News Release

U.S. Department of the Interior
U.S. Geological Survey

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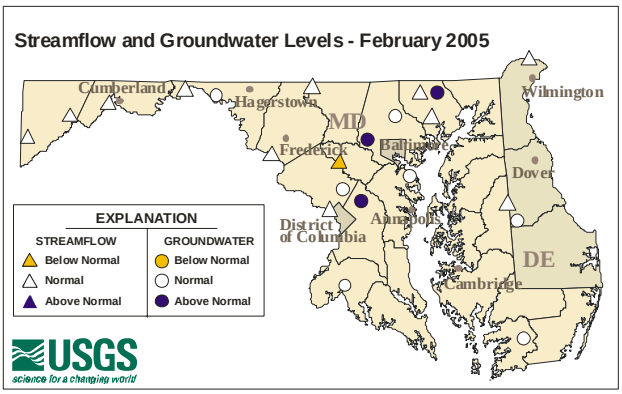
Flow Below Normal in Potomac River and Chesapeake Bay

Monthly flow on the Potomac River was below normal for the first time since October 2002. Flow to the Chesapeake Bay was also below normal for the first time since the summer of 2004. Precipitation in February was below normal, which caused water levels to drop from their high levels. However, many water levels remained normal and the snow provided water that will be available for release when temperatures increase.

The magnitude 2 earthquake that occurred in the Chesapeake Bay region on the morning of February 23, 2005 did not have a visible effect on water levels throughout the region, according to hydrologists at the U.S. Geological Survey (USGS). Historically, some wells have responded to large earthquakes thousands of miles away. For details on earthquakes, visit: http://earthquakes.usgs.gov/ .



Status of Streams and Wells

This map shows the location and status of wells and streams used by the USGS to monitor water levels in Maryland, Delaware, and Washington, D.C. for February 2005. Water levels were normal in most of Maryland and Delaware, except in the central Piedmont and nearby areas, where groundwater levels were above normal. Seneca Creek (orange triangle) had below normal monthly streamflow.

Precipitation

Although the snowfall total for Baltimore was 9 inches in February, the snow's water equivalent amounted to only 1.66 inches, which is 1.36 inches below normal, according to preliminary rainfall data from the National Weather Service (NWS). Precipitation levels were below normal across Maryland, Delaware, and Washington D.C. Temperatures were close to long-term averages in Maryland, Delaware, and Washington, D.C.

Chesapeake Bay

Monthly mean streamflow into the Chesapeake Bay during February averaged 55.8 bgd (billion gallons per day), which was 17 percent below normal. Normal flow for February is 67.04 bgd. This was the first month since the summer of 2004 with below normal flow. Additional 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. For information on water resources in the Chesapeake Bay, visit: http://md.water.usgs.gov/monthly/bay.html.

Streamflow

Streamflow levels were near normal in streams in Maryland, Delaware, and Washington, D.C. in February. Current and historical streamflow data can be found on the web at: http://waterdata.usgs.gov/. Five-year monthly streamflow hydrographs from the USGS stream-gaging network can be viewed on the web at: http://md.water.usgs.gov/surfacewater/streamflow/

Daily streamflow for the Potomac River near Washington, D.C. averaged 6.6 bgd in February, which is 36 percent below normal. Monthly flow had been normal to above normal since October 2002. More information on the Potomac River is available at: http://md.water.usgs.gov/monthly/poto.html.

Groundwater

Although precipitation was below normal in February, water levels in wells used by the USGS to monitor unconfined or shallow aquifer response to climatic conditions in Maryland and Delaware remain normal to above normal. Snowfall throughout the region serves as water in storage that slowly recharges the groundwater system as temperatures rise. The highest groundwater levels are typically in March or April before the growing season begins. For 5-year hydrographs of groundwater levels for the climatic indicator wells, visit: http://md.water.usgs.gov/groundwater/.

Reservoir Storage

Storage in the Baltimore reservoir system remained at 100 percent of capacity in February. The Baltimore reservoirs (Loch Raven, Liberty, and Prettyboy) have been nearly full since May 2003. Storage in the Triadelphia and Duckett Reservoirs on the Patuxent River, which serve Montgomery and Prince Georges Counties, fell 4 percent to 96 percent of capacity in February.

Recently Released Report:

Summary of Suspended-Sediment Data for Streams Draining the Chesapeake Bay Watershed, Water Years 1952–2002

U.S. Geological Survey suspended-sediment data collected from 1952 to 2002 at selected gaging stations on streams draining the nontidal parts of the Chesapeake Bay Watershed were summarized to identify areas in the Watershed with high suspended-sediment loads, yields, and concentrations.

Suspended-sediment load data collected from 43 stations from 1952–1984, with a minimum of 3 years of record, indicated that the two highest average annual suspended-sediment loads were for stations on the main stem of the Potomac and Susquehanna Rivers. The highest average annual sediment yields and discharge-weighted sediment concentrations were for streams draining the metropolitan Washington, D.C. area, possibly related to urbanization. Data from 1985 through 2001 that were collected from 35 stations with a minimum of 3 years of record showed that the highest average annual suspended-sediment loads were also on the main stem of the Potomac and Susquehanna Rivers. This publication is available online at: http://md.water.usgs.gov/publications/sir-2004-5056

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Streamflow and groundwater levels are used to assess 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 Washington, D.C., visit Water Watch at: http://md.water.usgs.gov/waterwatch/.

The USGS, a Bureau within the Department of the Interior, has served the Nation and the world for 125 years 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 make important decisions and enhance and protect our quality of life.

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