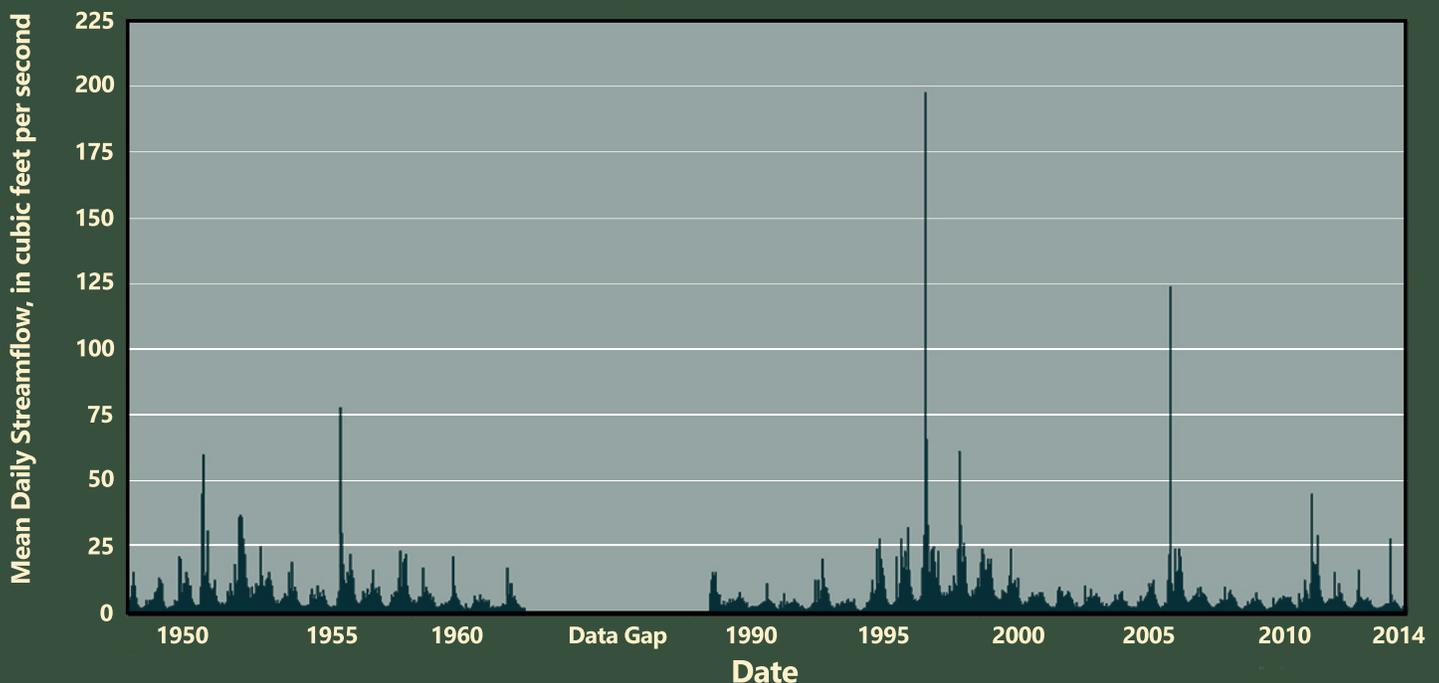


Clear Creek

USGS Research

Clear Creek is a small alpine stream that begins near Lake Tahoe. The creek flows roughly parallel to U.S Highway 50 until it reaches the Carson River near Carson City, Nevada. USGS, in cooperation with the Nevada Department of Transportation, has been studying streamflow, water quality, and sediment data from the creek since 2004. However, daily streamflow has been collected at Clear Creek since 1948. Streamflow is monitored in real-time which provides early warning of high flows and gives USGS the ability to sample the creek during storm events.

Clear Creek Mean Daily Streamflow, 1948-2014



Elements Affecting Clear Creek Water Quality

Erosion ➤ Development ➤ Runoff

Fires, extreme precipitation events, and human activities, on the lands surrounding Clear Creek, have created erosion which in some places is severe. Development along the middle and lower parts of the creek and urban and highway runoff, especially during winter when salt is applied to the roads, also may be affecting water quality and the amount of sediment in the creek.

Forest Health and Clear Creek

Reducing the amount of trees on the forested land surrounding Clear Creek could improve water quality by

- **Allowing new growth of native underbrush** which will help in controlling the amount of sediment deposited in the creek by runoff.
- **Reducing the intensity of fires** which destroy native plants and trees. Loss of these plants and trees increases erosion and the amount of sediment transported to the creek.
- **Allowing additional precipitation through the tree canopy.** This additional precipitation could infiltrate the ground beneath the trees to the underlying aquifer.

USGS Research

Baseline Assessment (2004-07)

Establish Baseline Conditions: Evaluated streamflow, water quality, and sediment data at three sampling sites along Clear Creek.

Publish Results: USGS Scientific Investigations Report 2009-5005.

Some reaches of Clear Creek have highly erodible channel sediments that mobilize during moderate to high streamflow. Annual suspended-sediment load in Clear Creek ranged from 100 to 1,456 tons.

Current Studies (2010-16)

Compare data collected to baseline conditions.

Continue data collection through September 2016 for evaluating long-term sediment transport.

Document changes in sediment load over time.

Characterize water-quality over time.

New USGS report on Clear Creek will be released this year!

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This information sheet, streamflow graph, link to published report, and additional information about Clear Creek can be found on the USGS Clear Creek Web Site:

<http://nevada.usgs.gov/water/studyareas/clearcreek.htm>