



# THE ATMOSPHERIC RESERVOIR

*Examining the Atmosphere and Atmospheric Resource Management*

# 2023 A NEW WATER YEAR?

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If you were asked what calendar dates signify the start of the new water year, seasonal snowfall, or annual precipitation, would you be able to answer? It might seem confusing unless we look at the reasons why all three of them start on different dates.

Hydrologists came up with a start date of October 1 each year for the beginning of a new water year. The precipitation that occurs after October 1, in many areas of the U.S. for example, is usually in the form of snow and must melt the following spring before it contributes to the overall water system. This is especially true of northern tier states such as North Dakota or mountainous areas of the U.S. It just didn't make sense then to start a water year on January 1, already midway through the snow season.

That brings us to seasonal snowfall and its official starting date of July 1 every year. Nationally, July is the least snowy month on the calendar, so it makes sense to start the season on July 1. In mountainous locations such as Montana, snow can take until June every year to melt, so July stands out as the most opportune month to start the next snowfall season as well.

When annual precipitation is considered, it's easier to think in terms of a regular calendar year, and this is what the National Weather Service (NWS) uses to describe the total precipitation that is measured between January 1 and December 31. Snowfall and other forms of frozen

## 1991-2020 AVERAGE SEASONAL SNOWFALL

Bismarck (NWS)	50.5"
Dickinson (RCH HQ)	44.0"
Fargo Hector (INTL AP)	51.4"
Grand Forks (UNIV NWS)	49.5"
Minot (EXP STN)	51.8"
Williston Sloulin (INTL AP)	48.2"

Data courtesy of NOAA/NCEI.

precipitation are melted down into liquid water and then that amount is added to liquid precipitation (i.e., drizzle, rainfall, etc.) for an annual total. The NWS recognizes seasonal snowfall as July 1 through June 30, so this doesn't change when considering only snowfall.

With half of North Dakota's snow season already past, we can look ahead to late winter and spring to see if additional snowfall through June 30 will place the 2022-23 season above normal, below normal, or somewhere in between. If you're keeping track, the latest 30-year average (1991-2020) snowfalls are listed in the graphic table above. And with that, it's only appropriate to end by saying, "Happy New (Annual Precipitation) Year!"

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