

APPENDIX C. Statewide Resource Quality Summary For Significant Publicly Owned Lakes, 2010.

In Illinois, *significant publicly owned lakes* are publicly owned inland lakes with a surface area of 20 acres or more. Also included are some lakes in Cook County that are less than 20 acres but provide substantial public access and benefits to the citizens of Illinois. 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, 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. Summary of Assessments of Use Attainment for Significant Publicly Owned Lakes.

Designated Use	Statewide Acres Designated	Acres Assessed	Acres Fully Supporting	Acres Not Supporting Fair	Acres Not Supporting Poor	Acres Not Assessed	Acres as Insufficient Information
Aesthetic Quality	160,867	131,940	13,520	108,241	10,180	27,402	1,525
Aquatic Life	160,867	131,959	119,745	12,214	0	27,383	1,525
Fish Consumption	162,467	87,065	4,200	82,290	575	75,401	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	75,084	15,576	59,508	0	244	0
Secondary Contact	162,467	929	929	0	0	161,537	0

Statewide Potential Causes of Use Impairment

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

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

Potential Cause of Impairment	Acres Impaired
Total Suspended Solids (TSS)	112,482
Phosphorus (Total)	100,759
Aquatic Algae	98,011
Mercury	74,947
Manganese	58,397
Aquatic Plants (Macrophytes)	33,880
Polychlorinated biphenyls	25,638
Oxygen, Dissolved	7,152
Sedimentation/Siltation	6,401
Chlordane	4,820
Turbidity	4,568
Cause Unknown	4,405
Silver	4,194
Atrazine	3,747
Aldrin	3,345
pH	3,214
Nitrogen, Nitrate	807
Nonnative Fish, Shellfish, or Zooplankton	604
Endrin	524
Cadmium	524
Zinc	524
Fecal Coliform	389
Nickel	325
Total Dissolved Solids	250
Fish Kills	172

Statewide Potential Sources of Use Impairment

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

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

Potential Source of Impairment	Acres Impaired
Source Unknown	104,747
Littoral/shore Area Modifications (Non-riverine)	96,613
Crop Production (Crop Land or Dry Land)	95,642
Other Recreational Pollution Sources	81,293
Atmospheric Deposition - Toxics	74,645
Runoff from Forest/Grassland/Parkland	51,013
Urban Runoff/Storm Sewers	38,901
Municipal Point Source Discharges	27,642
Animal Feeding Operations (NPS)	25,355
Contaminated Sediments	12,915
On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	9,655
Dredging (E.g., for Navigation Channels)	9,038
Rcra Hazardous Waste Sites	8,984
Agriculture	8,719
Natural Sources	6,573
Golf Courses	6,445
Waterfowl	6,156
Yard Maintenance	2,999
Industrial Point Source Discharge	2,153
Impacts from Hydrostructure Flow Regulation/modification	2,131
Dam or Impoundment	1,425
Rural (Residential Areas)	1,272
Other Turf Management	1,151
Pesticide Application	862
Highway/Road/Bridge Runoff (Non-construction Related)	727
Livestock (Grazing or Feeding Operations)	704
Residential Districts	666
Site Clearance (Land Development or Redevelopment)	613
Impacts from Abandoned Mine Lands (Inactive)	250
Lake Fertilization	248
Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)	225
Wildlife Other than Waterfowl	140
Unspecified Urban Stormwater	129
Pollutants from Public Bathing Areas	96
Impervious Surface/Parking Lot Runoff	82
Introduction of Non-native Organisms (Accidental or Intentional)	80
Municipal (Urbanized High Density Area)	62
Specialty Crop Production	61
Loss of Riparian Habitat	59

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 Lakes.

Trophic Status	Number of Lakes	Total Acres
Hypereutrophic (TSI ≥ 70)	75	65,924
Eutrophic (TSI ≥ 50 & < 70)	143	61,835
Mesotrophic (TSI ≥ 40 & < 50)	34	7,140
Oligotrophic (TSI < 40)	5	241
Unknown	94	27,327
Total:	354	162,467