APPENDIX A4. Statewide Resource Quality Summary for Significantly Publicly Owned Lakes - Cycle 2024

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 2024.

Designated Use	Statewide Acres Designated	Acres Assessed	Acres Fully Supporting	Acres Not Supporting
Aesthetic Quality	167,273	133,283	11,357	121,926
Aquatic Life	165,692	133,490	122,929	10561
Fish Consumption	167,215	121,991	0	121,991
Indigenous Aquatic Life	1,600	1,600	1,600	0
Primary Contact	165,673	2,071	1,092	979
Public and Food Processing Water Supply	73,667	73,667	65,944	7723

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 2024.

Potential Cause of Impairment	Acres Impaired
Phosphorus (Total)	131,713
Mercury	115,341
Total Suspended Solids (TSS)	111,109
Polychlorinated biphenyls	27,122
Aquatic Algae	24,356
Oxygen, Dissolved	12,865
Aquatic Plants (Macrophytes)	7776
Chlordane	4820
pН	4368
Sedimentation/Siltation	4225
Silver	4194
Aldrin	23,495
Nitrogen, Nitrate	3072
Cause Unknown	1704
Turbidity	1531
Simazine	1420.3
Terbufos	925
Manganese	1215.3
Nonnative Fish, Shellfish, or Zooplankton	604
Atrazine	6807.7
Endrin	16891.54
Cadmium	524
Zinc	524
Fecal Coliform	978.5
Nickel	325.4
Fluoride	172
Hexachlorobenzene	172
Odor	74.5
Color	52
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 2024.

Trophic Status	Number of Lakes	Total Acres
Hypereutrophic (TSI ≥70)	81	65,404
Eutrophic (TSI \ge 50 & <70)	146	62,829
Mesotrophic (TSI ≥40 & <50)	41	7619
Oligotrophic (TSI <40)	1	206
Unknown	2	31233
Total:	271	167,291