Central Sands Lakes Study Data Availability
April 2021

Hydrostratigraphy

Described in Appendix A. Shapefiles of geologic layering and zones available on DNR's Open Data Portal: https://data-wi-dnr.opendata.arcgis.com/ (search Central Sands)

Measured Groundwater and Lake Levels and Streamflow

Available on SWIMS, also available through the DNR's Open Data Portal: https://data-wi-dnr.opendata.arcgis.com/ (search Central Sands)

Modeling Files

The groundwater flow model and Soil-Water-Balance model files will be available through the USGS Data Release upon final publication.

The General Lake Model is available on GitHub (https://github.com/WDNR-Water-Use) under the repository "CSLSglm".

Three sets of land uses were developed for lake ecosystem response modeling scenarios: current-irrigated-agriculture, potential-irrigated-agriculture, and no-irrigated-agriculture. Those datasets are available through the DNR's Open Data Portal: https://data-wi-dnr.opendata.arcgis.com/ (search Central Sands)

Lakes Data and Analysis Code

Available on GitHub (https://github.com/WDNR-Water-Use)

- *CSLSdata*: contains processed field data, including bathymetry, fish surveys, plant PI surveys, stable isotope data, lake buoy temperature and DO data, other water chemistry data (from NADP and SWIMS), and water levels (from WU). Also includes processed MODFLOW results. Includes some Rmd files for visualizing field data.
- *CSLSscenarios*: contains code for calculating hydrologic metrics and determining ecological impact for MODFLOW scenarios. Includes Rmd files for visualizing hydrology and impacts.
- *CSLSfluxes*: contains code for calculating water balance from stable isotopes, conservative solutes, and MODFLOW results. Also calculates the solute-budget hydrologic metrics.
- *CSLSevap*: contains code for calculating lake evaporation in a few different ways from daily or monthly weather data.
- *CSLSsensitivity*: contains code related to sensitivity analysis of sufficiently long lake level timeseries (Devil's Lake and Anvil Lake)

Groundwater Withdrawals

Reported Water Use data used in the Study is available on DNR Open Data Portal: https://data-wi-dnr.opendata.arcgis.com/ (search Central Sands)