



Financial Services Audit Committee Communication

Date: September 27, 2024

To: Great Lakes Water Authority Audit Committee

From: Matthew S. Lane MPA, Charges Outreach and Modeling Manager

Re: Annual Report on Water System Max Day

Background: Each year, following the designated peak season of June 1 to August 31, the Great Lakes Water Authority (GLWA) reviews the daily water system pumpage and reservoir data to determine the System Maximum Day (Max Day) and the hourly water system pumpage and reservoir data to determine the System Peak Hour (Peak Hour). The GLWA Systems Analytics and Meter Operations team and the Charges Outreach & Modeling team conduct this review in parallel and compare data to help ensure accuracy and completeness.

Once the Max Day and Peak Hour are determined and verified, the teams review daily and hourly performance for all Member Partners on the water model contracts as of that date to evaluate compliance with the values set forth in the Exhibit B of each Member Partner's model contract, which defines projected annual volumes, minimum annual volumes, pressure ranges and maximum flow rates. The teams complete this analysis using the wholesale master meter data available in GLWA's Wholesale Automated Meter Reading (WAMR) portal.

For this report, all measurements are reflected as million gallons per day or MGD.

Analysis: Based on the system pumpage and reservoir analysis completed for 2023, the System Max Day and Peak Hour are as follows:

2024 GLWA System Max Day

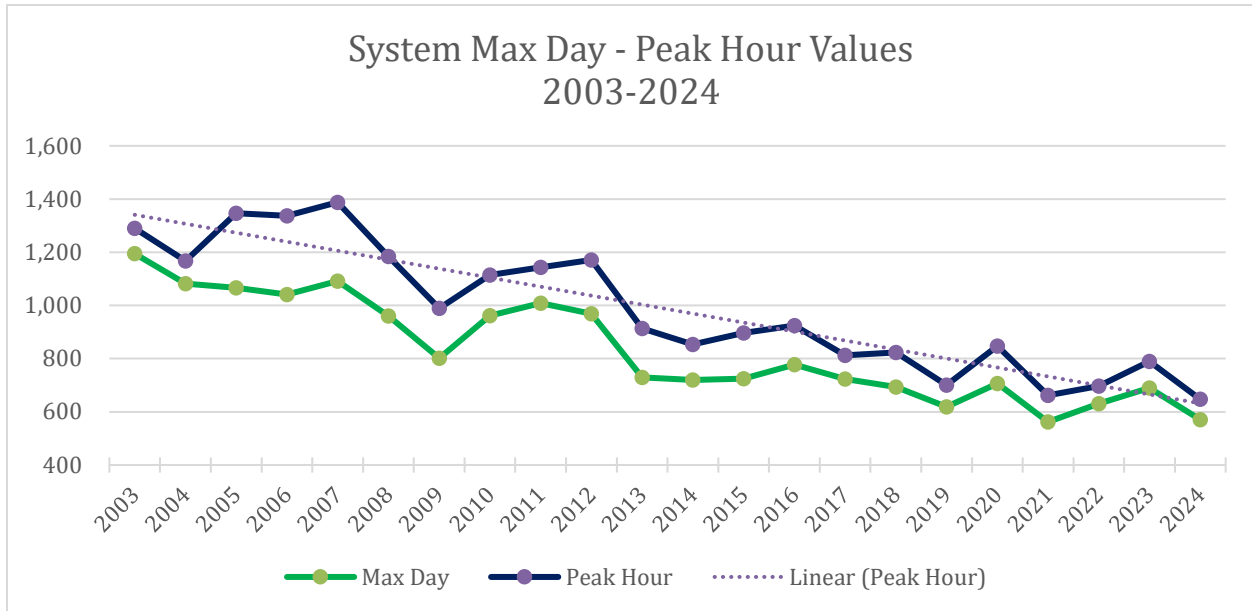
- June 19, 2024
- 571 MGD (690 MGD in 2023)

2024 GLWA System Peak Hour

- 6:00 A.M. – 7:00 A.M. EST
- 647 MGD (789 MGD in 2023)

Chart 1 below provides an illustration of demand patterns compared to overall system capacity. It identifies the number of days above threshold amounts of pumpage in MGD, showing the reduced use of system capacity over time. Total GLWA water system capacity is 1,720 MGD (or 1.7 billion gallons per day).

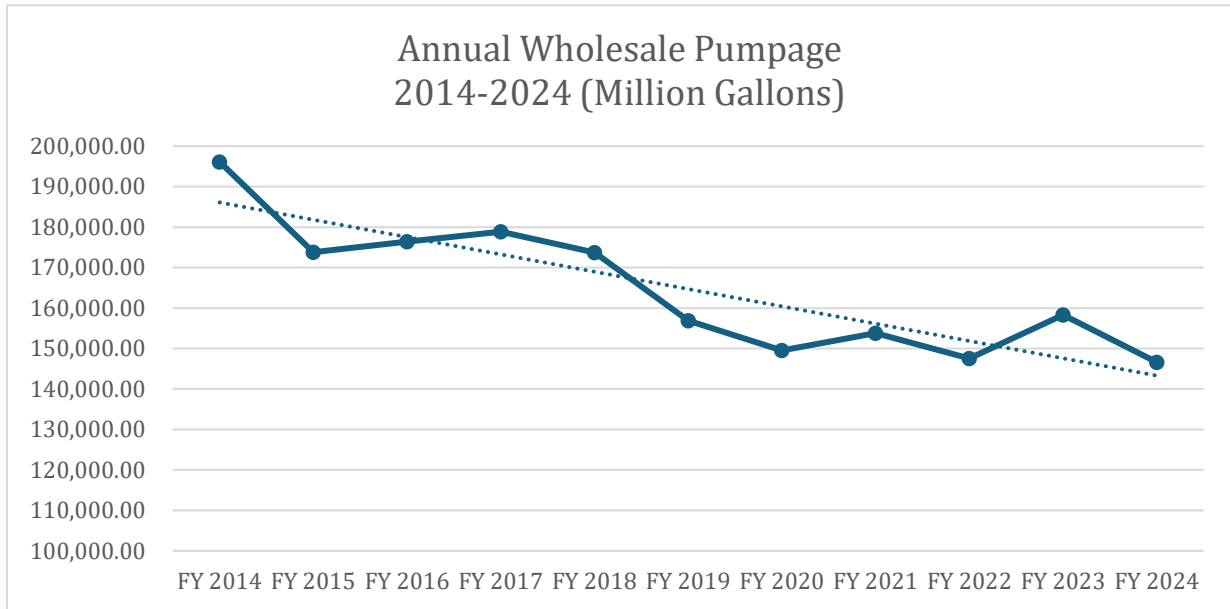
Chart 1: Historic Max Day & Peak Hour



After review of the WAMR data from June 19, 2024, GLWA determined that only one Member Partner had exceedances for the Max Day and/or Peak Hour Value in their model contract. Members of the GLWA and that Member Partner Community are working through the required diligence to investigate the exceedance and will report out at a future Water Analytical Work Group regarding the findings (presently scheduled for October 29, 2024).

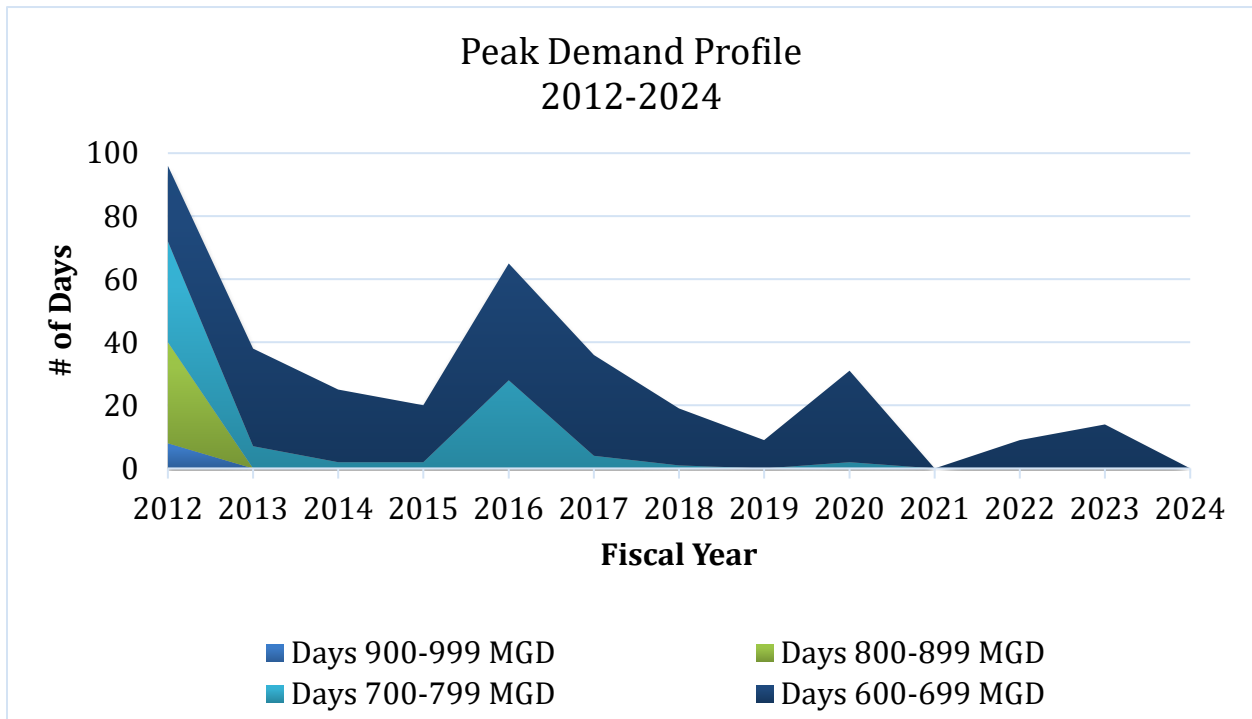
Turning to Chart 2 on the next page, system demand trends show decline in recent history. Chart 2 shows the historical decline in wholesale water production since 2014. The declining production numbers coincide with the declining peak demands.

Chart 2: Historic Wholesale Pumpage



As shown in Chart 3 below, GLWA has observed reduced demand levels over time. For example, in 2012 the peak demands were much greater and more frequent. In 2024, the demand profile shows lower and fewer peaks.

Chart 3: Peak Demand Profile



Budget Impact: None.

Proposed Action: Receive and file report.