

228
FGUS73 KFGF 221635
ESFFGF

NDC005-027-071-281200-

Probabilistic Hydrologic Outlook
National Weather Service Grand Forks ND
1134 AM CDT Thu Sep 22 2022

...DEVILS LAKE OUTLOOK FOR FLOOD POTENTIAL...

Devils and Stump Lakes
Long-Range Probabilistic Outlook

The National Weather Service provides long-range probabilistic hydrologic outlooks for Devils and Stump lakes between January and September. They will not be provided between October and December. Depending on the season, the high or low water probabilities may be omitted due to their applicability to the hydrologic situation.

.OUTLOOK SUMMARY...

Note: This outlook incorporates a daily average of 350 cfs worth of pumping operations on Devils Lake from June 1st through November 10th.

Lake levels continue to fall following their summer peak with readings currently hovering around the 1449.7 ft mark. Precipitation has continued to be well below normal across the majority of the basin with the exception of the far northern reaches. The dry conditions throughout the second half of the summer and into the fall continue to aid in the recession of lake levels.

Climate outlooks indicate better chances for above normal temperatures and below normal precipitation through October. There are equal chances for above, below, or normal precipitation and temperatures heading into the winter. Even drier conditions than expected would lead to more of a decline in lake levels (i.e., 5-10% probabilities).

Note: The current gage zero datum of the Devils Lake at Creel Bay gage is 1401.33 feet NAVD88 or 1400.00 feet NGVD29. The gage zero datum of the Stump Lake at East Stump Lake gage is 1401.15 feet NAVD88 or 1400.00 feet NGVD29.

.Chances of Devils and Stump Lakes Rising Above Given Lake Levels...

Exceedance information is not published in September.

.Chances of Devils and Stump Lakes Falling Below Given Lake Levels...

The probability of not exceeding a given lake level is the percentage of lake level falls that are below that level for all the years that were run through the model using the precipitation and temperatures for those years during the valid period of the outlook.

Interpretation Aid: There is a 50 percent chance that Devils Lake will fall below 49.5 feet during the valid period and only a 5 percent chance that it will fall below 49.3 feet.

Probabilities for Non-Exceeding Listed Lake Levels

FROM SEPTEMBER 19, 2022 TO DECEMBER 25, 2022

LOCATION	95%	90%	75%	50%	25%	10%	05%
-----	-----	-----	-----	-----	-----	-----	-----
Devils Lake.....							
CREEL BAY	49.8	49.7	49.6	49.5	49.4	49.3	49.3
Stump Lake.....							
EAST STUMP LAKE	49.8	49.7	49.6	49.5	49.4	49.3	49.3

The non-exceedance value for a listed percentage is the value where that percentage of all model cases run were below that lake level for the specified valid period of the outlook.

.OUTLOOK SCHEDULE...

- Between January and May, only the high water exceedances will be provided with valid periods ending at the end of September.
- Special Spring Flood and Water Management Outlooks will be issued in late February and early March.
- For June and July, both high-water and low-water exceedances will be provided.
- For August and September, only the low-water exceedances will be provided with valid periods ending at the end of November.
- No probability of exceedance/non-exceedance information will be given from October through December, since lake freeze-up levels will be given in the fall outlooks previously issued.

.ADDITIONAL INFORMATION...

The long-range probabilistic outlook is based on high and low lake levels that were calculated for the valid period using multiple scenarios of temperature and precipitation from 1949 to 2018 and current conditions of the lake, snowcover (in winter), and soil moisture.

By providing the complete range of lake level probabilities, the amount of risk associated with long-range planning decisions can be determined. These probabilistic outlooks are part of NOAA's National Weather Service's Advanced Hydrologic Prediction Services (AHPS).

A YouTube video on "How to Interpret River Outlook Products" is at:

www.youtube.com/watch?v=pSoEgvsnpv4

This outlook is also presented as probability graphs of lake height for the full period as well as weekly probabilities. The outlook graphics and explanations that help in interpreting these outlooks are available on the NWS Grand Forks AHPS web page at:

water.weather.gov/ahps2/index.php?wfo=FGF

Wind and wave forecasts for Devils and Stump lakes are available for a 7-day period when the lakes are sufficiently ice-free at:

www.weather.gov/fgf/lake_info

If you have any questions, contact the NWS at 701-772-0720.

You can follow us on Facebook at www.facebook.com/NWSGrandForks and on Twitter at @NWSGrandForks.

\$\$

weather.gov/fgf

NNNN