

## APPENDIX C. Statewide Resource Quality Summary for Significant Publicly Owned Lakes - Cycle 2018

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, 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, Cycle 2018.**

<b>Designated Use</b>	<b>Statewide Acres Designated</b>	<b>Acres Assessed</b>	<b>Acres Fully Supporting</b>	<b>Acres Not Supporting</b>	<b>Acres Not Assessed</b>	<b>Acres as Insufficient Information</b>
Aesthetic Quality	167,282	133,180	13,375	119,805	33,233	869
Aquatic Life	165,682	133,381	119,961	13,420	31,432	869
Fish Consumption	167,282	120,632	4,000	116,632	46,650	0
Indigenous Aquatic Life	1,600	1,600	1,600	0	0	0
Primary Contact	165,682	1,481	1,092	389	164,201	0
Public and Food Processing Water Supply	73,803	73,803	67,931	5,872	0	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: phosphorus, mercury, and total suspended solids.

**Appendix Table C-2. Potential Causes of All Use Impairments in Significant Publicly Owned Lakes, Cycle 2018.**

<b>Potential Cause of Impairment</b>	<b>Acres Impaired</b>
Phosphorus (Total)	118,341
Mercury	113,983
Total Suspended Solids (TSS)	105,083
Polychlorinated biphenyls	27,122
Aquatic Algae	18,434
Oxygen, Dissolved	12,886
Aquatic Plants (Macrophytes)	7,776
Chlordane	4,820
pH	4,342
Sedimentation/Siltation	4,246
Silver	4,173
Aldrin	3,324
Nitrogen, Nitrate	3,072
Cause Unknown	1,532
Turbidity	1,531
Simazine	1,388
Terbufos	925
Manganese	915
Nonnative Fish, Shellfish, or Zooplankton	604
Atrazine	599
Endrin	524
Cadmium	524
Zinc	524
Fecal Coliform	389
Nickel	325
Fluoride	172
Hexachlorobenzene	172
Odor	75
Color	35
Debris/Floatables/Trash	35
Total Dissolved Solids	22

**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, atmospheric deposition- toxics, crop production (crop land or dry land), and littoral/shore area modifications (non-riverine).

**Appendix Table C-3. Potential Sources of All Use Impairments in Significant Publicly Owned Lakes, Cycle 2018.**

Potential Source of Impairment	Acres Impaired
Source Unknown	122,705
Atmospheric Deposition - Toxics	99,665
Crop Production (Crop Land or Dry Land)	88,029
Littoral/shore Area Modifications (Non-riverine)	87,856
Runoff from Forest/Grassland/Parkland	78,216
Other Recreational Pollution Sources	76,772
Urban Runoff/Storm Sewers	39,635
Internal Nutrient Recycling	35,186
Municipal Point Source Discharges	26,602
Animal Feeding Operations (NPS)	25,355
Agriculture	21,389
Contaminated Sediments	12,558
Golf Courses	11,008
On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	9,054
Rcra Hazardous Waste Sites	8,984
Dredging (E.g., for Navigation Channels)	5,966
Industrial Point Source Discharge	2,153
Waterfowl	2,125
Dam or Impoundment	1,425
Yard Maintenance	1,422
Rural (Residential Areas)	1,395
Impacts from Hydrostructure Flow Regulation/modification	928
Other Turf Management	816
Natural Sources	778
Pesticide Application	730
Highway/Road/Bridge Runoff (Non-construction Related)	727
Site Clearance (Land Development or Redevelopment)	538
Residential Districts	450
Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)	225
Sediment Resuspension (Clean Sediment)	222
Lake Fertilization	143
Wildlife Other than Waterfowl	140
Unspecified Urban Stormwater	129
Impervious Surface/Parking Lot Runoff	117
Municipal (Urbanized High Density Area)	102
Pollutants from Public Bathing Areas	96
Introduction of Non-native Organisms (Accidental or Intentional)	80
Specialty Crop Production	61
Streambank Modifications/destabilization	55
Other Spill Related Impacts	40
Livestock (Grazing or Feeding Operations)	39

## 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, Cycle 2018.**

<b>Trophic Status</b>	<b>Number of Lakes</b>	<b>Total Acres</b>
Hypereutrophic (TSI $\geq 70$ )	87	64,738
Eutrophic (TSI $\geq 50$ & $< 70$ )	157	63,451
Mesotrophic (TSI $\geq 40$ & $< 50$ )	43	7,619
Oligotrophic (TSI $< 40$ )	5	226
Unknown	95	31,248
Total:	387	167,282