May 2018 was the polar opposite of April 2018. After the 3rd coldest April in Minnesota, the preliminary statewide average temperature for May was 60.8 degrees F, for the 4th warmest May in 124 years of records (1895-2018). The preliminary state-averaged precipitation total was 2.70 inches or the 45th driest out of 124 years of records. Seasonal precipitation so far (April 1 through June 5) shows above normal precipitation in the far south, and in the Lake of the Woods area, with near average across the rest of the south and north central. A large area of central Minnesota is below average, with west central Minnesota well below normal and is ranked in the lowest 20 percentile. The U. S. Drought Monitor map released on June 5, shows Abnormally Dry conditions over 36% of the state. This is a reduction in coverage from the previous week. The recent rains over the east central and north central Minnesota helped to alleviate dry conditions there. Abnormally Dry conditions persist across northwest and west central Minnesota, as well as parts of the northeast. The U.S. Drought Monitor index is a blend of science and subjectivity where drought categories (Moderate, Severe, etc.) are based on several indicators.

A majority of the gages in the state reported normal flows when compared to historical monthly data. Indicator gages in the southernmost quarter of the state reported flows in the Above Normal (75-90th percentile) or High Flow (greater than 90th percentile) category.

When comparing received May 2018 lake levels to their entire historic record, 51% of these lakes were in the Normal percentile, but 40% were Above Normal or High percentiles, and 9% below normal or low. So far, 65% of the gaged lakes were above their average lake level, 15% at their average, and 20% of the lakes were below their average lake level. Over 54% of these "above average" lakes reported elevations more than ½ foot higher than their average. Forty-six percent of the lakes with May elevations showed a rise in lake elevations since their last Fall 2017 elevation; 21% stayed the same; and 33% had a decrease since the fall. A number of lakes had a small bounce with rains in the last week of May.

Groundwater levels in May 2018 show generally average groundwater levels throughout much of the state for selected monitoring sites. This was true for bedrock, buried artesian and water table aquifer wells as many groundwater sites were at normal (50%) levels. There were several sites, especially in Eastern Minnesota showing above normal (75%-90%) or high water level (>90%). More data for groundwater monitoring sites would be needed to determine if this was a regional or statewide pattern. Sites affected by lower than average water levels (25% or lower) were predominantly buried artesian and water table aquifers which reflect a similar pattern to last year’s groundwater levels.

The information in this report is provided by DNR through long term programs committed to recording and tracking the long term status of our water resources. The current conditions of precipitation, stream flows, lake levels and ground water levels in this report provide valuable information for natural and economic resource management on a state, county and watershed level. If you have questions on the content of this report please contact DNR Climatology Office: climate@umn.edu
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**Stream Flow Conditions**

**May 2018**

▲ Designated major watershed gage

* Percentile ranking based on mean daily flows for the current month averaged and ranked with all historical mean daily flows for that month.

A watershed ranked at zero means that the present month flow is the lowest in the period of record; a ranking of 100 indicates the highest in the period of record.

A ranking at the 50th percentile (median) specifies that the present-month flow is in the middle of the historical distribution.

**Percentile**

- High Flows (>90th percentile)
- Above Normal Flows (75 - 90th percentile)
- Normal Flows (25 - 75th percentile)
- Below Normal Flows (10 - 25th percentile)
- Low Flows (<= 10th percentile)
- Equipment malfunction
- Station monitored seasonally

This map is based on provisional stream gage data from the USGS National Water Information System.
Lake Level Status
May 2018

* Percentile ranking based on last reported reading for the current month compared to all historical reported levels for that month. A lake ranked at zero means that the present reported level is the lowest in the period of record; a ranking of 100 indicates the highest in the period of record. A ranking at the 50th percentile (median) specifies that the present-month reported lake level is in the middle of the historical distribution.

Source data from: MN DNR Waters Lake Level Monitoring Program

Previous Conditions
October 2017
Groundwater Level Historical Rankings
May 2018

Percentile *
- High Water Levels (>90th percentile)
- Above Normal Water Levels (75 - 90th percentile)
- Normal Water Levels (25 - 75th percentile)
- Below Normal Water Levels (10 - 25th percentile)
- Low Water Levels (≤ 10th percentile)
- No reading available

Aquifer Type
- Water Table
- Bedrock
- Buried Artesian

* Percentile ranking based on last reported reading for the current month compared to all historical reported levels for that month. A water level ranked at zero means that the present reported level is the lowest in the period of record; a ranking of 100 indicates the highest in the period of record. A ranking at the 50th percentile (median) specifies that the present month reported water level is in the middle of the historical distribution.

Source data from: MN DNR Groundwater Level Monitoring Program