



Water-Data Report 2011

10336674 Ward Creek below Confluence, near Tahoe City, CA

Pyramid and Winnemucca Lakes Basin

LOCATION.--Lat 39°08'27", long 120°12'40" referenced to North American Datum of 1927, in SE ¼ SE ¼ sec.16, T.15 N., R.16 E., Placer County, CA, Hydrologic Unit 16050101, Tahoe National Forest, on left bank, 0.1 mi downstream from confluence with unnamed tributary, 3.2 mi west of William Kent Campground, and 4.8 mi southwest of Tahoe City.

DRAINAGE AREA.--4.96 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1991 to September 2011 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 6,600 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. No storage or diversion upstream from station. See schematic diagram of Truckee River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,220 ft³/s, Jan. 1, 1997, gage height, 8.85 ft, from crest stage gage; no flow for some days in most years.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 24	1915	153	5.05
Dec 10	1315	64	4.53
Apr 18	0400	58	4.48
May 13	2200	97	4.74
May 24	2215	72	4.58
Jun 22	1645	*258	*5.44

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10336674 Ward Creek below Confluence, near Tahoe City, CA—Continued

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

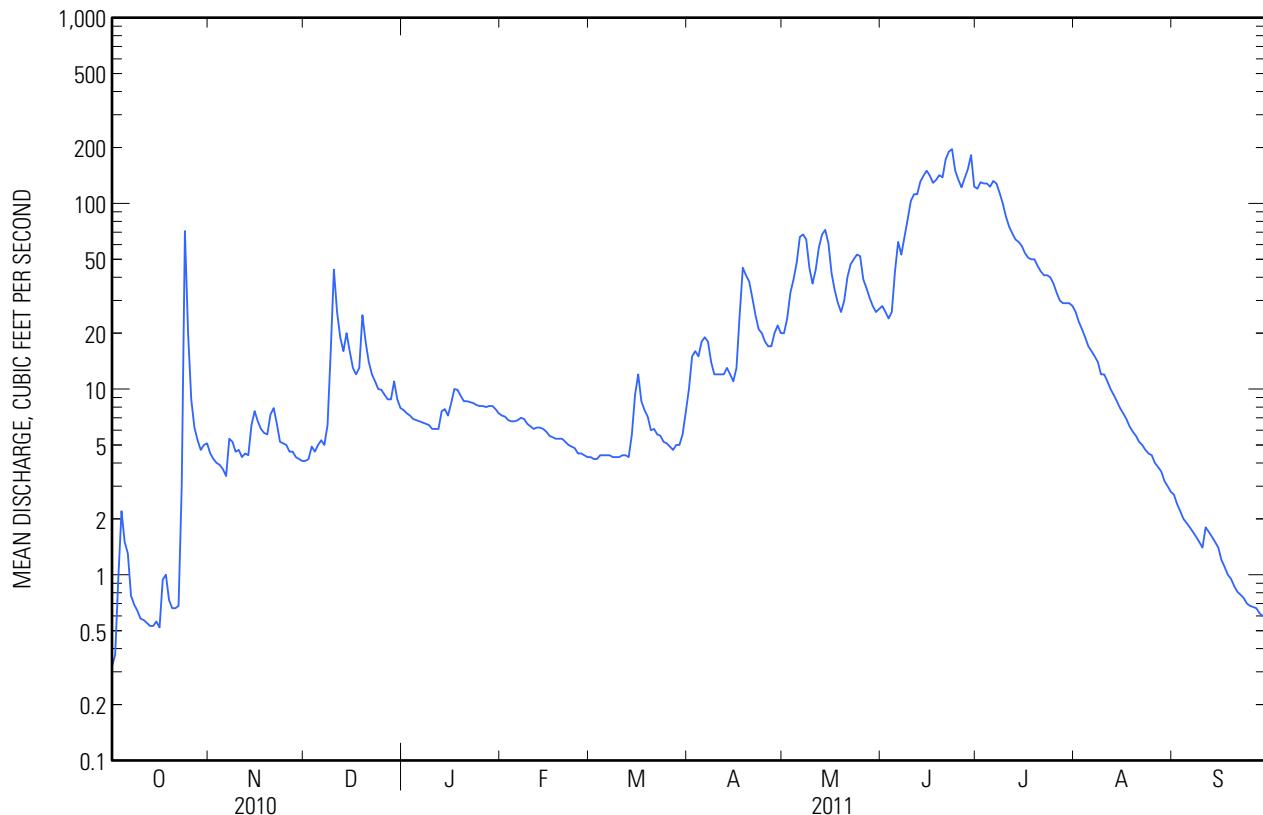
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.32	4.5	4.1	7.7	7.2	e4.3	10	20	28	120	26	2.7
2	0.37	4.2	4.2	7.4	7.1	e4.2	15	24	26	130	23	2.4
3	0.96	4.0	4.9	7.2	6.8	e4.2	16	33	24	128	21	2.2
4	2.2	3.9	4.6	6.9	6.7	4.4	15	39	26	128	19	2.0
5	1.5	3.7	5.0	6.8	6.7	4.4	18	48	43	123	17	1.9
6	1.3	3.4	5.3	6.7	6.8	4.4	19	66	62	132	16	1.8
7	0.77	5.4	5.0	6.6	7.0	4.4	18	68	53	128	15	1.7
8	0.69	5.2	6.4	6.5	6.9	4.3	14	64	66	114	14	1.6
9	0.64	4.6	16	6.4	6.5	4.3	12	45	82	100	12	1.5
10	0.58	4.7	44	6.1	6.3	4.3	12	37	103	85	12	1.4
11	0.57	4.3	26	6.1	6.1	4.4	12	44	112	75	11	1.8
12	0.55	4.5	19	6.1	6.2	4.4	12	58	112	69	10	1.7
13	0.53	4.4	16	7.6	6.2	4.3	13	68	131	64	9.3	1.6
14	0.53	6.4	20	7.8	6.1	5.7	12	72	141	62	8.6	1.5
15	0.56	7.6	16	7.2	5.9	9.3	11	61	150	59	7.9	1.4
16	0.52	6.7	13	8.4	e5.6	12	13	42	141	54	7.4	1.2
17	0.94	6.1	12	10	e5.5	8.6	25	34	129	51	6.9	1.1
18	1.0	5.8	13	9.9	e5.4	7.7	45	29	134	50	6.3	1.0
19	0.73	5.7	25	9.2	e5.4	7.1	41	26	142	50	5.9	0.95
20	0.66	7.3	18	8.6	5.4	e6.0	38	30	138	46	5.6	0.87
21	0.66	e7.9	14	8.6	5.2	6.1	31	40	173	43	5.2	0.81
22	0.68	e6.5	12	8.5	5.0	5.7	25	47	190	41	5.0	0.78
23	3.0	e5.2	11	8.4	4.9	5.6	21	50	196	41	4.7	0.75
24	71	e5.1	10	8.2	4.8	e5.2	20	53	150	40	4.5	0.70
25	20	5.0	9.9	8.1	e4.5	e5.1	18	52	134	37	4.4	0.68
26	8.8	4.6	9.3	8.1	e4.5	e4.9	17	39	122	33	4.0	0.67
27	6.2	4.6	8.8	8.0	e4.4	e4.7	17	35	137	30	3.8	0.66
28	5.3	4.3	8.8	8.1	e4.3	5.0	20	31	153	29	3.6	0.62
29	4.7	4.2	11	8.1	---	5.0	22	28	182	29	3.2	0.60
30	5.0	4.1	8.8	7.8	---	5.7	20	26	123	29	3.0	0.60
31	5.1	---	7.9	7.4	---	7.5	---	27	---	28	2.8	---
Total	146.36	153.9	389.0	238.5	163.4	173.2	582	1,336	3,403	2,148	298.1	39.19
Mean	4.72	5.13	12.5	7.69	5.84	5.59	19.4	43.1	113	69.3	9.62	1.31
Max	71	7.9	44	10	7.2	12	45	72	196	132	26	2.7
Min	0.32	3.4	4.1	6.1	4.3	4.2	10	20	24	28	2.8	0.60
Ac-ft	290	305	772	473	324	344	1,150	2,650	6,750	4,260	591	78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	0.85	1.77	5.64	8.00	6.28	10.5	23.7	60.8	54.4	18.5	2.42	0.54
Max	4.72	9.82	34.7	68.8	32.5	26.9	43.1	93.5	127	88.7	16.0	1.94
(WY)	(2011)	(1997)	(2006)	(1997)	(1996)	(1995)	(1997)	(1996)	(1998)	(1995)	(1995)	(1995)
Min	0.11	0.45	0.64	0.82	0.95	3.96	11.7	20.5	3.67	0.81	0.02	0.01
(WY)	(1993)	(1996)	(2010)	(1992)	(1994)	(2010)	(2010)	(1992)	(1992)	(1994)	(1992)	(1992)

10336674 Ward Creek below Confluence, near Tahoe City, CA—Continued**SUMMARY STATISTICS**

	Calendar Year 2010	Water Year 2011	Water Years 1992 - 2011	
Annual total	5,726.39	9,070.65		
Annual mean	15.7	24.9	16.2	
Highest annual mean			29.0	1995
Lowest annual mean			5.56	1992
Highest daily mean	186	Jun 4	720	Jan 2, 1997
Lowest daily mean	0.32	Oct 1	0.00	Aug 21, 1992
Annual seven-day minimum	0.36	Sep 26	0.00	Sep 9, 1992
Maximum peak flow			1,220	Jan 1, 1997
Maximum peak stage			8.85	Jan 1, 1997
Annual runoff (ac-ft)	11,360	17,990	11,700	
10 percent exceeds	47	68	50	
50 percent exceeds	4.7	7.8	3.5	
90 percent exceeds	0.73	1.4	0.36	



10336674 Ward Creek below Confluence, near Tahoe City, CA—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water year 1993 to September 2011 (discontinued).

REMARKS.--In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Nutrient samples were analyzed by the University of California, Davis, Tahoe Research Group. Quality assurance samples associated with the entire Lake Tahoe Interagency Monitoring Program are listed under station numbers 103366769999 and 103367309999. The original hydrazine method used to determine nitrate plus nitrite concentrations (parameters 00631 and 00630) was found to have interferences caused by calcium and magnesium in stream water samples. The nitrate plus nitrite concentrations under parameters 99911 and 99910 are based on a laboratory method that uses pyrophosphate to remove interferences caused by calcium and magnesium. This method has replaced the original hydrazine method as of December 2008. Parameter code 00623, filtered ammonia plus organic nitrogen (dissolved Kjeldahl nitrogen) was discontinued in April 2011.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 1 of 3

 [N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius;
 µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Medium name	Sample type	Discharge, instantaneous, ft ³ /s (00061)	Temperature, air, °C (00020)	Temperature, water, °C (00010)	Specific conductance, unfiltered, µS/cm at 25 °C (00095)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)
10-04-2010	1310	Surface water	Regular	1.4	11.0	10.0	54	.18
10-24-2010	1220	Surface water	Regular	76	9.0	3.5	26	.13
11-03-2010	1120	Surface water	Regular	4.1	9.0	3.5	41	--
12-06-2010	1335	Surface water	Regular	5.2	1.0	2.0	41	.07
12-10-2010	1155	Surface water	Regular	62	3.5	1.0	30	.11
01-04-2011	1150	Surface water	Regular	7.2	-3.5	1.0	40	--
02-01-2011	1150	Surface water	Regular	7.2	.0	1.0	41	--
03-04-2011	1150	Surface water	Regular	4.6	3.0	1.0	41	<.04
04-04-2011	1310	Surface water	Regular	13	13.0	2.0	43	--
04-18-2011	1255	Surface water	Regular	42	2.0	1.0	38	--
05-04-2011	1700	Surface water	Regular	38	11.0	1.5	37	--
05-14-2011	1125	Surface water	Regular	71	10.0	2.0	35	--
05-24-2011	1120	Surface water	Regular	47	8.0	2.0	37	--
05-31-2011	1315	Surface water	Regular	26	7.0	4.0	37	--
06-06-2011	1250	Surface water	Regular	64	4.5	2.5	33	--
06-13-2011	1720	Surface water	Regular	180	14.0	1.5	27	--
06-15-2011	1755	Surface water	Regular	180	15.0	2.0	28	--
06-17-2011	1240	Surface water	Regular	104	16.0	3.0	30	--
06-22-2011	1600	Surface water	Regular	249	20.5	3.0	26	--
06-23-2011	1000	Surface water	Regular	169	16.5	3.0	27	--
06-29-2011	1245	Surface water	Regular	173	12.0	8.0	25	--
07-06-2011	1615	Surface water	Regular	151	19.5	5.5	21	--
07-15-2011	1245	Surface water	Regular	55	16.0	7.0	27	--
07-22-2011	1500	Surface water	Regular	43	20.5	9.5	28	--
08-10-2011	1520	Surface water	Regular	11	22.0	12.0	32	--
08-10-2011	1525	QC sample - Surface water	Replicate	--	--	--	32	--
09-06-2011	1340	Surface water	Regular	1.7	23.0	11.5	41	--

10336674 Ward Creek below Confluence, near Tahoe City, CA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 2 of 3

[N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius;
 µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Ammonia				Nitrate		Orthophosphate		Phosphorus		Suspended sediment, sieve diameter, percent smaller than 0.0625 mm		Suspended sediment concentration, mg/L (80154)
		plus organic nitrogen, water, unfiltered,	Ammonia, water, filtered,	mg/L as N (00625)	mg/L as N (00608)	plus nitrite, water, filtered,	mg/L as N (99911)	Orthophosphate, water, filtered,	mg/L as P (00671)	Phosphorus, water, filtered,	mg/L as P (00666)	Phosphorus, water, unfiltered,	mg/L as P (00665)	
10-04-2010	1310	.26	<.003	.068	.007	.013	.056	--	--	--	--	--	--	18
10-24-2010	1220	1.6	.009	.197	.014	.020	1.97	90	90	1,290	1,290	1,290	1,290	
11-03-2010	1120	.11	.004	.012	.004	.009	.019	--	--	<.5	<.5	<.5	<.5	
12-06-2010	1335	.06	.004	.008	.004	.010	.012	--	--	<.5	<.5	<.5	<.5	
12-10-2010	1155	.17	.005	.039	.005	.011	.091	--	--	86	86	86	86	
01-04-2011	1150	.05	.003	.006	.004	.010	.013	--	--	<.5	<.5	<.5	<.5	
02-01-2011	1150	.05	.006	.004	.002	.012	.014	--	--	<.5	<.5	<.5	<.5	
03-04-2011	1150	.06	.004	.008	.003	.009	.010	--	--	2	2	2	2	
04-04-2011	1310	.06	.006	.020	.003	.007	.009	--	--	2	2	2	2	
04-18-2011	1255	.05	.005	.038	.003	.007	.016	--	--	10	10	10	10	
05-04-2011	1700	<.04	.004	.022	.002	.012	.017	--	--	6	6	6	6	
05-14-2011	1125	.07	.008	.025	.004	.017	.026	--	--	12	12	12	12	
05-24-2011	1120	<.04	.004	.015	.005	.012	.013	--	--	3	3	3	3	
05-31-2011	1315	.05	.004	.008	.003	.010	.012	--	--	2	2	2	2	
06-06-2011	1250	.08	.003	.015	.005	.004	.009	--	--	8	8	8	8	
06-13-2011	1720	.33	.004	.019	.011	.014	.168	47	47	174	174	174	174	
06-15-2011	1755	.20	.004	.018	.009	.024	.139	41	41	126	126	126	126	
06-17-2011	1240	<.04	<.003	.018	.008	.033	.037	--	--	18	18	18	18	
06-22-2011	1600	.32	.004	.014	.011	.013	.152	44	44	170	170	170	170	
06-23-2011	1000	.25	.011	.018	.011	.011	.024	--	--	20	20	20	20	
06-29-2011	1245	.10	.004	.015	.002	.010	.037	--	--	22	22	22	22	
07-06-2011	1615	.22	.004	.012	.006	.013	.073	51	51	44	44	44	44	
07-15-2011	1245	.08	.004	.005	.004	.010	.016	--	--	4	4	4	4	
07-22-2011	1500	.07	.004	.003	.004	.015	.020	--	--	3	3	3	3	
08-10-2011	1520	.10	.003	.003	.008	.013	.016	--	--	1	1	1	1	
08-10-2011	1525	.06	<.003	.003	.005	.012	.014	--	--	--	--	--	--	
09-06-2011	1340	.04	.005	.004	.006	.013	.013	--	--	1	1	1	1	

10336674 Ward Creek below Confluence, near Tahoe City, CA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 3 of 3

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 mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius;
 µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Suspended sediment discharge, tons per day (80155)
10-04-2010	1310	.07
10-24-2010	1220	265
11-03-2010	1120	<.01
12-06-2010	1335	<.01
12-10-2010	1155	14
01-04-2011	1150	<.01
02-01-2011	1150	<.01
03-04-2011	1150	.02
04-04-2011	1310	.07
04-18-2011	1255	1.1
05-04-2011	1700	.62
05-14-2011	1125	2.3
05-24-2011	1120	.38
05-31-2011	1315	.14
06-06-2011	1250	1.4
06-13-2011	1720	85
06-15-2011	1755	61
06-17-2011	1240	5.1
06-22-2011	1600	114
06-23-2011	1000	9.1
06-29-2011	1245	10
07-06-2011	1615	18
07-15-2011	1245	.59
07-22-2011	1500	.35
08-10-2011	1520	.03
08-10-2011	1525	--
09-06-2011	1340	<.01