



## **Lake Characteristic: Trophic Status – Eutrophic**

### Description

These lakes have high concentrations of nutrients (total phosphorus >25 µg/L) resulting in generally high biomass of algae. They also generally have lower water clarity and potentially low oxygen concentrations in the hypolimnion. They are more likely to have low winter oxygen concentrations under the ice depending on lake depth and basin shape.

### General Condition of Feature

This habitat is considered 75% in good to excellent condition, 20% in fair condition, and 5% in degraded to very degraded condition.

### Associated Species of Greatest Conservation Need

#### *SNAILS*

spindle Lymnaea (*Acella haldemani*)

#### *FISH*

Specific associations with this landscape feature were not found in the literature

#### *REPTILES*

Blanding's turtle (*Emydoidea blandingii*)

### Associated Threats

#### *POLLUTION*

- Altered nutrient inflows: Eutrophication is an increasing problem; Due to municipal waste water discharge

#### *HABITAT CONVERSION*

- Riparian modifications: Development

### Conservation Actions Needed (Threats addressed)

#### *LAND, WATER & SPECIES MANAGEMENT*

- Maintain or establish riparian buffers of at least 50 ft., but 500 ft. or wider maximizes conservation benefits (riparian modifications)
- Protect existing natural wetlands and rehabilitate degraded wetlands (altered nutrient inflows)
- Restore native flora (riparian modifications)
- Soften or remove hard shoreline structures (riparian modifications)
- Use natural materials or soft engineering techniques for a any shoreline modification (riparian modifications)

#### *LAW & POLICY*

- Encourage clustered development rather than evenly spaced home lots (riparian modifications)
- Encourage green space planning (riparian modifications)
- Encourage townships to separate combined sewer systems (altered nutrient inflows)
- Upgrade septic systems (altered nutrient inflows)
- Use best management practices (variety of threats)
- 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 modifications)

#### *EDUCATION & AWARENESS*

- Educate landowners about nutrient inputs and the importance of riparian buffers (altered nutrient inflows, riparian modifications)
- Educate the public on the use of and reasons for maintaining septic systems (altered nutrient inflows)

### Research and Survey Needs

- Track amount of wetlands under 5 acres that are being converted to other use
- Inventory erosion sites and conduct remediation activities
- Survey nutrient loading and develop strategies to reduce identified problems

### Monitoring

- Dissolved oxygen
- Land use
- Nutrient inflows: local septic systems and municipal waste water treatment plants
- Riparian development
- Sediment loading
- Shoreline modification
- Wetland modification