

# Table 1

Table 1: Mean and interquartile range of selected lake characteristics.

|   | Mean  | IQR           |
|---|-------|---------------|
| Total Phosphorus (ug/L)                   | 40    | 20 - 110      |
| Chlorophyll (ug/L)                        | 11.85 | 6.05 - 21.3   |
| Secchi Depth (m)                          | 1.5   | 0.9 - 2.4     |
| P Retention (%)                           | 0.46  | 0.24 - 0.59   |
| Residence Time (yr)                       | 0.63  | 0.2 - 1.8     |
| Lake Area (km <sup>2</sup> )              | 6.54  | 2.93 - 21.88  |
| Maximum Depth (m)                         | 12.95 | 9.2 - 21.34   |
| Agricultural Landuse (%)                  | 53.27 | 17.68 - 74.05 |
| Lake Watershed Area (km <sup>2</sup> )    | 88    | 21 - 410      |
| Network Watershed Area (km <sup>2</sup> ) | 143   | 54 - 550      |

## Table 2

Table 1: Classification and ranking of connectivity metrics, lake depth, and their partition split values according to median effect size.

| Metric                | Scale | Connectivity Type | Split Value | Delta k |
|-----------------------|-------|-------------------|-------------|---------|
| Average Link Length   | nws   | Longitudinal      | 2380        | 0.23    |
| Closest lake distance | nws   | Longitudinal      | 3774        | 0.22    |
| Stream density        | nws   | Lateral           | 13.84       | 0.20    |
| Lake Connection       | focal | Longitudinal      | -           | 0.17    |
| Upstream lake area    | nws   | Longitudinal      | 154         | 0.16    |
| Max Depth             | focal | -                 | 19.81       | 0.15    |
| Average Link Length   | lws   | Longitudinal      | 2177        | 0.14    |
| Upstream lake area    | lws   | Longitudinal      | 279         | 0.13    |
| Baseflow              | lws   | Lateral           | 63.76       | 0.12    |
| Stream order ratio    | lws   | Longitudinal      | 0.67        | 0.10    |
| Baseflow              | nws   | Lateral           | 53.43       | 0.08    |
| Closest lake distance | lws   | Longitudinal      | 3274        | 0.05    |
| Stream order ratio    | nws   | Longitudinal      | 0.4         | 0.04    |
| Stream density        | lws   | Lateral           | 4.43        | 0.03    |