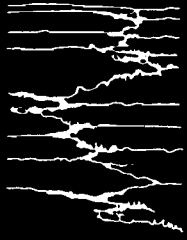


DISCOVERY
GROUP



REVISED DRAFT

INLAND LAKES CLASSIFICATION SYSTEM

**DOUGLAS COUNTY, WISCONSIN
MARCH 11, 1996**

PREPARED FOR

**ORDINANCE REVIEW COMMITTEE
DOUGLAS COUNTY BOARD OF SUPERVISORS**

PREPARED BY

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INLAND LAKES CLASSIFICATION SYSTEM REPORT

DOUGLAS COUNTY, WISCONSIN

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SECTION 1 INTRODUCTION

The Douglas County Board of Supervisors has engaged Discovery Group, Ltd. to prepare the Lake Classification System in order to respond to an increasing concern by residents and property owners about the quality of the lakes and the pressures for lakefront development on the inland lakes.

The intent of the study is to provide the Douglas County Board of Supervisors with specific recommendations to further the objectives, purposes, and intent of the Douglas County's Shoreland Zoning Ordinance, which is currently being revised.

SECTION 2

LAKE DEVELOPMENT POLICY

The following policy statements are adopted as the guidelines for implementing the Douglas County Inland Lakes Classification System and accompanying recommended ordinance changes:

1. It is the intent of the Douglas County Board of Supervisors to preserve the natural and scenic qualities of the lakes and shorelines in Douglas County.
2. The Douglas County Board of Supervisors recognizes that different lakes within the county have varying natural conditions that affect their environmental sensitivity or vulnerability to shoreland development. In recognition of this fact, the "Douglas County Lakes Classification System" needs to take into account the relative vulnerability of each waterbody based on lake surface area, lake depth, soil group, lake type, length of shoreline, size of watershed, and availability of wastewater treatment facilities.
3. The Douglas County Board of Supervisors desires to balance the needs for environmental protection and responsible stewardship with reasonable use of private property and economic development.
4. Lakes that are most vulnerable to environmental degradation should receive the highest level of protection.
5. Lakes that are environmentally-sensitive and in pristine or near-pristine condition should receive the highest level of protection.
6. Future development and land divisions on lakes that are developed or partially developed should be carefully managed to prevent overcrowding that would diminish the value of the resource, minimize nutrient loading, protect water quality, preserve spawning grounds and fish and wildlife habitats, and preserve shore cover and natural beauty.
7. Cluster developments that result in the protection of undeveloped shoreline are encouraged.
8. The shorelines of all lakes should be left in as near a natural condition as feasible.
9. Navigable waterbodies in Douglas County should have public access so that the waters are available for public use, commensurate with the suitability of the water resource for recreational use and the reasonable interests of the riparian property owners,

SECTION 3

LAKE CLASSIFICATION SYSTEM

The Douglas County Lakes Classification System is based on a combination of natural factors that determine lake vulnerability or environmental sensitivity.

Note: The classification system incorporates only information that is uniformly available for all lakes. Because biological and chemical information is not uniformly available for all of the lakes in Douglas County, these criteria have not been used in the classification system. If biological or chemical information is available for any individual lakes, this data may be considered by the Douglas County Zoning Committee and used as a basis for reclassification, if the scientific evidence suggests that the lake requires a different level of protection than that provide by the classification system.

ENVIRONMENTAL FACTORS CONTRIBUTING TO LAKE VULNERABILITY

Lake Surface Area

Lake surface area is an important determinant of the ability of a lake to support shoreline development and avoid lake user conflicts. As a general rule, smaller lakes (under 50 acres in size) are more susceptible to environmental degradation and visual impacts resulting from shoreland development and intensive recreational use.

The majority of the lakes in Douglas County, particularly in the southeastern one-third of the county, are small land-locked lakes that are extremely vulnerable to development in the shoreland zone and intensive recreational use.

The following scoring factors are used to rank lakes based on their surface area. The lower scores indicate greater lake vulnerability.

<u>Lake Surface Area</u>	<u>Scoring</u>
Less than 50 acres	1
50 to 249 acres	2
250 or more acres	3

Maximum Depth

Lake maximum depth is used as a second indicator of vulnerability. Shallower lakes, which do not stratify, have greater circulation of dissolved nutrients that enter the lakes. These lakes tend to have a larger variety of aquatic plant communities that are valuable for a wide range of wildlife and fish. Beds of aquatic plant materials can easily be disturbed by intensive water recreation use and shoreline activities, such as cutting and chemical treatment of aquatic vegetation to create swimming and docking areas.

Shallow lakes are particularly susceptible to nutrient loading and turbidity problems, both of which can be increased by intensive shoreline development and recreational use. In general, shallower lakes are more appropriate for wildlife habitat protection and passive recreation than

for motor boating, water skiing, and other more intensive lake uses associated with shoreline development.

The following scoring factors are used to rank lakes based on the maximum depth. The lower scores indicate greater lake vulnerability.

<u>Maximum Lake Depth</u>	<u>Scoring</u>
Less than 20 feet	1
20 to 39 feet	2
40 or more feet	3

Shoreline Soil Group

The USDA - NRCS has assisted Douglas County by providing a ranking of soils association and land types in the county based on limitations for building suitability and private septic system suitability.

The following scoring factors are used to rank lakes based on shoreline soil group. The lower scores indicate greater lake vulnerability.

<u>Soil Association</u>	<u>Scoring</u>
Group 5 Organic and wetland soils	1
Group 4 Sandy outwash soils	2
Group 2 Clayey tills and modified lacustrine soils	2
Group 3 Sandy tills and outwash	3
Group 1 Coarse-loamy tills	4

The sandy outwash soils (Soils Group 4) are the predominant soil association in the southeastern part of the county. As a general rule, many of the smaller, shallow sandy-bottomed lakes are located in this part of the county. Most of these lakes are ranked moderately vulnerable (Scoring 2) with respect to soils.

Lakes in areas with extensive organic soils and wetland soils (Soils Group 5) receive are the most vulnerable (Scoring 1) under the ranking system.

Lake Type

In Douglas County, the majority of lakes, particularly in the sandy southeastern third of the county, are seepage lakes formed by groundwater seeping into depressions in the glacial outwash plain. Most of these lakes are "landlocked" and have no external drainage. These lakes are the most vulnerable to premature eutrophication and contamination caused by development in the shoreland zone.

Drainage lakes flow into the surface water system of rivers and streams. All of the lake chains that drain into the St. Croix, Bois Brule, and Eau Claire Rivers are examples of drainage lakes. These lakes, along with manmade impoundments, possess varying degrees of ability to naturally circulate and flush nutrients and other forms of contaminants, but generally these lakes are less

vulnerable to environmental damage than the seepage lakes. A third category of lakes is spring lakes that are fed primarily by natural springs. These lakes have intermediate vulnerability.

The following scoring is used to rank lake vulnerability with respect to lake type. The lower scores indicate greater lake vulnerability.

<u>Lake Type</u>	<u>Scoring</u>
Seepage Lake (SE)	1
Spring Lake (SP)	2
Drainage Lake (DG)	3

Watershed Area

The natural ability of lakes to flush and circulate water is also a function of watershed size, lake volume, and average rainfall. Lakes with larger watersheds tend to have a higher volume of water circulating through them and may have higher flushing rates.

Lakes with smaller watersheds tend to have a lower nutrient input; however, nutrients accumulate because of longer retention times. Generally lakes with smaller watersheds and long retention times are more vulnerable to nutrient loading from activities that occur in the shoreland zone, which is a larger percentage of the total watershed area.

The following scoring is used to rank lake vulnerability with respect to watershed size. The lower scores indicate greater lake vulnerability.

<u>Watershed Size</u>	<u>Scoring</u>
Under 1 square mile	1
1 to 9 square miles	2
10 or more square miles	3

Shoreline Development Factor (SDF)

Shoreline development factor (SDF) is a convenient method of expressing the degree of irregularity of the shoreline of a lake compared to the surface area. The SDF ratio is the length of shoreline versus the circumference of a circle having the same surface area as the lake. A perfectly round lake would have a surface area of 1.00. The SDF can never be less than 1.00.

Lakes with a higher SDF have more shoreline in relation to the surface area and thus are more vulnerable to development pressures per linear foot of shoreline that is developed. These lakes can more easily become overdeveloped and are more susceptible to various types of contamination and runoff resulting shoreline development.

The following scoring is used to rank lake vulnerability with respect to the shoreline development factor (SDF). The lower scores indicate greater lake vulnerability.

<u>Shoreline Development Factor (SDF)</u>	<u>Scoring</u>
2.00 or more	1
1.50 to 1.99	2
1.00 to 1.49	3

LAKE CLASSIFICATION SCORING CRITERIA SUMMARY

<u>Lake Surface Area</u>		<u>Scoring</u>
Less than 50 acres		1
50 to 249 acres		2
250 acres or more		3
<u>Maximum Lake Depth</u>		<u>Scoring</u>
Less than 20 feet		1
20 to 39 feet		2
40 or more feet		3
<u>Soil Association</u>		<u>Scoring</u>
Organic and wetland soils (Group 5)		1
Sandy outwash soils (Group 4)		2
Clayey tills and modified lacustrine soils(Group 2)		2
Sandy tills and outwash (Group 3)		3
Coarse-loamy tills (Group 1)		4
<u>Lake Type</u>		<u>Scoring</u>
Seepage Lake (SE)		1
Spring Lake (SP)		2
Drainage Lake (DG)		3
<u>Watershed Size</u>		<u>Scoring</u>
Under 1 square mile		1
1 to 9 square miles		2
10 or more square miles		3
<u>Shoreline Development Factor (SDF)</u>		<u>Scoring</u>
2.00 or more		1
1.50 to 1.99		2
1.00 to 1.49		3
<u>Overall Vulnerability Ranking</u>		<u>Lake Classification</u>
Total score 11 or under		Class 1
Total score 12 to 13		Class 2
Total score 14 or more		Class 3

DOUGLAS COUNTY LAKES

DOUGLAS COUNTY LAKES									
LAKE CLASSIFICATIONS									
Lake Name	Location Sec.- Town- Range	Surface Area Score	Max. Depth Score	Lake Type Score	Soil Group Score	Shoreline Development Factor Score	Watershed Size Score	Lake Vulnerability Score	Lake Classification
		(A)	(B)	(C)	(D)	(E)	(F)	(A+B+C+D+E+F)	
Alexander Lake	12-43-11	1	1	1	2	3	1	9	Class 1
Amnicon Lake	12-46-14	3	2	3	2	1	2	13	Class 2
Anderson Lake	13-46-11	1	2	1	3	3	1	11	Class 1
Apple Lake	8-43-12	1	1	1	2	3	1	9	Class 1
Bass Lake	10-43-12	2	2	1	2	3	2	12	Class 2
Bass Lake	33-45-11	2	1	1	2	3	1	10	Class 1
Bear Lake	10-45-14	1	1	3	2	3	2	12	Class 2
Beaupre Springs	9-45-11	1	1	2	2	3	2	11	Class 1
Beauregard Lake	35-45-10	2	1	1	3	2	1	10	Class 1
Beglinger Lake	10-43-12	1	3	1	2	3	1	11	Class 1
Bennett Lake	10-43-12	1	1	1	2	3	1	9	Class 1
Bergen Creek Springs	33-43-12	1	1	2	2	1	1	8	Class 1
Big Lake	10-46-10	1	1	3	2	3	3	13	Class 2
Big Spring	17-45-11	1	1	2	2	2	1	9	Class 1
Bird Sanctuary	14-44-12	1	1	1	2	2	1	8	Class 1
Black Fox Lake	22-45-10	1	1	1	2	2	1	8	Class 1
Black Lake	19-45-15	2	1	3	1	2	3	12	Class 2
Blue Spring	36-46-11	1	1	2	2	3	1	10	Class 1
Bluegill Lake	15-43-12	1	3	1	2	3	1	11	Class 1
Bond Lake	28-43-12	3	3	1	2	2	2	13	Class 2
Boot Lake	33-45-10	1	1	1	2	3	1	9	Class 1
Breizman Lake	23-46-15	1	2	1	4	3	1	12	Class 2
Buckley Spring	20-43-13	1	1	2	2	2	1	9	Class 1
Buffalo Lake	35-43-12	1	2	1	2	3	2	11	Class 1
Catherine Lake	36-45-10	2	1	1	2	1	2	9	Class 1
Cedar Island Pond	21-46-10	1	1	3	2	1	1	9	Class 1
Chain Lake, Lower	22-43-11	2	1	1	2	3	2	11	Class 1
Chain Lake, Upper	21-43-11	2	1	1	2	2	2	10	Class 1
Cheney Lake	14-45-11	1	1	1	2	2	1	8	Class 1
Clear Lake	15-43-12	1	2	1	2	3	1	10	Class 1
Clyde Lake	26-43-11	1	1	1	2	3	1	9	Class 1
Coffee Lake	22-46-11	1	2	1	3	3	1	11	Class 1
Cranberry Lake	24-43-13	2	1	3	2	3	2	13	Class 2
Cranberry Creek Flowage	26-43-13	3	1	3	2	2	3	14	Class 3
Cranberry Spring	18-43-12	1	1	2	2	2	1	9	Class 1

DOUGLAS COUNTY LAKES

Lake Name	Location Sec.- Town- Range	Surface Area Score	Max. Depth Score	Lake Type Score	Soil Group Score	Shoreline Development Factor Score	Watershed Size Score	Lake Vulnerability Score	Lake Classification
		(A)	(B)	(C)	(D)	(E)	(F)	(A+B+C+D+E+F)	
Cream Lake	22-46-11	1	1	1	3	3	1	10	Class 1
Crooked Lake	17-43-10	1	1	1	2	3	2	10	Class 1
Crotty Lake	32-43-11	2	1	1	2	3	1	10	Class 1
Crystal Lake	23-43-13	3	2	1	2	2	2	12	Class 2
Deer Lake	11-43-13	1	1	1	2	3	1	9	Class 1
Deer Lake	2-46-11	1	1	1	3	2	1	9	Class 1
Deer Lake	10-46-13	1	1	1	4	3	1	11	Class 1
Deer Print Lake	21-45-10	1	1	1	2	2	1	8	Class 1
Dowling Lake	18-46-13	2	1	3	2	3	2	13	Class 2
Eau Claire River Flowage	5-43-11	2	2	3	2	1	3	13	Class 2
Ellison Lake	24-45-10	2	1	1	2	3	1	10	Class 1
Ferguson Lake	34-45-12	1	1	3	2	3	2	12	Class 2
Fiamang Lake	1-44-11	1	1	1	2	3	1	9	Class 1
Flat Lake	3-44-11	2	1	1	2	2	1	9	Class 1
Gander Lake	22-46-11	2	2	1	3	3	1	12	Class 2
Gilbert Lake	6-45-11	1	1	1	2	2	1	8	Class 1
Goose Lake	10-43-10	1	1	1	2	3	2	10	Class 1
Grover Lake	8-43-11	1	1	1	2	3	1	9	Class 1
Harriet Lake	7-43-11	1	1	1	2	3	1	9	Class 1
Haugen Lake (Pagan)	7-43-10	1	2	1	2	3	1	10	Class 1
High Life Lake	23-45-10	1	1	1	2	3	1	9	Class 1
Hoodoo Lake	26-47-10	1	1	1	2	3	1	9	Class 1
Hopkins Lake	24-45-10	1	1	1	2	3	1	9	Class 1
Horseshoe Lake (Tank)	18-46-10	1	3	1	3	3	1	12	Class 2
Horseshoe Springs	8-44-10	1	1	2	2	1	1	8	Class 1
Interfalls Lake (Manitou)	26-47-14	1	1	3	2	1	3	11	Class 1
Island Lake	29-45-11	1	1	1	2	3	1	9	Class 1
Jack Pine Lake	22-45-10	1	1	1	2	3	1	9	Class 1
Kreide Lake	13-43-12	1	1	1	2	2	1	8	Class 1
Lake of the Woods	17-45-11	1	1	1	2	2	1	8	Class 1
Leader Lake	21-43-12	2	3	1	2	2	1	11	Class 1
Little Sand Lake	35-43-14	2	2	1	2	3	1	11	Class 1
Little Simms Lake	31-44-10	1	1	1	2	3	1	9	Class 1
Little Steele Lake	27-47-11	1	1	3	3	3	2	13	Class 2
Long Lake	11-43-12	1	1	1	2	2	1	8	Class 1
Long Lake	31-45-11	1	2	1	2	3	1	10	Class 1
Long Lake	10-46-13	1	1	1	4	2	1	10	Class 1
Loon Lake	36-43-11	1	1	1	2	3	1	9	Class 1
Loon Lake	27-43-13	2	1	1	2	3	1	10	Class 1

DOUGLAS COUNTY LAKES

Lake Name	Location Sec.-Town-Range	Surface Area Score	Max. Depth Score	Lake Type Score	Soil Group Score	Shoreline Development Factor Score	Watershed Size Score	Lake Vulnerability Score	Lake Classification
		(A)	(B)	(C)	(D)	(E)	(F)	(A+B+C+D+E+F)	
Loon Lake	13-45-10	2	2	1	2	3	1	11	Class 1
Lower Eau Claire Lake	25-44-10	3	3	3	2	2	3	16	Class 3
Lower Ox Flowage	8-44-11	1	1	3	2	1	2	10	Class 1
Lund Lake	2-44-10	2	2	1	2	3	2	12	Class 2
Lydon Lake	2-46-11	1	1	1	2	3	1	9	Class 1
Lyman Lake	22-46-13	3	1	3	4	1	3	15	Class 3
Lynch Spring	17-45-11	1	1	2	2	3	1	10	Class 1
McDougal Spring	29-46-10	1	1	2	2	1	1	8	Class 1
McGraw Lake	31-43-14	2	2	1	2	2	2	11	Class 1
Metzger Lake	1-44-11	1	2	1	2	3	1	10	Class 1
Mills Lake	5-45-11	1	1	1	2	1	1	7	Class 1
Minnesuing Lake	16-46-11	3	3	3	3	1	3	16	Class 3
Minong Flowage (Nancy)	36-43-13	3	2	3	2	1	3	14	Class 3
Minnow Lake	19-47-10	1	1	1	3	3	1	10	Class 1
Mirror Lake	26-45-10	1	1	1	3	3	2	11	Class 1
Moose Branch Flowage	34-45-13	1	1	3	4	1	2	12	Class 2
Moose Lake	31-45-12	1	1	1	4	3	2	12	Class 2
Muck Lake	35-43-12	1	1	1	2	3	1	9	Class 1
Muck Lake	12-45-10	1	1	1	2	3	2	10	Class 1
Mud Creek Springs	31-45-10	1	1	2	2	1	1	8	Class 1
Mud Lake	12-44-10	2	1	1	2	2	1	9	Class 1
Mud Lake	14-46-14	1	1	1	2	3	2	10	Class 1
Mulligan Lake	13-43-11	2	1	3	2	3	2	13	Class 2
Murray Lake	24-45-10	1	1	1	2	1	1	7	Class 1
Muskrat Lake	28-45-11	1	1	1	2	2	1	8	Class 1
Nebagamon Lake	35-47-11	3	3	3	3	1	3	16	Class 3
Newman Lake	8-46-13	1	1	1	4	1	1	9	Class 1
One Buck Lake	8-46-13	1	2	1	4	3	1	12	Class 2
One Mile Lake	12-43-12	1	1	1	2	1	2	8	Class 1
Paradise Lake	22-45-10	1	1	1	2	3	1	9	Class 1
Park Creek Pond	26-45-12	1	1	3	2	3	2	12	Class 2
Person Lake	22-43-13	2	1	1	2	1	2	9	Class 1
Peterson Lake	36-43-12	1	1	1	2	3	1	9	Class 1
Pickrel Lake	21-43-12	2	2	1	2	2	1	10	Class 1
Pine Lake	32-47-10	1	1	1	3	2	1	9	Class 1
Plate Lake	12-46-11	1	2	1	3	3	2	12	Class 2
Poplar River Pond	6-47-11	1	1	3	2	2	3	12	Class 2
Radigan Flowage	10-43-15	2	1	3	4	1	3	14	Class 3
Rainbow Lake	11-43-12	1	2	1	2	3	1	10	Class 1

DOUGLAS COUNTY LAKES

Lake Name	Location Sec.- Town- Range	Surface Area Score	Max. Depth Score	Lake Type Score	Soil Group Score	Shoreline Development Factor Score	Watershed Size Score	Lake Vulnerability Score	Lake Classification
		(A)	(B)	(C)	(D)	(E)	(F)	(A+B+C+D+E+F)	
Red Lake	29-43-11	3	2	1	2	2	2	12	Class 2
Reichuster Lake	3-46-14	1	1	1	4	3	2	12	Class 2
Rock Lake	33-45-10	1	1	1	2	1	2	8	Class 1
Round Lake	12-43-13	1	3	1	2	3	1	11	Class 1
Round Lake	15-46-13	1	1	1	4	3	1	11	Class 1
Rush Lake	12-46-10	1	1	1	2	3	1	9	Class 1
St. Croix Flowage (Gordon)	34-44-12	3	2	3	2	1	3	14	Class 3
Sand Lake	13-45-10	2	1	1	4	3	1	12	Class 2
Saunders Pond	34-47-10	1	1	2	3	2	1	10	Class 1
Sauntrys Pocket	1-43-11	2	1	1	2	3	1	10	Class 1
Sawyer Lake	30-43-10	1	1	1	2	3	1	9	Class 1
Scott Lake	1-43-13	1	1	1	2	3	1	9	Class 1
Scout Lake	16-46-13	1	1	3	4	3	1	13	Class 2
Seventeen Lake	17-45-14	1	1	1	4	3	1	11	Class 1
Shoberg Lake	12-45-11	1	1	1	2	3	2	10	Class 1
Simms Lake	25-44-11	2	3	1	2	3	1	12	Class 2
Smith Lake	11-45-11	1	1	1	2	3	1	9	Class 1
Snake Lake	19-43-10	2	2	1	2	3	2	12	Class 2
Snipe Lake	7-43-12	1	2	1	2	3	1	10	Class 1
Spider Lake	5-43-12	2	1	1	2	1	2	9	Class 1
Spring Lake	3-46-10	1	1	3	2	1	3	11	Class 1
Steele Lake	33-47-11	2	1	1	3	3	2	12	Class 2
Sullivan Lake	20-43-11	2	1	1	2	3	1	10	Class 1
Sunfish Lake (Redding)	18-46-10	1	2	1	3	3	1	11	Class 1
Swenson Lake	23-44-11	1	1	1	2	1	1	7	Class 1
Thorne Lake	8-43-10	1	1	1	2	3	1	9	Class 1
Three Buck Lakes, Lower	24-46-13	1	1	1	4	3	1	11	Class 1
Three Buck Lakes, Middle	24-46-13	1	1	1	4	1	1	9	Class 1
Three Buck Lakes, Upper	13-46-13	1	1	1	4	3	1	11	Class 1
Twin Lakes, East	27-45-11	2	1	1	2	2	2	10	Class 1
Twin Lakes, West	28-45-11	2	1	1	2	3	1	10	Class 1
Twin Lakes, North	4-46-11	1	1	3	3	3	1	12	Class 2
Twin Lakes, South	4-46-11	1	1	3	3	3	1	12	Class 2
Two-Mile Lake	12-43-12	2	2	1	2	3	1	11	Class 1
Upper Ox Flowage	14-44-11	2	1	3	2	2	2	12	Class 2
Upper St. Croix Lake	25-45-12	3	2	3	2	1	3	14	Class 3
Wagner Lake	15-43-12	1	2	1	2	3	1	10	Class 1
Wascott Lake	26-43-12	1	1	1	2	1	1	7	Class 1
Webb Lake	5-43-12	2	2	1	2	3	1	11	Class 1

DOUGLAS COUNTY LAKES

Lake Name	Location Sec.- Town- Range	Surface Area Score	Max. Depth Score	Lake Type Score	Soil Group Score	Shoreline Development Factor Score	Watershed Size Score	Lake Vulnerability Score	Lake Classification
		(A)	(B)	(C)	(D)	(E)	(F)	(A+B+C+D+E+F)	
Whiskey Lake	18-46-10	1	2	1	3	2	1	10	Class 1
Whitefish Lake (Bardon)	16-43-12	3	3	1	2	2	2	13	Class 2
Whiteside Lake (German)	8-44-10	1	1	1	2	3	1	9	Class 1
Wilson Lake	14-43-13	1	1	1	2	3	1	9	Class 1
Yoekel Lake	35-43-12	1	1	1	2	3	1	9	Class 1

DOUGLAS COUNTY LAKES

DOUGLAS COUNTY LAKES								
RESOURCE CHARACTERISTICS								
Lake Name	Location Sec.-Town-Range	Surface Area (acres)	Max. Depth (feet)	Lake Type	Soil Group	Shoreline Development Factor	Watershed Size (sq. miles)	Watershed Size/Surface Area Ratios
Alexander Lake	12-43-11	49	10	SE	4	1.40	0.99	12.93
Amnicon Lake	12-46-14	426	31	DG	4	2.70	4.83	7.26
Anderson Lake	13-46-11	6	23	SE	3	1.27	0.19	20.27
Apple Lake	8-43-12	6	11	SE	4	1.13	0.55	58.67
Bass Lake	10-43-12	126	26	SE	4	1.20	1.03	5.23
Bass Lake	33-45-11	52	14	SE	4	1.48	0.40	4.92
Bear Lake	10-45-14	49	14	DG	4	1.40	5.50	71.84
Beaupre Springs	9-45-11	2	5	SP	4	1.46	1.01	323.20
Beauregard Lake	35-45-10	91	19	SE	3	1.78	0.68	4.78
Beglinger Lake	10-43-12	11	47	SE	4	1.21	0.16	9.31
Bennett Lake	10-43-12	30	17	SE	4	1.27	0.43	9.17
Bergen Creek Springs	33-43-12	7	6	SP	4	3.27	0.49	44.80
Big Lake	10-46-10	41	7	DG	4	1.33	38.05	593.95
Big Spring	17-45-11	1	4	SP	4	1.51	0.08	51.20
Bird Sanctuary	14-44-12	10	8	SE	4	1.67	0.18	11.52
Black Fox Lake	22-45-10	38	5	SE	4	1.71	0.21	3.73
Black Lake	19-45-15	80	4	DG	5	1.78	24.00	192.00
Blue Spring	36-46-11	1	4	SP	4	1.21	0.01	6.40
Bluegill Lake	15-43-12	21	77	SE	4	1.16	0.12	3.66
Bond Lake	28-43-12	292	64	SE	4	1.59	1.86	4.08
Boot Lake	33-45-10	16	2	SE	2	1.21	0.22	8.80
Breitzman Lake	23-46-15	13	21	SE	1	1.01	0.26	12.80
Buckley Spring	20-43-13	4	10	SP	4	1.97	0.44	70.40
Buffalo Lake	35-43-12	42	33	SE	4	1.24	1.08	16.46
Catherine Lake	36-45-10	72	11	SE	4	2.21	1.60	14.22
Cedar Island Pond	21-46-10	27	15	DG	4	5.99	0.98	23.23
Chain Lake, Lower	22-43-11	98	11	SE	4	1.22	1.06	6.92
Chain Lake, Upper	21-43-11	77	5	SE	4	1.85	1.50	12.47
Cheney Lake	14-45-11	20	17	SE	4	1.66	0.20	6.40
Clear Lake	15-43-12	36	39	SE	4	1.07	0.59	10.49
Clyde Lake	26-43-11	49	11	SE	4	1.23	0.56	7.31
Coffee Lake	22-46-11	11	31	SE	3	1.21	0.37	21.53
Cranberry Lake	24-43-13	172	19	DG	4	1.50	3.06	11.39
Cranberry Creek Flowage	26-43-13	346	6	DG	4	1.67	10.04	18.57
Cranberry Spring	18-43-12	1	12	SP	4	1.91	0.13	83.20

DOUGLAS COUNTY LAKES

Lake Name	Location Sec.-Town-Range	Surface Area (acres)	Max. Depth (feet)	Lake Type	Soil Group	Shoreline Development Factor	Watershed Size (sq. miles)	Watershed Size/Surface Area Ratios
Cream Lake	22-46-11	5	17	SE	3	1.05	0.61	78.08
Crooked Lake	17-43-10	32	9	SE	4	2.00	1.86	37.20
Crotty Lake	32-43-11	52	16	SE	4	1.48	0.62	7.63
Crystal Lake	23-43-13	292	21	SE	4	1.92	1.69	3.70
Deer Lake	11-43-13	19	19	SE	4	1.33	0.54	18.19
Deer Lake	2-46-11	49	6	SE	3	1.66	0.32	4.18
Deer Lake	10-46-13	5	28	SE	1	1.07	0.10	12.80
Deer Print Lake	21-45-10	20	7	SE	4	1.88	0.14	4.48
Dowling Lake	18-46-13	154	13	DG	4	1.12	2.28	9.48
Eau Claire River Flowage	5-43-11	56	22	DG	4	3.02	21.79	249.03
Ellison Lake	24-45-10	110	18	SE	4	1.37	0.47	2.73
Ferguson Lake	34-45-12	10	7	DG	4	1.26	1.57	100.48
Flamang Lake	1-44-11	7	17	SE	4	1.09	0.13	11.89
Flat Lake	3-44-11	58	4	SE	4	1.85	0.55	6.07
Gander Lake	22-46-11	54	27	SE	3	1.36	0.27	3.20
Gilbert Lake	6-45-11	8	6	SE	4	1.55	0.15	12.00
Goose Lake	10-43-10	38	5	SE	4	1.44	1.41	23.75
Grover Lake	8-43-11	7	10	SE	4	1.03	0.08	7.31
Harriet Lake	7-43-11	17	18	SE	4	1.42	0.32	12.05
Haugen Lake (Pagan)	7-43-10	27	25	SE	4	1.37	0.81	19.20
High Life Lake	23-45-10	20	6	SE	4	1.43	0.19	6.08
Hoodoo Lake	26-47-10	32	13	SE	4	1.12	0.27	5.40
Hopkins Lake	24-45-10	15	17	SE	4	1.02	0.16	6.83
Horseshoe Lake (Tank)	18-46-10	4	45	SE	3	1.35	0.16	25.60
Horseshoe Springs	8-44-10	6	4	SP	4	2.53	0.20	21.33
Interfalls Lake (Manitou)	28-47-14	27	13	DG	2	2.24	79.79	1891.32
Island Lake	29-45-11	46	17	SE	4	1.33	0.52	7.23
Jack Pine Lake	22-45-10	15	12	SE	4	1.20	0.10	4.27
Kreide Lake	13-43-12	47	7	SE	4	1.55	0.81	11.03
Lake of the Woods	17-45-11	34	18	SE	4	1.61	0.60	11.29
Leader Lake	21-43-12	165	56	SE	4	1.95	0.80	3.10
Little Sand Lake	35-43-14	74	21	SE	4	1.10	0.79	6.83
Little Simms Lake	31-44-10	12	11	SE	4	1.14	0.14	7.47
Little Steele Lake	27-47-11	23	14	DG	3	1.19	2.92	81.25
Long Lake	11-43-12	17	5	SE	4	1.84	0.36	13.55
Long Lake	31-45-11	25	18	SE	4	1.38	0.49	12.54
Long Lake	10-46-13	18	10	SE	1	1.81	0.20	7.11
Loon Lake	36-43-11	41	15	SE	4	1.41	0.25	3.90
Loon Lake	27-43-13	58	18	SE	4	1.03	0.66	7.28
Loon Lake	13-45-10	109	20	SE	4	1.43	0.35	2.06
Lower Eau Claire Lake	25-44-10	802	42	DG	4	1.73	10.86	8.67

DOUGLAS COUNTY LAKES

Lake Name	Location Sec.-Town-Range	Surface Area (acres)	Max. Depth (feet)	Lake Type	Soil Group	Shoreline Development Factor	Watershed Size (sq. miles)	Watershed Size/Surface Area Ratios
Lower Ox Flowage	8-44-11	38	18	DG	4	2.45	5.22	87.92
Lund Lake	2-44-10	75	31	SE	4	1.18	1.50	12.80
Lydon Lake	2-46-11	10	15	SE	4	1.15	0.11	7.04
Lyman Lake	22-46-13	403	15	DG	1	2.44	49.67	78.88
Lynch Spring	17-45-11	2	11	SP	4	1.48	0.10	32.00
McDougal Spring	29-46-10	3	4	SP	4	3.41	0.19	40.53
McGraw Lake	31-43-13	135	25	SE	4	1.64	2.40	11.38
Metzger Lake	1-44-11	12	29	SE	4	1.28	0.22	11.73
Mills Lake	5-45-11	8	7	SE	4	3.49	0.15	12.00
Minnesuing Lake	16-46-11	432	43	DG	3	2.36	13.94	20.65
Minnow Lake	19-47-10	11	18	SE	3	1.08	0.39	22.69
Minong Flowage (Lake Nancy)	36-43-13	1,564	21	DG		4.48	234.00	95.75
Mirror Lake	26-45-10	25	8	SE	3	1.25	0.35	8.96
Moose Branch Flowage	34-45-13	40	5	DG	1	2.15	2.62	41.92
Moose Lake	31-45-12	13	9	SE	1	1.07	1.20	59.08
Muck Lake	35-43-12	19	5	SE	4	1.13	0.41	13.81
Muck Lake	12-45-10	39	6	SE	4	1.38	1.03	16.90
Mud Creek Springs	31-45-10	4	12	SP	4	2.07	0.32	51.20
Mud Lake	12-44-10	56	6	SE	4	1.63	0.65	7.43
Mud Lake	14-46-14	47	3	SE	4	1.29	1.02	13.89
Mulligan Lake	13-43-11	77	4	DG	4	1.50	2.55	21.19
Murray Lake	24-45-10	43	15	SE	4	1.03	0.13	1.93
Muskrat Lake	28-45-11	20	9	SE	4	1.79	0.72	23.04
Nebagamon Lake	35-47-11	914	56	DG	3	2.53	27.59	19.32
Newman Lake	8-46-13	12	12	SE	1	2.42	0.18	9.60
One Buck Lake	8-46-13	5	30	SE	1	1.10	0.03	3.84
One Mile Lake	12-43-12	39	6	SE	4	2.47	1.15	18.87
Paradise Lake	22-45-10	21	6	SE	4	1.05	0.25	7.62
Park Creek Pond	26-45-12	11	7	DG	4	1.11	1.93	112.29
Person Lake	22-43-13	172	10	SE	4	1.50	1.81	6.73
Peterson Lake	36-43-12	33	10	SE	4	1.17	0.15	2.91
Pickereel Lake	21-43-12	58	24	SE	4	1.59	0.27	2.98
Pine Lake	32-47-10	12	8	SE	3	1.85	0.30	16.00
Plate Lake	12-46-11	1	22	SE	3	1.23	1.32	844.80
Poplar River Pond	6-47-11	9	14	DG	2	1.55	29.66	2109.16
Radigan Flowage	10-43-15	62	10	DG	1	2.62	34.88	360.05
Rainbow Lake	11-43-12	6	39	SE	4	1.11	0.22	23.47
Red Lake	29-43-11	252	39	SE	4	1.51	1.44	3.66
Reichuster Lake	3-46-14	13	5	SE	1	1.11	1.13	55.63
Rock Lake	33-45-10	42	13	SE	4	2.38	1.40	21.33
Round Lake	12-43-13	34	75	SE	4	1.01	0.24	4.52
Round Lake	15-46-13	8	11	SE	1	1.01	0.30	24.00

DOUGLAS COUNTY LAKES

Lake Name	Location Sec.-Town-Range	Surface Area (acres)	Max. Depth (feet)	Lake Type	Soil Group	Shoreline Development Factor	Watershed Size (sq. miles)	Watershed Size/Surface Area Ratios
Rush Lake	12-46-10	22	9	SE	4	1.34	0.24	6.98
St. Croix Flowage (Gordon)	34-44-12	1,912	28	DG	4	3.38	125.24	41.92
Sand Lake	13-45-10	98	16	SE	1	1.04	0.41	2.68
Saunders Pond	34-47-10	2	8	SP	3	1.77	0.32	102.40
Sauntrys Pocket	1-43-11	110	9	SE	4	1.11	0.70	4.07
Sawyer Lake	30-43-10	12		SE	4	1.14	0.26	13.87
Scott Lake	1-43-13	22	14	SE	4	1.05	0.40	11.64
Scout Lake	16-46-13	30	6	DG	1	1.06	0.65	13.87
Seventeen Lake	17-45-14	3	14	SE	1	1.11	0.50	106.67
Shoberg Lake	12-45-11	6	6	SE	4	1.28	1.48	157.87
Simms Lake	25-44-11	154	41	SE	4	1.08	0.90	3.74
Smith Lake	11-45-11	30	5	SE	4	1.46	0.67	14.29
Snake Lake	19-43-10	85	38	SE	4	1.45	1.02	7.68
Snipe Lake	7-43-12	21	20	SE	4	1.16	0.41	12.50
Spider Lake	5-43-12	63	15	SE	4	2.32	1.20	12.19
Spring Lake	3-46-10	12	8	DG	4	2.65	41.36	2205.87
Steele Lake	33-47-11	157	8	SE	3	1.44	1.11	4.52
Sullivan Lake	20-43-11	84	7	SE	4	1.03	0.67	5.10
Sunfish Lake (Redding)	18-46-10	8	28	SE	3	1.24	0.91	72.80
Swenson Lake	23-44-11	15	15	SE	4	2.06	0.12	5.12
Thorne Lake	8-43-10	29	9	SE	4	1.31	0.90	19.86
Three Buck Lakes, Lower	24-46-13	3	7	SE	1	1.47	0.03	6.40
Three Buck Lakes, Middle	24-46-13	1	6	SE	1	3.09	0.04	25.60
Three Buck Lakes, Upper	13-46-13	2	6	SE	1	1.23	0.05	16.00
Twin Lakes, East	27-45-11	113	5	SE	4	1.59	1.25	7.08
Twin Lakes, West	28-45-11	66	5	SE	4	1.21	0.21	2.04
Twin Lakes, North	4-46-11	19	14	DG	3	1.36	0.35	11.79
Twin Lakes, South	4-46-11	29	5	DG	3	1.19	0.97	21.41
Two-Mile Lake	12-43-12	97	31	SE	4	1.37	0.41	2.71
Upper Ox Flowage	14-44-11	64	19	DG	4	1.59	9.79	97.90
Upper St. Croix Lake	25-45-12	855	22	DG	4	2.29	28.25	21.15
Wagner Lake	15-43-12	21	32	SE	4	1.16	0.11	3.35
Wascott Lake	26-43-12	6	7	SE	4	1.28	0.23	24.53
Webb Lake	5-43-12	55	25	SE	4	1.27	0.64	7.45
Whiskey Lake	18-46-10	10	26	SE	3	1.56	0.18	11.52
Whitefish Lake	16-43-12	832	102	SE	4	1.71	4.29	3.30
Whiteside Lake	8-44-10	16	19	SE	4	1.25	0.20	8.00
Wilson Lake	14-43-13	27	9	SE	4	1.37	0.41	9.72
Yoekel Lake	35-43-12	5	7	SE	4	1.21	0.19	24.32

4. SECTION 4 LIST OF LAKES BY CLASSIFICATION

The following classification lists identify lakes named in "Wisconsin Lakes," Wisconsin Department of Natural Resources, PUBL-FM-800 91 and appearing by name on the Douglas County 1:100,000 scale topographic map published by the U.S. Geological Survey, 1986.

Small or unnamed lakes not appearing on these lists are considered Class 1 Protection Lakes.

Class 1 lakes which do not have a habitable residence within 300 feet of the ordinary highwater mark are considered "wild lakes." The determination of whether a Class 1 lake qualifies as a "wild lake" will be made in the field by the Zoning Administrator.

It should be noted that Douglas County's shoreline regulation jurisdiction extends only to those portions of shoreline outside the boundaries of any incorporated municipality. Lakes with all or parts of the shorelines within incorporated municipalities are identified by community.

Class 1 Protection Lakes

Alexander Lake
Anderson Lake
Apple Lake
Bass Lake (T45N-R11W-S33)
Beaupre Springs
Beauregard Lake
Beglinger Lake
Bennett Lake
Bergen Creek Springs
Big Spring
Bird Sanctuary Lake
Black Fox Lake
Blue Spring
Bluegill Lake
Boot Lake
Breitzman Lake
Buckley Spring
Buffalo Lake
Catherine Lake
Cedar Island Pond
Chain Lake, Lower
Chain Lake, Upper
Cheney Lake
Clear Lake
Clyde Lake
Coffee Lake

Class 1 Protection Lakes List - Continued

Cranberry Spring
Cream Lake
Crooked Lake
Crotty Lake
Deer Lake T43N R13W S11
Deer Lake T46N R11W S2 (*in the Village of Nebagamon*)
Deer Lake T46N R13E S10
Deer Print Lake
Ellison Lake
Flamang Lake
Flat Lake
Gilbert Lake
Goose Lake
Grover Lake
Harriet Lake
Haugen Lake (Pagan)
High Life Lake
Hoodoo Lake
Hopkins Lake
Horseshoe Springs
Interfalls Lake (Manitou)
Island Lake
Jack Pine Lake
Kreide Lake
Lake of the Woods
Leader Lake
Little Sand Lake
Little Simms Lake
Long Lake T43N R12W S11
Long Lake T45N R11W S31
Long Lake T46N R13W S10
Loon Lake T45N R10W S13
Loon Lake T43N R11W S36
Loon Lake T43N R13W S27
Lower Ox Flowage
Lydon Lake (*in the Village of Nebagamon*)
Lynch Spring
McDougal Spring
McGraw Lake
Metzger Lake
Mills Lake
Minnow Lake
Mirror Lake
Muck Lake T43N R12W S35
Muck Lake T45N R10W S12
Mud Creek Springs
Mud Lake T44N R10W S12
Mud Lake T46N R14W S14
Murray Lake
Muskrat Lake
Newman Lake

Class 1 Protection Lakes List - Continued

One Mile Lake
Paradise Lake
Person Lake
Peterson Lake
Pickerel Lake
Pine Lake
Rainbow Lake
Rock Lake
Round Lake T43N R13W S12
Round Lake T46N R13W S15
Rush Lake
Saunders Pond
Sauntrys Pocket
Sawyer Lake
Scott Lake
Seventeen Lake
Shoberg Lake
Smith Lake
Snipe Lake
Spider Lake
Spring Lake
Sullivan Lake
Sunfish Lake (Redding)
Swenson Lake
Thorne Lake
Three Buck Lakes, Lower
Three Buck Lakes, Middle
Three Buck Lakes, Upper
Twin Lakes, East
Twin Lakes, West
Two-Mile Lake
Wagner Lake
Wascott Lake
Webb Lake
Whiskey Lake
Whiteside Lake (German)
Wilson Lake
Yoekel Lake

Class 2 Protection Lakes

Amnicon Lake
Bass Lake T43N R12W S10
Bear Lake
Big Lake
Black Lake
Bond Lake
Breitzman Lake
Cranberry Lake
Crystal Lake
Dowling Lake
Eau Claire River Flowage
Ferguson Lake
Gander Lake
Horseshoe Lake (Tank)
Little Steele Lake (*partially in the Village of Nebagamon*)
Lund Lake
Moose Branch Flowage
Moose Lake
Mulligan Lake
One Buck Lake
Park Creek Pond (*in the Village of Solon Springs*)
Plate Lake
Poplar River Pond (*in the Village of Poplar*)
Red Lake
Reichuster Lake
Sand Lake
Scout Lake
Simms Lake
Snake Lake
Steele Lake
Twin Lakes, North
Twin Lakes, South
Upper Ox Flowage
Whitefish Lake (Bardon)

Class 3 Protection Lakes

Cranberry Creek Flowage
Lower Eau Claire Lake
Lyman Lake
Minnesuing Lake
Minong Flowage (Nancy)
Nebagamon (*in the Village of Nebagamon*)
Radigan Flowage
St Croix Flowage (Gordon)
Upper St. Croix Lake (*partially in the Village of Solon Springs*)