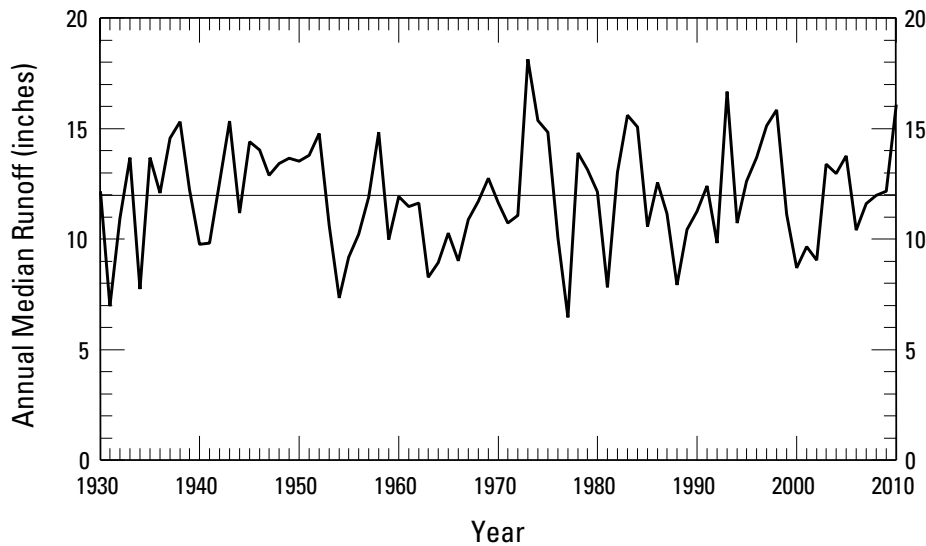
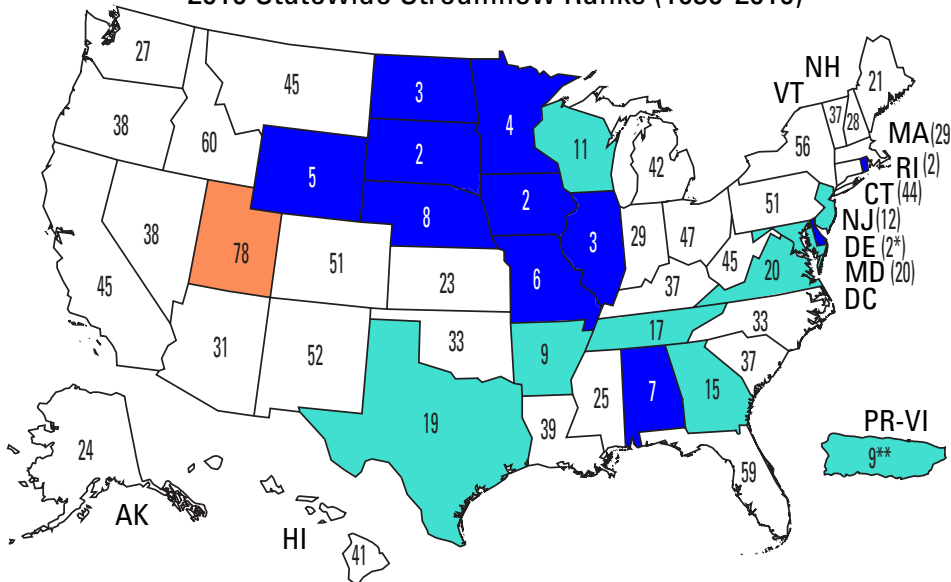


Annual Median U.S. Runoff, 1930-2010



Runoff in the Nation's rivers and streams during 2010 (16.10 inches) was much higher than the long-term annual median for the United States (11.98 inches). Nationwide, 2010 streamflow ranked 3rd out of the 81 years in the period 1930-2010.

2010 Statewide Streamflow Ranks (1930-2010)

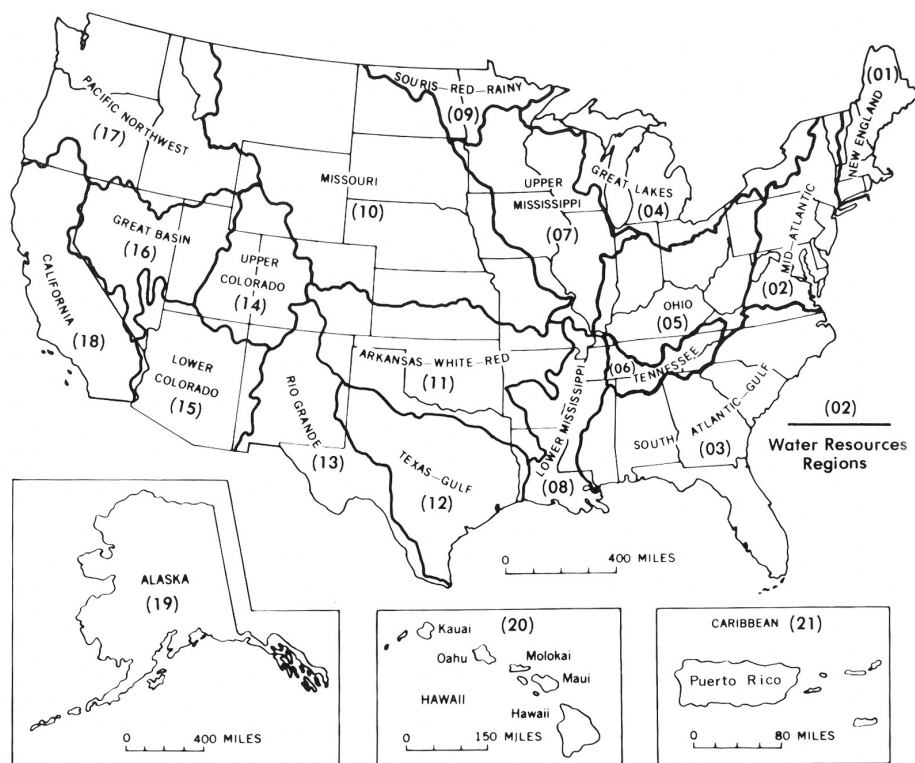


Above normal and much-above normal streamflow characterized most parts of the Midwest and Southeast, and also Puerto Rico. Below normal streamflow was prevalent only in Utah.

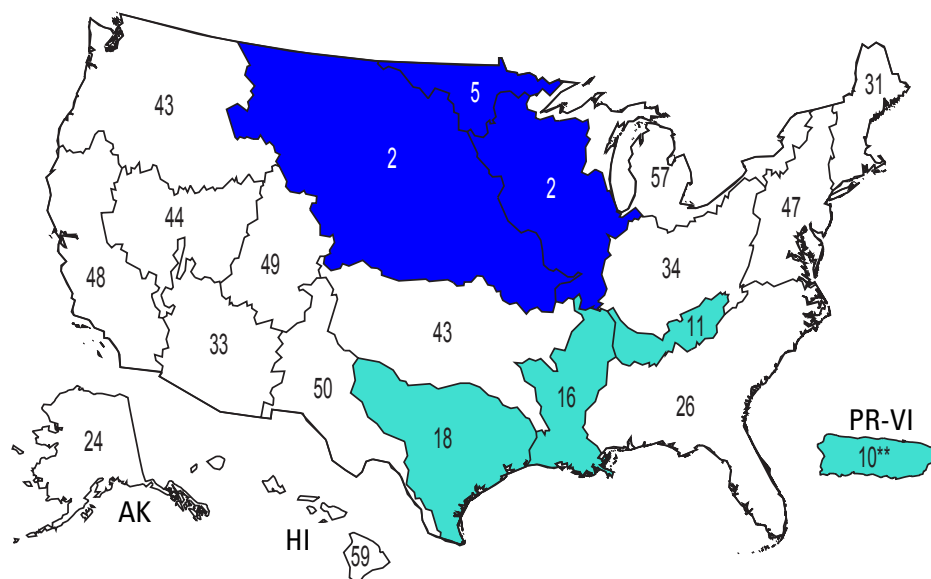
* Out of 72 years of historical data.
** Out of 67 years of historical data.

Explanation - Rank						
80	72-79	61-73	21-60	9-20	2-8	1
Lowest	Much below normal	Below normal	Normal	Above normal	Much above normal	Highest

Regional Patterns



The United States (including Puerto Rico) is divided into 21 large drainages, or water resources regions. These hydrologic areas are based on surface topography and contain either the drainage area of a major river, such as the Columbia, the combined drainage areas of a series of rivers, such as the Texas-Gulf region which includes a number of rivers draining into the Gulf of Mexico, or the area of an island or island group. Water resources regions provide a coherent, watershed-based framework for depicting streamflow variations.

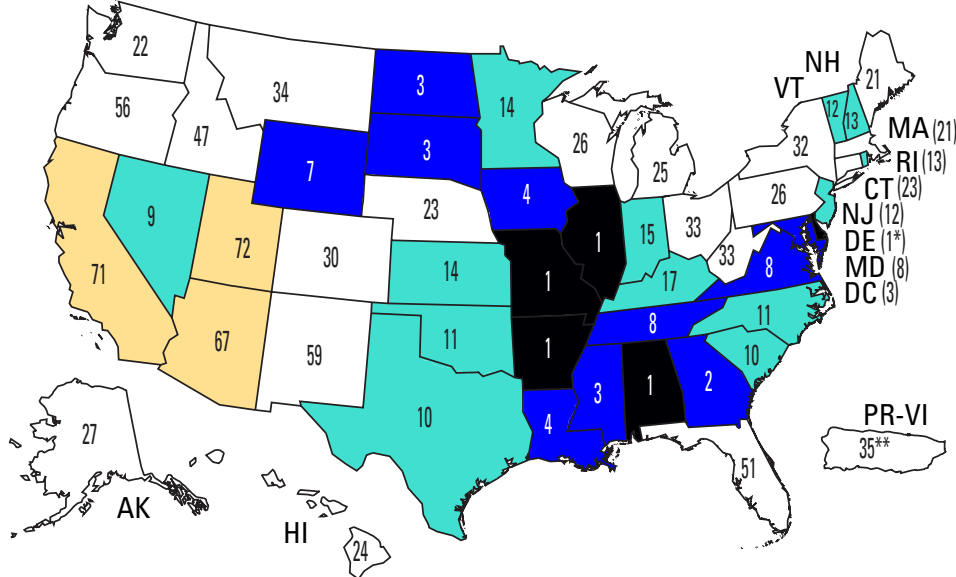


Streamflow was generally in the normal range in most of the Nation's water resources regions. Much-above normal flows dominated Missouri, Upper Mississippi, and Souris-Red-Rainy regions. Above normal flows were reported in Texas-Gulf, Lower Mississippi, Tennessee, and Caribbean regions.

Explanation - Rank						
80	72-79	61-73	21-60	9-20	2-8	1
Lowest	Much below normal	Below normal	Normal	Above normal	Much above normal	Highest

Seasonal Characteristics

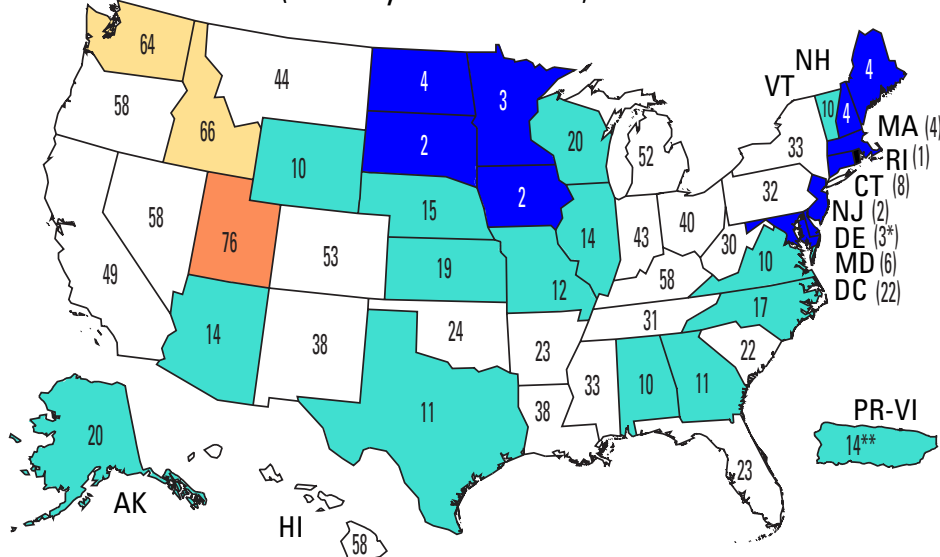
Autumn (October - December 2009) Statewide Ranks



Autumn season (October-December) streamflow was at records high levels (ranking 1st in 81 years) nationwide and in the states of Illinois, Missouri, Arkansas, Alabama, and Delaware. Above and much-above normal flows were reported in 10 and 13 states, respectively, while below normal flows were observed in only three states (California, Nevada, and Utah).

* Out of 72 years of historical data.
** Out of 67 years of historical data.

Winter (January - March 2010) Statewide Ranks



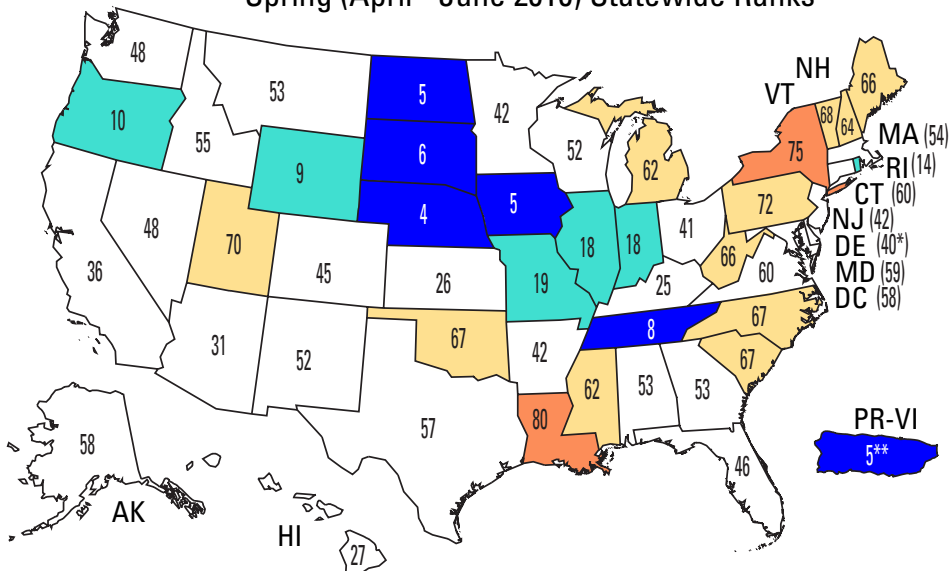
Winter season (January-March) streamflow was above to much-above normal in many central states, southeastern states, parts of New England, Alaska, and Puerto Rico. Below normal and much-below normal streamflow occurred in Utah, Idaho, and Washington. Nationwide, winter season streamflow ranked 4th out of 81 years.

* Out of 72 years of historical data.
** Out of 67 years of historical data.

Explanation - Rank

80	72-79	61-73	21-60	9-20	2-8	1
Lowest	Much below normal	Below normal	Normal	Above normal	Much above normal	Highest

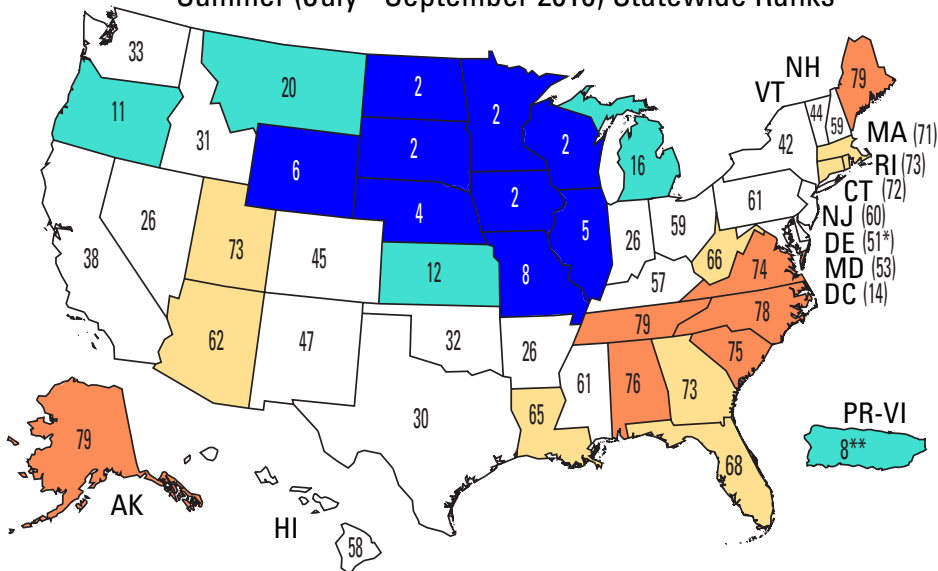
Spring (April - June 2010) Statewide Ranks



Spring season (April-June) streamflow was above or much-above normal in the north-central states and Puerto Rico. In contrast, some northeastern and southern states reported below or much-below normal flows. On a nationwide basis, spring season streamflow was normal, ranking 42nd in 81 years.

* Out of 72 years of historical data.
 ** Out of 67 years of historical data.

Summer (July - September 2010) Statewide Ranks



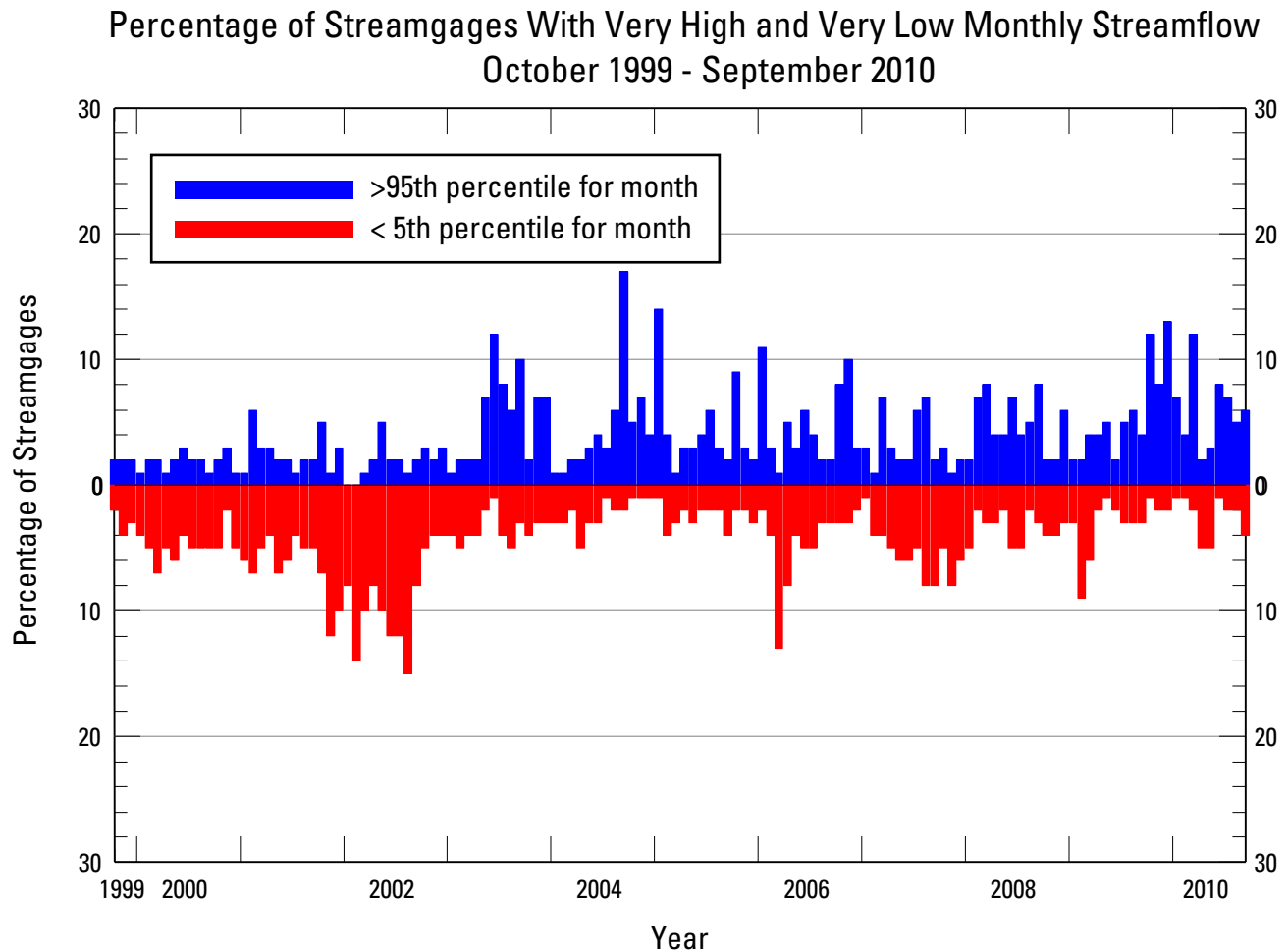
Nationwide, summer season (July-September) streamflow was normal, ranking 24th out of 81 years. However, a broad range in flow conditions from state to state was observed. Much above normal streamflow prevailed in most north-central states, while much-below normal flows dominated the Southeast, Northeast, Arizona, Nevada, and Alaska.

* Out of 72 years of historical data.
 ** Out of 67 years of historical data.

Explanation - Rank

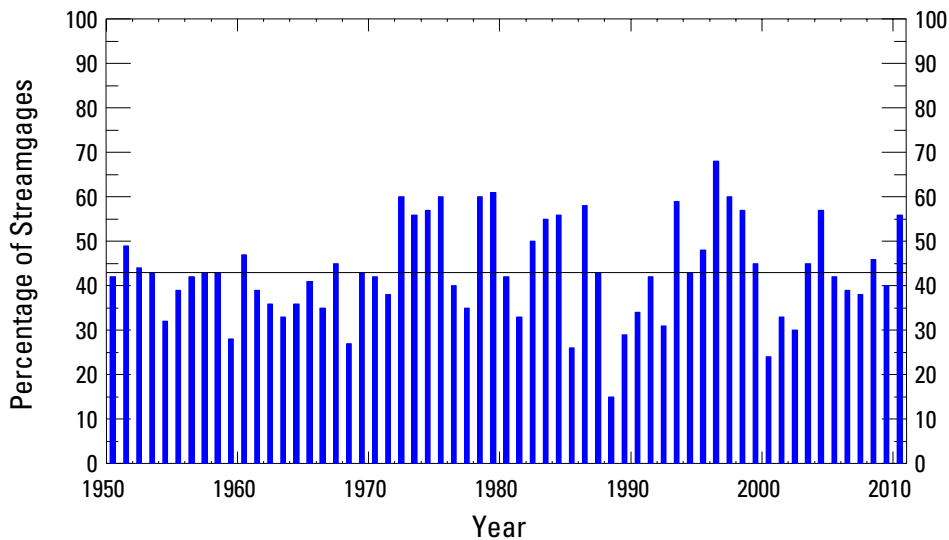
80	72-79	61-73	21-60	9-20	2-8	1
Lowest	Much below normal	Below normal	Normal	Above normal	Much above normal	Highest

High and Low Flows



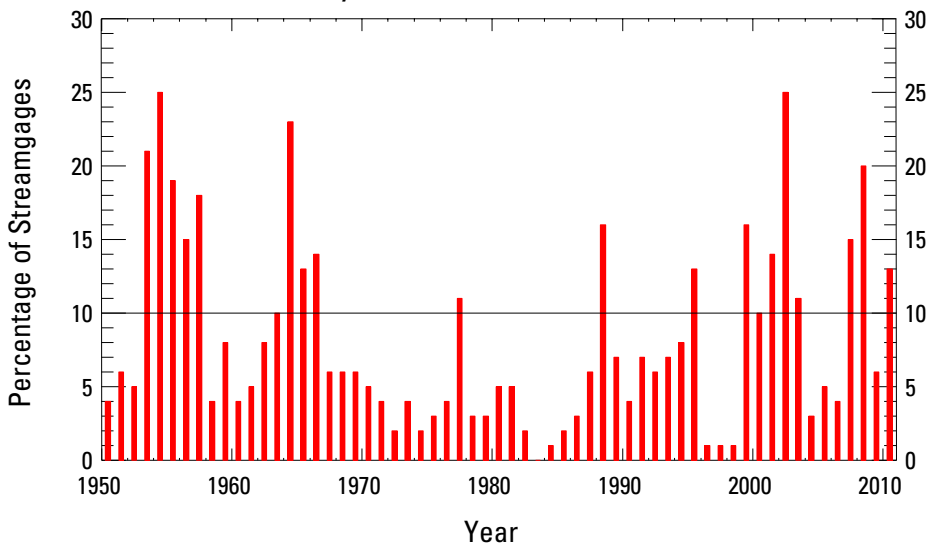
In any given month, on average, it is expected that five percent of the streamgages will experience very high (>95th percentile) and very low (<5th percentile) average streamflow. During water year 2010, eight months (October, November, December, January, March, June, July, and September) had a greater than expected percentage of streamgages reporting very high streamflow (12, 8, 13, 7, 12, 8, 7 and 6 percent respectively). In contrast, there were no months with a greater than expected percentage of streamgages with very low flows.

Percent of streamgages above bankfull streamflow
1950-2010



The bankfull streamflow is defined as the highest daily mean streamflow value expected to occur, on average, once in every 2.3 years. In 2010, 56 percent of streamgages had a daily mean streamflow value above the bankfull level. This value is greater than the expected number (43 percent) to occur in any given year. Since 1950, the largest number of streamgages reporting higher than bankfull streamflow in any one year was 68 percent, which occurred in 1996.

Percent of streamgages below 10th percentile of
annual 7-day minimum streamflow (1950-2010)



The 10th percentile 7-day low flow is defined as the lowest 7-day average streamflow expected to occur, on average, once in every 10 years. In water-year 2010, 13 percent of the streamgages reported a 7-day low flow less than the 10th percentile 7-day low flow. The expected number to occur in any given year is 10 percent. Since 1950, the largest percentage of streamgages reporting a 7-day low flow less than the 10th percentile 7-day low flow was 25 percent, which occurred in 1954 and 2002.

Additional Information

The USGS operates a network of approximately 7,800 streamgages nationwide, many in real-time. Current information derived from these stations is available on the web at <http://waterwatch.usgs.gov>. Tables of data that summarize historical streamflow conditions by State, beginning in the year 1900, can be accessed at <http://waterwatch.usgs.gov/?m=statesum>. These tables are updated every few months to reflect the most current streamflow data.

The streamflow information used to prepare this summary is also used for water management, monitoring floods and droughts, bridge design, and for many recreational activities. To obtain real-time and archived streamflow data and information, visit <http://water.usgs.gov/nwis>. Although the national streamgage network is operated primarily by the USGS, it is funded by a partnership of 850 agencies at the Federal, State, Tribal, and local levels. For more information about the streamgage network, see <http://water.usgs.gov/nsip/>.

*By Xiaodong Jian, David M. Wolock,
Harry F. Lins, and Steve Brady*

For additional information, contact:

Harry Lins
U.S. Geological Survey
415 National Center
Reston, VA 20192
Email: hlins@usgs.gov

[Accessibility](#) [FOIA](#) [Privacy](#) [Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

URL: <http://waterwatch.usgs.gov>

Page Contact Information: [Office of Surface Water](#)

