Socioeconomic Impacts of the Bay Delta Water Quality Control Plan on SFPUC Customers

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Presentation Summary

1) SFPUC Water Supply & Demand
2) SFPUC Socioeconomics Study
3) SFPUC Storage, Carryover & Replenishment

SFPUC Water Supply & Demand

"The 1922-2003 average calculated volume of water potentially available to CCSF under the Raker Act was about **750 TAF/y** [thousand acre-feet per year]"

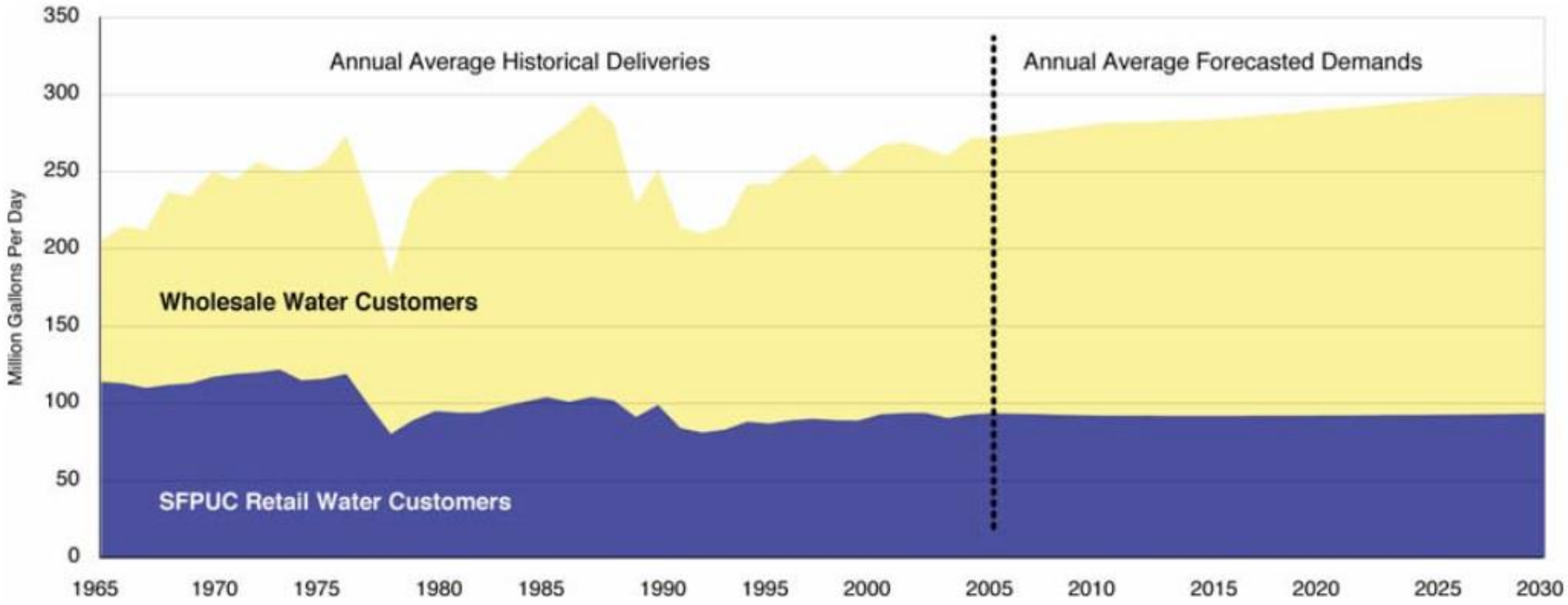
"According to a SFPUC planning document, an average of **244 TAF/y** is diverted from the Tuolumne River… based on data from 1989-2005"

Source: Bay Delta Plan SED

750 TAF/y = 670 mgd
244 TAF/y = 218 mgd

These figures do not include Bay Area water supplies.

Demand Projections from 2007 Suggested Continued Growth in Water Demand



SFPUC Water System Improvement Program ▪ 203287

SOURCE: SFPUC, 2007b

Figure S.3
Annual Average Historical and Projected Future Customer Purchase Requests

Water Use in the SFPUC Service Territory

2018 Demand Projections = 285 mgd
(from 2007 WSIP EIR)

2008 Sales Cap = 265 mgd

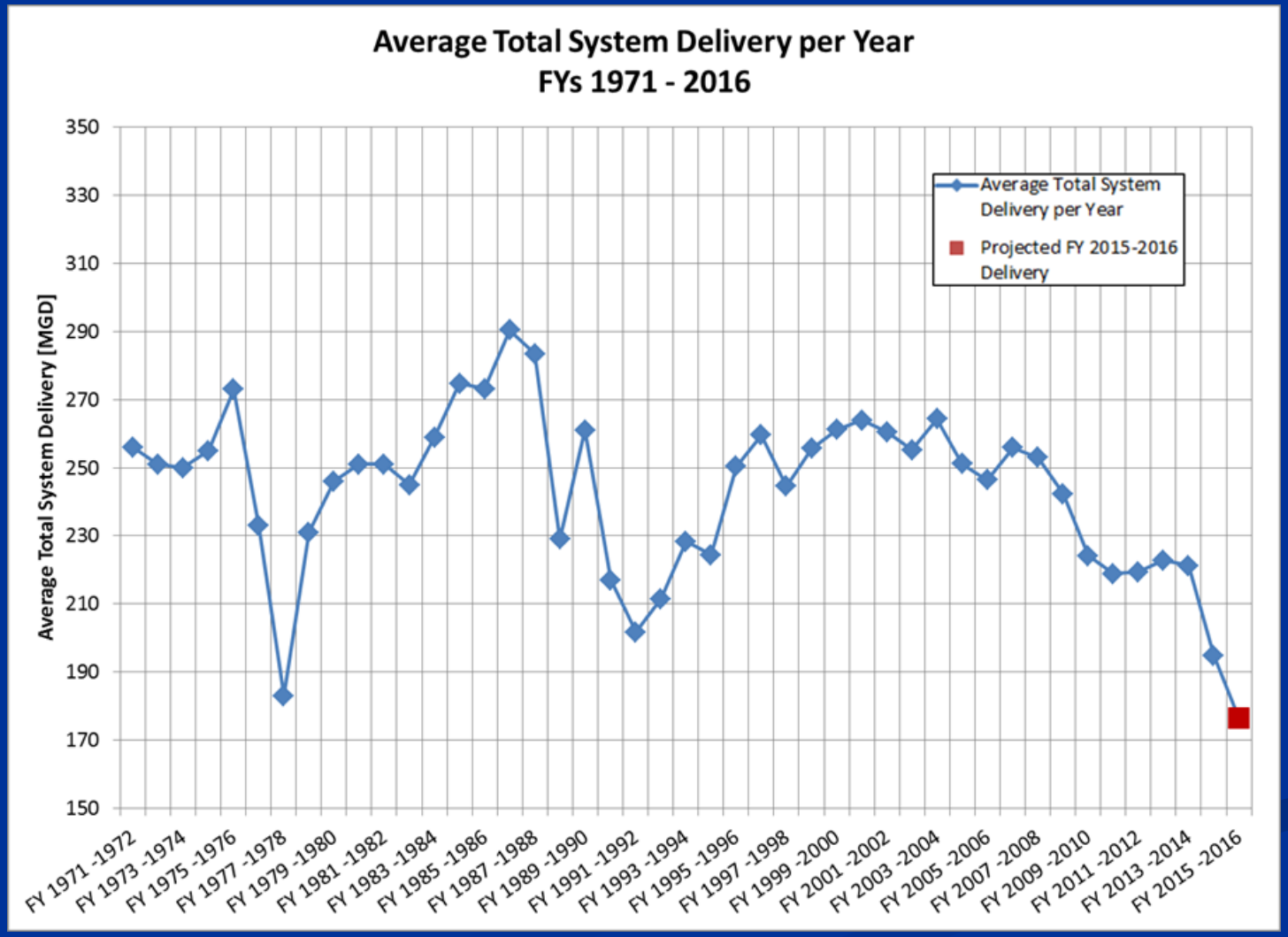
2010-2014 Average = 225 mgd

FY 2014/15 = 195 mgd

FY 2015/16 = 180 mgd

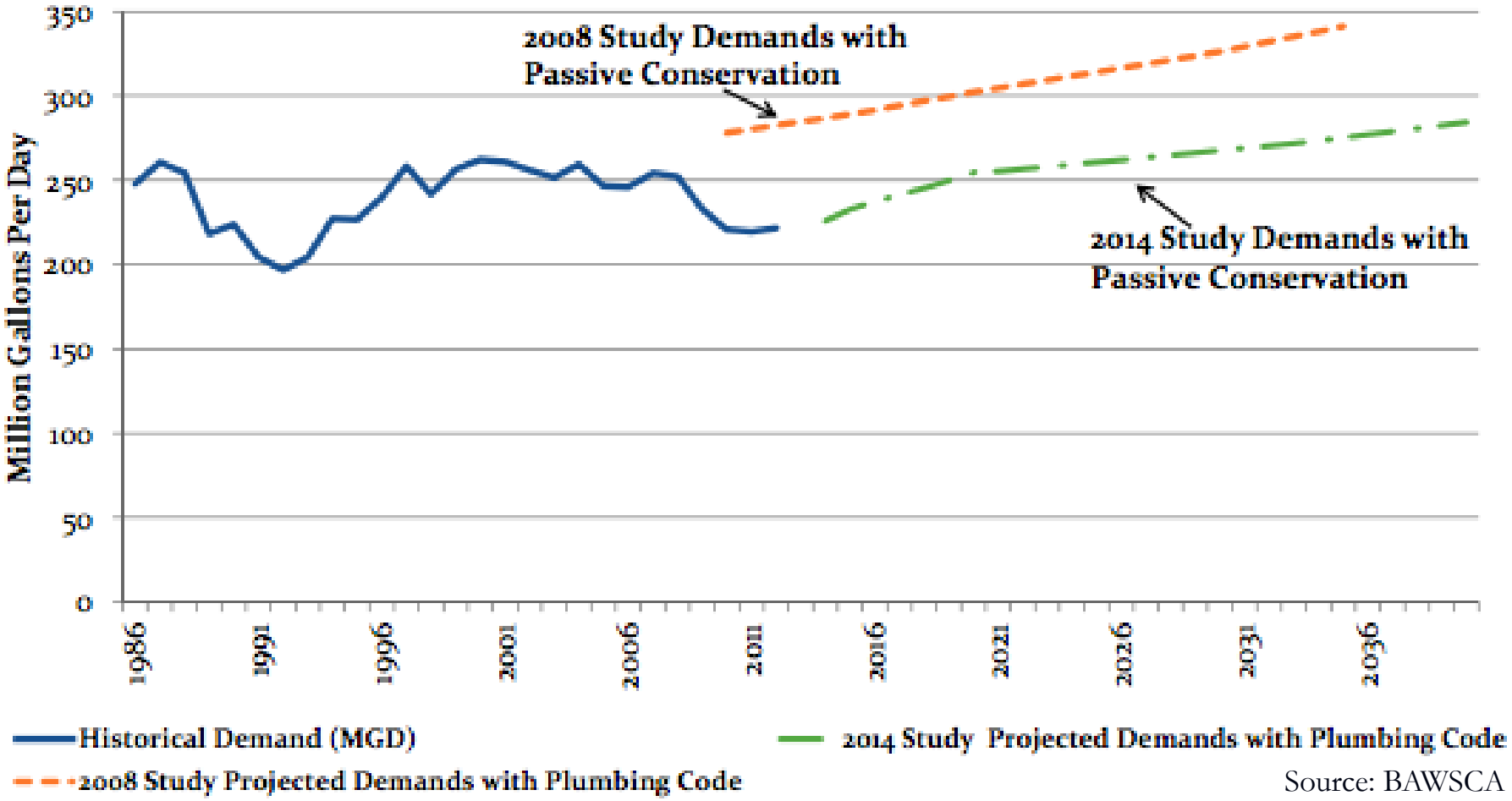
Figures include water demand from Tuolumne and Bay Area sources.

Water Demand Decreased 30% Between 2007 and 2016



Source: SFPUC

Projected Demands are 20% Lower than 2008 Demand Study



Source: BAWSCA

SFPUC Socioeconomics Study

San Francisco Chronicle

Guest Editorial - October 9, 2016

San Francisco to state on water-use cutbacks: How low can we go?

By Harlan L. Kelly Jr. and Nicole Sandkulla

"Our initial economic analysis of the first iteration of this plan forecast up to 51 percent rationing, resulting in 140,000 to 188,000 jobs lost in the Bay Area. These same forecasts also show between $37 billion and $49 billion in decreased sales transactions."

Flaws in the Study

1) Based rationing on demand vs. supply.
2) Comingled Bay Area water sources with Tuolumne supply.
3) Treated instream flow as reduced water supply (inadequate assessment of carryover storage and replenishment).
4) Underestimated conservation potential.

Had the Study been accurate, we would have lost $6.5 billion in sales last year.

Table 5-3: Annual Business Sales Losses by Shortage Scenario ($ Billions)

	FY 2010-11		FY 2035-36	
% Reduction of RWS Supply	Lost Sales	% of Total Sales	Lost Sales	% of Total Sales
10	$0.44	0.1%	$1.72	0.3%
20	$2.03	0.4%	$8.87	1.3%
30	$6.50	1.4%	$15.64	2.3%
40	$15.35	3.2%	$24.05	3.5%
50	$20.56	4.3%	$38.74	5.6%
60	$34.24	7.2%	$46.83	6.8%

Source: Sunding Study, 2014

Had the Study been accurate, we would have lost 24,510 jobs last year.

Table 5-4: Annual Job Losses by Shortage Scenario (Thousands of jobs)

	FY 2010-11		FY 2035-36	
% Reduction of RWS Supply	Lost Jobs	% of Total Jobs	Lost Jobs	% of Total Jobs
10	3.02	0.2%	3.35	0.2%
20	7.51	0.5%	12.93	0.6%
30	24.51	1.7%	29.35	1.4%
40	54.03	3.8%	46.02	2.2%
50	71.39	5.0%	89.83	4.4%
60	116.19	8.1%	111.07	5.4%

Source: Sunding Study, 2014

Projected Sales Losses were Inflated

Rationing	Sunding 2009	Sunding 2014
20%	$3.1 B	$2.03 B
30%	-	$6.5 B
40/41%	$37 B	$15.35 B
50/51%	$49 B	$20.56 B

2009 projections were more inflated than 2014 projections.

Projected Job Losses were Inflated

Rationing	Sunding 2009	Sunding 2014
20%	6,562	7,510
30%	-	24,510
40/41%	139,146	54,030
50/51%	188,000	71,390

2009 projections were more inflated than 2014 projections.

Job Growth Actually Increased Between 2010 and 2015

San Francisco = 125,400

San Mateo County = 65,700

*Alameda County = 93,200

*Santa Clara County = 172,500

Source: CA Employment Development Department

*Water purchases include other sources.

SFPUC Storage, Carryover & Replenishment

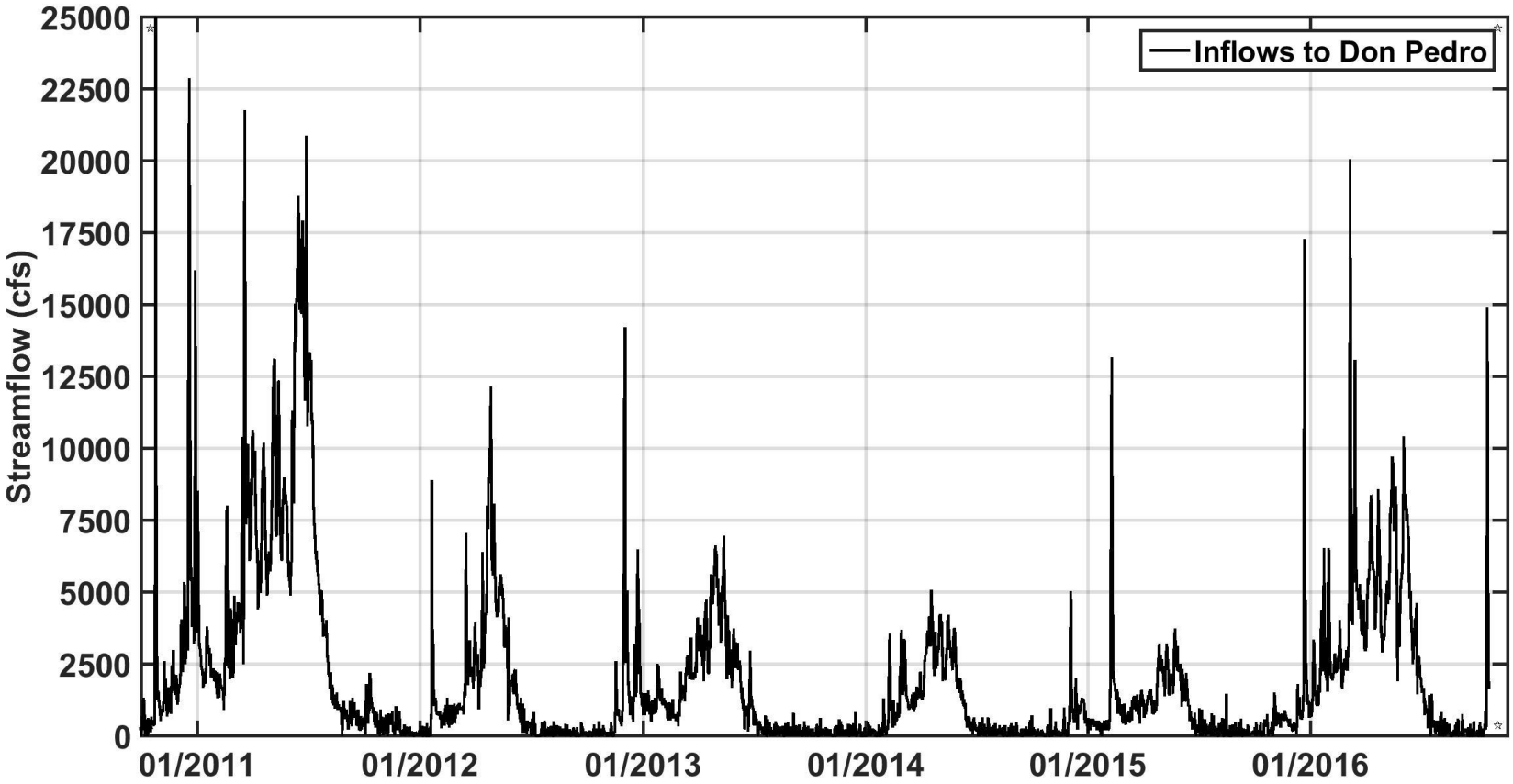
SFPUC Tuolumne Reservoirs = 660,973 AF

Don Pedro Water Bank = 570,000 AF

Bay Area Reservoirs = 227,711 AF

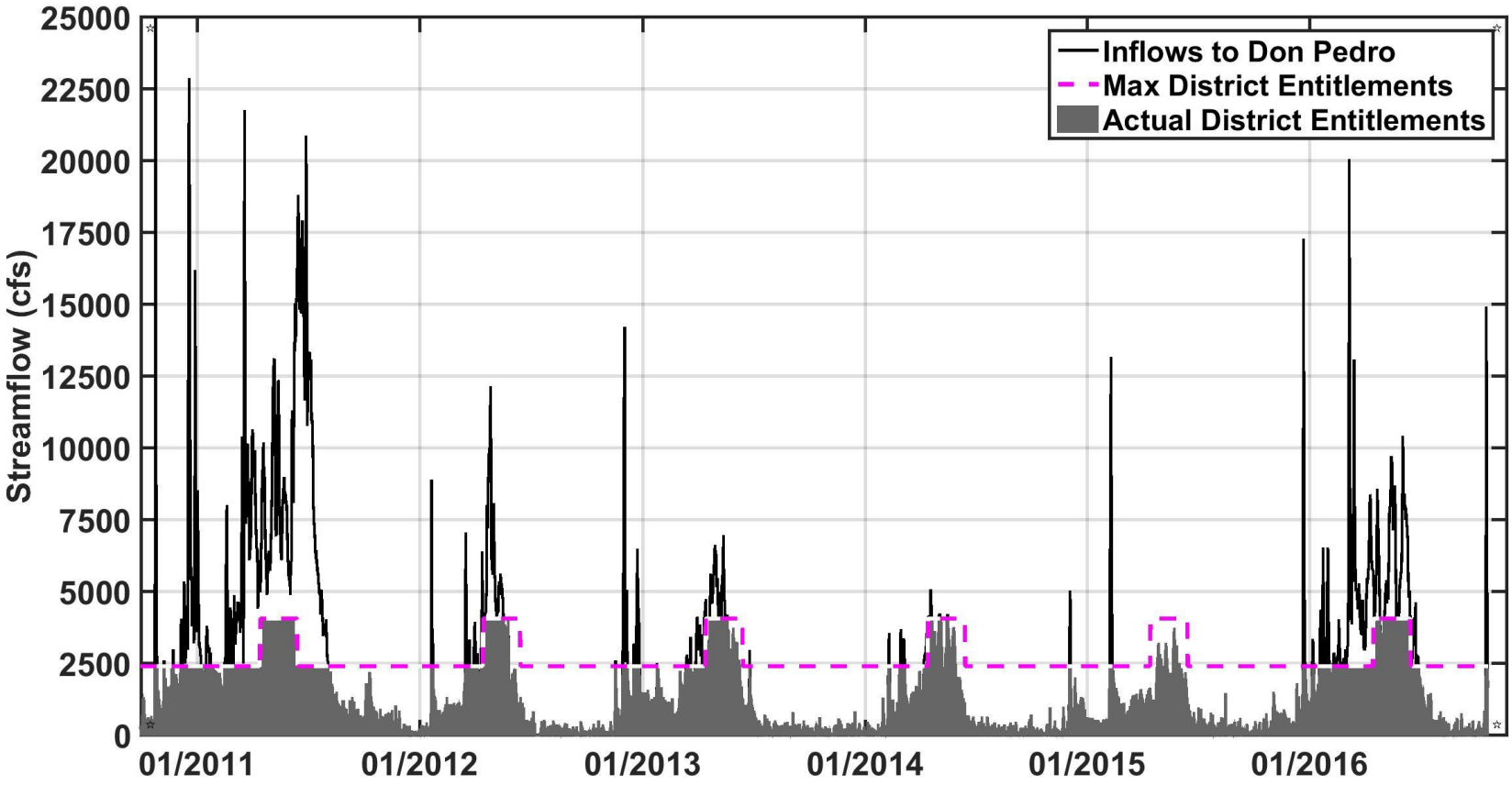
Total Storage = **1,458,684 AF**

Inflows to Don Pedro Reservoir



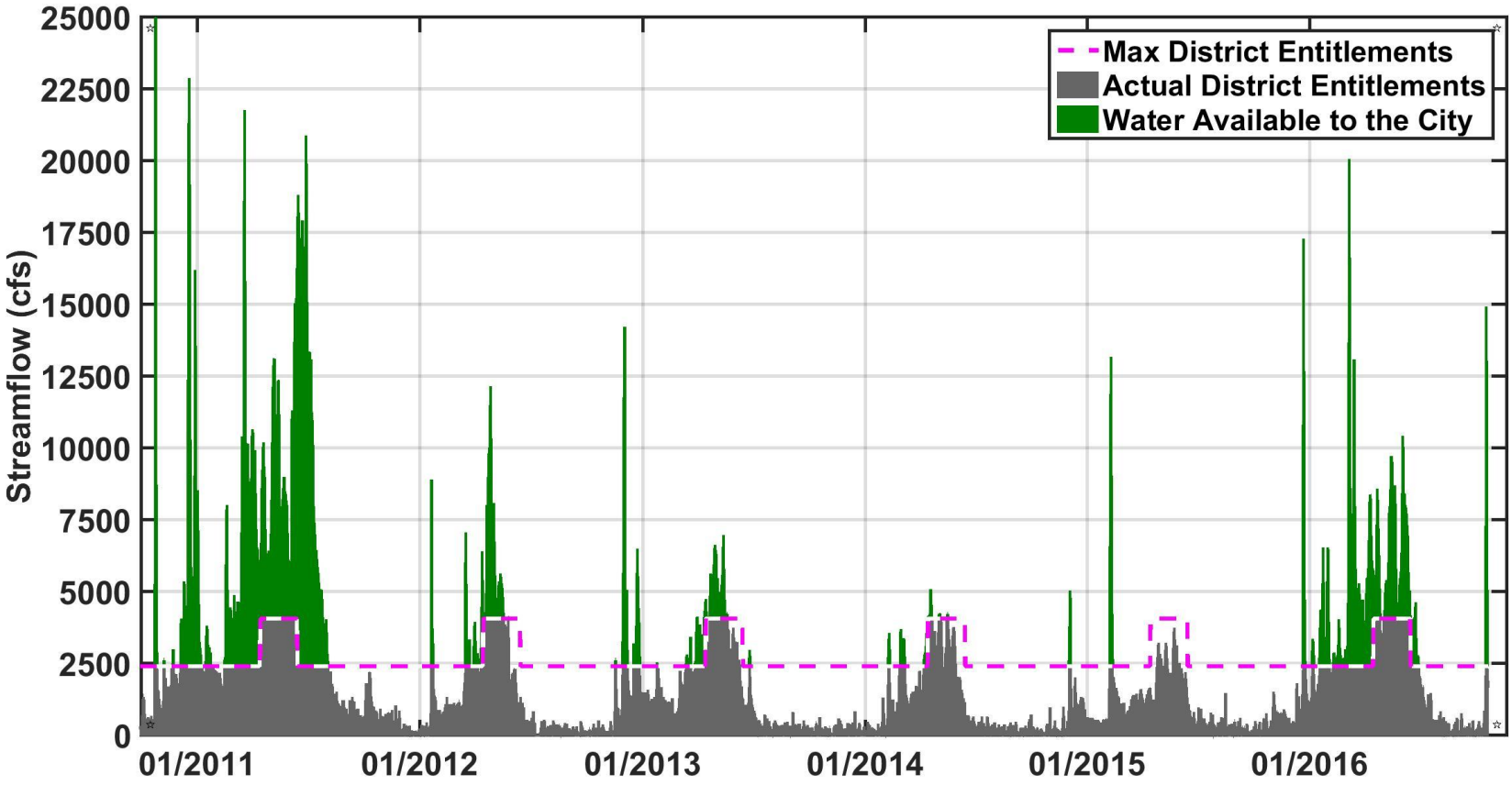
Source: SFPUC

Irrigation District Entitlements



Source: SFPUC

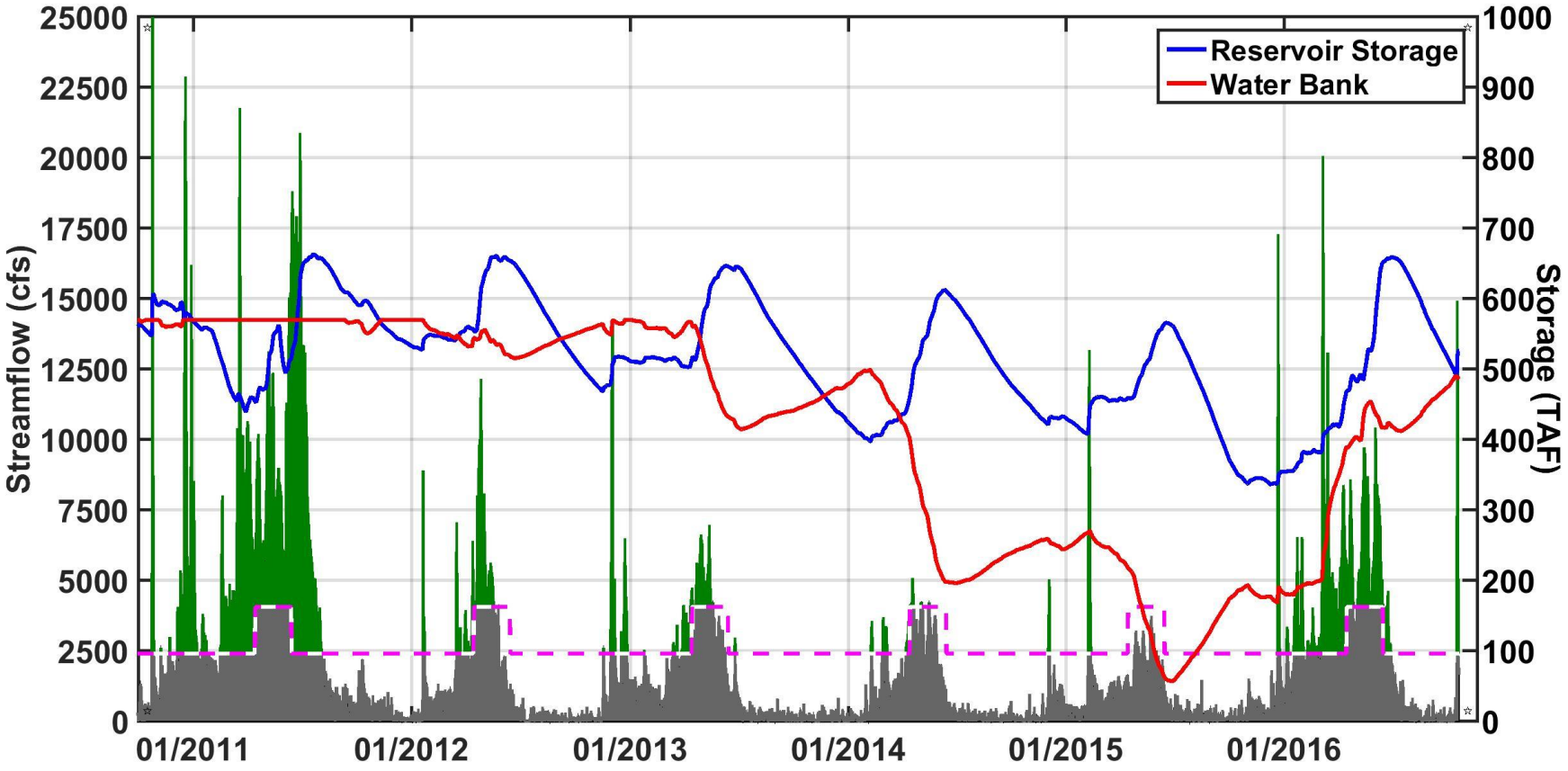
Water Available to SFPUC



The SFPUC captured 651,000 AF in 2016.

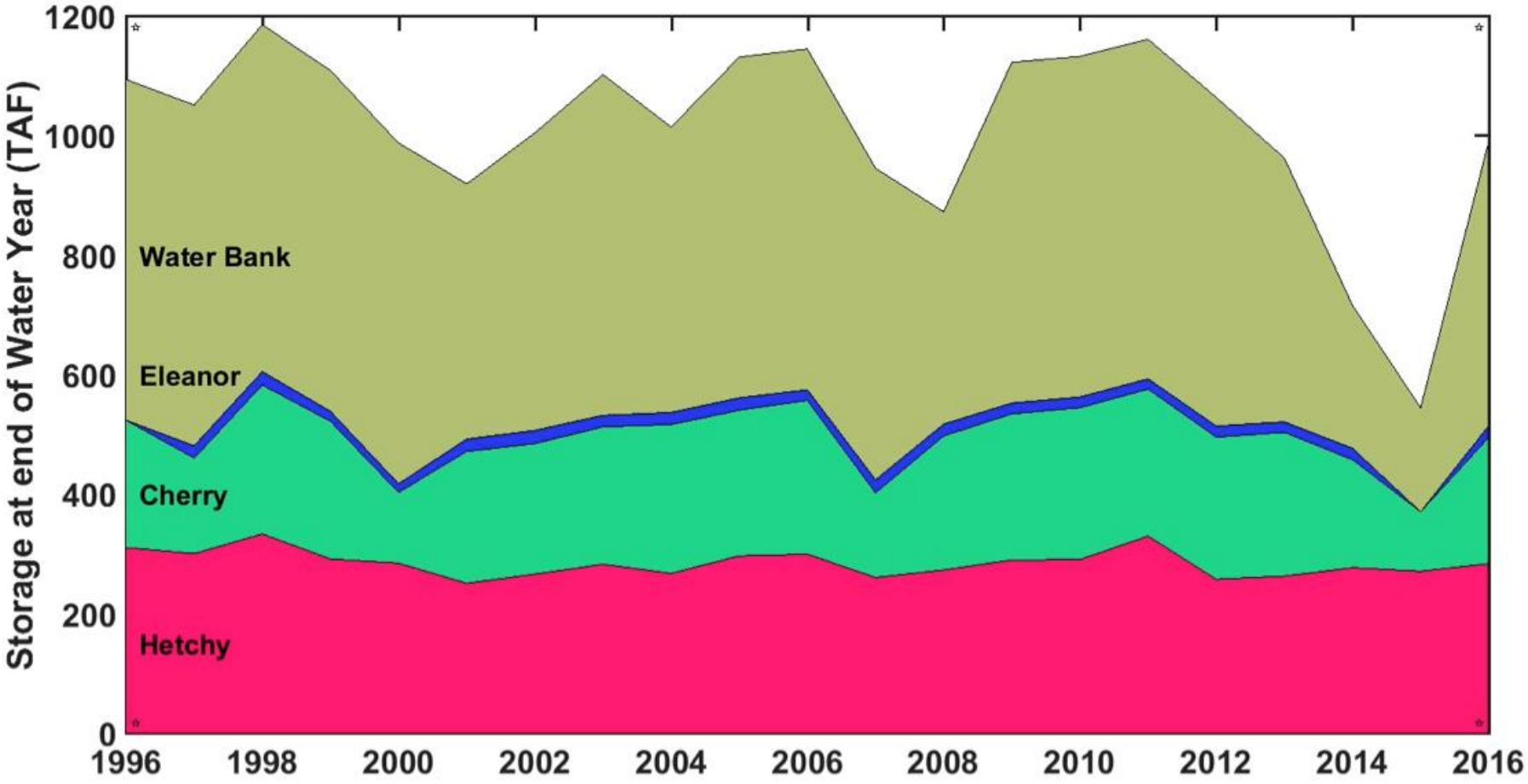
Source: SFPUC

Reservoir Storage and Water Bank



Source: SFPUC

SFPUC Tuolumne Storage



Bay Area storage not included.

Source: SFPUC

Hetch Hetchy Regional Water System

December 11, 2016 Reservoir Storage Levels

Reservoir	Current Storage[1,2,3] (AF)	Maximum Storage[3,4] (AF)	Available Capacity (AF)	Percent of Maximum Storage	Normal Percent of Maximum Storage[5]
Tuolumne System					
Hetch Hetchy	319,360	360,360	41,000	88.6%	**65.9%**
Cherry	235,670	273,500	37,830	86.2%	-
Eleanor	22,500	27,113	4,613	83.0%	-
Water Bank	476,788	570,000	93,212	83.6%	**98.4%**
Total Tuolumne Storage	**1,054,318**	**1,230,973**	**176,655**	**85.6%**	-
Local System					
Calaveras	36,017	96,670	60,653	37.3%	-
San Antonio	42,163	50,637	8,474	83.3%	-
Crystal Springs	54,883	58,309	3,426	94.1%	-
San Andreas	18,583	19,027	444	97.7%	-
Pilarcitos	2,749	3,069	320	89.6%	-
Total Local Storage	**154,394**	**227,711**	**73,317**	**67.8%**	-
Total System Storage	1,208,712	1,458,684	249,972	**82.9%**	**76.1%**
Total without water bank	731,924	888,684	156,760	**82.4%**	-

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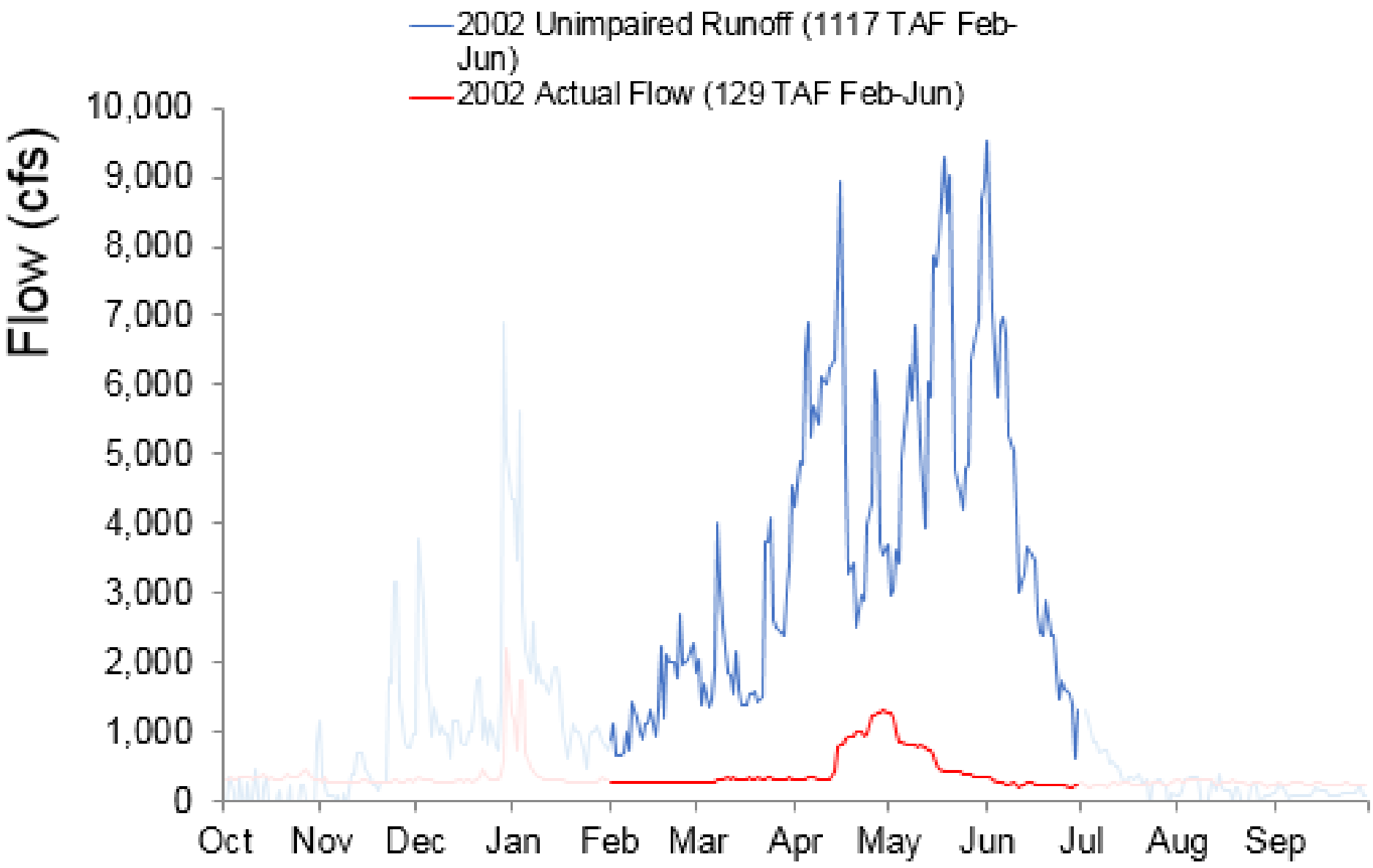
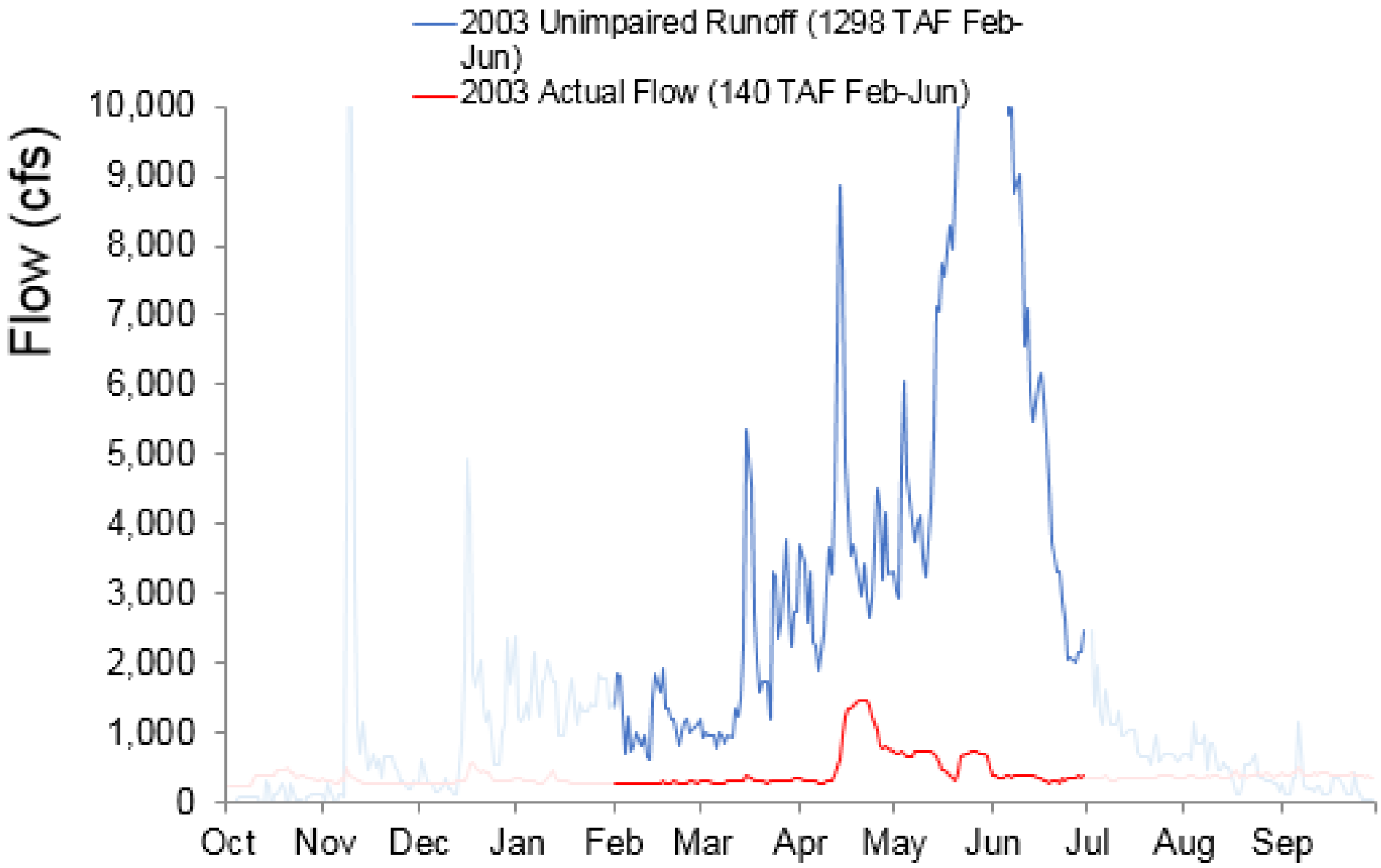
Tuolumne River



Source: The Bay Institute

Tuolumne River



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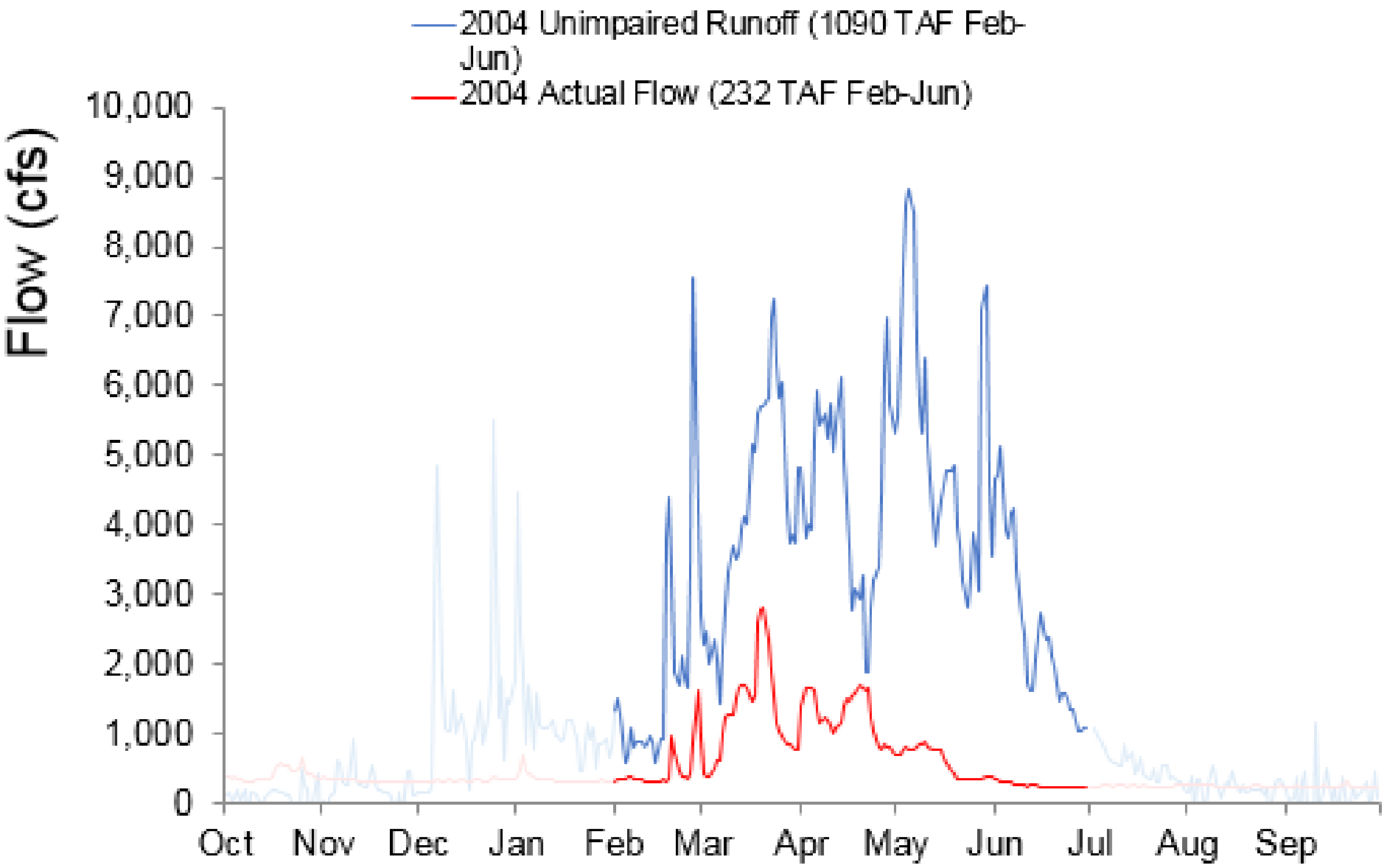
Tuolumne River



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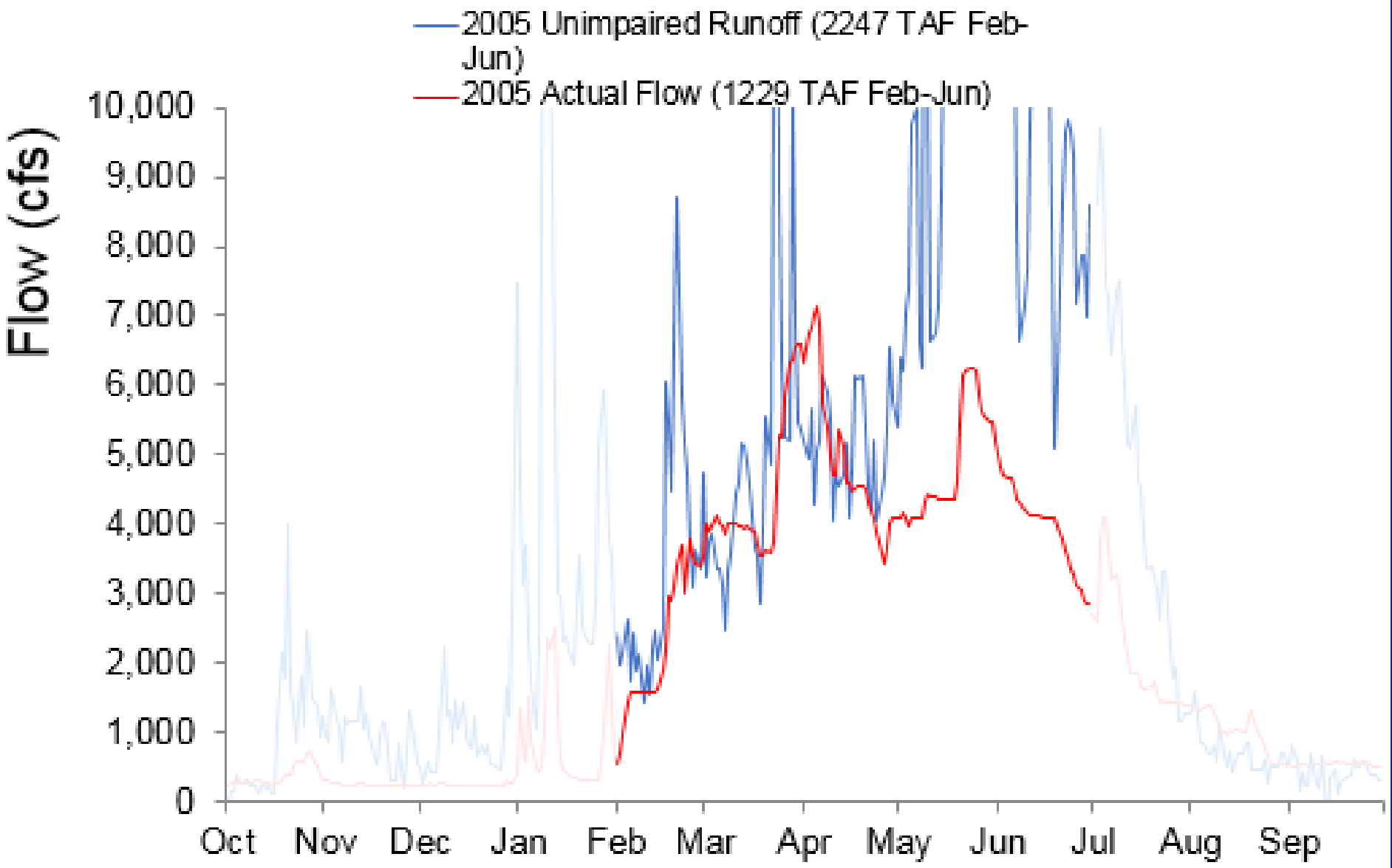
Tuolumne River



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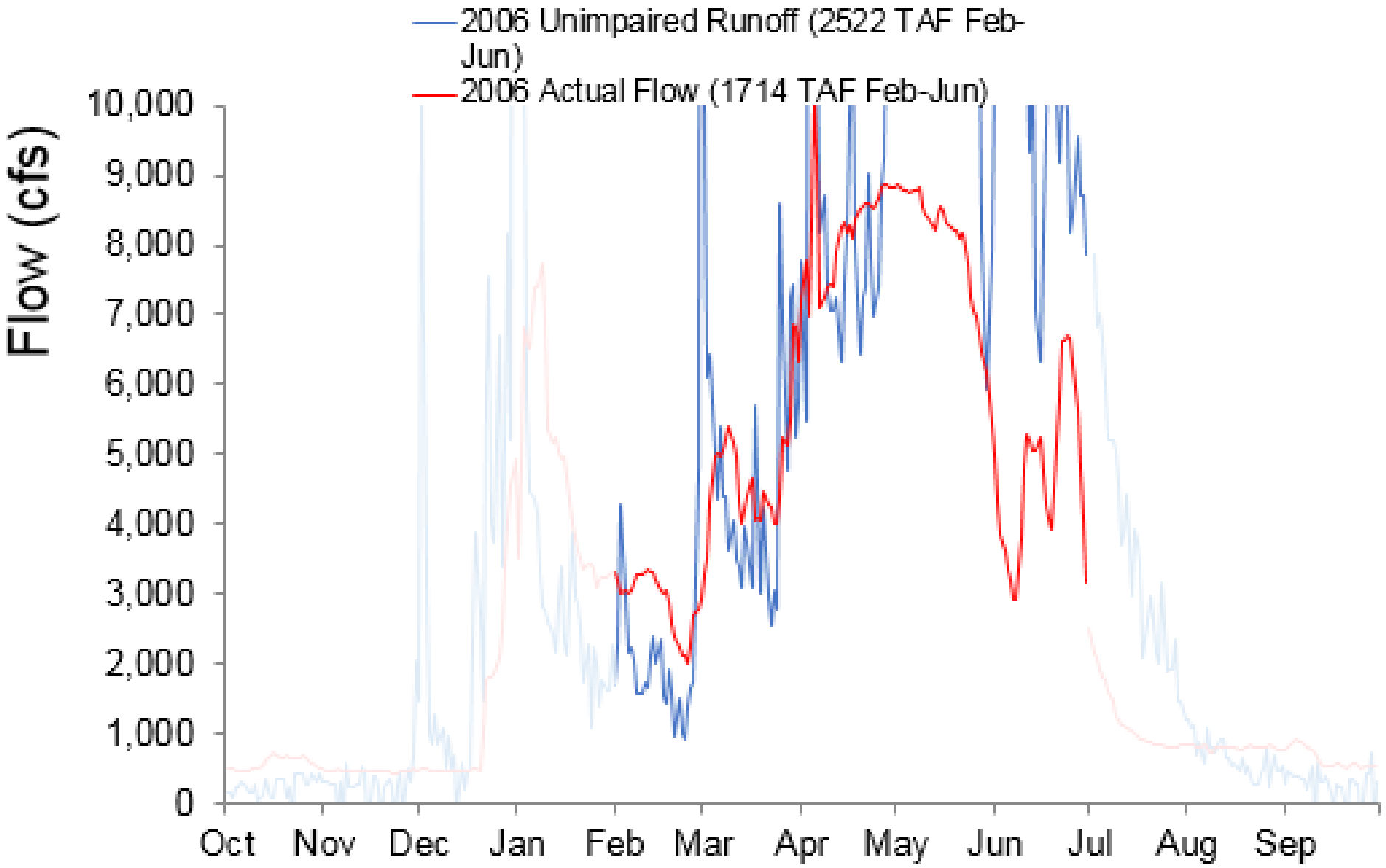
Tuolumne River



Source: The Bay Institute

Conclusions

SFPUC Socioeconomics Study is flawed.

- No sales or job losses at 30% rationing.
- San Francisco alone added more than 125,000 jobs between 2010 and 2015.

SFPUC's abundant storage provides a buffer against shortages.

- Storage currently at 83% of capacity.
- Enough water in storage to last five years.

We can improve the ecosystem while maintaining a strong economy.