CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: January 24, 2017

TO: File

FROM: Ian Anderson DG/5

SUBJECT: Lake Koshkonong Wetland Evaluation – Groundwater Component

As part of a September 8, 2016 Lake Koshkonong meeting for Department staff, the Water Use program was asked to develop a groundwater monitoring plan. The groundwater monitoring plan would support a baseline wetland assessment used to evaluate the impacts of raising water levels (3-5 inches) in the lake per the agreement between the lake district and the wetlands association. After discussing the technical merits of the groundwater monitoring plan with several hydrogeologists in the Drinking Water and Groundwater (DG) program, a consensus was reached that groundwater monitoring is not necessary for this effort and would likely not contribute useful data to the evaluation.

Surficial geology in the area is dominated by glacial deposits, primarily sand and gravel with some silt and clay. Surface water and groundwater are assumed to be well connected, with Lake Koshkonong and the Rock River both representing areas of regional groundwater discharge. As a result, raising lake water levels will have negligible effect on groundwater flow, and monitoring wells placed around the lake may not yield valuable information to support the project team's mission.

While the use of monitoring wells in this application may have limited use, the Water Use program agrees that an improved conceptualization of the system, specifically wetlands, should be considered prior to dismissing groundwater monitoring wells. The conceptualization begins with a wetland survey. If the wetland survey identifies high-quality groundwater dependent wetlands, the Water Use program can provide technical oversight for the installation of wells/piezometers used to characterize the local hydrology at the request of the wetland program. The effort would entail a transect of 2-3 nested piezometers for each wetland station where groundwater is deemed critical to the wetland's health. The nested piezometer would be one water table well and 1-2 piezometers. Neither DG nor the wetlands team anticipate groundwater monitoring becoming a necessary component of the monitoring plan at Lake Koshkonong.