

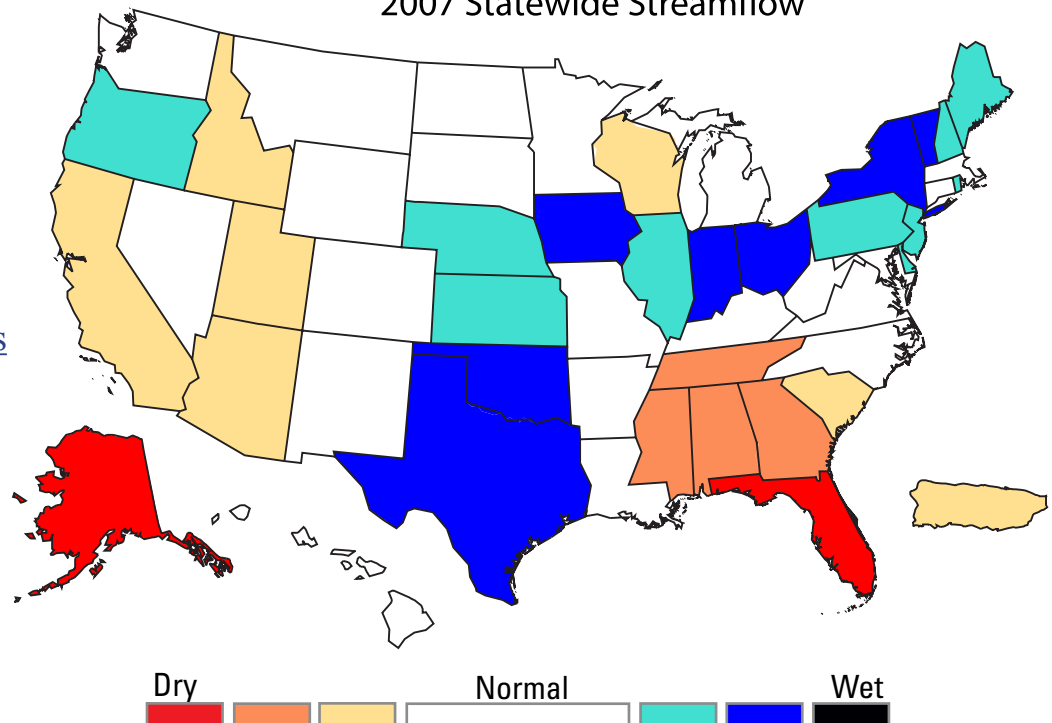
Streamflow of 2007 – Water Year Summary

U.S. Geological Survey
Reston, Virginia

January 2008

2007 Statewide Streamflow

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Introduction

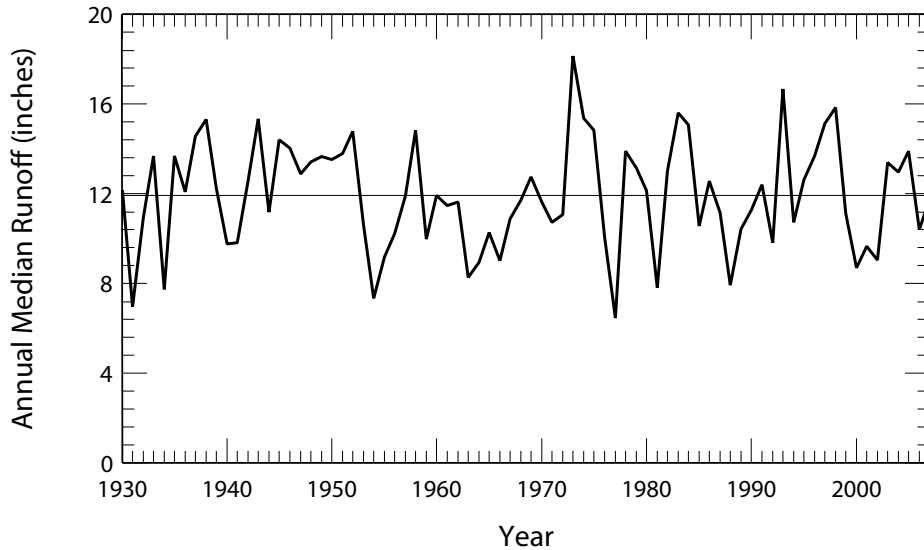
The maps and graphs appearing in this summary describe streamflow conditions for water-year 2007 (October 1, 2006 to September 30, 2007) in the context of the 78-year period 1930-2007, unless otherwise noted. The illustrations are based on observed data from the U.S. Geological Survey's (USGS) National Streamflow Information Program. The period 1930-2007 was used because prior to 1930, the number of streamgages was too small to provide representative data for computing statistics for most regions of the country.

In the summary, reference is made to the term "runoff," which is the depth to which a river basin, State, or other geographic area would be covered with water if all the streamflow within the area during a single year was uniformly distributed upon it. Runoff quantifies the magnitude of water flowing through the Nation's rivers and streams in measurement units that can be compared from one area to another. The runoff value for a geographic area is computed as the median runoff value for all streamgages in that geographic area. For example, the runoff value for a state is the median for all streamgages in that state, and the median for the Nation is the median value for all streamgages in the Nation.

Each of the maps and graphs below can be expanded to a larger view by clicking on the image. In all the graphics, a rank of 1 indicates the highest flow of all years analyzed.

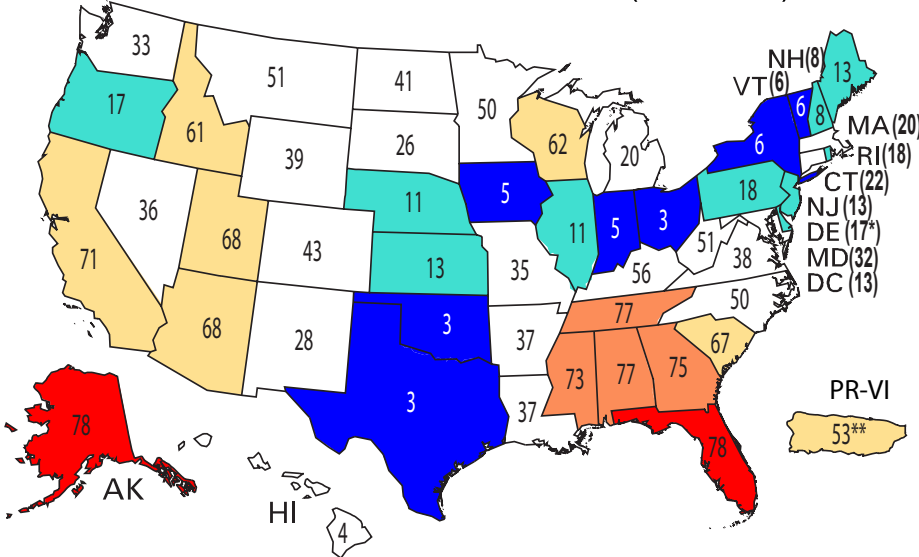
National Overview

Annual Median U.S. Runoff, 1930-2007



Runoff in the Nation's rivers and streams during 2007 (11.79 inches) was close to the long-term annual median for the United States (11.93 inches). Nationwide, 2007 streamflow ranked 41 out of the 78 years in the period 1930-2007.

2007 Statewide Streamflow Ranks (1930-2007)



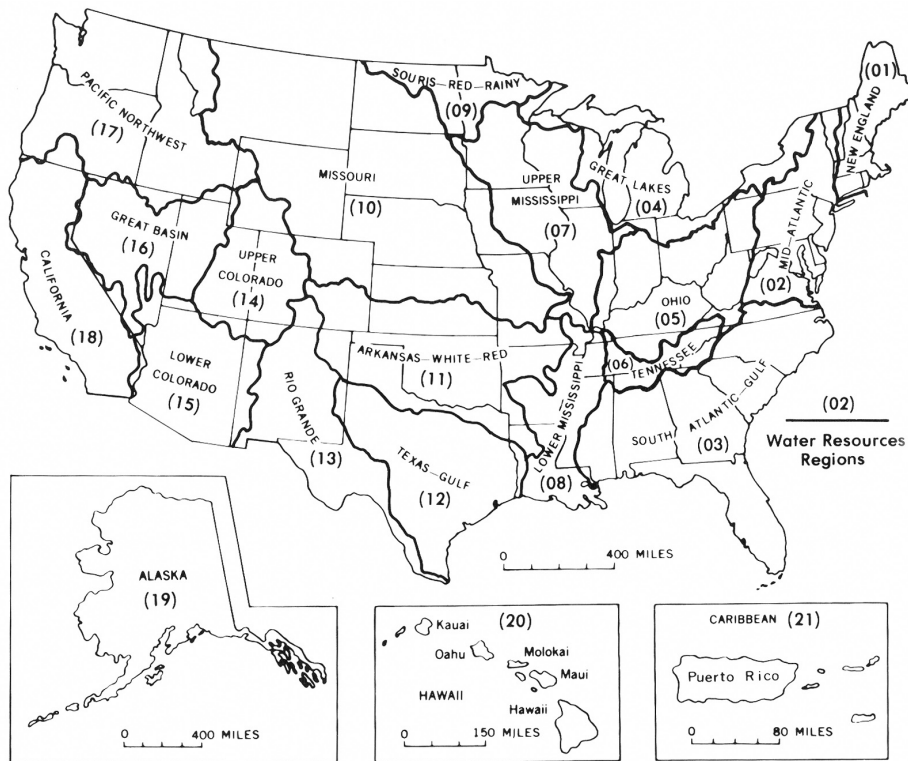
Above normal streamflow characterized the Central and Southern Plains, the Upper Ohio Valley, and most of the Northeastern states. Below normal streamflow was prevalent in the Southeast, parts of the West, and in Alaska. Both Florida and Alaska reported the lowest annual streamflow for any water year since 1930.

* Out of 69 years of historical data.
** Out of 64 years of historical data.

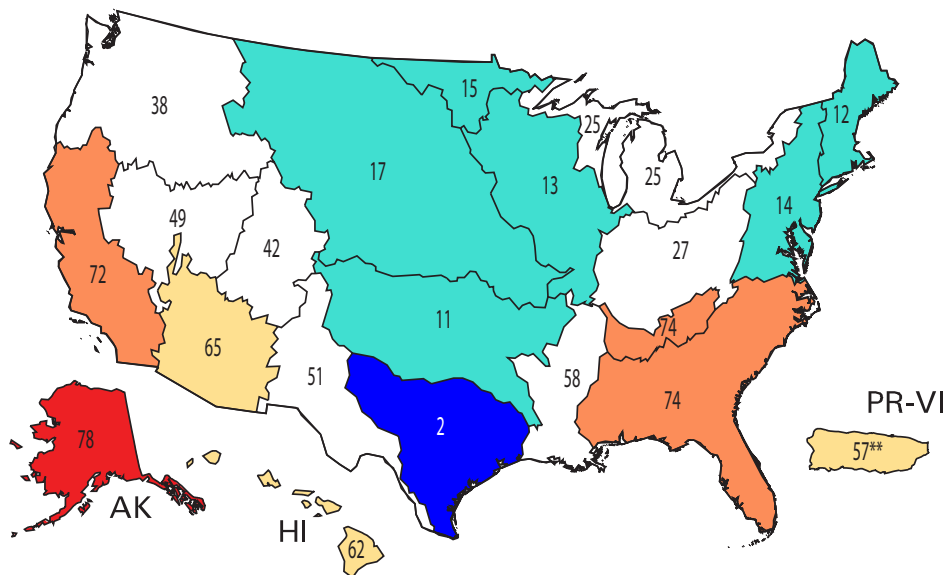
Explanation - Rank

77	71-76	59-70	20-58	8-19	2-7	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.

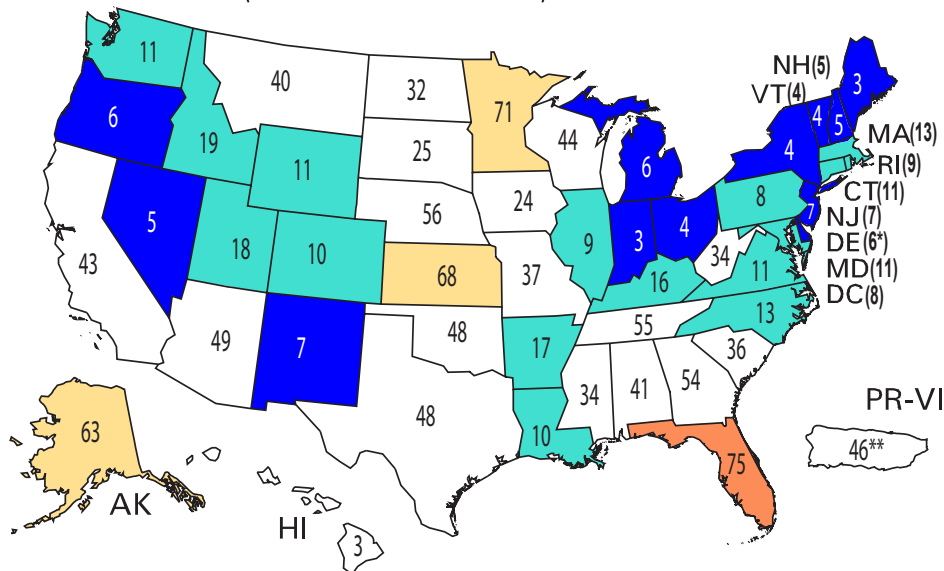


In 2007, notable regional streamflow differences were observed among hydrologic units in the western, central, and eastern United States. Alaska experienced its lowest annual flow since 1930, while California and the Lower Colorado River basin were also below normal. In contrast, the water resources regions of the Central U.S. (Missouri, Souris-Red-Rainy, Upper Mississippi, Arkansas-White-Red, and Texas-Gulf basins) were above normal. Farther east, the Tennessee and South-Atlantic Gulf regions had much below normal flows, while the Mid-Atlantic and New England regions had above normal flows.

Explanation - Rank						
77	71-76	59-70	20-58	8-19	2-7	1
Lowest	Much below normal	Below normal	Normal	Above normal	Much above normal	Highest

Seasonal Characteristics

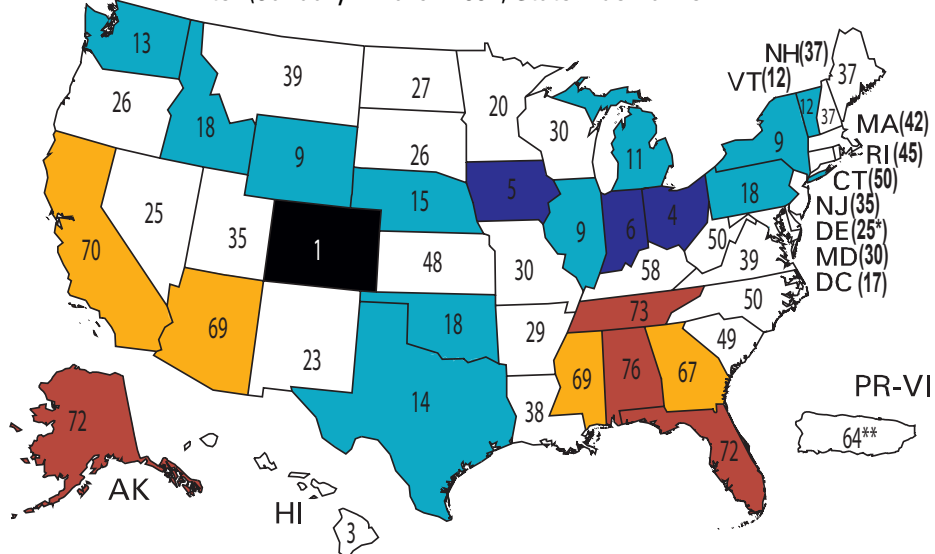
Autumn (October - December 2006) Statewide Ranks



Autumn season (October-December) streamflow was above normal nationwide (10th highest autumn flows in 78 years), although no new record seasonal high flows were set in any state. Florida reported its fourth lowest autumn streamflow.

* Out of 69 years of historical data.
 ** Out of 64 years of historical data.

Winter (January - March 2007) Statewide Ranks

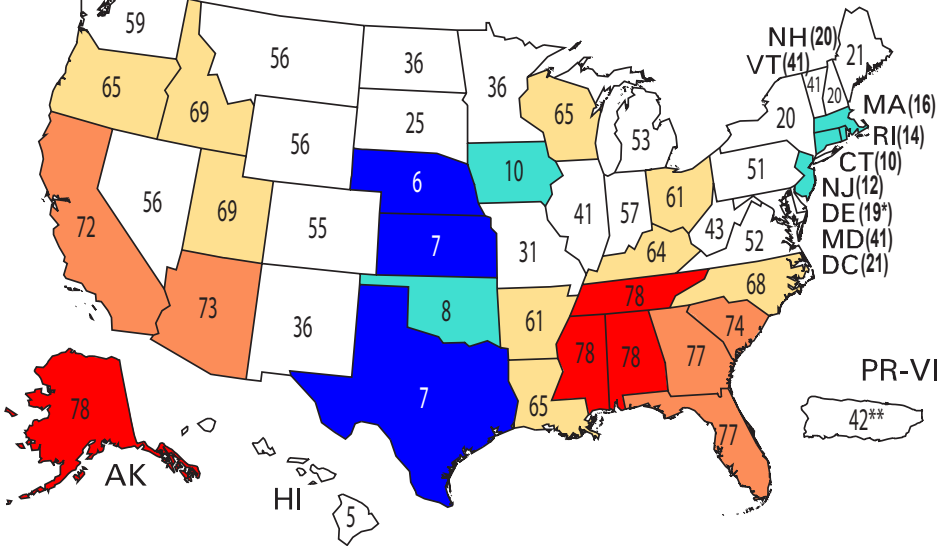


Winter season (January-March) saw a continuation of high flows across the U.S., ranking 17th out of 78 years nationwide, and Colorado set a new record high winter streamflow. Seasonally adjusted flows began to decline, however, in Alaska, California, Arizona and much of the Southeast, where below- to much-below normal flow occurred.

* Out of 69 years of historical data.
 ** Out of 64 years of historical data.

Explanation - Rank						
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Lowest	Much below normal	Below normal	Normal	Above normal	Much above normal	Highest

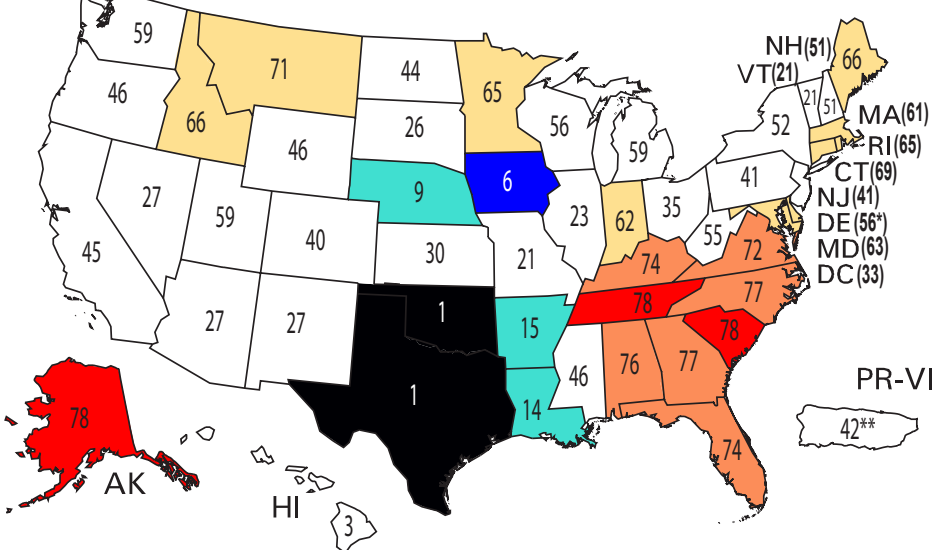
Spring (April - June 2007) Statewide Ranks



Spring season (April-June) streamflow declined noticeably across much of the Nation, falling into the below-normal category (62nd highest in 78 years) for the U.S. overall. Four states (Alaska, Tennessee, Mississippi, and Alabama) set new record low spring season streamflows.

* Out of 70 years of historical data.
 ** Out of 64 years of historical data.

Summer (July - September 2007) Statewide Ranks

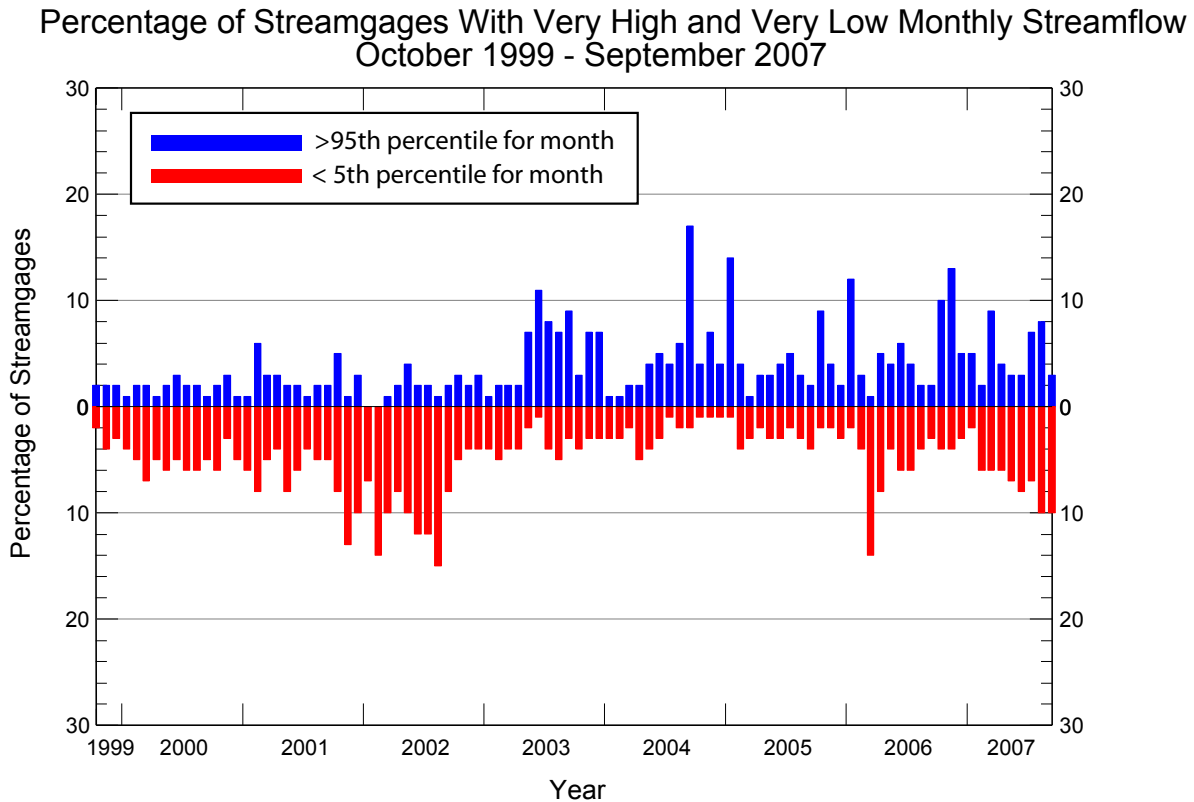


Summer season (July-September) streamflow was in the normal range for the U.S., ranking 52nd out of 78 summer seasons. However, it was a season of notable contrasts with two states (Texas and Oklahoma) setting new record summer high flows, and three states (Alaska, Tennessee, and South Carolina) setting new record summer low flows.

* Out of 71 years of historical data.
 ** Out of 65 years of historical data.

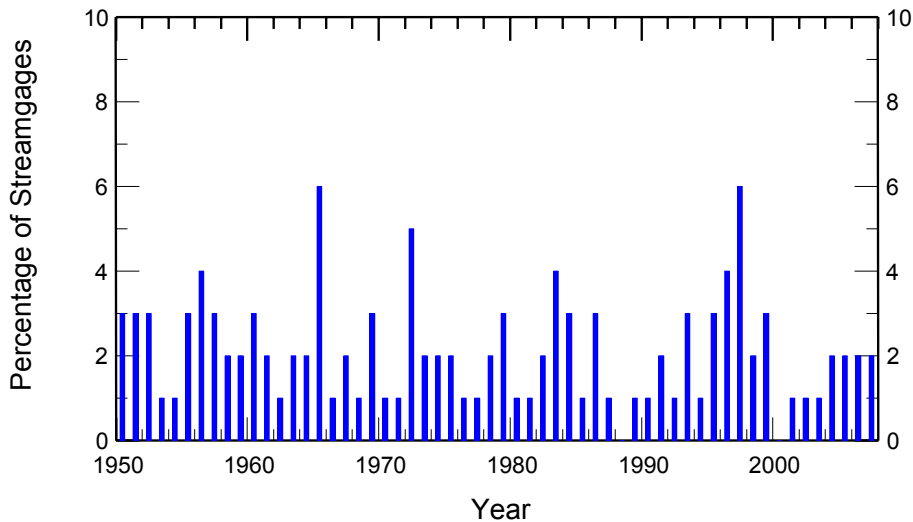
Explanation - Rank						
77	71-76	59-70	20-58	8-19	2-7	1
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High and Low Flows



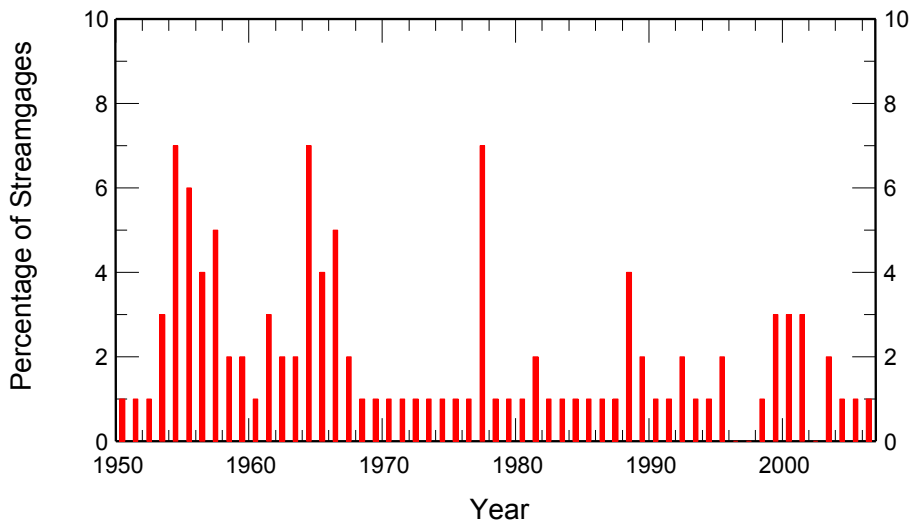
In any given month, on average, it is expected that five percent of the streamgages will experience very high (>95th percentile) and very low (<5th percentile) average streamflow. During water-year 2007, five months (October [2006], November [2006], March, July, and August) had a greater number of streamgages than expected reporting very high flows (10, 13, 9, 7, and 8 percent respectively). In contrast, 8 months during the water year had a greater number of streamgages than expected reporting very low flows (February-September).

Number of Record High Daily Mean Flows
1950-2007



In 2007, two percent of USGS streamgages reported new record high daily mean streamflow, the same as in the previous three years. Since 1950, the largest number of streamgages reporting new record highs in any one year was six percent, which occurred in both 1965 and 1997.

Number of Record 7-Day Low Flows
1950-2007



The 7-day low flow is defined as the lowest average streamflow to occur on seven consecutive days in a year. The number of new all-time record 7-day low streamflows that have been set annually since 1999 (the year when the current period of widespread drought began in the U.S.) has been well-below the number of records set during previous multi-year drought periods, such as those of the 1950s and 1960s. In 1954, 1964, and 1977, for example, seven percent of the streamgages set new all-time record 7-day low flows.

Additional Information

The USGS operates a network of nearly 7,400 streamgages nationwide, many real-time. Current information derived from these stations is available on the web at <http://water.usgs.gov/waterwatch>. Tables of data that summarize historical streamflow conditions by State, beginning in the year 1900, can be accessed at <http://water.usgs.gov/waterwatch/?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 800 agencies at the Federal, State, Tribal, and local levels. For more information about the streamgage network, see <http://water.usgs.gov/nsip/>.

This document is available online at <http://water.usgs.gov/waterwatch/2007summary/>.

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