

2023 DROUGHT

After a wet spring in 2023 Wisconsin experience a flash drought that lasted until April 2024. While temperatures remained relatively cool, a prolonged period of little to no precipitation quickly created drought conditions across the majority of Wisconsin. To identify resources and answer questions, DNR released a [drought resources website](#).

DNR reviewed the impacts of the 2023 drought on water use and water resources in the state, including comparing the impact in 2023 to Wisconsin’s last drought in 2012. With respect to water resources, DNR’s analysis found that although water levels and streamflows decreased throughout 2023, the decrease was buffered by record setting precipitation between 2016 – 2020.

Groundwater levels observed across the groundwater level monitoring network decreased to normal levels after a five-year period of extremely wet weather conditions (Figure 1). Lake levels in seepage lakes, lakes that have no inlet or outlet and are reliant on groundwater for water supply, also showed a decrease in water level, but still well above the low water levels in 2012 (Figure 2). A review of streamflows showed low baseflows in many groundwater dependent streams, with some reaches going dry, but not to the extent observed in 2012.

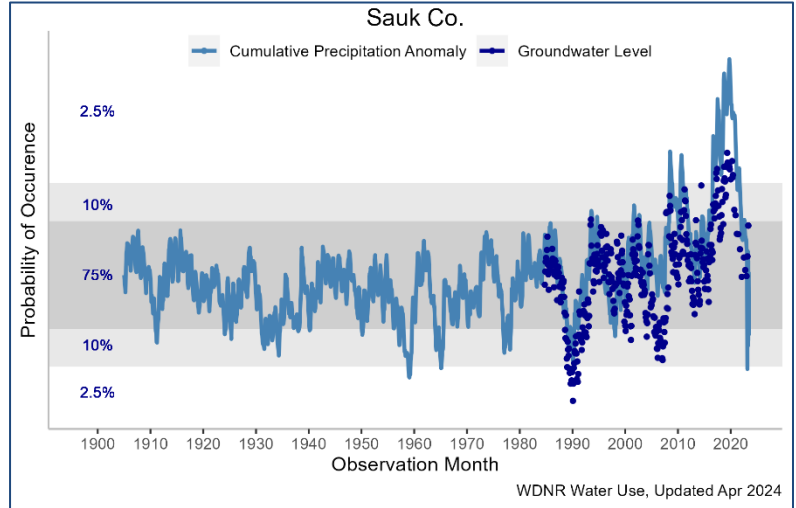


Figure 1. Groundwater monitoring level network well in Sauk Co. showing the cumulative precipitation anomaly and the corresponding groundwater level.

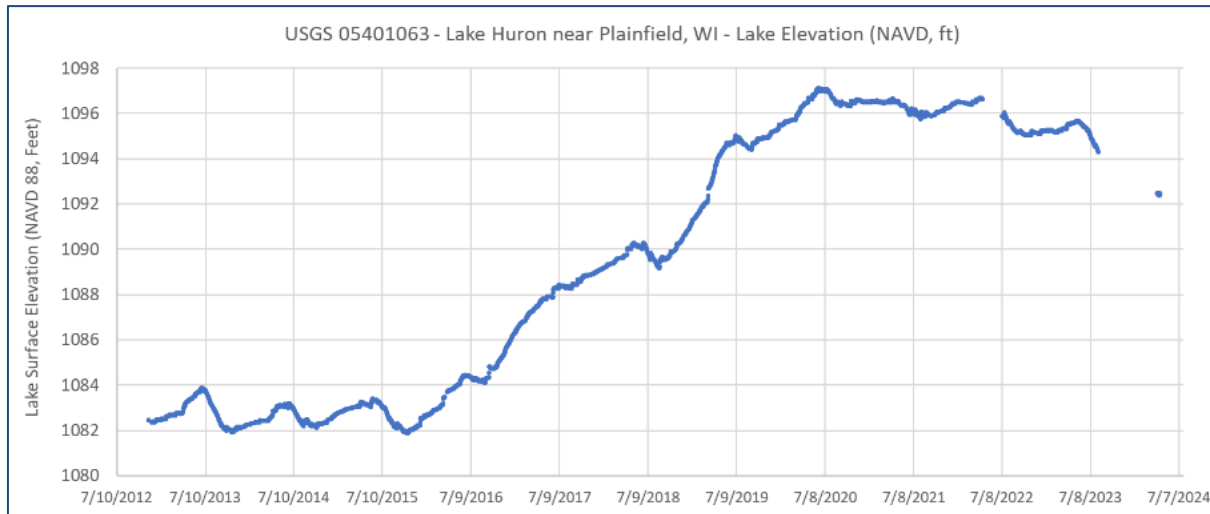


Figure 2. Lake levels in seepage lake, Plainfield Lake 2012-2023.

DNR found that municipal water use did not increase with the 2023 drought, but that total irrigation water use was higher when compared to the 2012 drought. That may be due to the duration of the 2023 drought as well as an increase of 700 more high capacity wells since 2012. The maximum monthly average water use per irrigation well was lower in 2023 than in 2012. The reason for this difference may be that the weather in 2012 was hotter than in 2023 (Figure 3).

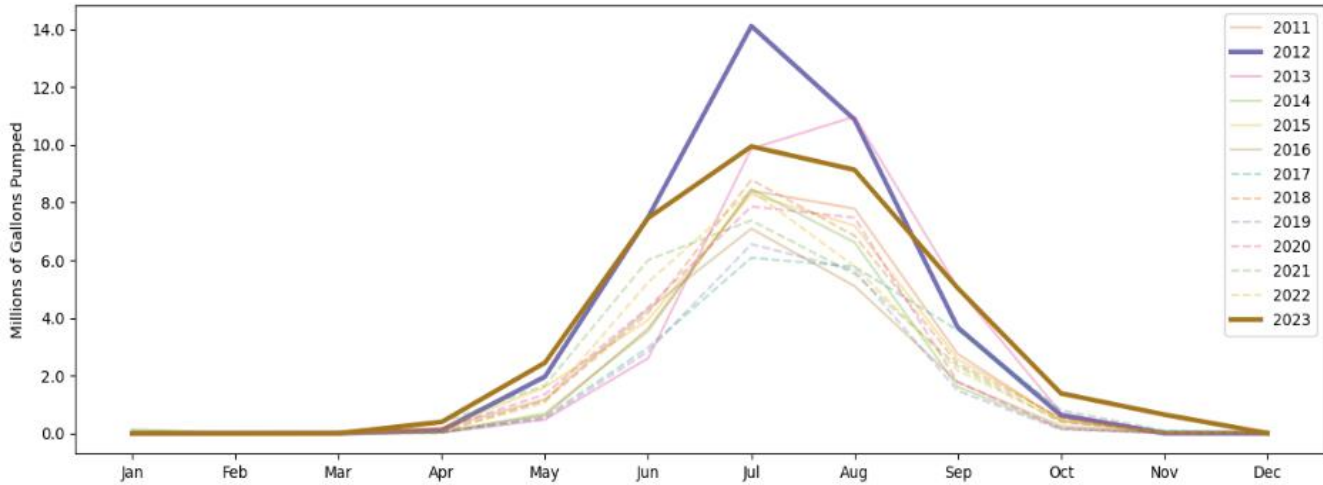


Figure 3. Average monthly withdrawal per irrigation well in 2011 – 2023.