THE
ATMOSPHERIC RESERVOIR
*Examining the Atmosphere and Atmospheric Resource Management*

# Precip Data Improved With New Tools

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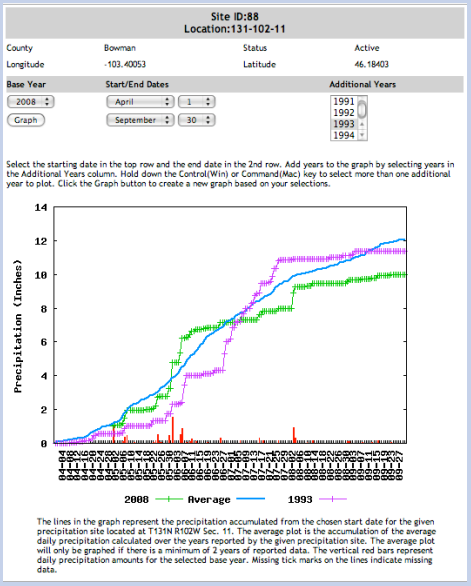
The North Dakota Atmospheric Resource Board (NDARB) will have new tools under it's belt before the next growing season is underway. They include precipitation data graphing of Atmospheric Resource Board Cooperative Observer Network (ARBCON) data and upgrades to the NDARB's weather radars in Bowman and Stanley.

The graphing application gives online users the ability to select and observe daily and accumulated ARBCON precipitation data in graphical form. An average accumulation for that site is also drawn automatically for the selected period of data. In addition, the user can select and display observed accumulations from other years for comparison. An example of this new graphing feature is pictured in this article.

To access the graphing application, go to the SWC website at www.swc.nd.gov, and click on "Map and Data Resources" and then the "Precipitation" link. A Site ID, location, county, or Lat/Long coordinates are then entered, allowing access to archived data. At the top of the query box, a "Graph" link will allow you to use the new graphing application.

You can also access precipitation data through the "MapServices" website at http://mapservice.swc.state.nd.us. A "Help/Demos" button in the upper-left corner of the screen will allow you to view an "Information Tools Demo Video." This tutorial explains how to select and view precipitation-recording sites. A link to the new "Graph" feature will appear at the top of the query box once a site has been selected.




The second significant improvement in precipitation data is an upgrade to the hardware, electronics, and software used with NDARB's WSR-74C weather radars in Bowman and Stanley. These two radars have remained virtually unchanged since their commission in the 1970s and will receive updates next spring, which include digital Doppler receivers, high-sensitivity signal processors, and new antenna control units. The advantages of these new radar technologies include the ability to analyze wind velocity data for increased cloud seeding operations safety and severe wind detection. In addition, improved low-end echo sensitivity will allow the radar meteorologists to see clouds on their scopes earlier, improving severe storm detection.

NDARB radar data can be found on the SWC website by first clicking on "Atmospheric Resources," then on "Cloud Modification Project" and "Radar Images" from June 1 through August 31 of each year.

New software installed at the Bowman and Stanley radar sites next spring will be capable of mosaicing multiple radar data feeds including National Weather Service data from Bismarck, Minot, Glasgow, and Rapid City. The NDARB shares its radar data with other agencies and the general public and the new software provides for free distribution of radar data to entities that install the software on their computers and request a data feed. An initial test will be used in Bowman County next summer for emergency management purposes and may potentially expand to many other interested counties in North Dakota.

There are many new and exciting tools available in today's technological world that if harnessed can provide a better understanding of our atmosphere and its intricate processes.

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