



# Modernization of the USGS Annual Water Data Report

An Innovative Publication of Water Resources  
Data to Meet Needs of Historical Data  
Documentation

Brian Reece – Information Management Specialist  
USGS Austin TX



# Annual Water Data Report Publishing 1962 - 2005



318

COLORADO RIVER BASIN

## COLORADO RIVER BASIN

08162000 Colorado River at Wharton, TX

LOCATION.--Lat 29°18'32", long 96°06'13", Wharton County, Hydrologic Unit 12090302, near left bank at downstream side of downstream bridge on U.S. Highway 59 in Wharton, 1,100 ft downstream from Texas and New Orleans Railroad Co. bridge, 12 mi upstream from Jones Creek, and at mile 66.6.

DRAINAGE AREA.--42,003 mi<sup>2</sup>, approximately, of which 11,403 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--July 1916 to Aug. 1918 (intermittent periods), Mar. 1919 to Sept. 1925 and July and Aug. 1938 (flood discharge measurements only), Oct. 1938 to current year. June to Nov. 1901, May to Sept. 1902, daily records published in U.S. Department of Agriculture, Office of Experiment Stations, Bulletin Nos. 119 and 133. Gage-height records collected in this vicinity since 1935 are contained in reports of the National Weather Service.

Water-quality records.--Chemical data: Apr. 1944 to Sept. 1995. Biochemical data: Jan. 1968 to Sept. 1995. Radiochemical data: Dec. 1973 to Sept. 1995. Pesticide data: Oct. 1967 to June 1982. Sediment data: Oct. 1974 to Sept. 1995.

REVISED RECORDS.--WSP 878: 1938 (M). WDR TX-81-3: Drainage area. WDR TX-88-3: 1985.

GAGE.--Water-stage recorder. Datum of gage is 52.42 ft above NGVD of 1929. Prior to Oct. 1, 1938, various types of recording and nonrecording gages 800 ft upstream at different datum. Oct. 1, 1938, to June 1, 1956, nonrecording gage 100 ft upstream at datum 13.00 ft higher. June 1, 1966, to Sept. 30, 1975, water-stage recorder at present site at datum 13.00 ft higher. Oct. 1, 1975, to Mar. 1, 1983, water-stage recorder at present site at datum 10.00 ft higher. Satellite telemeter at station.

REMARKS.--Records good. Since installation of gage in Oct. 1938, at least 10% of contributing drainage area has been regulated. There are many diversions above station for irrigation, municipal supply, cooling water for thermal-electric power plant, a oil field operations.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, 51.9 ft Dec. 8, 1913, present datum, from information by local residents; below Wharton floodwater combined with that of the Brazos River. Flood of about July 12, 1869, reached about same height. Flood of June 20, 1935, reached a stage of 51.2 ft, present datum, furnished by National Weather Service (discharge, 159,000 ft<sup>3</sup>/s), from rating curve defined by current-meter measurements below 145,000 ft<sup>3</sup>/s. Flood of July 30, 1938, reached a stage of 50.4 ft, present datum, observed by U.S. Geological Survey personnel (discharge, 145,000 ft<sup>3</sup>/s).

MIN	236	220	253	224	268	328	566	825	838
(WY)	1957	1957	1990	1964	1967	1952	1951	1962	1948

WATER YEAR

# Annual Water Data Report

## The Digital Disconnect

[News](#) - updated March 17, 2010

PERIOD OF RECORD.--July 1916 to Aug. 1918 (intermittent periods), Mar. 1919 to Sept. 1925 and July and Aug. 1938 (flood discharge measurements only), Oct. 1938 to current year. June to Nov. 1901, May to Sept. 1902, daily records published in U.S. Department of Agriculture, Office of Experiment Stations, Bulletin Nos. 119 and 133. Gage-height records collected in this vicinity since 1935 are contained in reports of the National Weather Service.

Water-quality records.--Chemical data: Apr. 1944 to Sept. 1995. Biochemical data: Jan. 1968 to Sept. 1995.

Radiochemical data: Dec. 1973 to Sept. 1995. Pesticide data: Oct. 1967 to June 1982. Sediment data: Oct. 1974 to Sept. 1995.

Contributing drainage area: 50,000 square miles,  
Datum of gage: 52.42 feet above sea level NGVD29.

### AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
<a href="#">Real-time</a>	-- Previous 120 days --		
<a href="#">Daily Data</a>			
<a href="#">Field/Lab water-quality samples</a>	1967-10-01	2001-04-04	452
Additional Data Sources			
Additional Data Sources	Begin Date	End Date	Count
<a href="#">Instantaneous-Data Archive</a> **offsite**	1988-06-01	2007-09-30	454463
<a href="#">Annual Water-Data Report (pdf)</a> **offsite**	2005	2009	5

### OPERATION:

Record for this site is maintained by the USGS Texas Water Science Center

Email questions about this site to [Texas Water Science Center Water-Data Inquiries](#)

## Why Replace the Existing Report?

- **\$\$\$, time, and technology**
- Replaces product produced from 1961-2005  
Last guidance published in 1985
- Diverging formats no longer met minimum consistent content nationwide
- Distribution: html, pdf, CD, DVD, internet
- Disconnected from National Water Information System (NWIS) database
- Stations are not easily mapped
- Difficult to access from one national source

## Annual Water Data Report

# The New Annual Report

- **Succeeds all previous versions**
- **Single source for annual water data**
- **National guidelines and administration**
- **Consistent format and NWIS-based content**
- **Provides spatial and text interfaces**
- **Familiar format**
- **Distributes Site Data Sheets versus volumes**

## Annual Water Data Report

# What is a Site Data Sheet

- **Site-based yearly snapshot and archive**
- **Daily continuous data and extremes**
- **Discrete measurements**
- **Water-quality concentrations**
- **Sediment concentrations and loads**
- **Ecological data**
- **Focus is basic data, not interpretive reports or collateral data**



Water-Data Report CO-2005

**091G3500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE**

COLORADO RIVER HEADWATERS-PLATEAU BASIN

LOCATION--Lat 39°07'58", long 108°01'35" referenced to North American Datum of 1927, in SE ¼ NW ¼ sec 5 Hydrologic Unit 14010005, on right bank 0.5 mi downstream from McDonald Creek, 1.7 mi upstream from G south-west of Mack.

DRAINAGE AREA--17,843 mi<sup>2</sup>.

**WATER-DISCHARGE RECORDS**

PERIOD OF RECORD--May 1951 to current year.

REVISED RECORDS--WRD Colo. 1974; Drainage area.

GAGE--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 4,325 ft above May 9, 1951 to Oct. 11, 1979, water-stage recorder at site 5.7 mi upstream at different datum. Oct. 12, 1979 site 0.2 mi downstream at same datum.

REMARKS--Records good except for estimated daily discharges, which are poor. Natural flow of stream affects reservoirs, power development, and diversions for irrigation. (Records include all return flow from irrigated

Water-Data Re

**091G3500 COLORADO RIVER NEAR COLO**

**DISCHARGE, CUBIC  
WATER YEAR OCTOBER 20  
DAILY MEAN  
[a. estin]**

Day	Oct	Nov	Dec	Jan	Feb	Mar
1	4,420	3,830	2,660	2,960	2,890	3,170
2	5,000	3,670	e2,310	2,790	2,850	3,140
3	4,740	3,540	e2,220	2,690	2,670	3,000
4	4,860	3,430	e2,220	2,600	2,650	3,140
5	4,860	3,590	e2,750	2,710	2,680	3,140
6	e4,900	3,920	2,880	2,740	2,740	3,140
7	e4,700	3,500	3,030	2,710	2,760	3,140
8	e4,300	3,410	3,050	2,610	2,810	3,200
9	e3,900	3,440	2,850	2,690	2,820	3,200
10	e3,800	3,430	2,900	3,240	2,890	3,200
11	e3,700	3,430	2,970	4,400	2,960	3,300
12	e3,600	3,380	2,900	5,830	3,100	3,200
13	e3,500	3,470	2,810	4,300	3,210	3,100
14	e3,470	3,590	2,800	3,330	e3,200	3,300
15	3,570	3,560	2,780	3,010	e3,180	3,300
16	3,550	3,490	2,740	2,960	e3,180	3,200
17	3,470	3,440	2,730	3,000	e3,140	3,600
18	3,660	3,380	2,650	3,070	e3,190	3,900
19	3,670	3,220	2,460	3,070	e3,210	3,900
20	3,590	3,160	2,470	2,940	e3,230	3,900
21	3,460	3,140	2,390	3,030	e3,290	4,000
22	3,460	3,260	2,490	3,000	e3,280	3,900
23	3,510	3,240	2,370	2,970	e3,250	3,700
24	3,540	3,160	e1,970	2,960	e3,280	3,800
25	3,580	3,100	e1,880	2,930	e3,280	4,100
26	3,650	3,130	2,030	2,890	3,230	4,100
27	3,650	3,280	2,380	2,950	3,210	4,000
28	3,540	3,290	2,580	3,150	3,230	3,900
29	4,340	3,270	2,750	3,140	---	3,900
30	4,100	3,070	3,800	3,020	---	4,100
31	3,820	---	3,480	2,940	---	4,300
<b>Total</b>	121,910	101,820	82,300	96,630	85,410	111,110
<b>Mean</b>	3,933	3,394	2,655	3,117	3,050	3,580
<b>Max</b>	5,000	3,920	3,800	5,830	3,290	4,300
<b>Min</b>	3,460	3,070	1,880	2,600	2,650	3,000
<b>Ac-ft</b>	241,800	202,000	163,200	191,700	169,400	220,400

**STATISTICS OF MONTHLY MEAN DATA FOR WA**

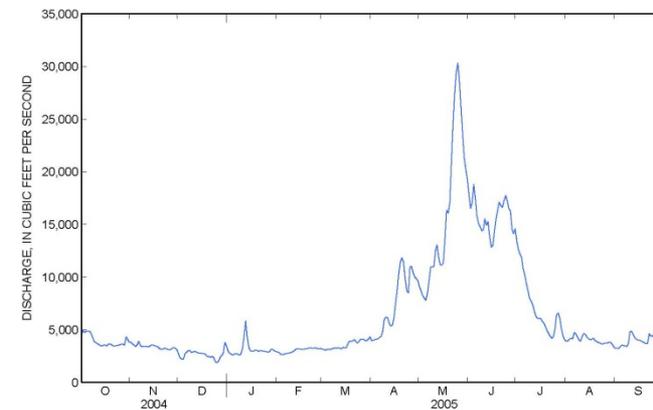
	Oct	Nov	Dec	Jan	Feb	Mar
<b>Mean</b>	3,972	3,969	3,531	3,321	3,376	3,800
<b>Max</b>	7,672	6,925	5,993	6,129	5,996	7,400
<b>(WY)</b>	(1987)	(1987)	(1986)	(1985)	(1985)	(1988)
<b>Min</b>	1,916	2,363	1,980	1,871	1,815	1,984
<b>(WY)</b>	(1957)	(1978)	(2003)	(1964)	(1964)	(1964)

Water-Data Report CO-2005  
091G3500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE--Continued

**SUMMARY STATISTICS**

	Calendar Year 2004		Water Year 2005		Water Years 1951 - 2005	
<b>Annual total</b>	1,273,080		2,268,290		6,111	
<b>Annual mean</b>	3,478		6,214		13,470	
<b>Highest annual mean</b>					2,417	
<b>Lowest annual mean</b>					68,300	
<b>Highest daily mean</b>	9,230	May 12	30,300	May 25	68,300	May 27, 1984
<b>Lowest daily mean</b>	1,370	Jan 7	1,880	Dec 25	960	Sep 7, 1956
<b>Annual seven-day minimum</b>	1,910	Feb 9	2,220	Dec 21	1,110	Sep 2, 1956
<b>Maximum peak flow</b>			31,000		69,800	
<b>Maximum peak stage</b>			11.76		16.12	
<b>Annual runoff (ac-ft)</b>	2,525,000		4,499,000		4,427,000	
<b>10 percent exceeds</b>	5,430		14,600		13,100	
<b>50 percent exceeds</b>	3,140		3,920		3,890	
<b>90 percent exceeds</b>	2,110		2,820		2,240	

<sup>a</sup> Estimated.  
<sup>b</sup> At site 0.2 mi downstream, at present datum.  
<sup>c</sup> From crest-stage gage.  
<sup>d</sup> From high-water mark.



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



# Annual Water Data Report

## Immediate Benefits

- Saves an average of 2-3 weeks per year per USGS office for production of ADR
- No printing costs, saving an average of several \$1,000 per year per USGS Office
- Requires no specialized publications staff
- Utilizes common word processing software (Microsoft Word)
- Nationwide Site Information Management System

# Annual Water Data Report

## Ongoing Benefits

- **Single source for data across the USA**
- **Basic data have consistent format across states and hydrologic boundaries**
- **Automated process integrates NWIS and improves quality**
- **Publish sites when ready, not when entire volume is ready**
- **Compilation reports can be tailored to geography, customers, and themes**

# Annual Water Data Report

## Useful websites

- <http://wdr.water.usgs.gov/> (Annual Water Data Report home page for tabular and map searches)
- <http://pubs.usgs.gov/> (USGS publications warehouse to search for and download many historic USGS reports)
- <http://tx.usgs.gov/> (USGS Texas home page)

Contact:

Brian Reece (bdreece@usgs.gov)