

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

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 | 160,580 | 131,509 | 14,111 | 108,660 | 8,738 | 28,012 | 1,059 |
| Aquatic Life | 160,580 | 131,528 | 121,371 | 10,157 | 0 | 27,993 | 1,059 |
| Fish Consumption | 162,180 | 85,897 | 4,200 | 81,103 | 594 | 76,283 | 0 |
| Indigenous Aquatic Life | 1,600 | 1,600 | 1,600 | 0 | 0 | 0 | 0 |
| Primary Contact | 160,580 | 1,481 | 1,092 | 389 | 0 | 159,099 | 0 |
| Public and Food Processing Water Supply | 74,491 | 74,318 | 66,941 | 7,377 | 0 | 173 | 0 |
| Secondary Contact | 162,180 | 1,092 | 1,092 | -- | -- | 161,088 | 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 mercury.

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) | 109,246 |
| Phosphorus (Total) | 101,435 |
| Mercury | 73,779 |
| Aquatic Algae | 67,787 |
| Aquatic Plants (Macrophytes) | 29,577 |
| Polychlorinated biphenyls | 25,680 |
| Oxygen, Dissolved | 5,543 |
| Chlordane | 4,820 |
| Turbidity | 4,695 |
| Sedimentation/Siltation | 4,511 |
| Cause Unknown | 4,380 |
| Silver | 4,194 |
| Atrazine | 4,272 |
| Aldrin | 3,345 |
| pH | 1,998 |
| Simazine | 1,550 |
| Manganese | 1,168 |
| Total Dissolved Solids | 635 |
| Nonnative Fish, Shellfish, or Zooplankton | 604 |
| Endrin | 524 |
| Cadmium | 524 |
| Zinc | 524 |
| Fecal Coliform | 389 |
| Nickel | 325 |
| Color | 310 |
| Fluoride | 172 |
| Hexachlorobenzene | 172 |
| Debris/Floatables/Trash | 35 |
| Odor | 35 |

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 |
|---|-----------------------|
| Littoral/shore Area Modifications (Non-riverine) | 93,738 |
| Crop Production (Crop Land or Dry Land) | 91,199 |
| Source Unknown | 85,248 |
| Other Recreational Pollution Sources | 80,545 |
| Atmospheric Deposition - Toxics | 72,913 |
| Runoff from Forest/Grassland/Parkland | 51,475 |
| Urban Runoff/Storm Sewers | 38,966 |
| Municipal Point Source Discharges | 26,842 |
| Animal Feeding Operations (NPS) | 25,355 |
| Contaminated Sediments | 12,853 |
| Agriculture | 13,105 |
| On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) | 9,887 |
| Dredging (E.g., for Navigation Channels) | 9,038 |
| Rcra Hazardous Waste Sites | 8,984 |
| Golf Courses | 6,552 |
| Natural Sources | 6,213 |
| Waterfowl | 4,591 |
| Internal Nutrient Recycling | 3,688 |
| Yard Maintenance | 3,488 |
| Industrial Point Source Discharge | 2,153 |
| Rural (Residential Areas) | 1,457 |
| Dam or Impoundment | 1,425 |
| Other Turf Management | 1,153 |
| Impacts from Hydrostructure Flow Regulation/modification | 928 |
| Pesticide Application | 862 |
| Highway/Road/Bridge Runoff (Non-construction Related) | 727 |
| Residential Districts | 716 |
| Site Clearance (Land Development or Redevelopment) | 538 |
| Sediment Resuspension (Clean Sediment) | 314 |
| Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) | 225 |
| Lake Fertilization | 143 |
| Wildlife Other than Waterfowl | 140 |
| Unspecified Urban Stormwater | 129 |
| Impervious Surface/Parking Lot Runoff | 117 |
| Pollutants from Public Bathing Areas | 96 |
| Introduction of Non-native Organisms (Accidental or Intentional) | 80 |
| Municipal (Urbanized High Density Area) | 62 |
| 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.

| Trophic Status | Number of Lakes | Total Acres |
|---------------------------------------|----------------------------|--------------------|
| Hypereutrophic (TSI ≥ 70) | 79 | 66,243 |
| Eutrophic (TSI ≥ 50 & < 70) | 147 | 59,834 |
| Mesotrophic (TSI ≥ 40 & < 50) | 40 | 7,808 |
| Oligotrophic (TSI < 40) | 6 | 404 |
| Unknown | 96 | 27,891 |
| Total: | 368 | 162,180 |