

# Retrieving data from the USGS National Water Information System (NWIS)

Sonya Vasquez

Database Administrator NV WSC

# So many websites so little time....

- **NWISWeb**
  - <http://waterdata.usgs.gov/nwis>
- **Instantaneous-Data Archive (IDA)**
  - <http://ida.water.usgs.gov/ida/index.cfm>
- **Water-Data Report**
  - <http://wdr.water.usgs.gov/>
- **WaterWatch**
  - <http://waterwatch.usgs.gov/>
- **Water Data Discovery**
  - <http://water.usgs.gov/data/>

# NWISWeb



**USGS**  
science for a changing world

**USGS Home**  
**Contact USGS**  
**Search USGS**

**National Water Information System: Web Interface**

[USGS Water Resources](#)

**Data Category:** Home

**Geographic Area:** United States

## USGS Water Data for the Nation

### Data Category

#### Real-time data

**Current-conditions** data transmitted from selected surface-water, ground-water, and water-quality sites.

#### Site information

Descriptive site information for all sites with links to all available water data for individual sites.

#### Surface water

Water flow and levels in streams, lakes, and springs.

#### Ground water

Water levels in wells.

#### Water quality

Chemical and physical data for streams, lakes, springs, and wells.

#### Mapper

Map of all sites with links to all available water data for individual sites.

### Introduction

These pages provide access to water-resources data collected at approximately 1.5 million sites in all 50 States, the District of Columbia, and Puerto Rico. Online access to this data is organized around the categories listed to the left.

The USGS investigates the occurrence, quantity, quality, distribution, and movement of surface and underground waters and disseminates the data to the public, State and local governments, public and private utilities, and other Federal agencies involved with managing our water resources.

[About us](#)

[Help](#)

[Tutorial](#)

# NWISWeb - What is it?

- Provides access to select USGS data
  - Real-time data
  - Site information
  - Current and historical
    - Streamflow
      - Daily means
      - Daily, monthly, and annual statistics
      - Peak flows
      - Field Measurements including channel geometry
    - Ground-water levels
    - Water-quality
- Does not include all data stored in NWIS

# NWISWeb - How can I see the data?

- Retrieval Options include
  - **Graphs**
    - Real-time stream flow, water levels, and water quality
  - **Tables**
    - HTML and ASCII tab-delimited files
  - **Automated retrievals**
    - [http://waterdata.usgs.gov/nwis/?automated\\_retrieval\\_info](http://waterdata.usgs.gov/nwis/?automated_retrieval_info)

# NWISWeb - Mapping Interface

- Can zoom and pan
- Sites become clickable at certain zoom levels
  - Site lists available
  - KML for Google Maps
- Sites can be viewed by
  - Active
  - Inactive
  - Realtime
  - Site Type

The screenshot displays the USGS National Water Information System: Mapper interface. At the top, the USGS logo and tagline "science for a changing world" are visible. Below the logo, the text "National Water Information System: Mapper" is displayed. The interface includes a search bar with the text "Include: All sites" and "Zoom to: Nevada" or "Enter a Place or Address...". Navigation links for "NWIS Home", "Instructions", and "Disclaimer" are present. The main map area shows a topographic map of Nevada with numerous water sites marked by green triangles. A "Zoom Box" is visible on the map. The left sidebar contains a list of site types with checkboxes: "Surface-Water Sites" (checked), "Groundwater Sites", "Spring Sites", "Atmospheric Sites", and "Other Sites". A status message indicates that sites are only clickable at zoom level 11 or greater. The bottom of the interface shows a scale bar (100 mi, 200 km) and a "POWERED BY Google" logo.

# Instantaneous-Data Archive - IDA



[USGS Home](#)  
[Contact USGS](#)  
[Search USGS](#)

## Instantaneous Data Archive - IDA

[Home](#) / [About IDA](#) / [Frequently Asked Questions](#) / [Questions and Feedback](#) / [Help](#) / [Other Water Data-NWISWeb](#) /

### Home

Since 1889 the United States Geological Survey has collected continuous stage, discharge, and other instantaneous time-series data on the nations rivers and streams. These time-series data have been and are typically recorded at intervals ranging from 5 to 60 minutes. These instantaneous data have been processed into and published as various daily values, such as the daily maximum, minimum, and/or mean. Because the published record are daily values, the original instantaneous data have not historically been officially approved, published, or made widely available. This web site has been established to make available as much historical instantaneous data from USGS data collection stations as possible. Although this site currently serves instantaneous discharge (streamflow) data only, work is planned to extend it to other time-series parameters in the future.

As described above, the USGS procedure for processing and publishing time-series data has focused on daily values as our final product and not the instantaneous values. As a result, the instantaneous values may not have been corrected and processed to the same extent as the daily values. Because of these USGS procedures, the instantaneous discharge data provided through this web site should be viewed as raw, unreviewed data. In order to provide a basic level of review and quality assurance of these data, the data have been recovered and compared against the published daily values through the use of automated filtering and computational software. Although significant effort has been made to ensure the instantaneous data available is reasonable and to remove obviously bad data, there may still be significant error in any individual value. Users are strongly encouraged to review all data carefully prior to use. These data are released on the condition that neither the USGS nor the United States Government may be held liable for any damages resulting from its use.

For further information, see [About IDA](#).

[IDA Status Map](#) / [IDA Station and UV Data Count](#)



# What is IDA?

- Repository of available instantaneous (unit value) discharge data
- Corresponds to the period of published daily-mean data
- 15 minute interval data
- Data typically start in the 1980's
- Number of stations and time interval will increase over time

# IDA - The Data

- **Historical data**
  - Compared to published daily value data if available
  - Classified by percent difference
    - Within 0.01, 1, 1-5, 5-10 percent
- **Recent data**
  - Are uploaded to IDA ~ 8-18 months after original collection, but may be sooner dependant on review and approval of daily value data
    - \*\*NWISWeb provides these data for the most recent 60 days
- **All Data**
  - Values are to be considered raw
  - Should be reviewed prior to use

# IDA - The Interface

The screenshot shows the USGS Instantaneous Data Archive (IDA) interface. At the top left is the USGS logo with the tagline "science for a changing world". To the right is a navigation menu with links for "USGS Home", "Contact USGS", and "Search USGS". Below this is a blue header for "Instantaneous Data Archive - IDA" and a breadcrumb trail: "Home / About IDA / Frequently Asked Questions / Questions and Feedback / Help / Other Water Data-NWISWeb /".

The main content area displays "Geographic Area: Nevada" and "Period of record for site: 10310500 / CLEAR CK NR CARSON CITY, NV". A link for "View data summary report" is provided. A table shows data from 1989-01-19 to 2008-09-30 with a count of 545,833. Below the table are input fields for "Retrieve data from:" and "to:" (YYYY-MM-DD), a "Tab-delimited data:" dropdown menu set to "Save to file", and a "Retrieve Data" button. A red warning message states: "Retrieval may take several minutes depending upon the amount of data requested." At the bottom are two buttons: "Select a different Geographic Area or Site Number" and "Select a different Site Number for Geographic Area: Nevada".

Two callout boxes provide additional information:

- One box points to the "Retrieve Data" button and states: "Data can be retrieved as a table in the html or as text files."
- Another box points to the "Select a different Site Number for Geographic Area: Nevada" button and states: "Site selection by site number or by geographic area"

# IDA - The Output

```

# column      column definition
# -----
# site_no     USGS site identification number
# date_time   date and time in format (YYYYMMDDhhmmss)
# tz_cd       time zone
# dd          internal USGS sensor designation (''data desc
# accuracy_cd accuracy code
#             0 - A daily mean discharge calculated from the instantaneous
#             data on this day is 0.01 cubic feet per second
#             or less and the published daily mean is zero.
#             1 - A daily mean discharge calculated from the instantaneous
#             data on this day matches the published daily mean
#             within 1 percent.
#             2 - A daily mean discharge calculated from the instantaneous
#             data on this day matches the published daily mean
#             from greater than 1 to 5 percent.
#             3 - A daily mean discharge calculated from the instantaneous
#             values on this day matches the published daily mean
#             from greater than 5 to 10 percent.
#             9 - The instantaneous value is considered correct by the
#             collecting USGS Water Science Center. A published daily
#             mean value does not exist and/or no con
# value       discharge in cubic feet per second
# precision   digits of precision in the discharge
# remark      optional remark code
#             Remark Explanation
#             < Actual value is known to be less than
#             > Actual value is known to be greater than
#             & Value is affected by unspecified reasons
#             A Value is affected by ice at the measurement
#             B Value is affected by backwater at the measurement
#             e Value has been estimated by USGS personnel
#             E Value was computed from an estimated rating
#             F Value was modified due to automated instrument
#             K Value is affected by instrument calibration
#             R Rating is undefined for this value.
# site_no>date_time>tz_cd>dd> accuracy_cd>value>prec> remark
15N 14N 6S 2N 5S 16N 1S 1S
10310500 20080901000000 PDT 1 1 1.2 2
10310500 20080901001500 PDT 1 1 1.2 2
10310500 20080901003000 PDT 1 1 1.2 2
10310500 20080901004500 PDT 1 1 1.2 2
10310500 20080901010000 PDT 1 1 1.2 2
10310500 20080901011500 PDT 1 1 1.2 2
10310500 20080901013000 PDT 1 1 1.2 2
10310500 20080901014500 PDT 1 1 1.2 2
10310500 20080901020000 PDT 1 1 1.2 2
10310500 20080901021500 PDT 1 1 1.2 2
10310500 20080901023000 PDT 1 1 1.2 2
10310500 20080901024500 PDT 1 1 1.2 2

```

Columns and codes defined within file

Tab delimited

# Water-Data Reports

1970

## Water Resources Data for Nevada

Part 1. Surface Water Records  
Part 2. Water Quality Records



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Prepared in cooperation with the State of Nevada  
and with other agencies

Water Resources of the United States—Annual Water Data Reports - Windows Internet Explorer

http://wdr.water.usgs.gov/adrgmap/index.html

nevada annual data reports

File Edit View Favorites Tools Help

Water Resources of the United States—Annual Water...

**USGS**  
science for a changing world

USGS Home  
Contact USGS  
Search USGS

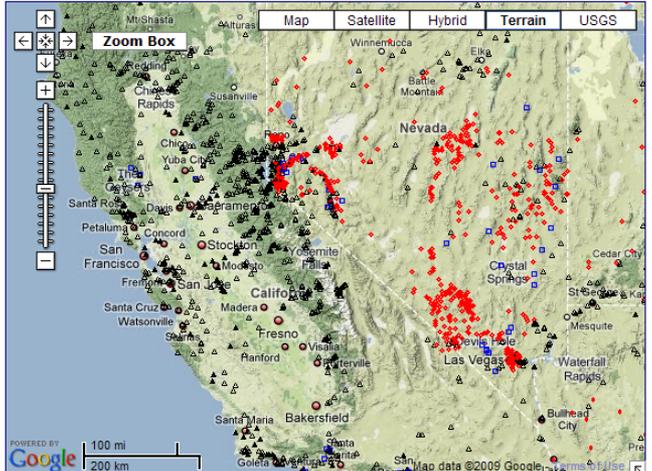
### Annual Water Data Reports Mapper—Water Years 2006 to 2009

Year: 2008 Zoom to: Nevada or Enter a Place or Address... Go WDR Home | Instructions | Disclaimer

Note: Data reports for Water Year 2009 will be processed from October 2009 through April 2010 and will be posted site-by-site as they are completed

Status:  
**Sites are clickable only when zoom level is 9 or greater.**  
(Current zoom level is 6.)

- Surface-Water Sites**  
(streams, lakes, wetlands, estuaries,  
ocean, diversions, outfalls)  
▲ Any data (not clickable)
- Groundwater Sites**  
(wells, any subsurface)  
● Any data (not clickable)
- Atmospheric Sites**  
(climate, weather)  
■ Any data (not clickable)



Map Satellite Hybrid Terrain USGS

Zoom Box

100 mi  
200 km

POWERED BY Google

Map data ©2009 Google

Local intranet 100%

# Water-Data Reports - A History

- **Data Prior to September 1960**
  - Paper reports called, “Compilation of Records of Surface Waters of the United States”
- **1961 to 2002**
  - Paper reports only
- **2002 to 2004**
  - Paper reports and available online
- **2005 to present**
  - Online individual electronic Site Data Sheets with mapping interface

# Water-Data Reports - Mapper

**USGS**  
science for a changing world

USGS Home  
Contact USGS  
Search USGS

### Annual Water Data Reports Mapper—Water Years 2006 to 2009

Year: 2008 | Zoom to: Select a State... | or Enter a Place or Address... | Go | WDR Home | Instructions | Disclaimer

Note: Data reports for Water Year 2009 will be processed from October 2009 through April 2010 and will be posted site-by-site as they are completed

**Status:**  
Click a site symbol to access its report for Water Year 2008. (Current zoom level is 9.)

- Surface-Water Sites**  
(streams, lakes, wetlands, estuaries, ocean, diversions, outfalls)
  - ▲ Basic data only (flow, level)
  - ▲ Basic data + water quality
  - ▲ Basic data + climate
  - ▲ Basic data + ecology
  - ▲ Multiple surface-water sites
- Groundwater Sites**  
(wells, any subsurface)
  - Basic data only (water level)
  - Basic data + water quality
  - Multiple groundwater sites
- Atmospheric Sites**  
(climate, weather)
  - Basic data only (climate)
  - Basic data + water quality

Map | Satellite | Hybrid | **Terrain** | USGS

**Zoom Box**  
Previous Zoom

**Water Year: 2008**  
**Site Number: 10339400**  
**Site Name: Martis Creek near Truckee, CA**  
[Download PDF](#)

Map data ©2009 Google, USGS

# Water-Data Reports – Site Data Sheet



Water-Data Report 2008

## 10336610 Upper Truckee River At South Lake Tahoe, CA

Truckee Basin  
Lake Tahoe Subbasin

LOCATION.--Lat 38°55'21", long 119°59'26" referenced to North American Datum of 1927, in NW ¼ SE ¼ sec.4, T.12 N., R.18 E., El Dorado County, CA, Hydrologic Unit 16050101, on left bank, 200 ft downstream from U.S. Highway 50 Bridge, 1.0 mi northeast of South Lake Tahoe Post Office, and 1.4 mi upstream from Lake Tahoe.

DRAINAGE AREA.--54.9 mi<sup>2</sup>.

### SURFACE-WATER RECORDS

PERIOD OF RECORD.--Oct 1971 to Sep 1974, Oct 1976 to Jun 1977, Oct 1977 to Jun 1978, Mar 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,229.04 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr 26, 1984, at datum 2.00 ft higher. Prior to Oct 19, 1993, at site 200 ft upstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Two small dams may cause slight regulation at times. Some small diversions for domestic use upstream from station. Echo Lake conduit (station 11434500) diverts from Echo Lake (station 10336608), to South Fork American River Basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,480 ft<sup>3</sup>/s, Jan 2, 1997, gage height, 9.95 ft; minimum daily, 0.01 ft<sup>3</sup>/s, Sep 6, 2001.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 19	0300	*513	*4.11
No other peak greater than base discharge			

# Water-Data Reports

## Why do we need them?

- Provides a snapshot in time of site conditions
- Manuscripts provide descriptive information
  - Location
  - Period of Record
  - Historical extremes outside period of record
  - Record accuracy
  - Other remarks pertinent to station operation

# WaterWatch

 **USGS**  
science for a changing world

USGS Home  
Contact USGS  
Search USGS

**WaterWatch -- Current Water Resources Conditions** [Special Features](#) [Contents](#)

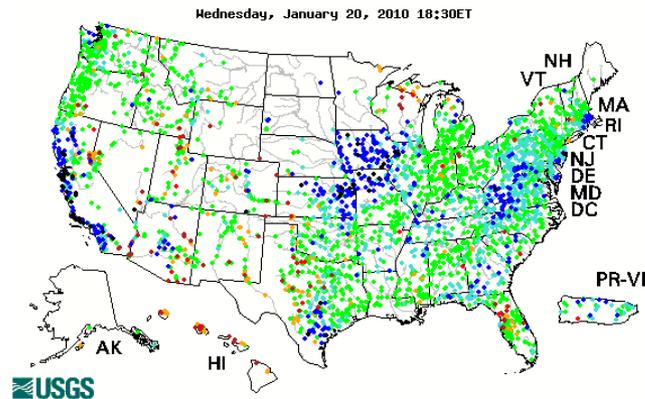
Current Maps/Graphs: Flood Watch: Drought Watch: Recent/Historical Maps/Graphs:

Current Streamflow

Map United States Water-Resources Regions Search Additional Information

## WaterWatch -- Current water resources conditions

Map of real-time streamflow compared to historical streamflow for the day of the year (United States)



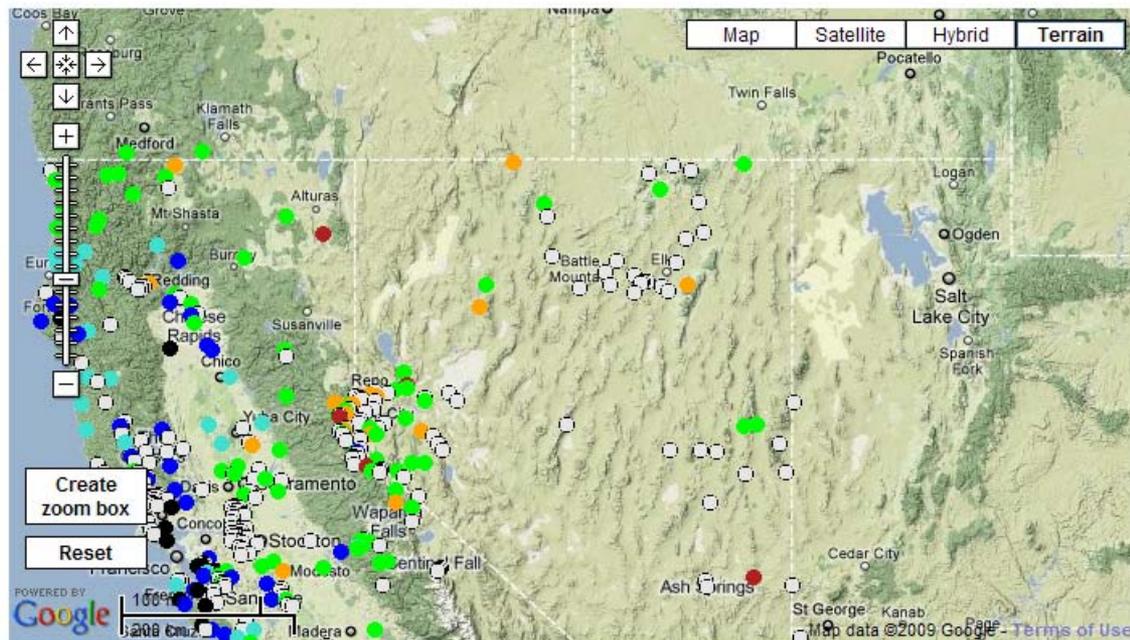
Choose a data retrieval option and select a location on the map  
 List of all stations in state,  State map, or  Nearest stations

# WaterWatch - What is it?

- **Current, recent, and historical maps**
  - Real-time, flood, 1-, 7-, 14-, 28-day, and monthly average flow
  - Site-by-site and hydrologic unit region maps
- **Graphs and Tables**
  - Summary of flow conditions in a region
  - List of streamflow condition information
- **Tools to customize WaterWatch products**
  - Google maps, Google Earth
- **Links to just about every data delivery site you need**

# WaterWatch

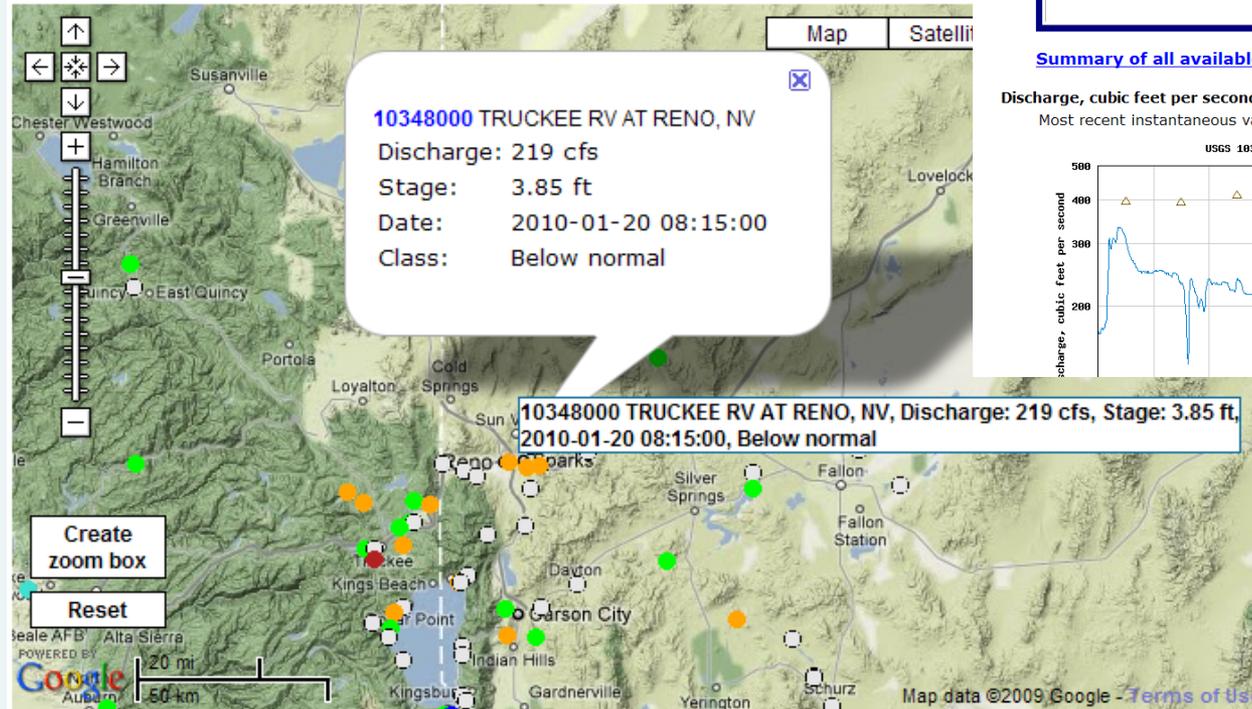
**Map of real-time streamflow compared to historical streamflow for the day of the year (United States)**



Explanation - Percentile classes						
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

# WaterWatch

Map of real-time streamflow compared to historical streamflow for the day of the year (United States)



**USGS**  
science for a changing world

USGS Home  
Contact USGS  
Search USGS

**National Water Information System: Web Interface**

USGS Water Resources (USGS Access) Data Category: Real-time Geographic Area: United States GO

News - updated November 2009

## USGS 10348000 TRUCKEE RV AT RENO, NV PROVISIONAL DATA SUBJECT TO REVISION

Available data for this site Time-series: Real-time data GO

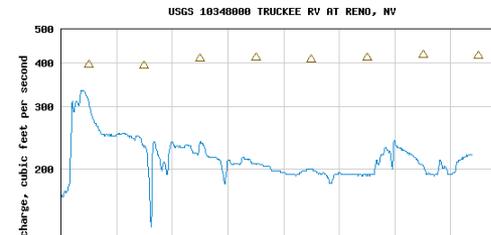
During winter months, stage and discharge may be affected by ice in the channel.

Available Parameters	Output format	Days
<input type="checkbox"/> All 2 Available Parameters for this site	<input checked="" type="radio"/> Graph	7
<input checked="" type="checkbox"/> 00060 Discharge	<input type="radio"/> Graph w/ stats	(1-60) GO
<input checked="" type="checkbox"/> 00065 Gage height	<input type="radio"/> Graph w/o stats	
	<input type="radio"/> Table	
	<input type="radio"/> Tab-separated	

### Summary of all available data for this site

#### Discharge, cubic feet per second

Most recent instantaneous value: 219 01-20-2010 09:15 PST



# WaterWatch




**USGS Home**  
**Contact USGS**  
**Search USGS**

**National Water Information System: Web Interface**

USGS Water Resources (USGS Access)

Data Category: Site Information  
 Geographic Area: United States  
 GO

[News](#) - updated November 2009

## USGS 10348000 TRUCKEE RV AT RENO, NV

Available data for this site: SUMMARY OF ALL AVAILABLE DATA GO

### Stream Site

#### DESCRIPTION:

Latitude 39°31'49", Longitude 119°47'40" NAD27  
 Washoe County, Nevada, Hydrologic Unit 16050102  
 Drainage area: 1,067 square miles  
 Datum of gage: 4,444.53 feet above sea level NGVD29.

#### AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
<a href="#">Real-time</a>	-- Previous 60 days --		
<a href="#">Daily Data</a>			
Temperature, water, degrees Celsius	1989-08-26	1998-09-30	8235
Discharge, cubic feet per second	1906-10-01	2010-01-19	31570
<a href="#">Daily Statistics</a>			
Temperature, water, degrees Celsius	1989-08-27	1998-09-30	2744
Discharge, cubic feet per second	1906-10-01	2009-09-30	31459
<a href="#">Monthly Statistics</a>			
Temperature, water, degrees Celsius	1989-08	1998-09	
Discharge, cubic feet per second	1906-10	2009-09	
<a href="#">Annual Statistics</a>			
Temperature, water, degrees Celsius	1989	1998	
Discharge, cubic feet per second	1907	2009	
<a href="#">Peak streamflow</a>	1907-03-18	2008-05-19	84
<a href="#">Field measurements</a>	1908-10-09	2009-12-28	817
<a href="#">Field/Lab water-quality samples</a>	1977-04-11	2001-03-14	154
<b>Additional Data Sources</b>	<b>Begin Date</b>	<b>End Date</b>	<b>Count</b>
<a href="#">Instantaneous-Data Archive</a> **offsite**	1989-01-11	2006-09-30	553112
<a href="#">Annual Water-Data Report (pdf)</a> **offsite**	2005	2008	4



**WaterWatch: Water Resources Conditions**

Summary | Hydrograph | Peak | Forecast | Rating

USGS 10348000 TRUCKEE RV AT RENO, NV

Drainage area:	1067 mi <sup>2</sup>
Discharge:	219 cfs
Stage:	3.85 ft
Flood stage:	11.0 ft
Date:	2010-01-20 08:15:00
Percentile:	16%
Class symbol:	
% of normal (median):	52%
% of normal (mean):	33%

# WaterWatch

USGS Home  
Contact USGS  
Search USGS

National Water Information System: Web Interface

USGS Water Resources (USGS Access) Data Category: Real-time Geographic Area: United States GO

News - updated November 2009

## USGS 10348000 TRUCKEE RV AT RENO, NV

### PROVISIONAL DATA SUBJECT TO REVISION

Available data for this site Time-series: Real-time data GO

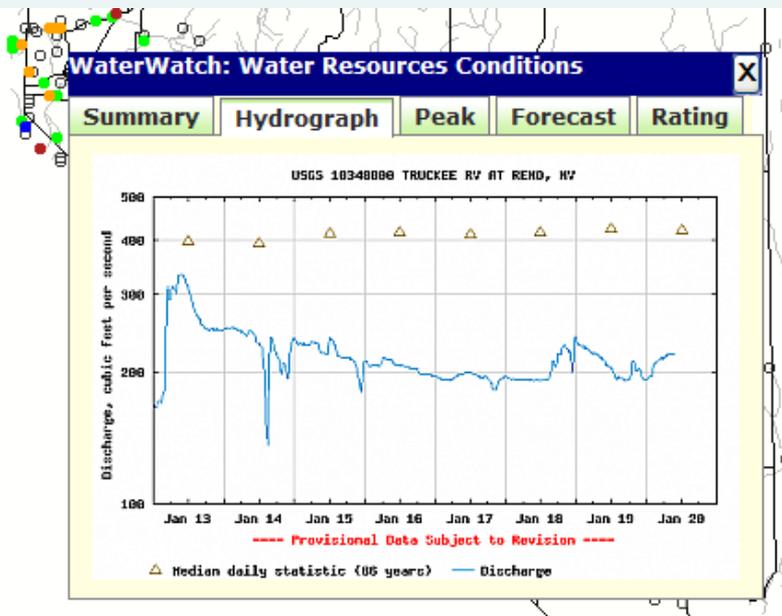
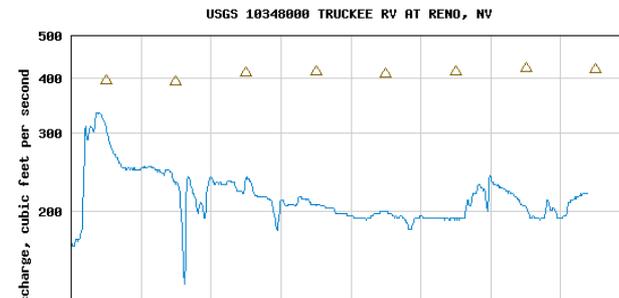
During winter months, stage and discharge may be affected by ice in the channel.

Available Parameters	Output format	Days
<input type="checkbox"/> All 2 Available Parameters for this site	<input checked="" type="radio"/> Graph	7
<input checked="" type="checkbox"/> 00060 Discharge	<input type="radio"/> Graph w/ stats	(1-60) GO
<input checked="" type="checkbox"/> 00065 Gage height	<input type="radio"/> Graph w/o stats	
	<input type="radio"/> Table	
	<input type="radio"/> Tab-separated	

### Summary of all available data for this site

#### Discharge, cubic feet per second

Most recent instantaneous value: 219 01-20-2010 09:15 PST



# WaterWatch

USGS Home  
Contact USGS  
Search USGS

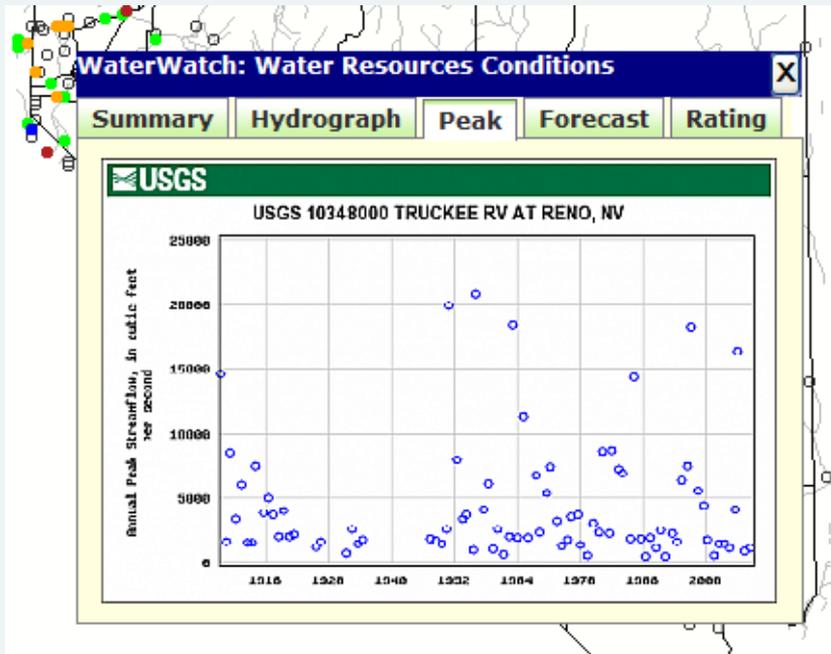
National Water Information System: Web Interface

USGS Water Resources (USGS Access) Data Category: Surface Water Geographic Area: United States GO

[News](#) - updated November 2009

## Peak Streamflow for the Nation USGS 10348000 TRUCKEE RV AT RENO, NV

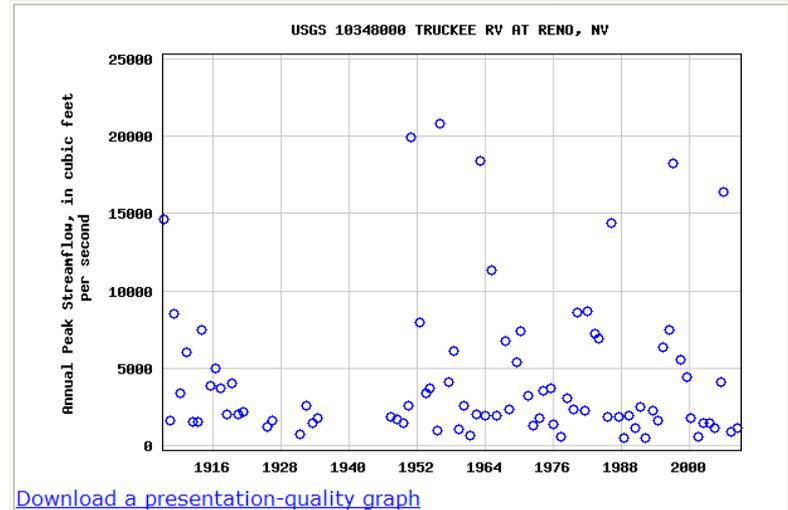
Available data for this site Surface-water: Peak streamflow GO



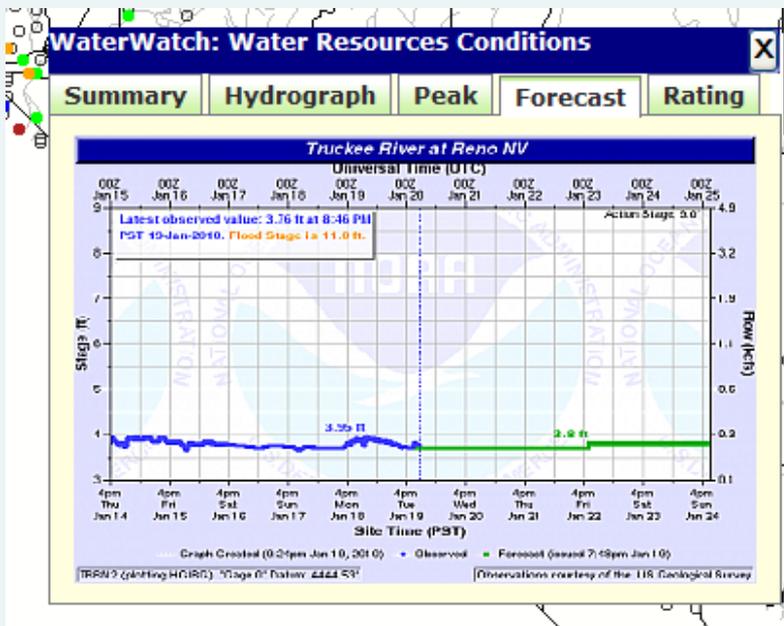
Washoe County, Nevada  
Hydrologic Unit Code 16050102  
Latitude 39°31'49", Longitude 119°47'40" NAD27  
Drainage area 1,067 square miles  
Gage datum 4,444.53 feet above sea level NGVD29

Output formats

- Table
- Graph
- Tab-separated file
- peakfq (watstore) format
- Reselect output format



# WaterWatch



weather.gov

**National Weather Service**

**Advanced Hydrologic Prediction Service**

Home News Organization Search for:  NWS All NOAA Go

Weather Forecast Office Reno, NV California Nevada River Forecast Center

**Winter Weather Advisory**

[View all valid statements/warnings](#)

Hydrograph | [River at a Glance](#) | [Download](#)

**Truckee River at Reno NV**

Universal Time (UTC)

Latest observed value: 3.76 ft at 8:46 PM PST 19-Jan-2010. Flood Stage is 11.0 ft.

Action Stage: 9.0

Stage (ft)

Flow (cfs)

Site Time (PST)

Graph Created (8:24pm Jan 19, 2010) | Observed | Forecast (issued 7:48pm Jan 19)

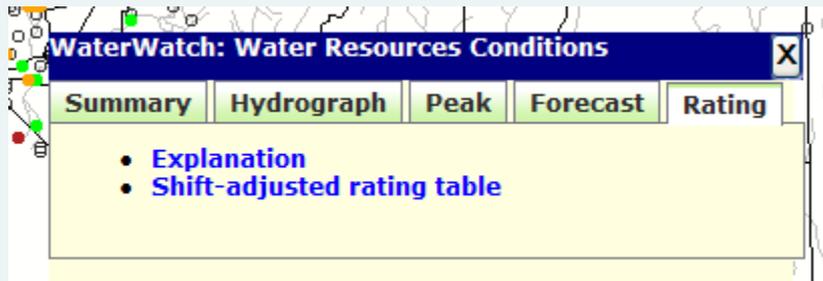
TRRN2 (plotting HGIRG) "Gage 0" Datum: 4444.53' | Observations courtesy of the US Geological Survey

[Printable Image](#) | **NOTE: Gauge reading may be affected by ice.** | [Default Hydrograph](#)

[About this graph](#)

**USGS**  
science for a changing world

# WaterWatch



WaterWatch: Water Resources Conditions

Summary Hydrograph Peak Forecast Rating

- Explanation
- Shift-adjusted rating table

## Stage-discharge relations

*Stage-discharge relations (ratings)* are usually developed from a graphical analysis of current-meter discharge measurements (sometimes called calibrations) made over a range of stages and discharges. Measurements are made on various schedules and for different purposes. Each measurement is carefully made, and undergoes quality assurance review. Frequently, measurements indicate a change in the rating, often due to a change in the streambed or riparian vegetation. Such changes are called shifts; they may indicate a short- or long-term change in the rating for the gage. In normal usage, the measured shifts (or corrections) are applied mathematically to a defined rating. Ratings may be temporarily invalidated and unavailable due to backwater conditions caused by ice, tides, or other variable physical obstructions.

The tables being provided are shift corrected, incorporating the mathematical adjustments for ease of use by the recreational user. The shift adjustments are applied to the individual ratings as measured data becomes available, resulting in an adjusted rating. Some ratings may change as often as weekly, others may not change for months.

```
UNITED STATES GEOLOGICAL SURVEY      http://water.usgs.gov/
WATER INFORMATION SYSTEM             http://water.usgs.gov/data.html
PROVISIONAL AND SUBJECT TO CHANGE UNTIL PUBLISHED BY USGS
2009-11-12 20:45:56
```

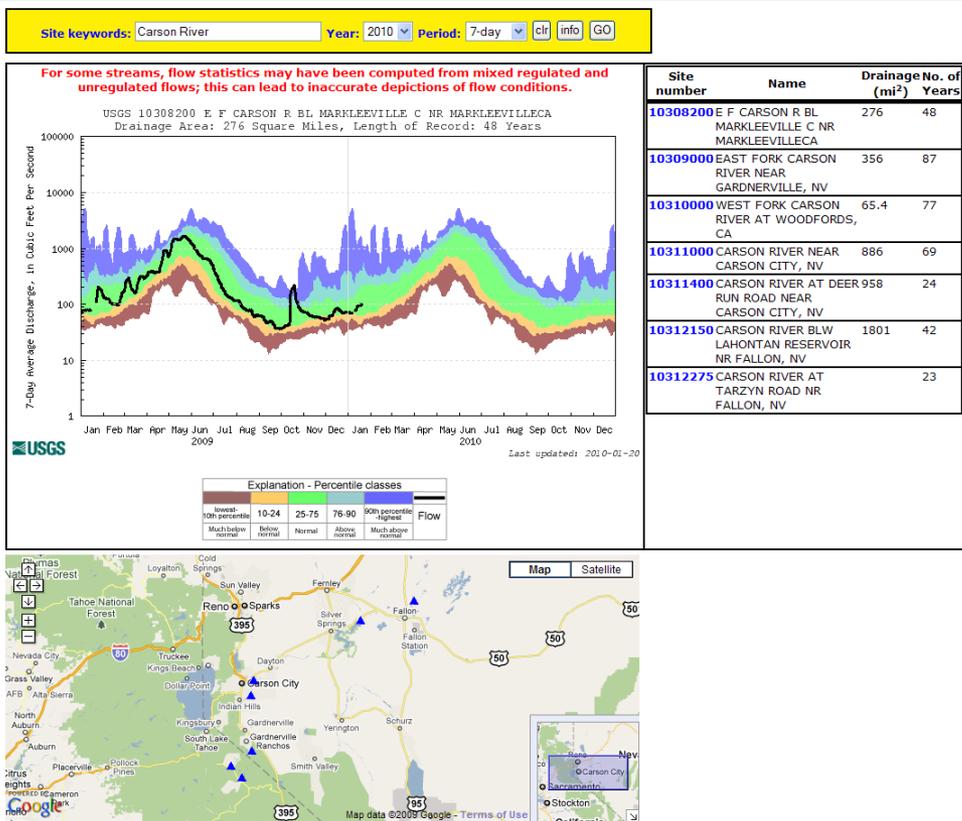
The stage-discharge rating provided in this file should be considered provisional and subject to change. Stage-discharge ratings change over time as the channel features that control the relation between stage and discharge vary. Users are cautioned to consider carefully the applicability of this rating before using it for decisions that concern personal or property or operational consequences.

```
STATION "
DESCRIPTION=" Standard data base for this site."
GS " NUMBER="10348000 " TIME_ZONE="PST" DST_FLAG=Y
KEE RV AT RENO, NV"
LABEL="Discharge (cfs)"
060"
091112200000 PST"
TYPE="STGQ" NAME="stage-discharge" AGING=A
Extension of rating #29.0"
logarithmic"
]
ING="2223456782" PARAMETER="Gage height (ft)"
G="222233332" PARAMETER="Discharge (cfs)"
GIN=20021120120100 BZONE=PST END=20090531235959 EZONE=PDT AGING=A
GIN=20090601000000 BZONE=PDT END=20090930235959 EZONE=PDT AGING=R
GIN=20091001000000 BZONE=PDT END=23821230160000 EZONE=PST AGING=U
20091112120000" BZONE="PST" END="-----" EZONE="-----"
"3.00" SHIFT1="0.03" STAGE2="4.80" SHIFT2="0.03" STAGE3="6.20" SHIFT3="0.00"
="V2 defined by QM#759 prorate on declining stage"
-----" BZONE="-----" END="-----" EZONE="-----"
"-----" SHIFT1="-----" STAGE2="-----" SHIFT2="-----" STAGE3="-----" SHIFT3="-----"
```

```
# //SHIFT NEXT COMMENT=" "
INDEP SHIFT DEP STOR
16N 16N 16N 1S
1.87 0.03 16 *
```

# WaterWatch

## Streamflow Duration Hydrographs



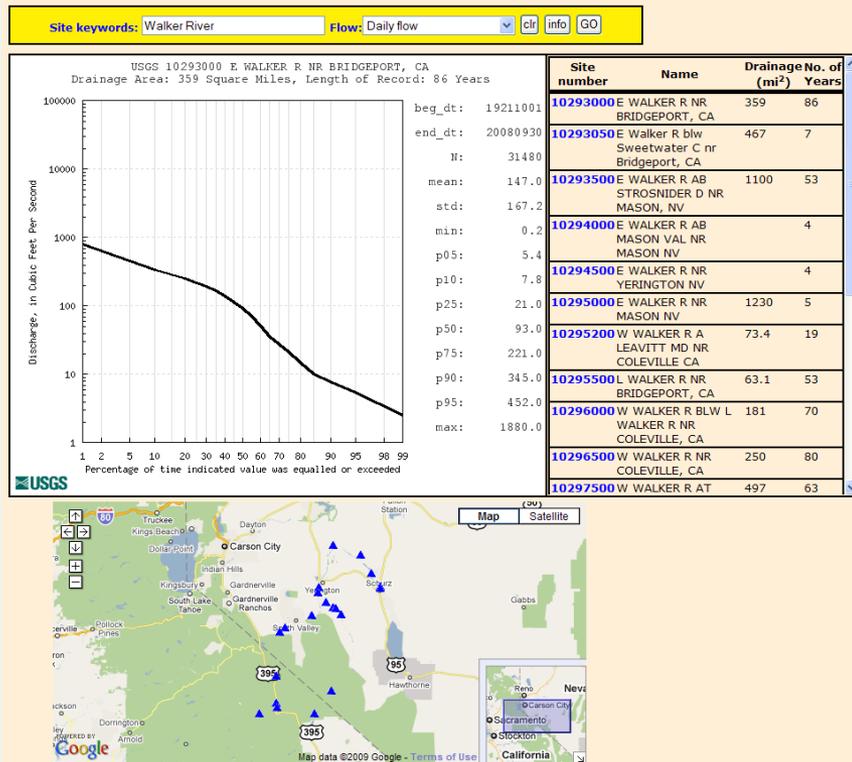
- Create duration graph of 7-, 14-, and 28-day flows for all USGS sites for any year
- Search sites by location and site number
- Access via a map interface showing site locations and a table showing site information
- Can display and download statistics

# WaterWatch

## Streamgauge Statistics

### WaterWatch -- USGS streamgauge statistics

Enter USGS streamgauge site information such as a site number, a river name, or a county name, choose streamflow type, and then click "GO" to retrieve streamflow statistics and flow duration curve.

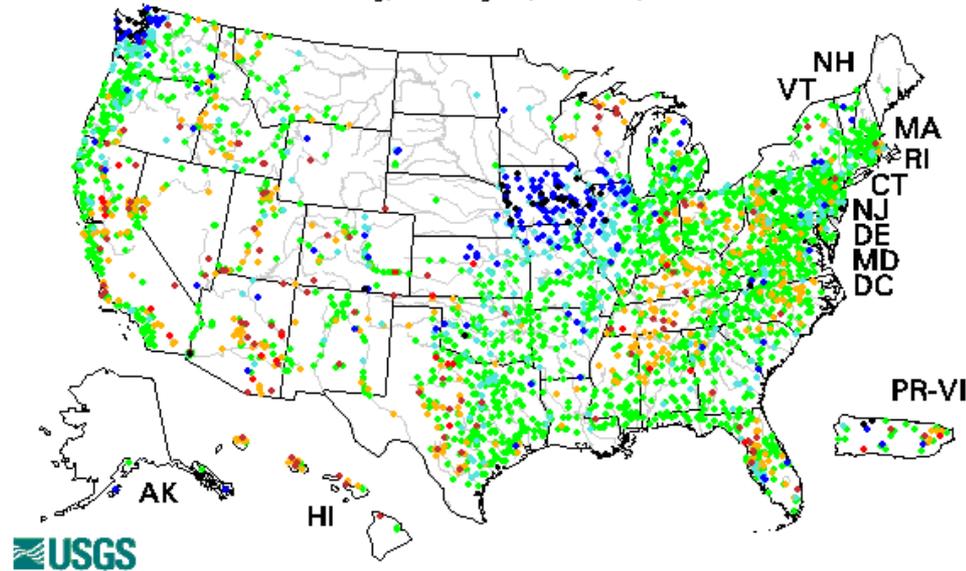


- Daily and 7-day lowest flow statistics and flow duration curve
- Search all USGS sites
- Access via Google Map showing location and a table showing site information
- Simple approximation for 7 yr, 10 day, low flow (7Q10)

# WaterWatch -- Current water resources conditions

## Animation of daily streamflow maps for January 2010

Tuesday, January 12, 2010 19:30ET



Explanation - Percentile classes						
	●	●	●	●	●	●
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

# Streamflow Map Animation

- Build customized WaterWatch map animations
- Real-time and flood maps

# WaterWatch

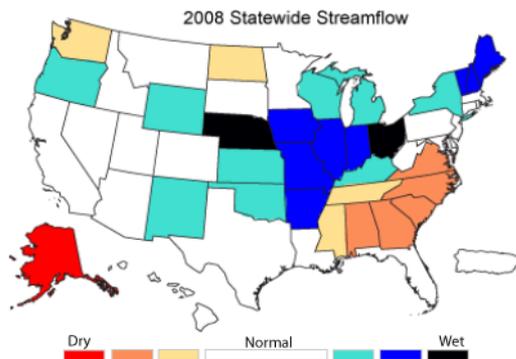
## Annual Streamflow Summary



This summary is published as USGS Fact Sheet FS-2009-3003 and can be downloaded as a [PDF](#) file

### Streamflow of 2008 - Water Year Summary

U.S. Geological Survey  
Reston, Virginia  
January 2009



- [National Overview](#)
- [Regional Patterns](#)
- [Seasonal Characteristics](#)
- [High and Low Flows](#)

- Annual streamflow summary has been published since 2006
- Provides annual and seasonal overview by state and hydrologic unit
- Summarizes high and low flows measured at streamgages

# Flood Intensity and Extent

## WaterWatch -- Current water resources conditions

Retrieve Summary of Recent Flood and High Flow Conditions  
 (Warning: These Data are Provisional and May be Prone to Error.)

State: <input type="text" value="nv"/>	<input type="button" value="clr"/>	Begin Date: <input type="text" value="2005-05-01"/>	End Date: <input type="text" value="2010-01-20"/>	<input type="button" value="Help"/>
Output format: <input checked="" type="radio"/> table <input type="radio"/> text	Sort by: <input type="text" value="No. of years of historical peaks"/>	<input checked="" type="radio"/> ascend <input type="radio"/> descend	<input type="button" value="GO"/>	

### Summary of Recent Flood and High Flow Conditions for Nevada

["--", no data; "<", less than all historical peaks]

USGS station number	USGS station name	Drainage area [mi <sup>2</sup> ]	NWS flood stage [ft]	No. of days above flood stage	Highest peak from 2005-05-01 to 2010-01-20					Historical peaks	
					Date	Time	Discharge [ft <sup>3</sup> /s]	Stage [ft]	Rank	years	No. of years
10311250	VICEE CYN CK NR CARSON CITY, NV	1.30	--	--	2005-07-18	20:15:00	--	1.89	--	1	6.60 (1983)
09415920	WARM SPGS W NR MOAPA, NV	--	--	--	2008-10-30	07:00:00	4.7	1.09	1	1	4.4 (2008)
09415558	HOT CK NR SUNNYSIDE, NV	--	--	--	2009-11-02	16:30:00	15	7.73	1	1	15 (2007)
09415640	ASH SPGS CK BLW HWY 93 AT ASH SPGS, NV	--	--	--	2009-07-27	14:00:00	34	4.59	<	1	185 (2006)
09419745	C-1 CHANNEL ABV MOUTH NR HENDERSON, NV	--	--	--	2009-12-07	18:30:00	6.9	2.95	<	2	9.6 (2007)

- Analyze high flows in a region during a specific period and compare to historical floods
- Uses provisional data which may be prone to errors

# If you can only remember one link, make it

## Water Data Discovery

<http://water.usgs.gov/data/>

**What are you looking for?**

**What is happening today...**

[Water Now](#)

**What happened in the past...**

[Water Then](#)

**What might happen in the future...**

[Water Tomorrow](#)

### Water Now

#### Real-time streamflow

Where is the USGS collecting and transmitting real-time streamflow data right now? How does flow today compare with historical streamflow? How can I see these sites on a map and get to the data? ([Fact Sheet](#))



#### Real-time flood data

Where in the Nation are floods or very high flows occurring now? How can I see these sites on a map and get to the data?



#### Real-time drought data

Where in the Nation are droughts or very low flows occurring now? How can I see these sites on a map and get to the data?



#### Real-time ground-water levels

Where is the USGS collecting and transmitting real-time ground-water levels right now? How do levels today compare



### Water Then

#### Annual water data reports

Can I see all of the locations where the USGS has published water resources data for a particular year? How can I see these sites on a map and get to the data? You can retrieve data using a [map](#) or a [search form](#).



#### Instantaneous streamflow data

I want to find long-term streamflow data reported in short time intervals (such as 15 minutes or 1 hour) rather than as daily averages. Where can I see a list of those sites and get to the data?



#### National Water Quality Assessment

The NAWQA program provides a search to physical, chemical, sediment, and biological data that have been collected as part of the national program, including some aquatic ecological data that can not be stored in NWIS. ([Fact Sheet](#))

