



The following summarizes Central Sands Lakes Study project activities that took place July 2018 - December 2018. The WDNR and our study partners, the United States Geological Survey (USGS) and the Wisconsin Geological and Natural History Survey (WGNHS), conducted fieldwork to monitor groundwater and surface water elevations, determine hydrogeological properties, and characterize Plainfield, Pleasant and Long Lakes in Waushara County. A groundwater flow model will be constructed and calibrated using the data collected. The model will contribute to the WDNR's determination of whether there are significant impacts to the study lakes due to groundwater withdrawals.

Since July 2018 the following monitoring information has been collected to assist the CSLS:

- Groundwater
 - Levels and chemistry data in temporary shallow groundwater wells surrounding each of the three lakes
 - Levels in project wells and long-term monitoring wells throughout the model area
- Lakes
 - Continuous lake levels in each of the three study lakes
 - Periodic lake levels at numerous other lakes in the model area
 - Seepage meters, lakebed mini-piezometer measurements, and water chemistry in the study lakes to better characterize the connection between the lakes and groundwater
- Streamflow
 - USGS streamflow gages provide continuous flow data at numerous locations in the study area
 - Instantaneous, supplemental flow data at many other stream sites throughout the model area
- Geology
 - Well construction reports and sediment core samples from drilled wells around the study lakes
 - Geophysical measurements to understand the hydrogeologic factors that may influence groundwater and surface water flow

In July 2018, the USGS began to develop a groundwater flow model. WDNR and WGNHS are providing data and modeling support. Substantial progress has been made in developing the model inputs including the geology, pumping and recharge datasets. In 2019, DNR will continue to develop model datasets, collect additional data, and develop a methodology to determine whether groundwater withdrawals may cause a significant reduction in lake levels.

The field data collection has been successful in part because of the cooperation of landowners around the lakes that have granted access to conduct monitoring and install wells on their properties. In addition to our interaction with landowners, during this period WDNR was asked to give presentations to the American Society of Agriculture and Biological Engineers and the Wisconsin Potato and Vegetable Association Water Task Force regarding the status of the project.

CSLS information including monitoring efforts, model development, and the compilation of past studies in the Central Sands are available on the project website: www.dnr.wi.gov Search "Central Sands" or directly to: <https://dnr.wi.gov/topic/Wells/HighCap/CSLStudy.html>