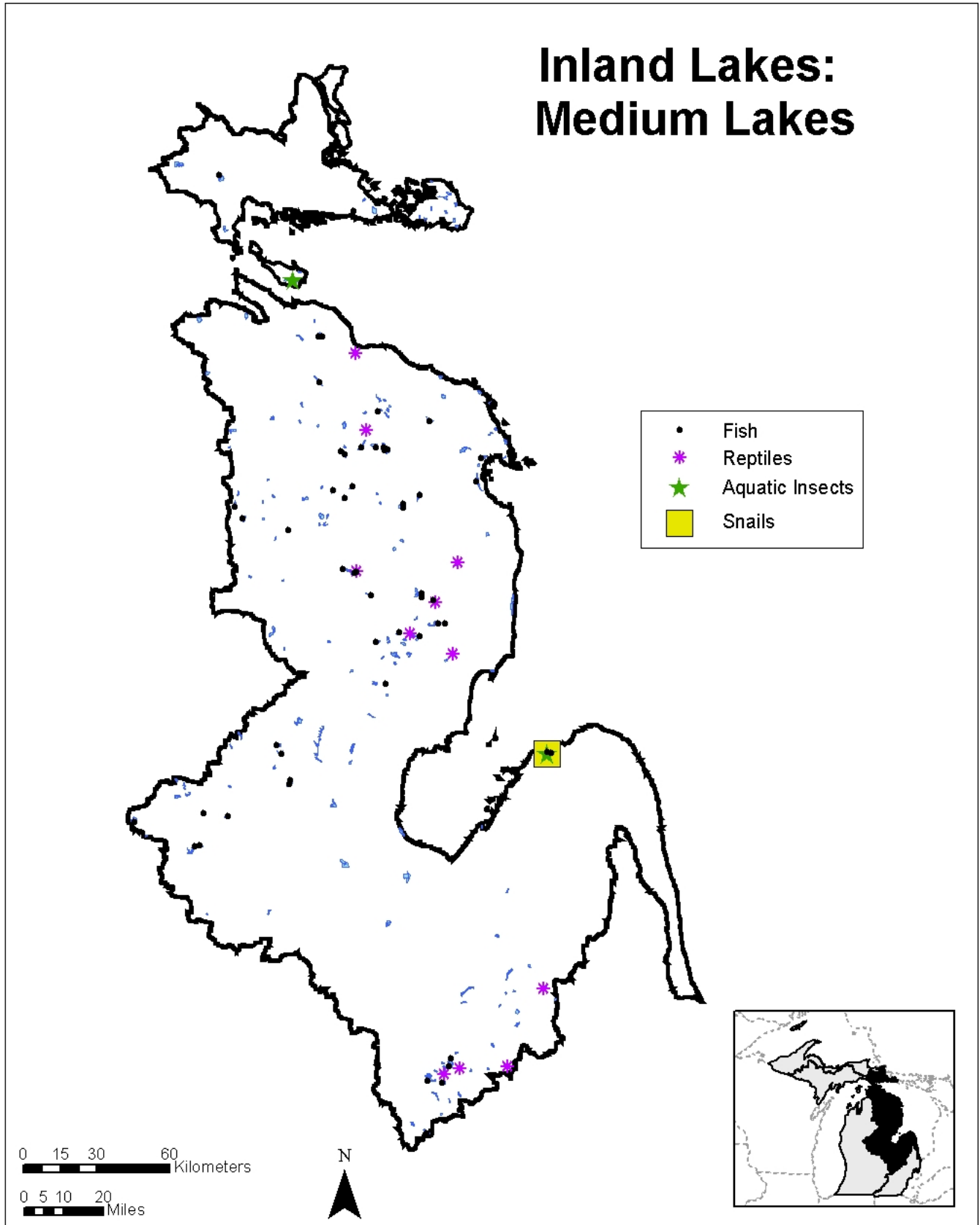


Inland Lakes: Medium Lakes



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Description

Medium lakes are permanent standing water bodies 100 to 999 acres in area. This group has moderately diverse features for chemical and biological variables. In general, these lakes will tend to have increasing shoreline complexity (lakes with many bays) and increasing basin complexity (lakes with more than one deep hole) compared to small lakes and ponds. Stratification status can range from fully stratified throughout the summer season, to no stratification. In lakes with stratification, there is development of true open-water (pelagic) zones that are distinct from shallow nearshore zones. These lakes can span a broader temperature range (from relatively cold water to relatively warm water) compared to larger lakes, with temperature depending on amount of groundwater inflows, lake depth, and climate. Winter oxygen levels are also variable and depend on lake depth, but are generally higher than in small lakes and ponds.

General Condition of Feature

This habitat is considered 40% in good to excellent condition, 30% in fair condition, and 30% in degraded to very degraded condition.

Associated Species of Greatest Conservation Need

MUSSELS

slippershell mussel (*Alasmidonta viridis*)
rainbow (*Villosa iris*)
eastern pondmussel (*Ligumia nasuta*)
threehorn wartyback (*Obliquaria reflexa*)
kidneyshell (*Ptychobranhus fasciolaris*)
purple lilliput (*Toxolasma lividus*)

SNAILS

spindle lymnaea (*Acella haldemani*)

INSECTS

ocellated damer (*Boyeria grafiana*)
stygian shadowdragon (*Neurocordulia yamaskanensis*)
a stonefly (*Arcynopteryx compacta*)

FISH

pugnose shiner (*Notropis anogenus*)
lake chubsucker (*Erimyzon sucetta*)
brown bullhead (*Ameiurus nebulosus*)
slimy sculpin (*Cottus cognatus*)
least darter (*Etheostoma microperca*)

AMPHIBIANS

mudpuppy (*Necturus maculosus maculosus*)
Blanchard's cricket frog (*Acris crepitans blanchardi*)
pickerel frog (*Rana palustris*)

REPTILES

Blanding's turtle (*Emydoidea blandingii*)

Associated Threats

POLLUTION

- Altered nutrient inflows: Septic tanks leaking (low threat)
- Pesticides and herbicides: (low threat)
- Urban, municipal, and industrial pollution: (low threat)

HABITAT CONVERSION

- Dredging and channelization: Dredging; Filling
- Riparian modification: Shoreline development; Seawalls
- Wetland modification: Wetland loss

BIOLOGICAL INTERACTIONS

- Disease, pathogens, & parasites: (low threat)
- Invasive plants and animals: Cormorants

NON-CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Macrophyte removal: Macrophyte removal; Excessive aquatic vegetation control
- Other structure removal: Woody debris removal

EDUCATION

- Lack of scientific knowledge: (low threat)
- Social attitudes

Conservation Actions Needed (Threats addressed)

LAND & WATER PROTECTION

- Continue support landowner incentive programs to foster conservation on private land

LAND, WATER & SPECIES MANAGEMENT

- Continued vigilance and cooperation on preventing aquatic invasive species introductions and establishments (invasive plants and animals)
- Develop early detection and rapid response protocols for aquatic invasive species (invasive plants and animals)

- Encourage the use of natural materials or soft engineering techniques for any shoreline modification (riparian modification)
- Use best management practices(riparian modification)
- Maintain or establish riparian buffers of at least 50 ft., but 500 ft. or wider maximizes conservation benefits (riparian modification)
- Soften or remove shoreline structures and rehabilitate natural shoreline (riparian modification)
- Rehabilitate and maintain wetland functions (riparian modification, wetland modification)
- Rehabilitate native flora (macrophytes removal, riparian modification, wetland modification)
- Restrict beach grooming (macrophyte removal, riparian modification)
- Restrict herbicide use in medium lakes (macrophytes removal)
- When removing exotic vegetation, at least 60-80% of native vegetation should be preserved (invasive plants and animals, macrophyte removal)
- Vegetation management should be preformed in conjunction with watershed management practices that consider all physical, biological, and social factors (invasive plants and animals, macrophytes removal)

LAW & POLICY

- Work with local officials to develop planning and zoning regulation and ordinances (macrophytes removal, riparian modification, wetland modification)
- Enact and enforce better wetland regulations and mitigation requirements (wetland modification)
- Enact and enforce shoreline protection regulations (riparian modification)
- Work with local officials to develop planning and zoning guidelines that consider natural processes (riparian modification)
- Work with regulatory agencies to restrict dredging (dredging and channelization, riparian modification, wetland modification)

EDUCATION & AWARENESS

- Educate landowners about the spread of invasive species and preventative steps (invasive plants and animals, social attitudes)
- Educate landowners on the value of macrophytes, riparian vegetation, natural shorelines, wetlands, and stewardship issues (macrophytes removal, riparian modification, social attitudes, wetland modification)
- Educate legislators, local planning boards, and other policy makers on the importance of natural processes (social attitudes)

Research and Survey Needs

- Determine effective prevention, control, and survey techniques for aquatic invasive species
- Determine important aquatic nursery areas
- Determine life history strategies of SGCN that are unknown
- Determine socially-acceptable ways to coordinate macrophyte treatments with aquatic species needs
- Determine the amount of shoreline development in this landscape feature
- Determine the number of natural lake outlets and socially acceptable ways of maintaining them
- Establish effective methods of communicating with the public and their role in stewardship, especially shoreline modification(beach grooming, seawalls, dredging)

Monitoring

- Indicator species
- Lake-level control structures
- Land use changes
- Macrophyte removal
- Riparian modification
- Wetland modification