

## Technical Memorandum

**To:** Valley Branch Watershed District Landlocked Basin Comprehensive Planning Study Project Stakeholders  
**From:** Jennifer Koehler, Gabby Campagnola  
**Subject:** VBWD Landlocked Basin Flood Mitigation Comprehensive Planning Study —Lake Level Data Summary  
**Date:** October 2023  
**Project:** 23821268.00  
**c:** John Hanson, Nicholas Vottero, Jeremiah Jazdzewski

As part of the Valley Branch Watershed District (VBWD) Landlocked Basin Comprehensive Planning Study, Barr Engineering Co. (Barr) reviewed, compiled, and summarized the available lake-level data for each of the study basins through 2021. As part of this study and the annual VBWD routine monitoring program, the VBWD contracted with the Washington Conservation District (WCD) in 2021 to monitor water levels on the landlocked study basins or potential receiving waters.

Additionally, we summarized the Minnesota Department of Natural Resources (MnDNR) ordinary high water level (OHWL) data. The OHWL is a regulatory elevation used by the MnDNR for permitting work in or modifications to public waters in the state.

As part of this study, we asked the MnDNR to establish the missing OHWL on Reid Park Ponds. The MnDNR completed this survey on June 28, 2022.

MnDNR staff also reviewed the current OHWLs on Cloverdale Lake, Klawitter Pond, and Goetschel Pond based on stakeholder discussions in January 2023. This review concluded that the OHWL for Cloverdale Lake and Klawitter Pond will remain. However, MnDNR staff concluded that the OHWL for Goetschel Pond was never officially surveyed, and we were directed to use an elevation of 894 ft MSL (NAVD88) for study purposes. The MnDNR planned to perform an official OHWL survey in the summer of 2023. As of the writing of this report, we have not seen the official OHWL survey for Goetschel Pond.

During the original project scoping, we did not anticipate needing to focus on Eden Park Pond as it is part of the Downs Lake floodplain; we expected that managing water levels in Downs Lake would address concerns in Eden Park Pond. However, through the assessment process, we determined that we needed to look at Eden Park Pond as an individual basin. The OHWL for Eden Park Pond was unknown throughout the study and assumed to be 884.0 ft MSL (NAVD88) based on a review of National Wetlands Inventory (NWI) and MnDNR LiDAR data. In late June 2023, MnDNR staff confirmed the OHWL of 882.05 ft MSL (NAVD88); however, because the study was nearly complete and model run times were long, the assessment related to Eden Park Pond was not revised.

Table 1 summarizes the available water level data for the VBWD landlocked basins included in this comprehensive planning study. The entire record represents data from all available dates for the study waterbodies. This entire record period varies by waterbody; some basins have many years to decades of data, while others may be limited to 1 or 2 years. Figures 1 through 10 include plots of the available water level data and show the entire record period.

**Table 1: VBWD Landlocked Basin Water Level Summary**

Basin	Maximum Water Level (Entire Record) (ft MSL, NAVD88)	Average Water Level (Entire Record) (ft MSL, NAVD88)	Average Water Level (2014–2021) (ft MSL, NAVD88)	Approx. Water Level (2011 LiDAR) (ft MSL, NAVD88)	OHWL (ft MSL, NAVD88)
Klawitter Pond	955.32	949.83	950.96	948.85	954.97
Sunfish Lake	905.73	895.21	896.44	890.75	896.33
Friedrich’s Pond	909.54	907.43	908.79	907.19	909.40
Cloverdale Lake	908.21	904.07	906.41	902.33	900.81
McDonald Lake	890.75	887.52	887.95	885.63	887.62
Goetschel Pond	895.65	889.25	894.77	885.50	894.00
Reid Park Ponds (East and West)	887.27	886.86	886.86	879.82	885.53
Legion Pond	886.29	881.82	885.73	879.56	884.00
Downs Lake	891.82	887.79	888.47	885.47	889.15
Eden Park Pond	886.64	884.80	884.80	877.89	882.05

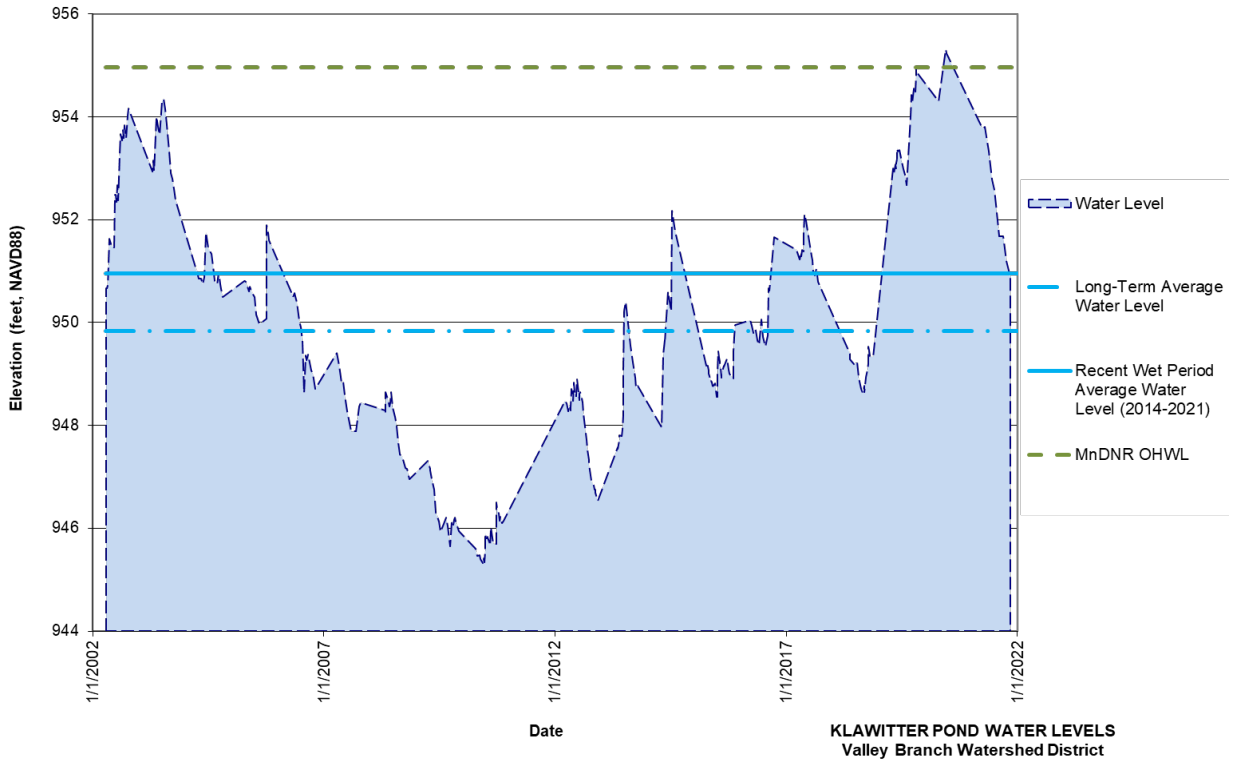
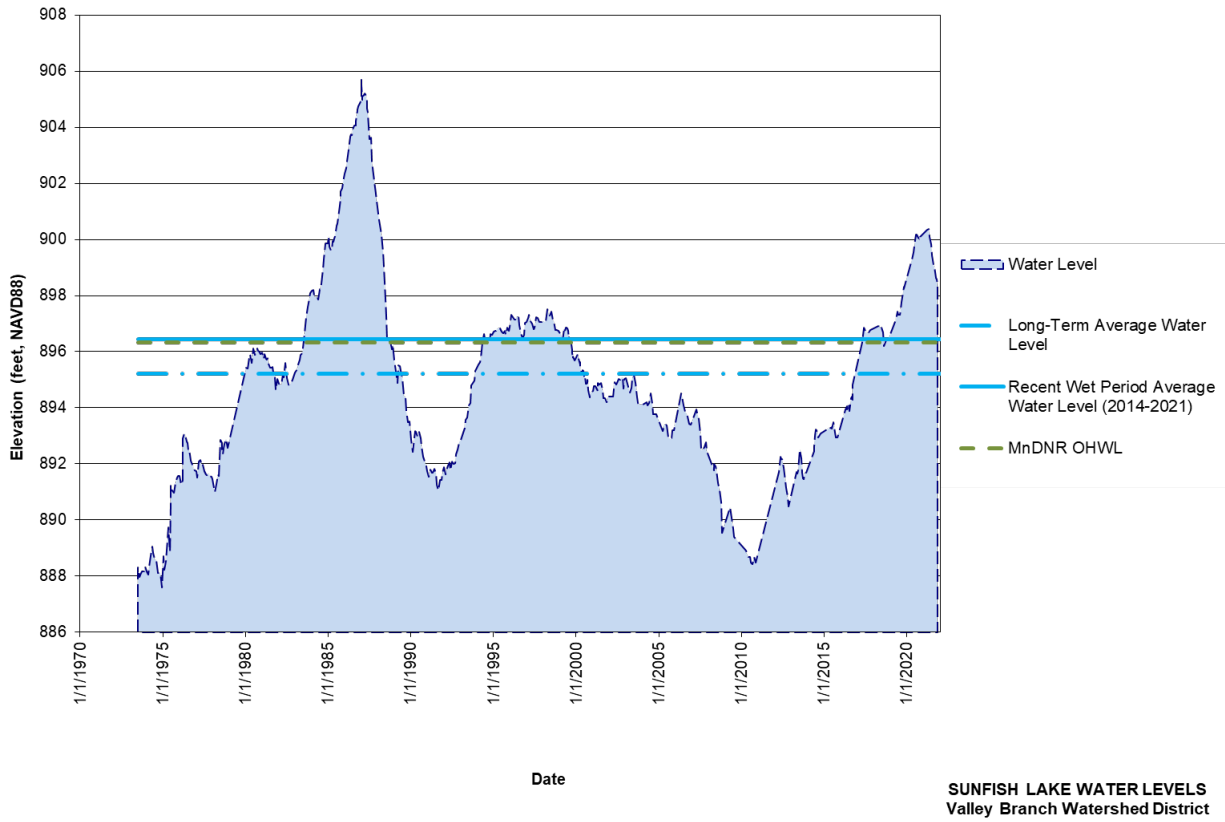
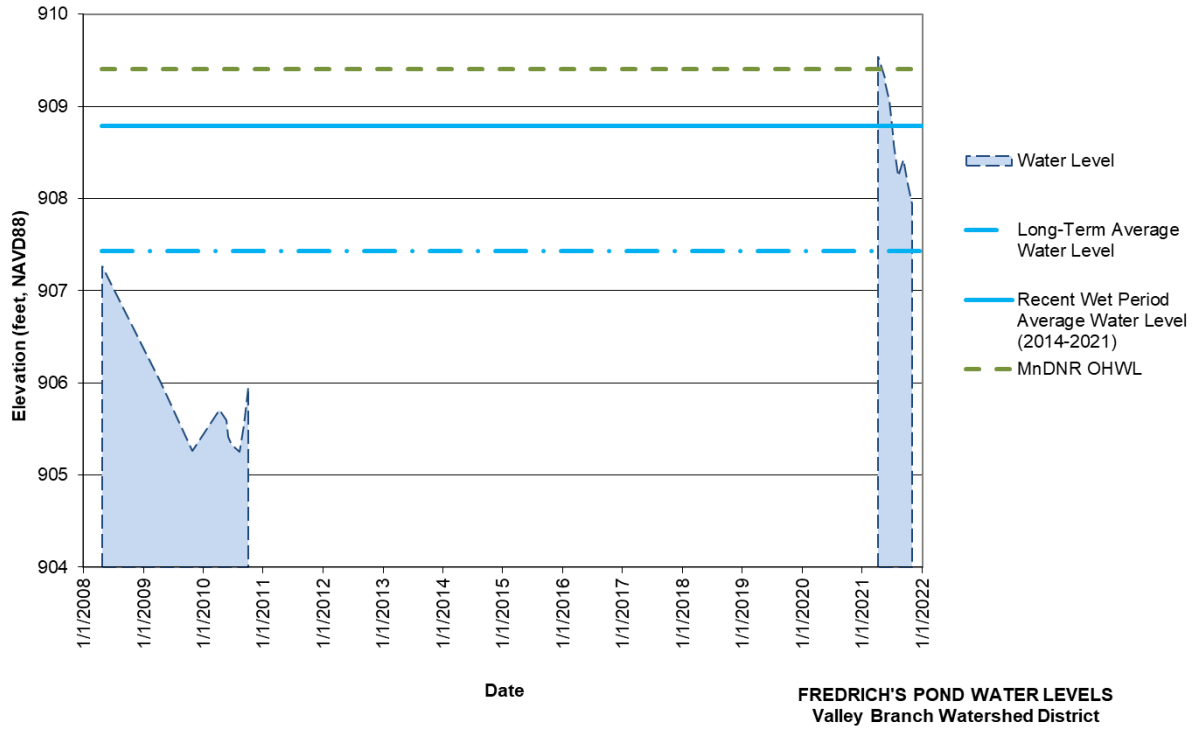


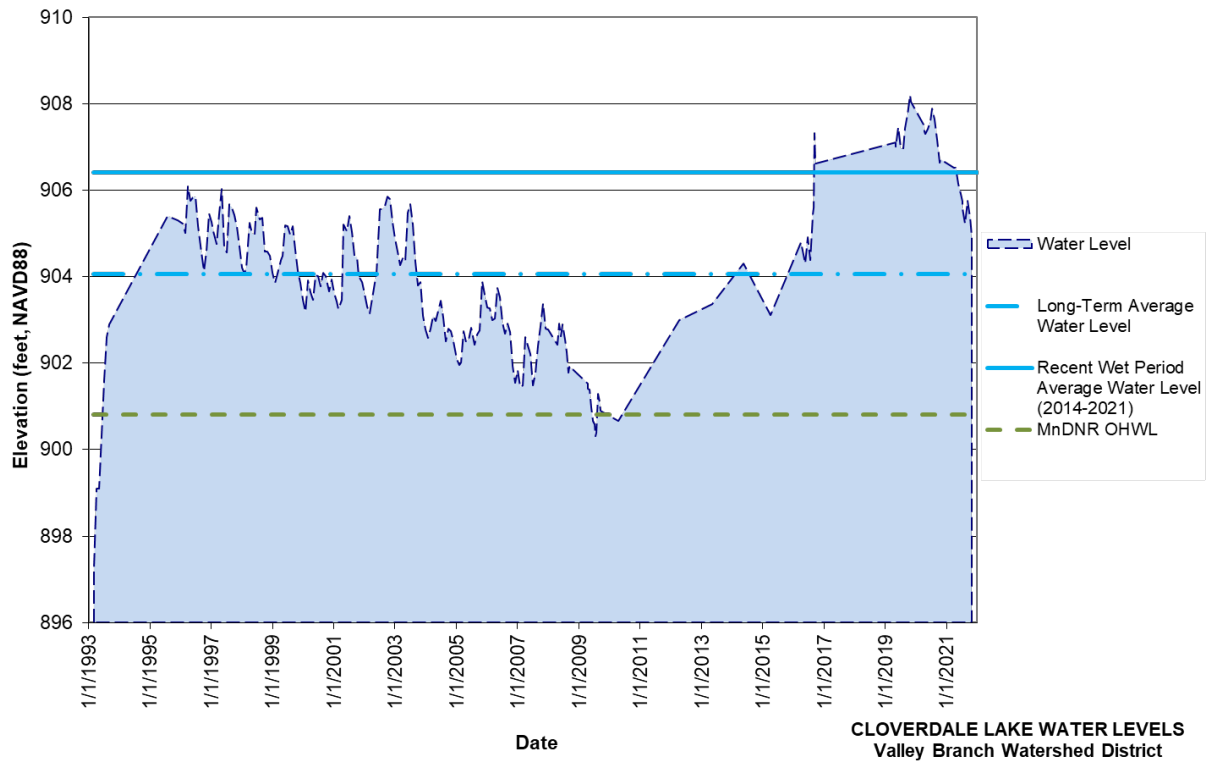
Figure 1 Klawitter Pond Water Levels



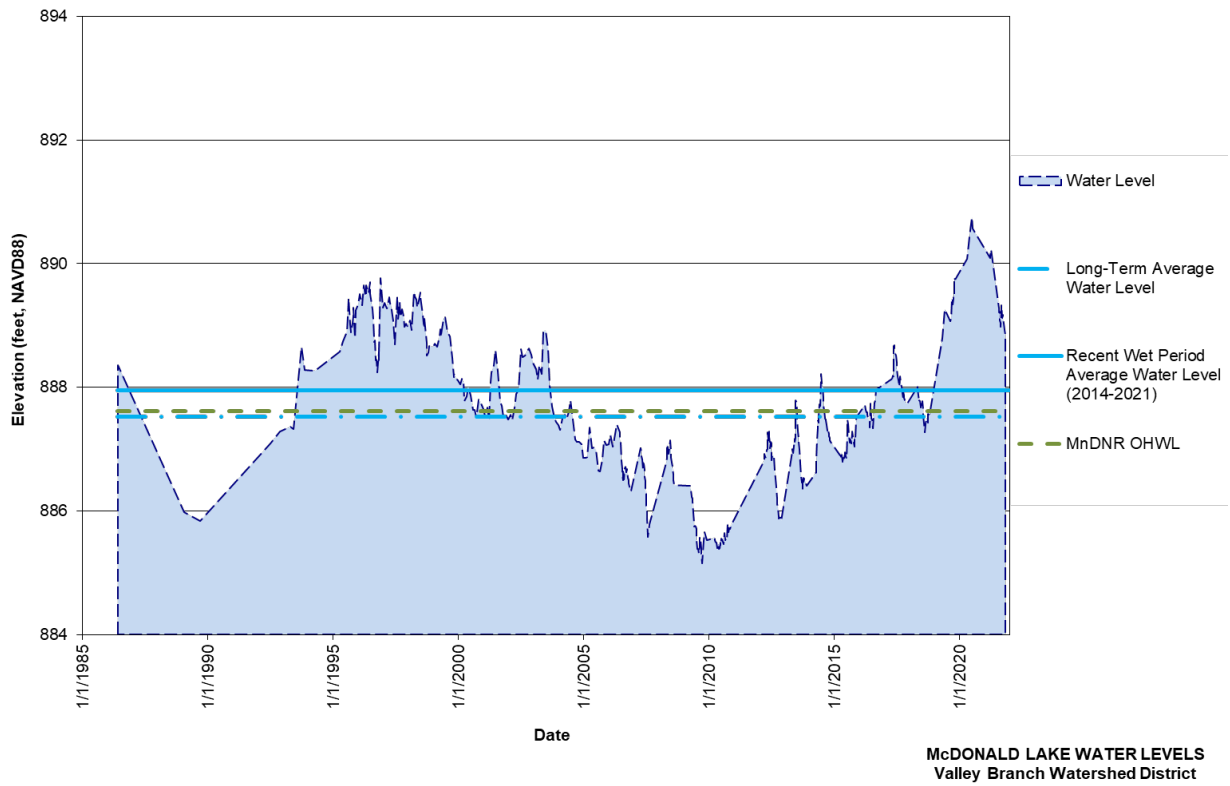
**Figure 2 Sunfish Lake Water Levels**



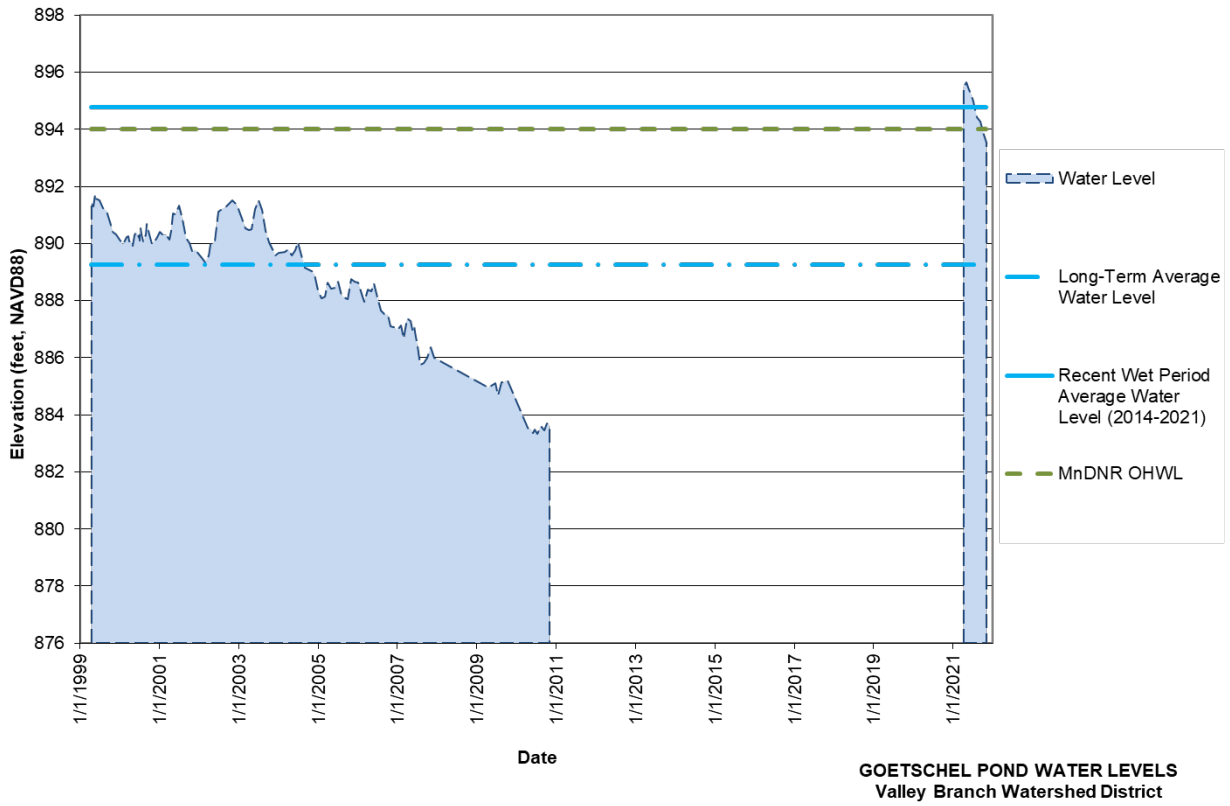
**Figure 3 Friedrich's Pond Water Levels**



**Figure 4 Cloverdale Lake Water Levels**

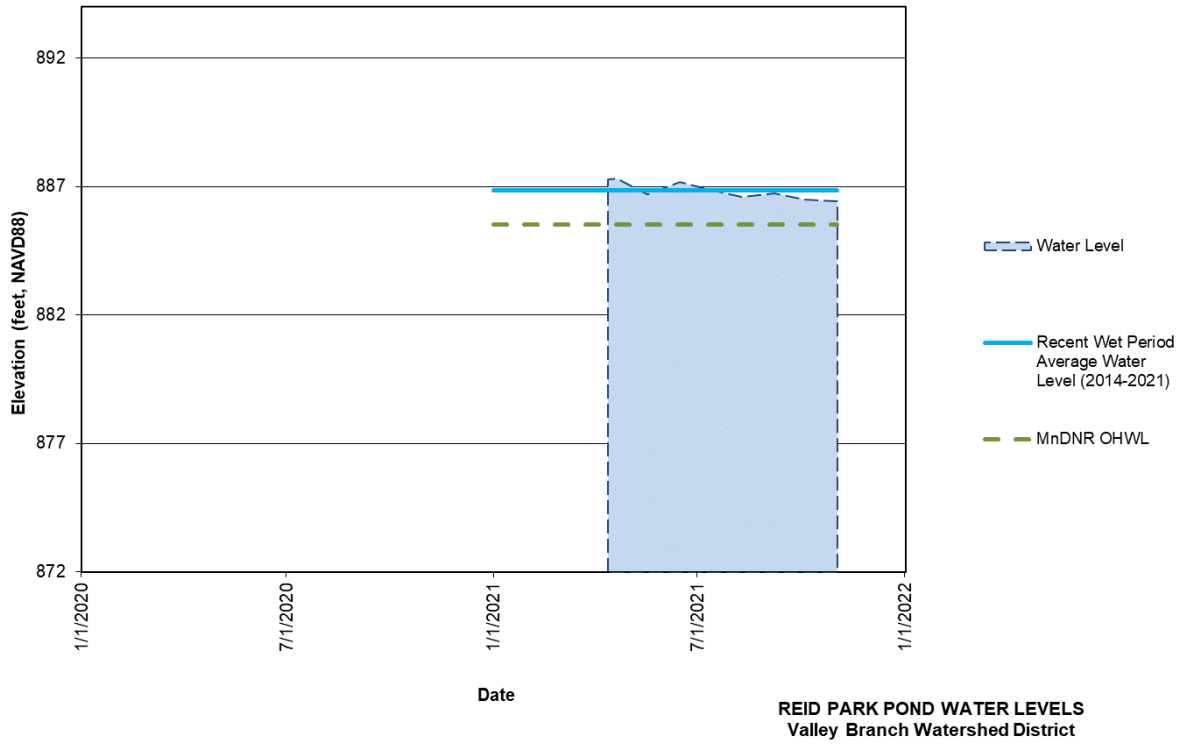


**Figure 5 Lake McDonald Water Levels**

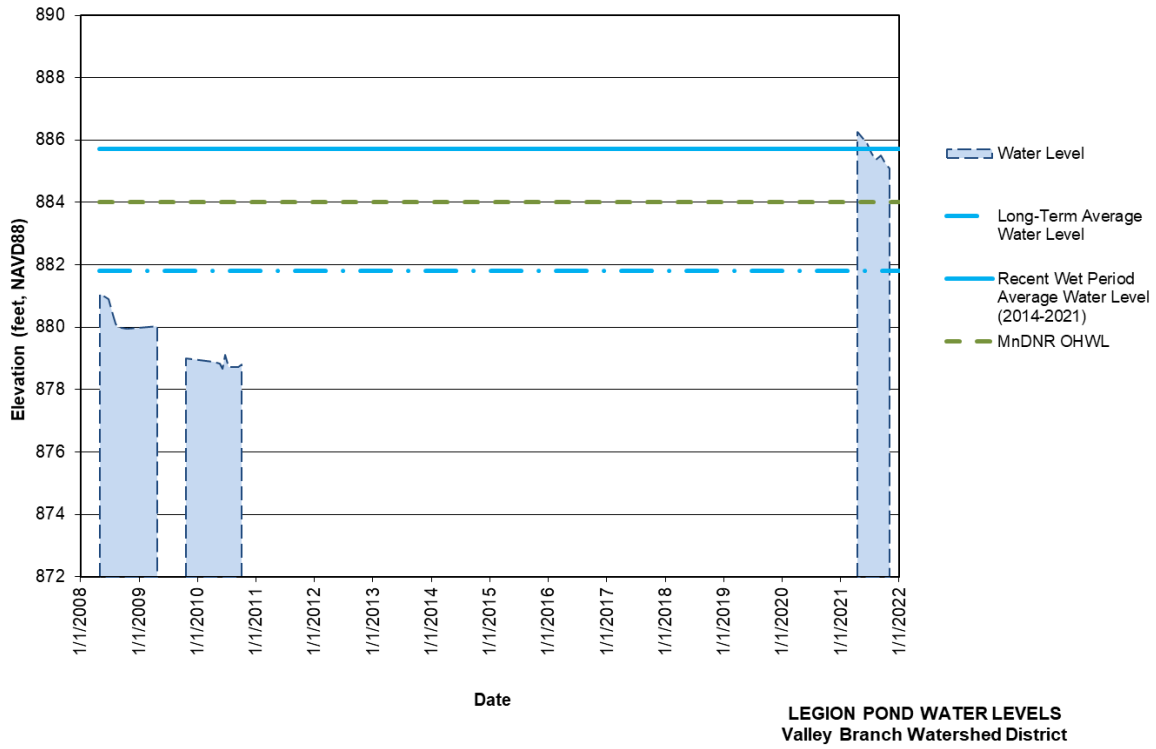


**Figure 6 Goetschel Pond Water Levels**

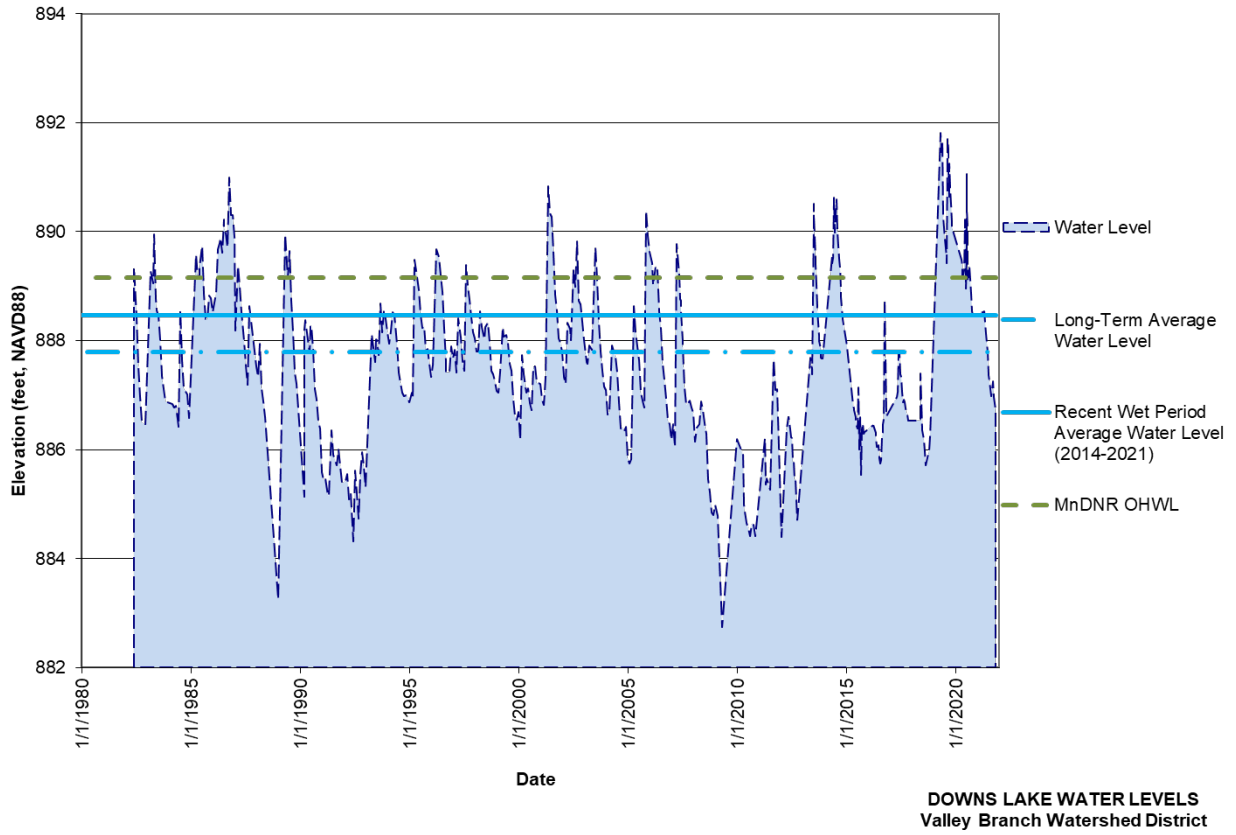




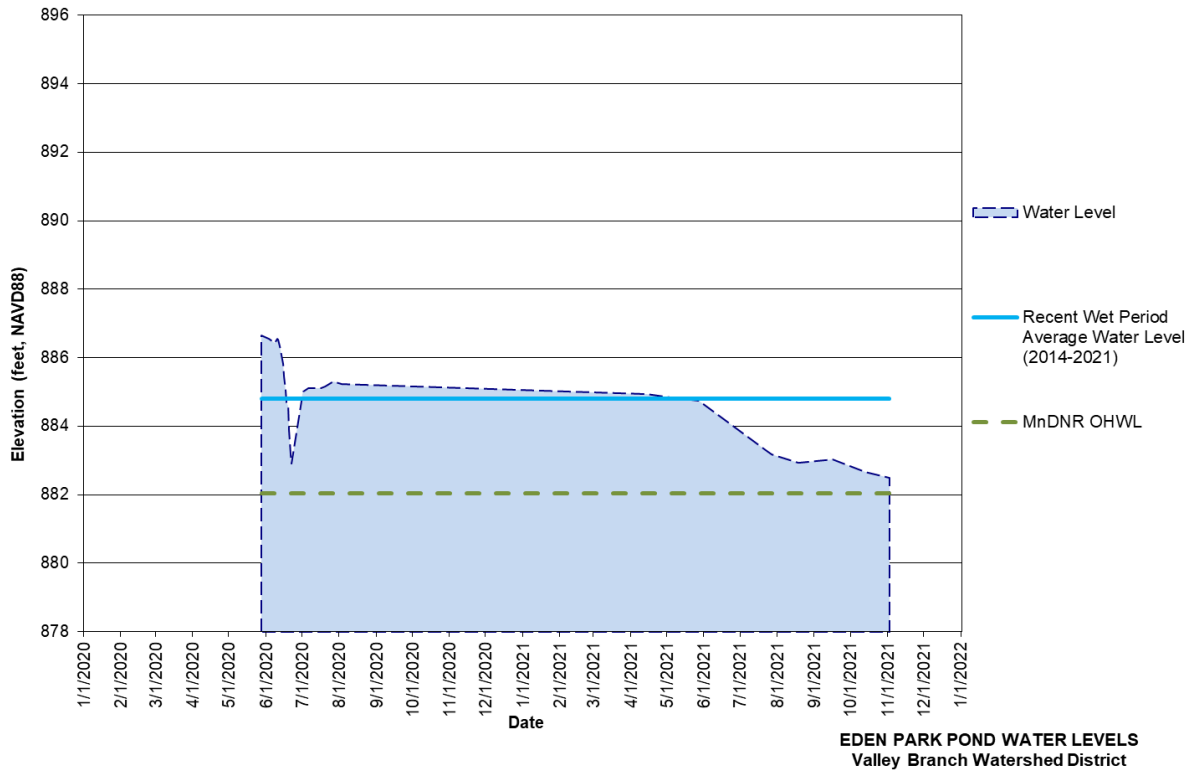
**Figure 7 Reid Park Ponds Water Levels**



**Figure 8 Legion Pond Water Levels**



**Figure 9 Downs Lake Water Levels**



**Figure 10 Eden Park Pond Water Levels**