APPENDIX A4. Statewide Resource Quality Summary for Significant Publicly Owned Lakes - Cycle 2020/2022

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 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 (Table 1).

Table 1. Summary of Assessments of Use Attainment for Significant Publicly Owned Lakes, Cycle 2020/2022.

Designated Use	Statewide Acres Designated	Acres Assessed	Acres Fully Supporting	Acres Not Supporting
Aesthetic Quality	167,405	133,395	13,695	119,700
Aquatic Life	165,805	133,357	122,994	10,581
Fish Consumption	167,405	120,869	0	120,869
Indigenous Aquatic Life	1,600	1,600	1,600	0
Primary Contact	165,805	2,071	1,092	979
Public and Food Processing Water Supply	73,667	73,494	65,834	7,659

Statewide Potential Causes of Use Impairment

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

Table 2. Potential Causes of All Use Impairments in Significant Publicly Owned Lakes, Cycle 2020/2022.

Potential Cause of Impairment	Acres Impaired
Phosphorus (Total)	118,401
Mercury	111,866
Total Suspended Solids (TSS)	54,250
Polychlorinated biphenyls	26,902
Aquatic Algae	13,891
Oxygen, Dissolved	6,721
Aquatic Plants (Macrophytes)	5,939
Chlordane	4,220
pH	1,554
Sedimentation/Siltation	4,246
Silver	4,194
Aldrin	16,389
Nitrogen, Nitrate	3,072
Cause Unknown	1,667
Turbidity	0
Simazine	1,222
Terbufos	0
Manganese	1,215
Nonnative Fish, Shellfish, or Zooplankton	604
Atrazine	3,273
Endrin	16,368
Cadmium	524
Zinc	524
Fecal Coliform	979
Nickel	325
Fluoride	172
Hexachlorobenzene	172
Odor	35
Color	35
Debris/Floatables/Trash	35
Total Dissolved Solids	22

Trophic Status

The trophic status of significant publicly owned lakes is summarized in Table 3. Lake trophic status is based on the Trophic State Index (TSI). Most lake acreage was classified as eutrophic or hypereutrophic.

Table 3. Trophic Status of Significant Publicly Owned Lakes, Cycle 2020/2022.

Trophic Status	Number of Lakes	Total Acres
Hypereutrophic (TSI ≥70)	92	65,491
Eutrophic (TSI ≥50 & <70)	154	62,852
Mesotrophic (TSI ≥40 & <50)	46	7,639
Oligotrophic (TSI <40)	5	226
Unknown	92	31,196
Total:	390	167,405