# 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 |
| pH | 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 ≥50 & <70) | 146 | 62,829 |
| Mesotrophic (TSI ≥40 & <50) | 41 | 7619 |
| Oligotrophic (TSI <40) | 1 | 206 |
| Unknown | 2 | 31233 |
| Total: | 271 | 167,291 |