

San Francisco Public Utilities Commission Hydrological Conditions Report for August 2017

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Moccasin Reservoir and Compound in the Spring

Current Tuolumne System and Local Bay Area storage conditions are summarized in Table 1.

Table 1 Current Storage As of September 1, 2017							
Reservoir	Current Storage		Maximum Storage		Available Capacity		Percentage of Maximum Storage
	Acre- Feet	Millions of Gallons	Acre-Feet	Millions of Gallons	Acre- Feet	Millions of Gallons	
Tuolumne System							
Hetch Hetchy ¹	353,088		360,360		7,272		98.0%
Cherry ²	48,182		268,810		220,628		18.0%
Lake Eleanor ³	27,016		27,100		84		99.7%
Water Bank	570,000		570,000		0		Full
Tuolumne Storage	998,286		1,226,270		227,984		81.4%
Local Bay Area Storage							
Calaveras ⁴	29,235	9,562	96,824	31,550	67,589	22,024	30.2%
San Antonio	39,160	12,760	50,496	16,454	11,335	3,694	77.6%
Crystal Springs	47,831	15,586	58,377	19,022	10,546	3,436	81.9%
San Andreas	17,675	5,759	18,996	6,190	1,321	431	93.0%
Pilarcitos	2,765	901	2,995	976	230	75	92.3%
Total Local Storage	136,666	44,532	227,688	74,192	91,022	29,659	60.0%
Total System	1,134,952		1,453,958		319,006		78.1%

¹ Maximum Hetch Hetchy Reservoir storage with drum gates activated.

² Maximum Cherry Reservoir storage with flash-boards removed.

³ Maximum Lake Eleanor storage with flash-boards installed.

⁴ Available capacity does not take into account current DSOD storage restrictions.

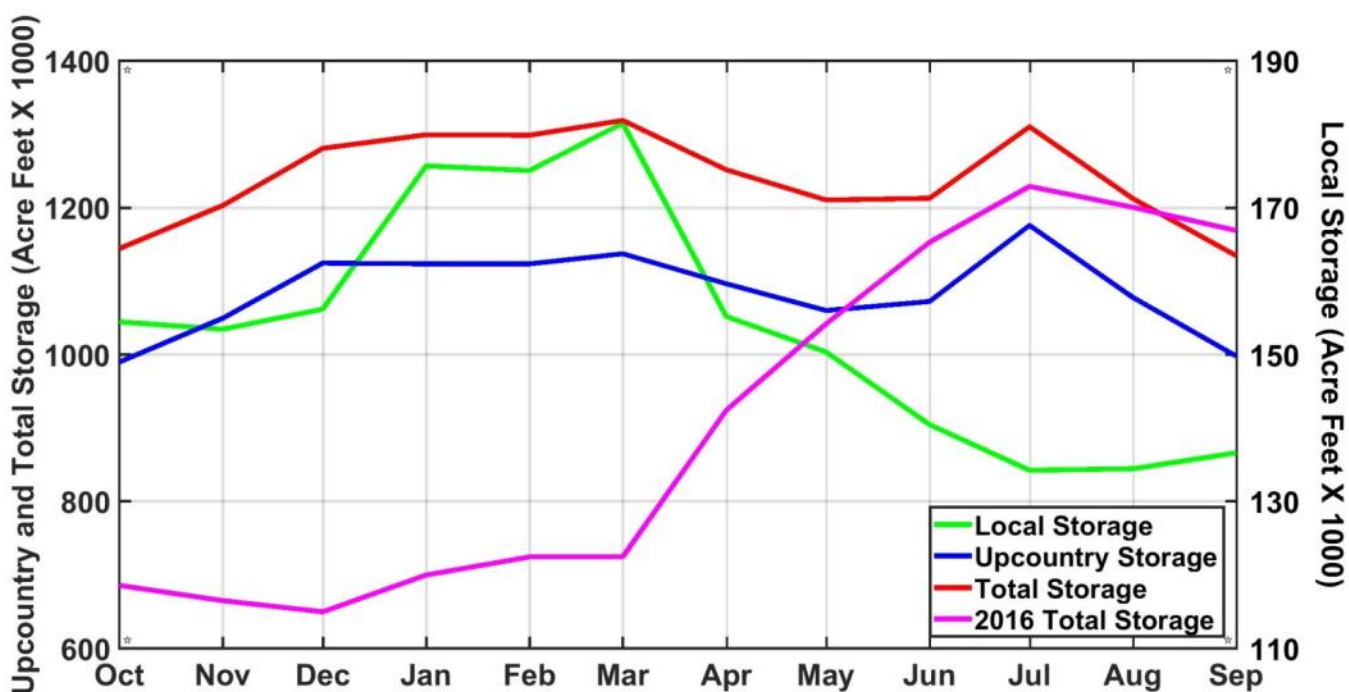


Figure 1: First of month system storage

Hetch Hetchy System Precipitation Index^{5/}

Current Month: The August 2017 six-station precipitation index was 0.0 inches, or 0% of the average index for the month.

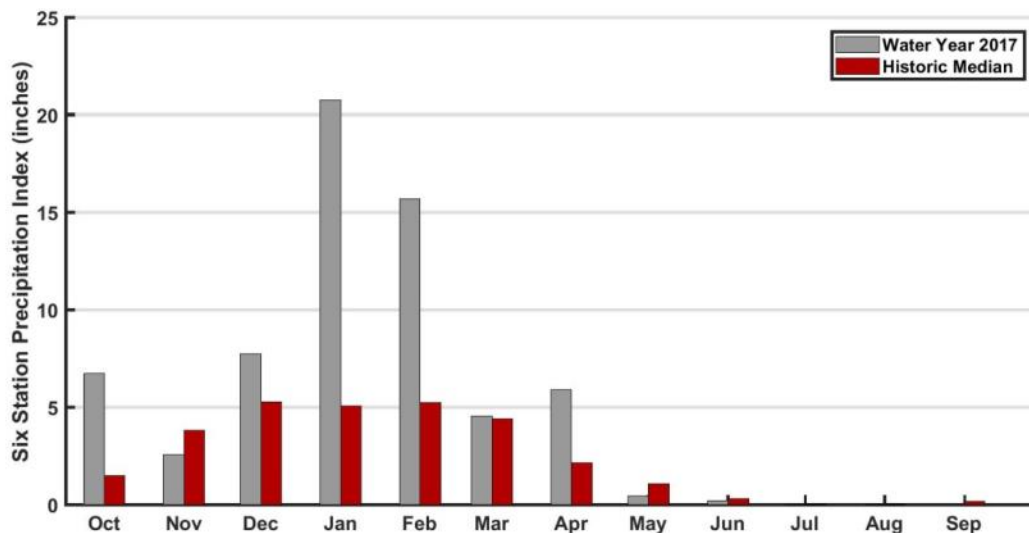


Figure 2: Monthly distribution of the Hetch Hetchy Six-station precipitation index as percent of the annual average precipitation.

Cumulative Precipitation to Date: The accumulated six-station precipitation index for water year 2017 is 64.47 inches, which is 181% of the average annual water year total, or 183% of average annual to date. Hetch Hetchy received 0.0 inches precipitation in July and a total of 62.73 inches for water year 2017. The cumulative Hetch Hetchy precipitation is shown in Figure 3 in red.

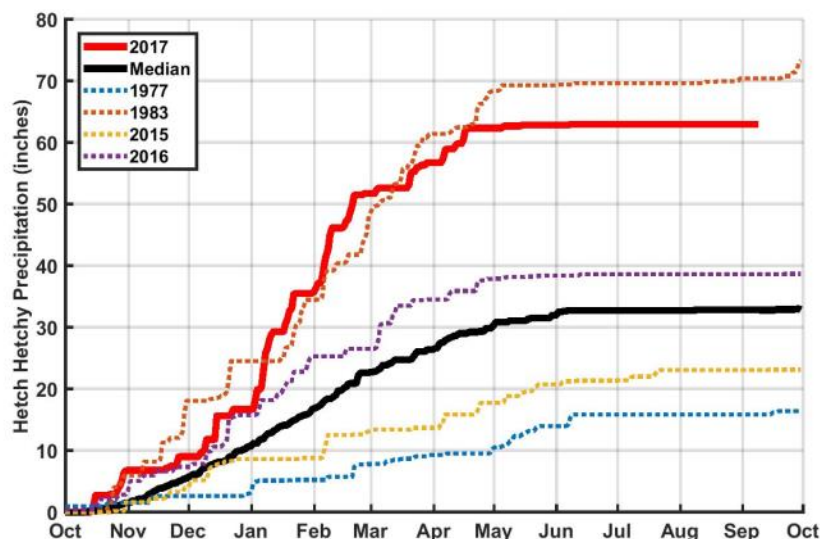


Figure 3: Water year 2017 cumulative precipitation measured at Hetch Hetchy Reservoir through July 31st, 2017. Precipitation at the Hetch Hetchy gauge for wet, dry, median, and WY 2015 and WY 2016 are included for comparison purposes.

^{5/}The precipitation index is computed using six Sierra precipitation stations and is an indicator of the wetness of the basin for the water year to date. The index is computed as the average of the six stations and is expressed in inches and in percent.

Tuolumne Basin Unimpaired Inflow

Unimpaired inflow to SFPUC reservoirs and the Tuolumne River at La Grange as of August 31, 2017 is summarized below in Table 2.

*All flows are in acre feet	August 2017				October 1, 2016 through August 31, 2017			
	Observed Flow	Median ¹	Mean ¹	Percent of Mean	Observed Flow	Median ¹	Mean ¹	Percent of Mean
Inflow to Hetch Hetchy Reservoir	43,868	7,010	13,803	317.8%	1,727,850	705,540	738,002	234.1%
Inflow to Cherry Reservoir and Lake Eleanor	10,746	1,654	3,225	333.2%	1,050,953	445,183	452,050	232.5%
Tuolumne River at La Grange	87,608	15,869	24,562	356.7%	4,819,799	1,679,935	1,819,150	265.0%
Water Available to City	789	0	1,375	57.4%	3,308,929	580,260	765,361	432.3%

¹ Hydrologic Record: 1919 – 2015

Hetch Hetchy System Operations

Power draft and releases from Hetch Hetchy Reservoir during the month of August totaled 50,160 acre-feet to meet instream release requirements and reservoir management goals. Inflows to date are sufficient to keep Hetch Hetchy Reservoir in Year Type A through the month of December 2017. Hetch Hetchy minimum instream release requirements for August were 125 cfs and are 100 cfs in September. As of August 11, spill at Hetch Hetchy had ceased, and releases from the dam were lowered to meet instream releases requirements and water deliveries.

84,645 acre-feet of power draft and valve releases were made from Cherry Reservoir during the month of August to meet instream release requirements and facilitate lowering of Cherry Lake for valve work in the fall. No water was transferred via pumping from Lake Eleanor to Cherry Reservoir in August. The required minimum instream release from Cherry Reservoir is 15 cfs through September 30. Required minimum release from Lake Eleanor is 20 cfs through September 15 and 10 cfs for the remainder of the month.

Regional System Treatment Plant Production

The Harry Tracy Water Treatment Plant average production rate for August was 36 MGD. The Sunol Valley Water Treatment Plant production for the month was 2 MGD. The average supply rate from Hetch Hetchy was 279 MGD.

Local System Water Delivery

The average August delivery rate was 243 MGD which is equal to the July delivery rate of 243 MGD.

Local Precipitation

Dry weather persisted throughout the month. The August rainfall summary is presented in Table 3.

Reservoir	Month Total (inches)	Percentage of Average for the Month	Water Year to Date ¹ (inches)	Percentage of Average for the Year-to-Date ¹
Pilarcitos	0.00	0 %	62.30	161 %
Lower Crystal Springs	0.00	0 %	39.19	147 %
Calaveras	0.00	0 %	25.92	120 %

¹ WY 2017: Oct. 2016 through Sep. 2017.

Snowmelt and Water Supply

The runoff season is at an end, though inflows into Hetch Hetchy Reservoir remain above normal due to continued melting snow and groundwater contributions. The long snowmelt runoff season was driven by the record high elevation snowpack, extending spill conditions at Hetch Hetchy Reservoir into the second week of August. The long snowmelt runoff period has resulted in a high carryover storage condition at Hetch Hetchy Reservoir.

Cherry Lake has been lowered to less than 25 TAF for outlet valve repairs and replacement. The target storage of 10 TAF is expected to be reached in early October. Butterfly valve repair will be completed in mid-November, allowing for lake refilling throughout the winter. The valve repair is expected to be completed in mid-November, allowing for return to normal operations at Cherry Lake.

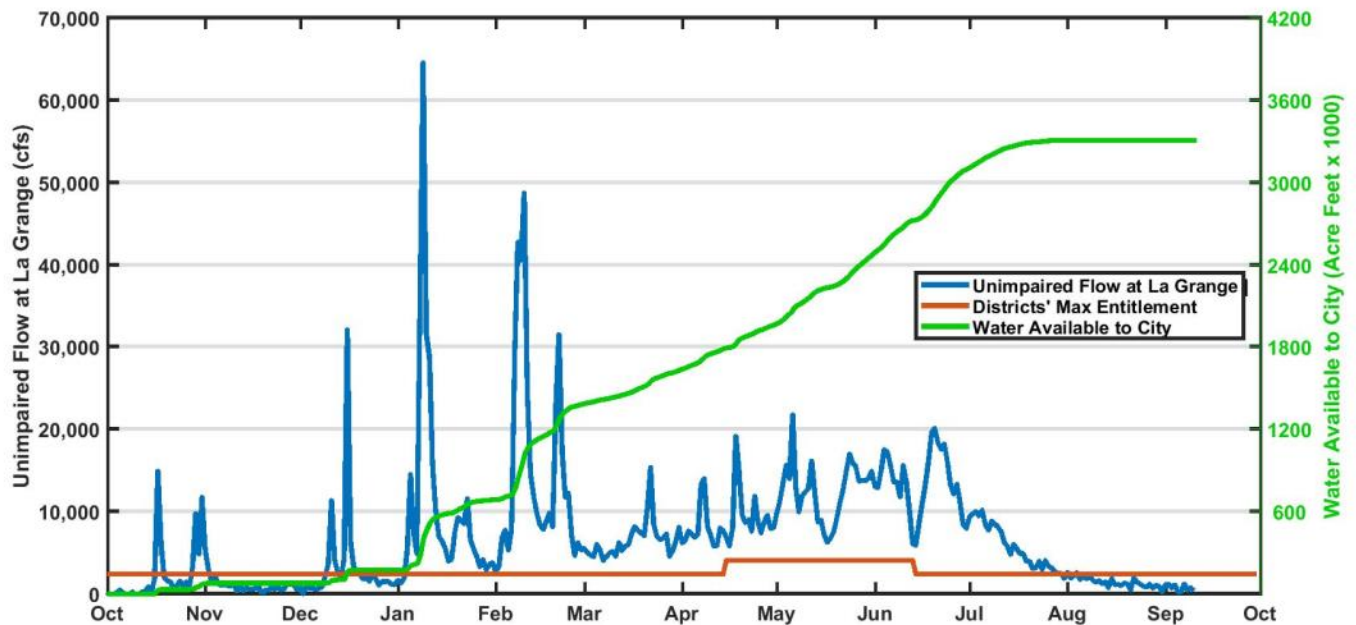


Figure 4: Calculated unimpaired flow at La Grange and the allocation of flows between the Districts and the City. 3,308,140 acre-feet of water has become available to the City during water year 2017.