Water-Data Report 2011

11427000 North Fork American River at North Fork Dam, CA

Sacramento River Basin

LOCATION.--Lat 38°56′10″, long 121°01′22″ referenced to North American Datum of 1927, in SW ¼ NW ¼ sec.31, T.13 N., R.9 E., Placer County, CA, Hydrologic Unit 18020128, on left bank, 50 ft upstream from crest of North Fork Dam, 2 mi upstream from Middle Fork American River, and 4 mi northeast of Auburn.

DRAINAGE AREA.--342 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1941 to current year.
CHEMICAL DATA: Water years 1977-80.
WATER TEMPERATURE: Water years 1960-83.
SEDIMENT DATA: Water year 1980 (periodic record).

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder and ogee section of concrete debris dam. Datum of gage is 715.00 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except for estimated daily discharges, which are fair. Estimated data during the periods of Oct. 5-7, 15-23, and Oct. 25 to Nov. 5, were due to the opening of the gate valve in the dam by the Army Corps of Engineers. The purpose of this procedure was to lower the lake level enough to temporarily inhibit spill over the crest of the dam in order to perform a safety inspection of the plunge pool below the dam. This resulted in a loss of the stage-discharge relationship at the gage. Minor regulation by Lake Clementine, usable capacity, 12,800 acre-ft, formed by North Fork Dam. Storage in Big Reservoir and Lake Valley Reservoir (station 11426170), combined capacity, 10,300 acre-ft, upstream from station. Lake Valley Canal (station 11426190) diverts from North Fork of North Fork American River into Bear River Basin for power development in powerplants of Pacific Gas and Electric Co. Combined storage and diversion have small effect on natural flow. See schematic diagrams of Bear River Basin and lower Sacramento River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,400 ft^3/s, Dec. 23, 1964, gage height, 11.87 ft, from rating curve extended above 24,000 ft^3/s, on basis of computed flow over crest of dam at gage height 10.22 ft; no flow Aug. 27-30, Sept. 2-11, 1944, Oct. 5, 6, 1963, Nov. 7-10, 1965, caused by operation of valve in North Fork Dam.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,300 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 24	2300	10,300	5.01
Dec 15	0030	5,470	3.89
Dec 19	1845	*16,000	*6.04
Dec 29	0930	6,900	4.26
Mar 16	0445	15,000	5.87
Mar 24	2045	6,280	4.10
Apr 21	1315	5,290	3.84

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	46	e190	371	1,840	757	930	3,630	2,030	1,530	1,940	302	105
2	46	e190	361	1,690	691	1,070	4,120	2,100	1,480	1,850	283	103
3	46	e190	652	1,540	655	2,130	4,160	2,400	1,360	1,830	261	100
4	48	e90	821	1,360	628	1,880	3,380	2,630	1,330	1,740	241	99
5	e51	e115	784	1,220	623	1,560	3,330	2,870	1,750	1,660	228	97
6	e37	197	2,320	1,110	653	1,920	3,270	3,400	3,370	1,580	219	95
7	e65	297	1,910	1,040	709	2,950	3,090	3,470	e3,170	1,540	210	106
8	71	953	1,220	974	699	2,400	2,620	3,360	e2,670	1,370	200	106
9	68	513	1,510	909	645	2,020	2,260	2,640	2,860	1,220	191	97
10	64	412	2,590	842	603	1,890	1,990	2,130	3,000	1,080	185	93
11	54	409	2,480	799	576	1,950	1,880	2,260	3,130	923	180	92
12	52	340	1,710	773	557	1,850	1,930	2,520	2,950	841	175	93
13	51	307	1,390	774	548	1,750	1,960	2,770	2,900	782	171	95
14	50	292	2,320	941	549	3,640	1,770	3,010	3,160	725	165	95
15	e46	351	3,550	928	725	5,100	1,630	2,640	3,390	683	159	111
16	e35	373	2,020	996	1,460	12,200	1,620	2,020	3,200	636	155	95
17	e35	306	1,630	1,210	1,340	6,230	2,070	1,820	2,990	599	149	91
18	e35	263	8,990	1,180	1,530	4,240	3,510	2,140	2,760	572	145	89
19	e35	247	13,300	1,040	1,690	3,860	3,860	1,810	2,810	556	142	91
20	e35	376	7,300	945	1,410	4,720	3,630	1,840	2,780	535	139	101
21	e35	614	3,840	879	1,160	3,870	4,230	2,120	2,940	499	137	100
22	e61	593	2,890	885	990	3,460	3,630	2,390	3,230	469	135	103
23	e75	1,310	2,430	905	901	3,190	2,770	2,270	3,190	443	132	102
24	2,240	851	2,020	842	865	4,640	2,660	2,170	2,800	432	127	96
25	3,640	504	1,770	804	1,610	4,710	3,030	2,340	2,340	421	122	96
26	e778	414	2,030	786	1,600	4,860	2,640	1,960	2,090	398	118	97
27	e391	442	1,940	767	1,210	4,130	2,400	1,790	1,980	369	115	97
28	e255	581	1,770	753	1,030	3,190	2,410	1,610	2,140	338	114	95
29	e213	468	5,260	738	---	2,830	2,450	1,550	3,060	325	113	81
30	e193	402	3,070	949	---	2,660	2,150	1,430	2,260	318	110	74
31	e190	---	2,180	857	---	3,180	---	1,440	---	312	108	---
Total	9,041	12,590	86,429	31,276	26,414	105,010	84,080	70,930	78,620	26,986	5,231	2,895
Mean	292	420	2,788	1,009	943	3,387	2,803	2,288	2,621	871	169	96.5
Max	3,640	1,310	13,300	1,840	1,690	12,200	4,230	3,470	3,390	1,940	302	111
Min	35	90	361	738	548	930	1,620	1,430	1,330	312	108	74
Ac-ft	17,930	24,970	171,400	62,040	52,390	208,300	166,800	140,700	155,900	53,530	10,380	5,740

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	101	335	897	1,292	1,411	1,536	1,608	1,648	802	197	67.5	50.6
Max	1,749	3,307	5,781	7,303	8,403	5,187	4,656	3,688	2,855	928	214	121
(WY)	(1963)	(1951)	(1965)	(1997)	(1986)	(1995)	(2006)	(1952)	(1983)	(1983)	(1983)	(1982)
Min	18.3	35.6	33.9	44.6	70.5	114	207	273	71.7	25.8	13.4	14.9
(WY)	(1978)	(1960)	(1977)	(1991)	(1991)	(1977)	(1977)	(1992)	(1992)	(1977)	(1977)	(1977)

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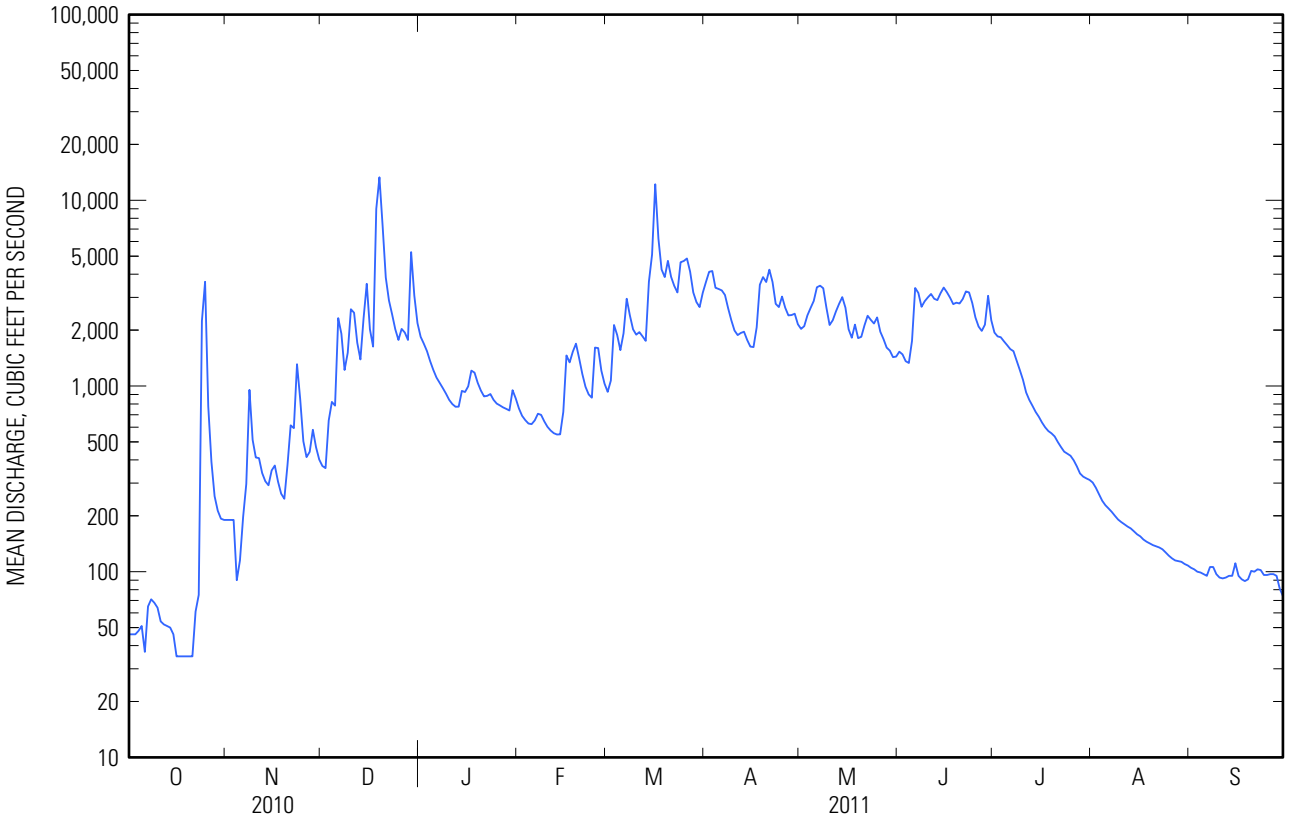
SUMMARY STATISTICS

[e, estimated]

	Calendar Year 2010		Water Year 2011		Water Years 1942 - 2011	
Annual total	350,858		539,502			
Annual mean	961		1,478		826	
Highest annual mean					1,843	1982
Lowest annual mean					88.5	1977
Highest daily mean	13,300	Dec 19	13,300	Dec 19	50,100	Jan 2, 1997
Lowest daily mean	e35	Oct 16	e35	Oct 16	0.00	Aug 27, 1944
Annual seven-day minimum	37	Oct 15	37	Oct 15	0.00	Sep 2, 1944
Maximum peak flow			16,000	Dec 19	65,400	Dec 23, 1964
Maximum peak stage			6.04	Dec 19	11.87	Dec 23, 1964
Annual runoff (ac-ft)	695,900		1,070,000		598,100	
10 percent exceeds	2,090		3,250		2,060	
50 percent exceeds	657		974		279	
90 percent exceeds	54		95		43