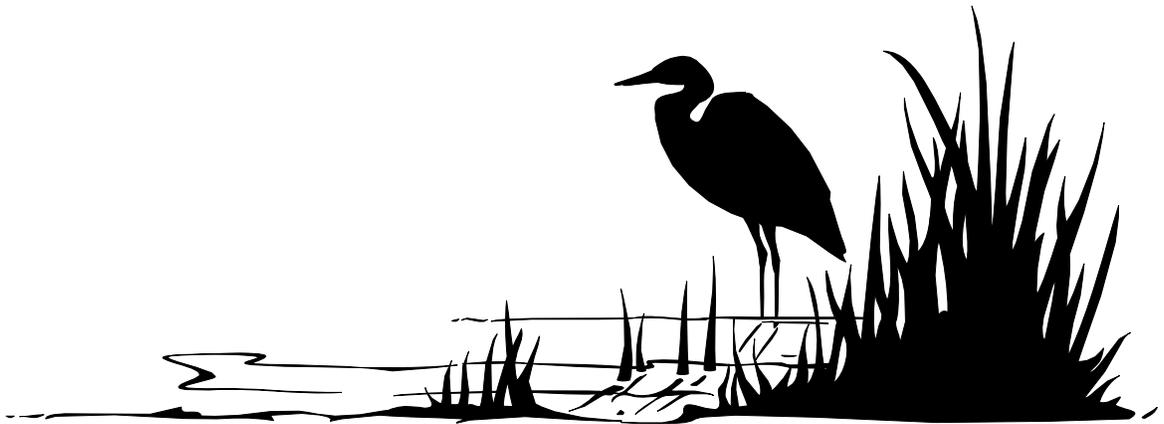


# **BLAKE AND LITTLE BLAKE LAKES SENSITIVE AREA SURVEY REPORT AND MANAGEMENT GUIDELINES**

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**This document is to be used  
with its companion document  
"Guidelines for protecting, maintaining,  
and understanding lake sensitive areas"**

# Blake Lake and Little Blake Lake (Polk Co) Integrated Sensitive Area Survey Report

Date of Survey: 17 August 2000

Number of Sensitive Areas: 4

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**Lake Sensitive Area Survey** results identified four areas that merit special protection of the aquatic habitat. These areas of aquatic vegetation on Blake Lake and Little Blake Lake offer critical or unique fish and wildlife habitat, including seasonal or life stage requirements and/or offer water quality or erosion control benefits to the bodies of water.

Wild rice (*Zizania sp.*) was documented in sensitive areas "A, C and D" occurring in both Blake Lake and Little Blake Lake. Wild rice holds very important niche in the lake ecosystem from both a human and wildlife standpoint. Care should be taken to allow for the proliferation of these rice stands.

During this survey there were no documented occurrences of Purple Loosestrife. However, the threat of Purple Loosestrife is always a concern and should be dealt with immediately. Methods for control are to remove the entire plant before it produces seeds or by cutting the flower head and spraying with an approved herbicide. You should contact the Department before any of these methods are implemented.

The reader should consider that any buffer that does not extend back from the waters edge at least 35' is not providing adequate protection for water quality and should be expanded to at least 35'. Local zoning ordinances and lakes classification systems have tried to provide better guidelines pertaining to buffer widths and set backs based on lake type. Landowners are encouraged to go beyond the minimum requirements laid out by zoning and consider extending buffer widths to beyond 35' and integrating other innovative ways to capture and reduce the runoff flowing off from their

property while improving critical shoreline habitat. Berms and low head retention areas can greatly increase the effective capture rate from developed portions in addition to that portion captured within the buffer.

Site conditions may dictate that a buffer has to be much wider than 35' to be effective at capturing the sediments and nutrients running off the developed portions of the shoreline. If the shoreline is steeply sloped (>7% slope) greater widths should definitely be used.

No mowing should take place within the buffer area (with the exception of a narrow access trail and small picnic area), and trees and shrubs should not be cut down even when they become old and die; because they provide important woody debris habitat within the buffer zone as well as aquatic habitat when they fall into the lake.

The following is a brief summary of the Blake Lake and Little Blake Lake sensitive area sites and the management guidelines. Also, the "Guidelines for Protecting, Maintaining, and Understanding Sensitive Areas" provides management guidelines and considerations for different lake sensitive areas (Attached).

#### I. Aquatic Plant Sensitive Areas

The following sensitive areas contain aquatic plant communities, which provide important fish and wildlife habitat as well as important shoreline stabilization functional values. Sensitive areas A and D are considered wild shorelines, providing important enough habitat for the Blake Lake and Little Blake Lake ecosystem that conservation easements, deed restrictions, or zoning should be used to protect them. Management guidelines for aquatic plant sensitive areas are (unless otherwise specifically stated):

1. Limit aquatic vegetation removal to navigational channels no greater than 25 feet wide where necessary, the narrower the better. These channels should be kept as short in length as possible and it is recommended that people do not completely eliminate aquatic vegetation within the navigation channel; but instead only remove what is necessary to prevent fouling of

propellers to provide access to open water areas. Chemical treatments should be discouraged and if a navigational channel must be cleared, pulling by hand is preferable over mechanical harvesters where practical.

2. Prohibit littoral zone alterations covered by Wisconsin Statutes Chapter 30, unless there is clear evidence that such alterations would benefit the lake's ecosystem. Rock riprap permits should not be approved for areas that already have a healthy native plant community stabilizing the shoreline and property owners should not view riprap as an acceptable alternative in these situations.
3. Leave large woody debris, logs, trees, and stumps, in the littoral zone to provide habitat for fish, wildlife, and other aquatic organisms.
4. Leave an adequate shoreline buffer of un-mowed natural vegetative cover and keep access corridors as narrow as possible (preferable less than 30 feet or 30% of any developed lot which ever is less).
5. Prevent erosion, especially at construction sites. Support the development of effective county erosion control ordinances. The proper use of Best Management Practices (BMP's) will greatly reduce the potential of foreign materials entering the waterway (i.e. silt, nutrients).
6. Strictly enforce zoning ordinances and support development of new zoning regulations where needed.
7. Eliminate nutrient inputs to the lake caused by lawn fertilizers, failing septic systems, and other sources.
8. Control exotic species such as purple loosestrife.

### **Resource Value of Site A**

Sensitive area A is located at the Northern end of Blake Lake and covers approximately 400 feet of shoreline extending out as far as 100 feet. This area encompasses the alder thicket and open / shallow water wetland area north of the boat launch. Most of this shoreline is still considered "wild", with little or no development and high scenic beauty.

This area provides important habitat for centrarchid (bass and panfish) and esocid (northern pike) spawning and nursery areas. This area also provides important habitat for forage species. Wildlife also are reliant upon this area for habitat. Eagles, loons, herons, waterfowl, songbirds, furbearers, turtles, and amphibians benefit from this valuable habitat.

The emergent, floating and submergent plant community structure of Sensitive area A includes: **Emergents;** sedges (*Carex sp.*), wild rice (*Zizania sp.*), cattails (*Typha sp.*), speckled alder (*Alnus incana*), joe-pye weed (*Eupatorium maculatum*) and canada blue joint (*Calamagrostis canadensis*). **Floating leafed;** yellow pond lily (*Nuphar advena*), white water lily (*Nymphaea odorata*) and duckweed (*Lemna sp.*). **Submergents;** coontail (*Ceratophyllum demersum*) and musk-grass (*Chara sp.*).

Chemical treatment and/or mechanical harvesting should not be allowed.

### Resource Value of Site B

Sensitive area B is located at the Northeastern end of Blake Lake and covers approximately 400 feet of shoreline extending out to 150 feet. Most of this length is dominated by a shallow or open water wetland, which have helped protect it from the negative impacts that can be associated with improperly developed shorelines.

This area provides important habitat for centrarchid (bass and panfish) spawning and nursery areas. This area also provides important habitat for forage species. Wildlife also are reliant upon this area for habitat. Loons, herons, waterfowl, songbirds, furbearers, turtles, and amphibians also benefit from this valuable habitat.

The emergent, floating and submergent plant community structure of Sensitive area B includes: **Emergents;** common bur-reed (*Sparganium eurycarpum*) and arrowhead (*Sagittaria sp.*). **Floating leafed;** yellow pond lily (*Nuphar advena*), white water lily (*Nymphaea odorata*) and water shield (*Brassenia schreberi*). **Submergents;** coontail (*Ceratophyllum demersum*), elodea, northern milfoil (*Myriophyllum sibiricum*) and filamentous alga.

Chemical treatments and mechanical harvesting should be limited to navigational channel only.

### Resource Value of Site C

Sensitive area C is located at the Southeastern end of Blake Lake and the Southwestern end of Little Blake Lake. This area encompasses the channel between both lakes. Most of this length is dominated by a deep marsh and shallow or open water wetland, which have helped protect it from the negative impacts that can be associated with improperly developed shorelines. There are however some developed shorelines with minimal buffers. These shorelines should implement the creation of suitable vegetative buffers (approximately 35').

This area provides important habitat for centrarchid (bass and panfish) and esocid (northern pike) spawning and nursery areas. This area also provides important habitat for forage species. Wildlife also are reliant upon this area for habitat. Loons, herons, waterfowl, songbirds, furbearers, turtles, and amphibians also benefit from this valuable habitat.

Sensitive area C has a diverse community structure of emergent and submergent aquatic plants including: **Emergents;** common bur-reed (*Sparganium eurycarpum*), wild rice (*Zizania sp.*), cattails (*Typha sp.*), sedges (*Carex sp.*), sandbar willow (*Salix exigua*) and soft stem bulrush (*Scirpus validus*). **Floating leafed;** white water lily (*Nymphaea odorata*) and duckweed (*Lemna sp.*). **Submergents;** coontail (*Ceratophyllum demersum*), northern milfoil (*Myriophyllum sibiricum*), eel grass (*Vallisneria americana*), flat-stem pondweed (*Potamogeton zosteriformis*), sago pondweed (*P. pectinatus*), fern pondweed (*P. robbinsii*) and large leaf pondweed (*P. amplifolius*).

Chemical treatments and mechanical removal efforts should only be allowed for navigation channels in this area. All other removal efforts should be strongly discouraged.

## Resource Value of Site D

Sensitive area D is located at the Northern end of Little Blake Lake and covers approximately 1,800 feet of shoreline. This area encompasses the mouth of the Straight River entering Little Blake Lake. Most of this length is dominated by a deep marsh and shallow or open water wetland. Most of this shoreline is still considered "wild", with little or no development and high scenic beauty. This sensitive area does extend into the Straight River.

This area provides important habitat for centrarchid (bass and panfish) and esocid (northern pike) spawning and nursery areas. This area also provides important habitat for forage species. This area contains high wildlife values. Loons, herons, waterfowl, songbirds, furbearers, turtles, and amphibians also benefit from this valuable habitat.

The emergent, floating and submergent plant community structure of Sensitive area D includes: **Emergents**; cattails (*Typha sp.*), common bur-reed (*Sparganium eurycarpum*), sandbar willow (*Salix exidua*), wild rice (*Zizania sp.*) and speckled alder (*Ulnus incana*). **Floating leafed**; duckweed (*Lemna sp.*), white water lily (*Nymphaea odorata*) and yellow pond lily (*Nuphar advena*). **Submergents**; elodea, eel grass (*Vallisneria americana*), flat-stem pondweed (*Potamogeton zosteriformis*), sago pondweed (*P. pectinatus*), and fern pondweed (*P. robbinsii*).

Chemical treatments and mechanical harvesting should only be considered for navigation channels to developed shorelines. Keeping this area in its natural state will aid in filtering out nutrients and silt entering from the Straight River.