



News Release

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U.S. Geological Survey

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Streamflow and Groundwater Levels Normal to Above Normal in February 2004

Streamflow and groundwater levels were in the normal to above normal range across Delaware, Maryland, and the District of Columbia. Precipitation and temperatures in February were near normal, following a cold, dry January. Previous months of above normal precipitation contributed to high water levels and two wells were at the highest February levels in 40 years, according to hydrologists at the U.S. Geological Survey (USGS). Groundwater levels are expected to lower as the growing season approaches because there is increased water demand from plants.

USGS 125th Year Anniversary

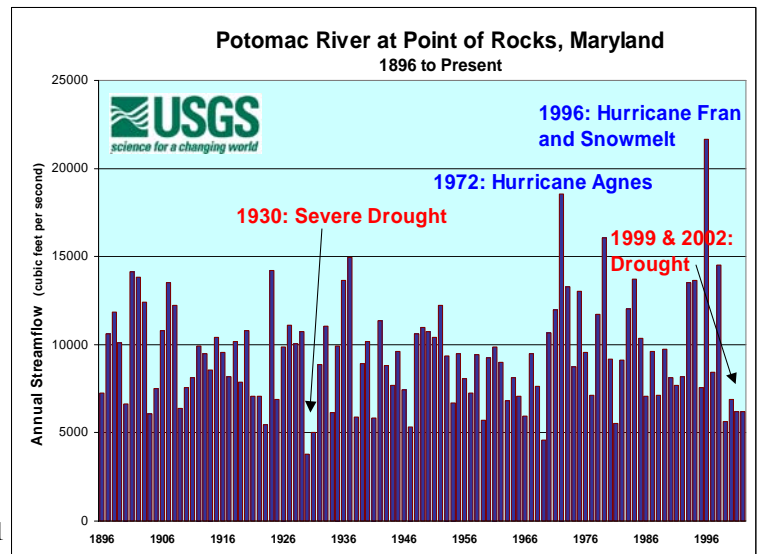
Today (March 3) marks the USGS 125th year anniversary. The USGS has been collecting data in Maryland for nearly 120 years. Long-term data collection is essential to assess long-term trends in water supply and availability. Streamflow and groundwater levels are used to assess the current water conditions and can be used to predict the potential for flooding and drought conditions.

For 125 years, the USGS has provided the Department of the Interior, the Nation, and the world with the science needed to make important decisions and safeguard society. As an unbiased science organization, USGS scientists are dedicated to the timely, relevant, and impartial study of the landscape, our natural resources, and the natural hazards that threaten us. The USGS is one of only a few Federal agencies that have survived for more than 100 years with its original name and mission unchanged. The USGS Home Page is assessable at: <http://www.usgs.gov> and is "Your federal source for science about the Earth, its natural and living resources, natural hazards and the environment".

109 Years of Potomac River Monitoring

The USGS has kept streamflow records on the Potomac River at Point of Rocks, Maryland, since February 1895. This is believed to be the oldest USGS stream-gaging station in continuous operation, and is a cornerstone in the National network of more than 7000 stations. Streamflow, groundwater, and water-quality data are available for the Nation at: <http://nwis.waterdata.usgs.gov/nwis>.

Data from this network have been fundamental for management of the Nation's water resources and for evaluation of long-term concerns such as climate change and availability of clean water.

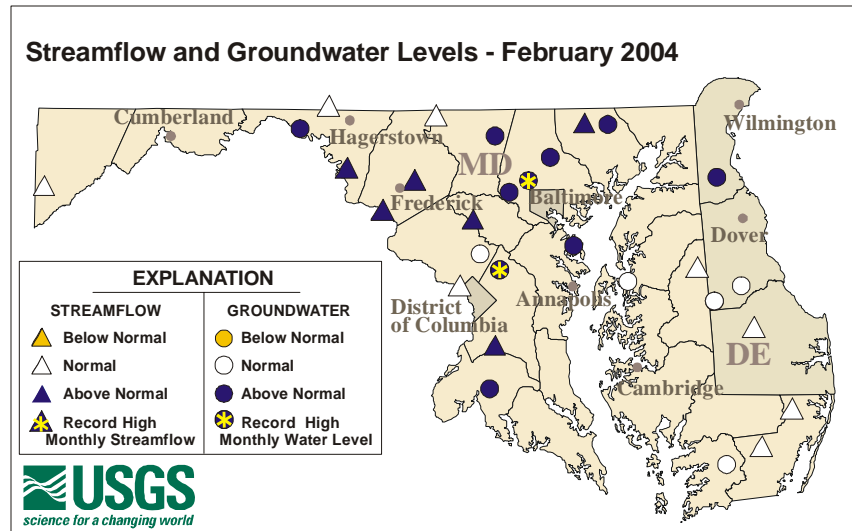


Status of Streams and Wells for February 2004

The map to the right shows the wells and streams used by the USGS to monitor water conditions in Maryland, Delaware, and the District of Columbia. In February, all streams and wells were at normal (white triangles and circles) or above normal levels (dark triangles and circles).

Two wells in Baltimore and Prince Georges County, Maryland were at the highest February level in 40 years (represented by an asterisk). Water levels at the well in Prince Georges County have been at record highs for the last 6 months.

Streamflow was at normal to above normal levels for streams in Maryland and Delaware during February. Monthly data could not be calculated for several streams because of ice or malfunctioning equipment leading to incomplete data, so these sites are not shown on the map.



Precipitation

February temperatures and precipitation were nearly normal in Baltimore, Maryland, and there was only a trace of frozen precipitation according to the National Weather Service. Heavy rainfall in the beginning of the month led to high streamflows. Ice remained in several streams because of the low temperatures. The cold temperatures also caused water in the soil to freeze, and the water (as ice) is essentially held in storage until it melts and either recharges aquifers or contributes flow to streams.

Chesapeake Bay

Monthly mean streamflow into the Chesapeake Bay during February averaged 60.7 bgd (billion gallons per day), which is only 9 percent below normal. February was the first month of normal flow to the Bay since March 2003. Several months in 2003 were near record-setting high levels. More information about USGS studies to help with the protection and restoration of the Chesapeake Bay and its watershed can be found at <http://chesapeake.usgs.gov>.

Streamflow

Streams across Maryland and Delaware were flowing at normal to above normal levels in February. Streamflow data in February may have been affected by ice build-up at the stream-gaging stations. Five-year monthly streamflow hydrographs from the USGS stream-gaging network can be viewed on the USGS website at <http://md.water.usgs.gov/surfacewater/streamflow/>. Current and historical streamflow data can be monitored on the web at: <http://waterdata.usgs.gov/>.

Daily streamflow on the Potomac River near Washington, D.C. in February averaged 16.2 bgd, which is 56 percent above normal for February. More information on the Potomac River is available at: <http://md.water.usgs.gov/monthly/poto.html>

Groundwater-Unconfined or Shallow Aquifers

Groundwater levels in the wells used by the USGS to monitor unconfined or shallow aquifer response to climatic conditions in the bi-state region were at normal to above normal levels during February. Although many water levels dropped in February, wells in Baltimore and Prince Georges Counties, Maryland, were at the highest February level in 40 years. This is the sixth consecutive month of record-setting high groundwater levels for Prince

Georges County. For 5-year hydrographs of groundwater levels for the climatic indicator wells, visit: <http://md.water.usgs.gov/groundwater/>.

Groundwater-Confined or Deep Aquifers

Although water is plentiful at the surface (streams, reservoirs, and shallow groundwater reserves are full), some of the deep confined aquifers used for water supply by many people living in southern and eastern Maryland and Delaware continue to decline. The water levels continue to decline because they are being pumped at rates higher than deep groundwater is recharged and since the confined aquifers are deep, water levels in confined aquifers take longer to respond to climatic conditions than shallow aquifers. Confined aquifer wells are measured monthly and can be viewed at <http://md.water.usgs.gov/groundwater>. Two wells in the confined Aquia aquifer in Calvert County, Maryland now have real-time water-level data collection. These can be viewed at: <http://waterdata.usgs.gov/md/nwis/gw>

Reservoir Storage

Contents of the Baltimore reservoir system remained at 100 percent capacity. Storage in the Triadelphia and Duckett Reservoirs on the Patuxent River, which serves Montgomery and Prince Georges Counties, has decreased 2 percent to 93 percent of capacity.

Water Monitoring

The USGS has been collecting National streamflow data for 120 years, since 1884. Streamflow monitoring began on the Potomac River at Point of Rocks, Maryland in 1895 and continues today. Streamflow and groundwater levels are used to assess the current water conditions and can be used to predict the potential for flooding and drought conditions. These USGS data have been provided to State and local water resource managers and are critical for making appropriate decisions on water regulation. For more information on streamflow and groundwater levels in Maryland, Delaware, and the District of Columbia, visit Water Watch at: <http://md.water.usgs.gov/waterwatch/>.

The real-time streamflow stations used in this analysis are operated in cooperation with the Maryland and Delaware Geological Surveys, the Maryland State Highway Administration, the U.S. Army Corps of Engineers, the Maryland Department of Natural Resources, the Maryland Department of the Environment, Baltimore County, Baltimore City, and other agencies. The observation wells used in this analysis are operated in cooperation with the Maryland and Delaware Geological Surveys. The real-time wells are operated in cooperation with the Maryland and Delaware Geological Surveys, the Interstate Commission on the Potomac River Basin, and Calvert County, Maryland. The USGS publishes data for 137 streamflow stations and 389 observation wells across Delaware, Maryland, and the District of Columbia.

The USGS serves the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

Recently Released USGS Report

The report titled "Lithologic Coring in the Lower Anacostia Tidal Watershed, Washington, D.C., July 2002" examines nonpoint-source contamination from groundwater and how it affects the lower tidal Anacostia River. Lithologic cores were collected from within and near the river channel in an area that has been subjected to more than 200 years of urbanization and anthropogenic modifications. Characteristics of the cores were consistent with the types of depositional environments that could be inferred from available maps and literature. The report is available on the web at: <http://md.water.usgs.gov/publications/ofr-03-318/>

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