Water-Data Report 2013

09474000 GILA RIVER AT KELVIN, AZ

Middle Gila Basin
Middle Gila Subbasin

LOCATION.--Lat 33°06′10″, long 110°58′33″ referenced to North American Datum of 1927, in NE ¼ NW ¼ sec.12, T.4 S., R.13 E., Pinal County, AZ, Hydrologic Unit 15050100, on left bank at Kelvin, 500 ft downstream from Mineral Creek, 18 mi downstream from San Pedro River, and 19 mi upstream from Ashurst-Hayden Dam.

DRAINAGE AREA.--18,011 mi^2, 12,866 mi^2 being above Coolidge Dam, and 5,125 mi^2 below Coolidge Dam (696 mi^2 of this area are in Mexico)

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Jan. 1911 to current year.

REVISED RECORDS.--WSP 329: 1911. WSP 609: 1916(M). WSP 629: 1914-17. WSP 1119: 1913, 1915, 1917(M), 1921(M), 1922-23, 1927(M). WSP 1283: Drainage Area.

GAGE.--Water-stage recorder. Datum of gage is 1,745.02 ft above sea level. Prior to June 15, 1914, and Dec. 1, 1914, to Aug. 31, 1915, nonrecording gages at several sites within 2 mi of present site at different datums. Sept. 1, 1915, to Sept. 30, 1963, water-stage recorder at site 900 ft downstream at datum 1.80 ft lower. Jan. 16, 1985, to June 1990, supplementary water-stage recorder at same site and datum.

REMARKS.--Records poor. Large diversions above station for irrigation, of which about 90 percent is above Coolidge Dam. About 82,000 acres irrigated, a considerable portion by pumping from ground water. Flow regulated by San Carlos Reservoir 49 mi upstream since Nov. 15, 1928. (See sta 09469000.) San Pedro River contributes major portion of unregulated inflow.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--(adjusted for storage in San Carlos Reservoir) 102 years, 496 ft^3/s, 359,400 acre-ft/yr; median of yearly mean discharges, 304 ft^3/s, 219,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--1911-28: Maximum discharge, about 132,000 ft^3/s, Jan. 20, 1916, gage height, 19.5 ft, site and datum then in use, from rating curve extended above slope-area measurement at gage height, 16.2 ft for flood of Sept. 28, 1926; minimum, no flow, Feb. 25, 1913.

1929-Current year: Maximum discharge, 100,000 ft^3/s, Oct. 2, 1983, gage height, 33.0 ft from floodmark, from rating curve extended above 12,000 ft^3/s on basis of peak discharge computed by step-backwater method at Hayden Railroad Bridge, 17.8 mi upstream, and by flood-routing; minimum daily, no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 816 ft^3/s, July 18, gage height, 9.93 ft; minimum daily discharge, 0.00 ft^3/s, on many days.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 09474000, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/09474000.2013.pdf

09474000 GILA RIVER AT KELVIN, AZ—Continued

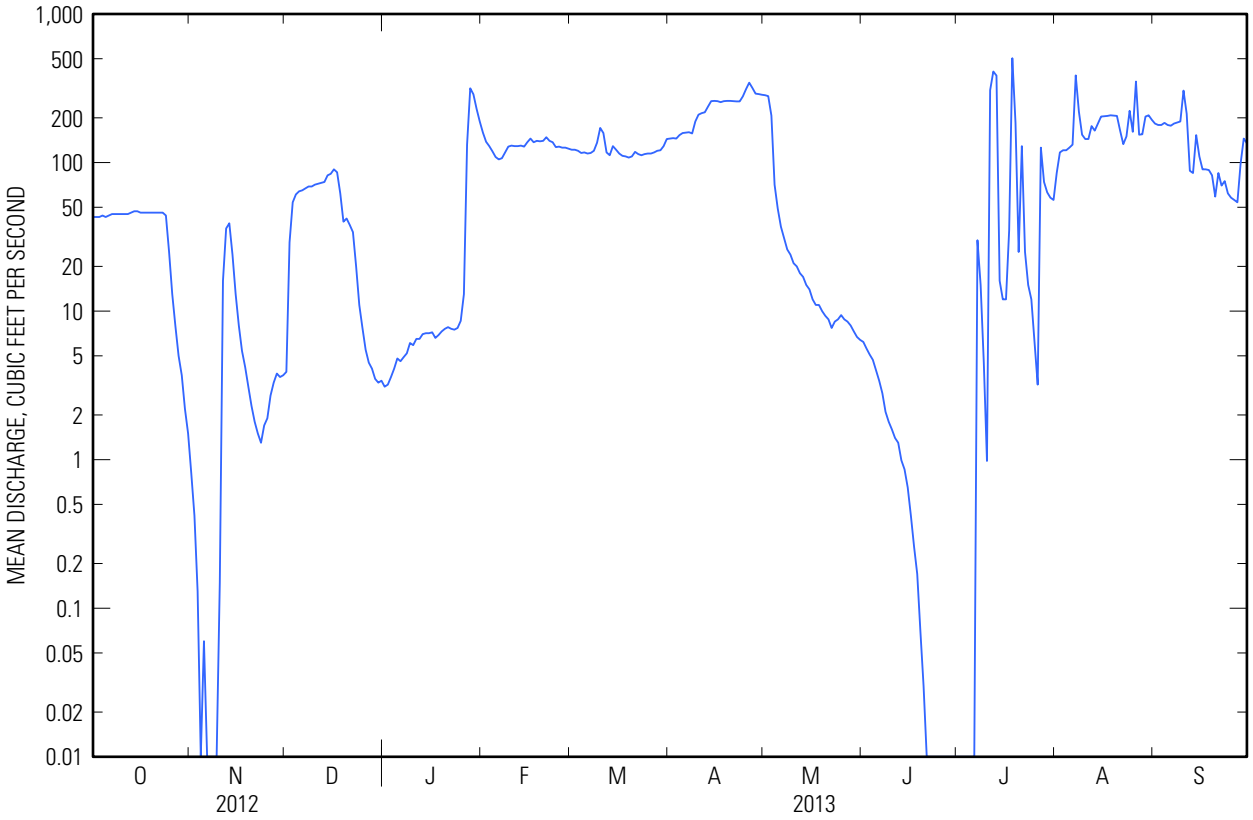
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	43	0.81	3.9	3.1	159	122	145	284	6.2	0.00	85	183
2	43	0.42	29	3.2	138	122	146	280	5.6	0.00	117	179
3	43	0.13	54	3.6	129	120	145	207	5.1	0.00	121	179
4	44	0.00	61	4.1	119	116	153	71	4.7	0.00	121	185
5	43	0.06	64	4.8	109	117	158	49	4.0	0.00	126	179
6	44	0.00	65	4.6	105	115	159	37	3.4	0.00	132	177
7	45	0.00	67	4.9	107	116	160	31	2.8	30	386	183
8	45	0.00	69	5.2	117	120	157	26	2.1	15	220	186
9	45	0.00	69	6.1	128	136	189	24	1.8	4.5	154	189
10	45	0.15	71	5.9	130	171	210	21	1.6	0.98	144	305
11	45	16	72	6.5	129	158	215	20	1.4	307	144	213
12	45	36	73	6.5	129	117	218	18	1.3	410	176	88
13	46	39	74	7.0	130	112	238	17	0.99	385	164	85
14	47	24	82	7.1	128	129	259	15	0.86	16	183	153
15	47	13	84	7.1	137	122	260	14	0.65	12	204	110
16	46	8.0	90	7.2	145	115	259	12	0.42	12	205	90
17	46	5.4	86	6.6	137	111	255	11	0.26	35	206	90
18	46	4.2	62	6.9	140	110	259	11	0.17	504	208	89
19	46	3.1	40	7.3	139	108	260	10	0.07	185	207	82
20	46	2.3	42	7.6	140	110	260	9.3	0.03	25	206	59
21	46	1.8	38	7.8	148	118	259	8.8	0.00	129	164	85
22	46	1.5	34	7.6	140	114	258	7.7	0.00	25	133	70
23	46	1.3	20	7.5	137	112	258	8.5	0.00	15	150	75
24	44	1.7	11	7.7	127	114	279	8.8	0.00	12	223	62
25	25	1.9	7.7	8.6	128	115	312	9.4	0.00	6.2	161	58
26	13	2.7	5.5	13	126	115	345	8.8	0.00	3.2	351	56
27	7.9	3.3	4.5	132	126	117	318	8.5	0.00	126	154	54
28	5.0	3.8	4.1	316	124	120	291	8.0	0.00	74	155	98
29	3.7	3.6	3.5	288	---	121	289	7.3	0.00	63	204	145
30	2.2	3.7	3.3	230	---	129	286	6.7	0.00	58	208	135
31	1.5	---	3.4	189	---	144	---	6.4	---	56	194	---
Total	1,140.3	177.87	1,392.9	1,322.5	3,651	3,766	7,000	1,256.2	43.45	2,508.88	5,606	3,842
Mean	36.8	5.93	44.9	42.7	130	121	233	40.5	1.45	80.9	181	128
Max	47	39	90	316	159	171	345	284	6.2	504	386	305
Min	1.5	0.00	3.3	3.1	105	108	145	6.4	0.00	0.00	85	54
Ac-ft	2,260	353	2,760	2,620	7,240	7,470	13,880	2,490	86	4,980	11,120	7,620

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	257	130	421	613	522	697	538	399	438	666	812	431
Max	4,372	810	12,350	17,080	7,211	5,824	3,930	1,271	1,608	3,459	4,590	1,968
(WY)	(1984)	(1915)	(1915)	(1993)	(1993)	(1993)	(1915)	(1992)	(1992)	(1919)	(1921)	(1926)
Min	0.00	0.00	7.06	9.25	22.1	38.2	9.19	2.47	0.32	1.56	43.1	2.06
(WY)	(2004)	(2008)	(1957)	(1954)	(1957)	(1929)	(1957)	(1957)	(2002)	(2002)	(1956)	(1956)

09474000 GILA RIVER AT KELVIN, AZ—Continued

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1911 - 2013	
Annual total	26,963.76		31,707.10			
Annual mean	73.7		86.9		494	
Highest annual mean					3,281	1993
Lowest annual mean					69.0	2012
Highest daily mean	566	Aug 23	504	Jul 18	105,000	Jan 20, 1916
Lowest daily mean	0.00	Jun 25	0.00	Nov 4	0.00	Jun 29, 1913
Annual seven-day minimum	0.00	Jun 25	0.00	Jun 21	0.00	Jun 29, 1913
Annual runoff (ac-ft)	53,480		62,890		358,200	
10 percent exceeds	154		209		972	
50 percent exceeds	46		56		254	
90 percent exceeds	0.45		1.3		19