

## APPENDIX C. Statewide Resource Quality Summary For Significant Publicly Owned Lakes

Significant Publicly-Owned Lakes” are defined as state, public, or multiply-owned lakes having 20 acres or more surface area; however, some smaller lakes (located in Cook County) which provide substantial public access and benefits to the citizens of Illinois have also been defined as “significant.” The summary information below is a subset of all lakes assessed and reported in Section C-3 of this report.

### Individual Use Support

*Fish consumption, aquatic life, primary contact (swimming), public and food processing water supply, secondary contact), aesthetic quality and indigenous aquatic life* uses were individually assessed for the degree of use support (Appendix Table C-1).

**Appendix Table C-1. Individual Use Support Summary for Significant Publicly Owned Lakes.**

<b>Designated Use</b>	<b>Total Acres</b>	<b>Acres Assessed</b>	<b>Acres Fully Supporting</b>	<b>Acres Not Supporting Fair</b>	<b>Acres Not Supporting Poor</b>	<b>Acres Not Assessed</b>	<b>Acres as Insufficient Information</b>
Aesthetic Quality	160,867	131,920	9,196	86,098	36,626	27,403	1,544
Aquatic Life	160,867	131,920	88,625	43,295	0	27,403	1,544
Fish Consumption	162,466	82,027	4,200	77,776	51	80,439	0
Indigenous Aquatic Life	1,600	1,600	1,600	0	0	0	0
Primary Contact	160,867	1,318	929	389	0	159,549	0
Public and Food Processing Water Supply	75,328	75,155	4,737	70,418	0	173	0
Secondary Contact	162,466	929	929	0	0	161,537	0

### Statewide Potential Causes of Use Impairment

Potential causes of use impairment for significant publicly-owned lakes are summarized below in Appendix Table C-2. Potential causes having the greatest effect on lake acres assessed include: phosphorus, total suspended solids, and aquatic algae.

**Appendix Table C-2. Potential Causes of All Use Impairments Significant Publicly Owned Lakes.**

<b>Potential Cause of Impairment</b>	<b>Acres Impaired</b>
Phosphorus (Total)	105,028
Total Suspended Solids (TSS)	101,585
Aquatic Algae	100,755
Mercury	69,385
Manganese	66,711
Atrazine	26,092
Polychlorinated biphenyls	25,638
Aquatic Plants (Macrophytes)	24,295
Sedimentation/Siltation	13,925
Oxygen, Dissolved	12,121
Cause Unknown	11,598
Silver	7,266
Non-Native Fish, Shellfish, or Zooplankton	6,229
pH	5,098
Chlordane	4,820
Aldrin	3,869
Nitrogen, Nitrate	3,707
Zinc	2,631
Heptachlor	2,107
Ammonia (Total)	1,700
Non-Native Aquatic Plants	1,623
Cadmium	524
Fecal Coliform	389
Nickel	325
Total Dissolved Solids	250
Turbidity	172

**Statewide Potential Sources of Use Impairment**

Potential sources of use impairment for significant publicly-owned lakes are summarized below in Appendix Table C-3. Potential sources having the greatest effect on lake acres assessed include: crop production (crop land or dry land), source unknown, and littoral/shore area modifications (non-riverine).

**Appendix Table C-3. Potential Sources of All Use Impairments in Significant Publicly Owned Lakes.**

<b>Potential Source of Impairment</b>	<b>Acres Impaired</b>
Crop Production (Crop Land or Dry Land)	109,349
Source Unknown	106,026
Littoral/shore Area Modifications (Non-riverine)	88,202
Other Recreational Pollution Sources	75,022
Atmospheric Deposition – Toxics	69,385
Runoff from Forest/Grassland/Parkland	47,982
Contaminated Sediments	46,479
Urban Runoff/Storm Sewers	40,256
Municipal Point Source Discharges	25,053
On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	12,031
Rcra Hazardous Waste Sites	8,984
Impacts from Hydrostructure Flow Regulation/modification	8,236
Site Clearance (Land Development or Redevelopment)	7,007
Dredging (E.g., for Navigation Channels)	5,966
Waterfowl	4,159
Introduction of Non-native Organisms (Accidental or Intentional)	2,187
Industrial Point Source Discharge	2,153
Agriculture	1,528
Livestock (Grazing or Feeding Operations)	1,283
Pesticide Application	1,027
Rural (Residential Areas)	935
Highway/Road/Bridge Runoff (Non-construction Related)	665
Residential Districts	260
Impacts from Abandoned Mine Lands (Inactive)	250
Combined Sewer Overflows	250
Lake Fertilization	248
Streambank Modifications/destablization	227
Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)	225
Golf Courses	172
Wildlife Other than Waterfowl	140
Highways, Roads, Bridges, Infrastructure (New Construction)	135
Channelization	135
Pollutants from Public Bathing Areas	96
Speciality Crop Production	61
Loss of Riparian Habitat	59
Other Spill Related Impacts	40
Crop Production (Crop Land or Dry Land)	109,349

## Trophic Status

The trophic status of significant publicly-owned lakes is summarized in Appendix Table C-4. Lake trophic status is based on the Trophic State Index (TSI). Most lake acreage was classified as eutrophic or hypereutrophic.

**Appendix Table C-4. Trophic Status of Significant Publicly Owned Inland Lakes.**

<b>Trophic Status</b>	<b>Number of Lakes</b>	<b>Total Acres</b>
Hypereutrophic (TSI $\geq 70$ )	77	65,902
Eutrophic (TSI $\geq 50$ & $< 70$ )	142	61,784
Mesotrophic (TSI $\geq 40$ & $< 50$ )	36	7,213
Oligotrophic (TSI $< 40$ )	5	241
Unknown	94	27,326
Totals:	354	162,466