

## News Release

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

**Address**  
Nevada District Office  
333 West Nye Lane, Room 220  
Carson City, Nevada 89706

---

<b>Release</b>	<b>Contact</b>	<b>Phone</b>	<b>Email</b>
January 20, 2005	Jon Wilson	(702) 564-4540	jwilson@usgs.gov

---

### **Flooding Sets Records in Places in Southern Nevada, Southern Utah, and Northwestern Arizona**

December's and January's heavy rains in southern Nevada, southern Utah, and northwestern Arizona resulted in some rivers reaching their highest-ever recorded flows, according to U.S. Geological Survey hydrologists. In addition, some of the flooding damaged or destroyed USGS gaging stations that measure water flow and help provide early notice of flooding. The USGS is working on repairing the damaged sites. A web page containing photos and a movie of the flood is available on the Nevada District web site at <<http://nevada.usgs.gov/flood05/index.htm>>.



USGS hydrologist Jon Wilson said the floods damaged or destroyed several gaging stations on the Virgin and Muddy rivers and on Beaver Dam and Meadow Valley washes. The USGS gaging station on the Virgin River near Littlefield, Ariz., was damaged during the rising stage. A discharge of about 28,000 cfs (cubic feet second) was recorded on Jan. 10 around 6 a.m. when the damage occurred as the river continued to rise. Preliminary estimates of the peak discharge at this station are between 30,000 to 40,000 cfs, which may surpass the second-highest peak flow recorded at 35,000 cfs in 1966. The peak at this station, however, was 61,000 cfs in 1989, and was the result of the Quail Creek dam failure.

Similarly, the turbulent waters on Meadow Valley Wash resulted in three USGS gaging stations being either damaged or destroyed, and eroded the railroad bed along the wash. USGS scientists also believe that the gaging station at Meadow Valley Wash near Caliente was destroyed, but high water has prevented USGS personnel from visiting the site. The last satellite reading on Jan. 10 from the site indicated about 675 cfs. Preliminary USGS estimates of the peak flow at this site are between 2,500 to 3,000 cfs, which would be a new peak of record. The previous record peak was 2,400 cfs in March 1978.

The peak stage on Beaver Dam Wash near Enterprise, Utah, peak stage was 13.91 feet. The prior peak of record at this site was 1,760 cfs, with a recorded stage of 10.16 feet. Thus, this event had a stage reading that was greater than the peak of record by more than 3.7 feet. Another Beaver Dam Wash gaging station at Beaver Dam, Ariz., was damaged on Jan. 11 – the apparent day of the peak flow. Preliminary USGS estimates of the peak discharge range from 8,000 to 10,000 cfs: a new peak of record at this site.

In Nevada, the gaging station at Muddy River near Glendale, Nev., was damaged. Preliminary USGS estimates of streamflow at this gaging station range from 3,000 to 5,000 cfs, well below the peak of record (16,400 cfs) that occurred in August 1981 after some severe thunderstorms.

USGS researchers are beginning repairs on gages at some of these sites, as well as conducting flood surveys at the sites that were inaccessible during the high water to calculate the maximum streamflow during these flooding events. The streamgages that were destroyed or damaged all used satellite telemetry technology, which allows the recorded water-level stage to be routinely transmitted to a satellite every 4 hours and then back to a local USGS office. There, USGS researchers convert that information to a streamflow value, and the information is displayed on the web. During flooding events, the water-level stage can be transmitted more frequently.

The following table provides the 100-year flood values for the four sites. These were determined from past peaks and the approximate recurrence interval based on preliminary estimates of the peak streamflow. It should be noted that the value that will be determined from the on-site surveys being conducted now by USGS could change these 100-year flood frequency numbers.

<b>Station</b>	<b>100 year flood value (cfs)</b>	<b>Estimated 2005 Flood Value (cfs)</b>	<b>Approximate Recurrence Interval</b>
Beaver Dam Wash at Beaver Dam, Az	800	8,000 to 10,000	Unknown
Virgin River at Littlefield, Az	34,600	30,000 to 40,000	100 years
Meadow Valley Wash near Caliente, Nv	6,300	2,500 to 3,000	25 years
Muddy River near Glendale, Nv	15,200	3,000 to 5,000	10 to 25 years

For more than 100 years, the U.S. Geological Survey has been collecting streamflow information in Nevada in cooperation with State, County, City, and other Federal agencies. The Nevada District operates more than 125 streamflow-gaging stations in Nevada and neighboring states. These data are available from the Nevada District home page at <<http://nevada.usgs.gov>>, or from the National USGS website at <<http://waterdata.usgs.gov/nv/nwis>>.

As the Nation's largest water, earth, and biological sciences and civilian mapping agency, the USGS works in cooperation with more than 2,000 organizations across the country to provide reliable, impartial scientific information to resource managers, planners, and other customers. This information is gathered in every State by USGS scientists to minimize the loss of life and property from natural disasters, to contribute to the conservation and the sound economic and physical development of the Nation's natural resources, and to enhance the quality of life by monitoring water, biological, energy, and mineral resources.

\* \* \* USGS \* \* \*

In-depth information about USGS programs may be found on the USGS home page at <http://www.usgs.gov>. To receive the latest USGS news releases automatically by e-mail, send a request to [listproc@listserver.usgs.gov](mailto:listproc@listserver.usgs.gov). Specify the listserver(s) of interest from the following names: water-pr; geologic-hazards-pr; biological-pr; mapping-pr; products-pr; lecture-pr. In the body of the message write: subscribe (name of listserver) (your name). Example: subscribe water-pr joe smith.