Wisconsin Department of Natural Resources
Central Sands Lakes Study Update
January 2020

The Wisconsin Department of Natural Resources (DNR) and our study partners are continuing to analyze data and prepare for sharing our methodology, data, and tentative results as part of the Central Sands Lakes Study (CSLS). The following summarizes CSLS activities between July and December 2019.

Lake level monitoring

During this period, the U.S. Geological Survey (USGS) continuously monitored water levels on each of the three study lakes. Precipitation data are collected at the Hancock research station and at precipitation gages near Plainfield and Pleasant lakes. The Central Sands region continued to experience more frequent, intense precipitation events the remainder of 2019. As a result, lake levels on each of the three study lakes are very high and continued to rise through the last six months. The groundwater flow model used for the CSLS will simulate water table levels at both lows (2012) to highs (2018) to demonstrate that the model can reasonably represent a full range of hydrologic conditions that the lakes experience. The DNR plans to continue to fund USGS to monitor the lake levels through 2021.

Local geology

Wisconsin Geological & Natural History Survey (WGNHS) and DNR staff are creating water table maps and characterizing the subsurface geology of the area based on compiled data from approximately 60,000 well construction reports, geophysical surveys, and exploratory drilling completed to fill data gaps.

Modeling

Modelers at USGS and DNR are calibrating a preliminary regional groundwater flow model using available data. They also created inset groundwater flow models to better represent local conditions surrounding the three study lakes. As additional data is analyzed, USGS, WGNHS and DNR are refining the model layers. The model will be used to assess the role of both groundwater withdrawals and climate. In the summer of 2020, the DNR and USGS will host a webinar on the modeling methodology used for the study.

Lake characterization

DNR biologists continue to monitor lake conditions and conduct lake assessments as part of the effort to define significant impacts to lake levels through a process called the Lake Level Impact Assessment (LLIRA). DNR staff are continuing to analyze data collected the past two summers to better characterize physical, chemical and biological characteristics of the lakes. The DNR will host a webinar on the LLIRA methodology used to assess the three lakes and to define significant impacts in the summer of 2020.

Outreach

By request, DNR staff provided an update on the CSLS at the American Public Works Association conference in November 2019. In addition, DNR Lakes Monitoring and Water Use staff presented preliminary LLIRA methodology the North American Lake Management Society conference in Vermont in November 2019. Once presented in the Summer of 2020, the technical webinars will be placed on the department's project website.

For more information regarding the status of the CSLS or to request a presentation, contact project manager, Jeff Helmuth at (608)-266-5234.

Funding

In the first biennium (FY2017-19) the joint committee on finance allocated $400,000 to DNR to fund the study. In January 2020, the Joint Committee on Finance approved funding for the second and final biennium of the project. With 2019-21 funding support now approved, the DNR can continue to work towards meeting the statutory requirements required by the legislature in June 2021.