**Description of Dataset**

Title: Great Lakes Water Quality Monitoring and Surveillance Data

Source: https://data-donnees.ec.gc.ca/data/substances/monitor/great-lakes-water-quality-monitoring-and-aquatic-ecosystem-health-data/great-lakes-water-quality-monitoring-and-surveillance-data/?lang=en

Introduction: This dataset contains information on water quality and ecosystem health collected from the Great Lakes and priority tributaries. The main dataset we will use is “Lake Ontario\_Water Quality\_2000-present.csv”

Area of Interest: We want to identify the locations where the water quality seems an issue in the Lake Ontario; and analysis is there an improvement in water quality in these locations from 2000-2023.

Variables: Main Variable are Highlighted

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| Variable | Description |
| CRUISE\_PLAN | Environment and Climate Change Canada Cruise plan number |
| LAST\_DATE\_UPDATED | Latest database modification or entry. In format yyyy-mm-dd  hh:mm:ss.sss. |
| SHIP\_NAME | Name of the Vessel (ship used for sampling) |
| WATER\_BODY | The name of the lake sampled |
| CSN | Order of Sampling (Consecutive) Station Number |
| LATITUDE | Latitude (Degrees Minutes Seconds) |
| LONGITUDE | Longitude (Degrees Minutes Seconds) |
| PSN | Environment and Climate Change Canada Permanent Station Number |
| SOUNDING | Total depth of water (station depth; m) |
| STN\_DATE | Sampling date and time. In format yyyy-mm-dd hh:mm:ss.sss. |
| CODE | Variable code |
| DEPTH\_FROM | Start of sample (depth in m); 998 is Method Blank, 999 is Bottle Blank |
| DEPTH\_TO | End of sample (only if code indicates the sample is depth-integrated; depth in m) |
| DETECTION | Laboratory detection limit |
| FLAG | Less than flag |
| SEQ\_NO | 0 - original sample; Sequence 1 - replicate 1; Sequence 2 - replicate 2, etc. |
| VALUE | Sample result |
| ABBREV | Parameter name abbreviation |
| FULL\_NAME | Water quality parameter name |
| UNITS | Unit of measurement |
| LATITUDE\_DD | Latitude (Decimal Degrees) |
| LONGITUDE\_DD | Longitude (Decimal Degrees) |