The "Bay-Delta Plan" and Fall Run Chinook Recovery

Presentation to the CA State Board of Food and Agriculture
October 4, 2016

Steve Rothert, California Director, American Rivers

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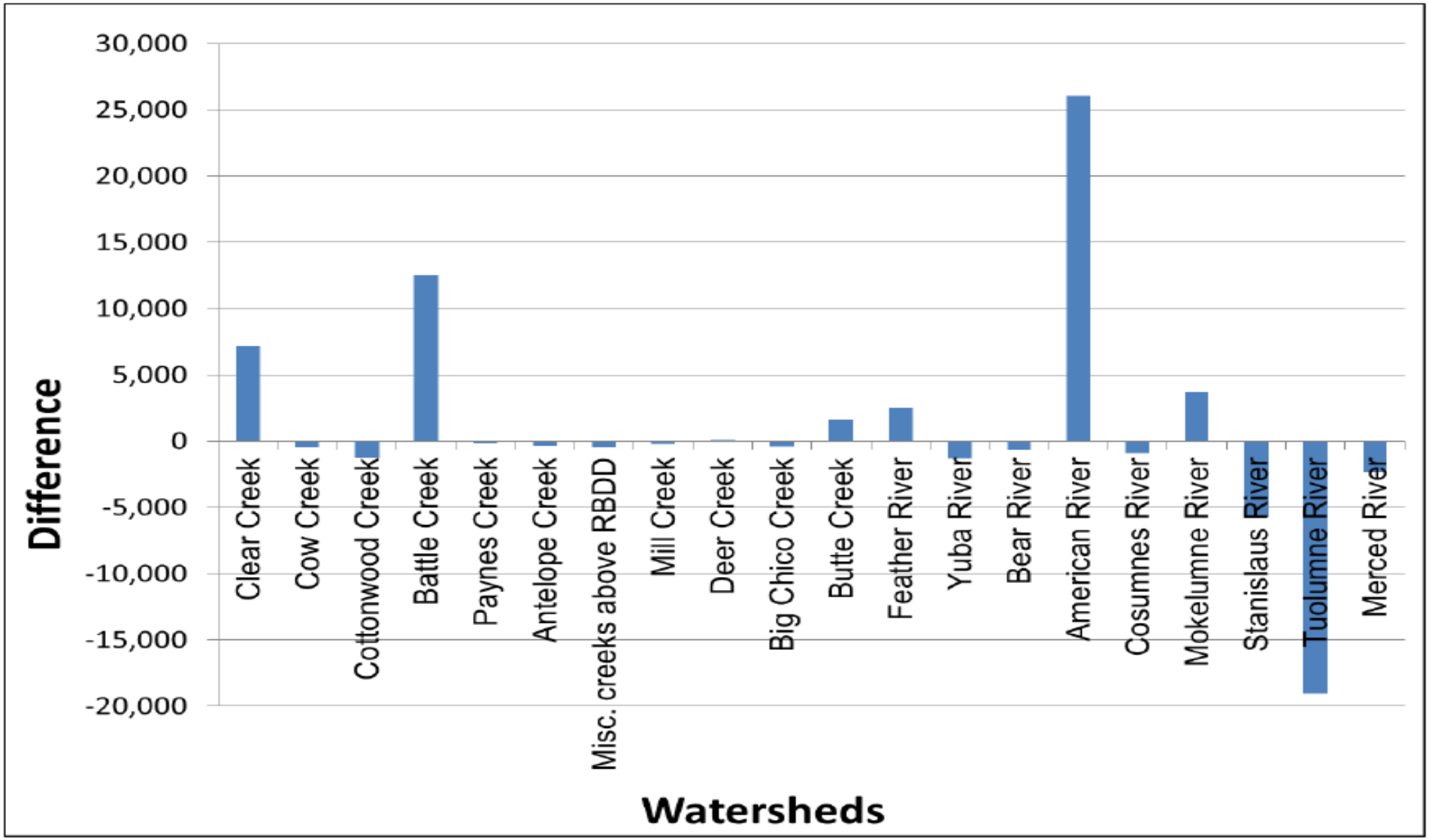
Salmon Objective

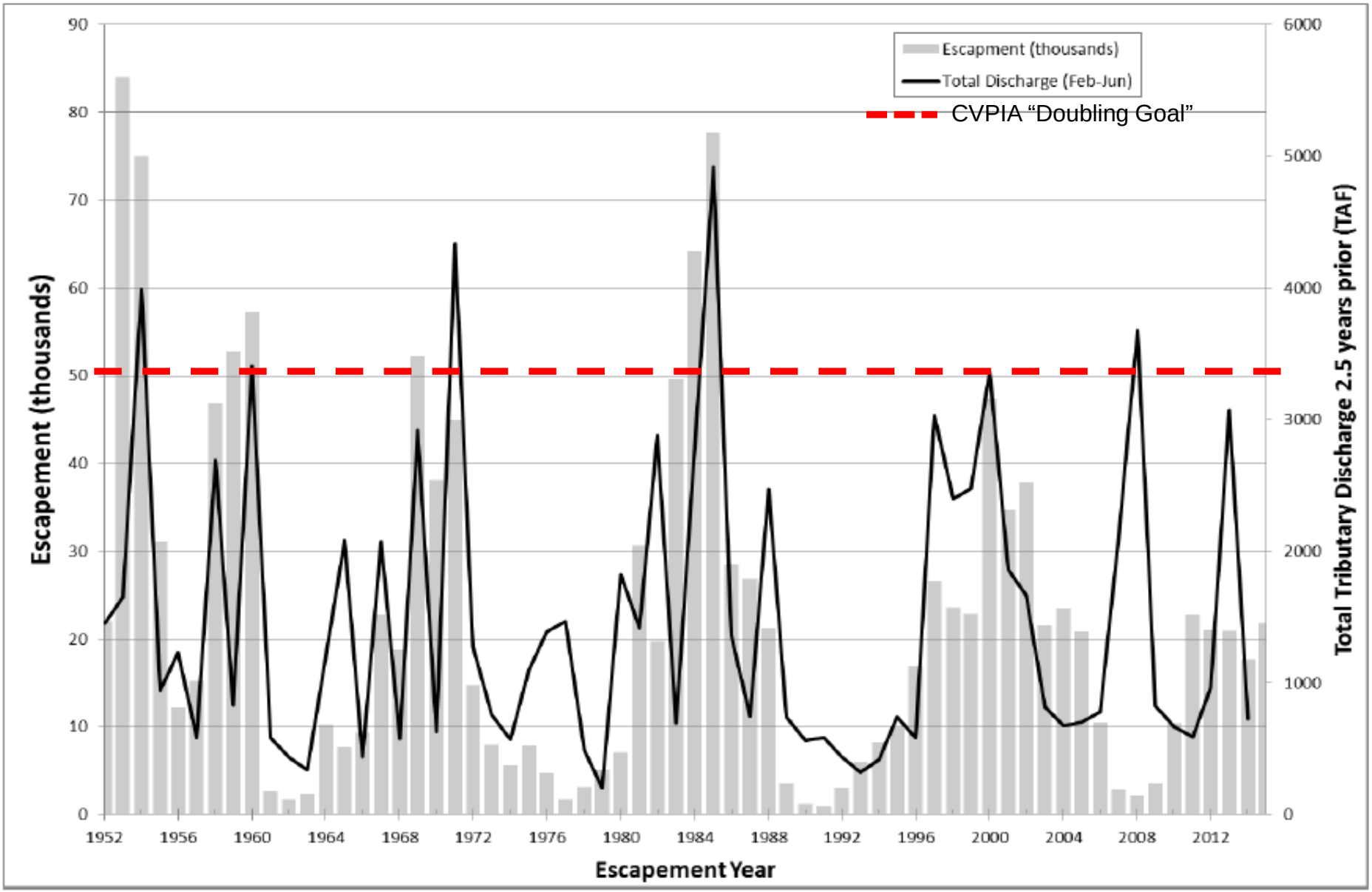
"The narrative objective for salmon protection in the Delta is consistent with the anadromous ***fish doubling goals*** of the CVPIA." *App. K, Page 53*

= 50,0000 adult Fall Run Chinook in San Joaquin River

Change in Fall Run #s btw '67-'91 and '92-'11



Flows and Salmon



Response to Flow Measures

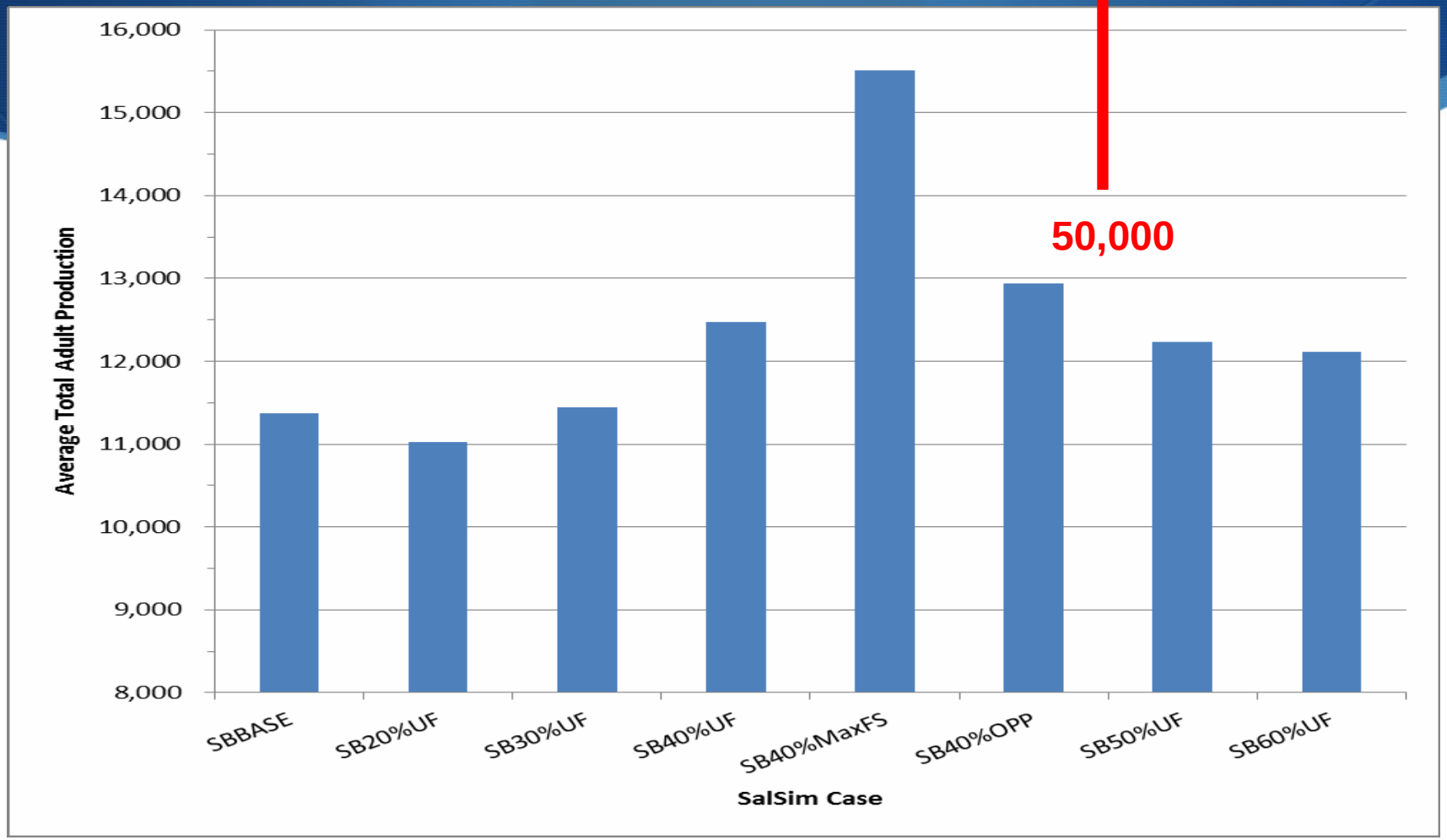


Figure 19-13. Ave. total fall-run Chinook salmon production per year, '94 - '10.

Western Adjudications

- Yakima – 27 yrs
- Klamath – 29, ongoing
- Gila (AZ) – 34, ongoing
- Salmon (ID) – 36 yrs
- Bay-Delta - ??

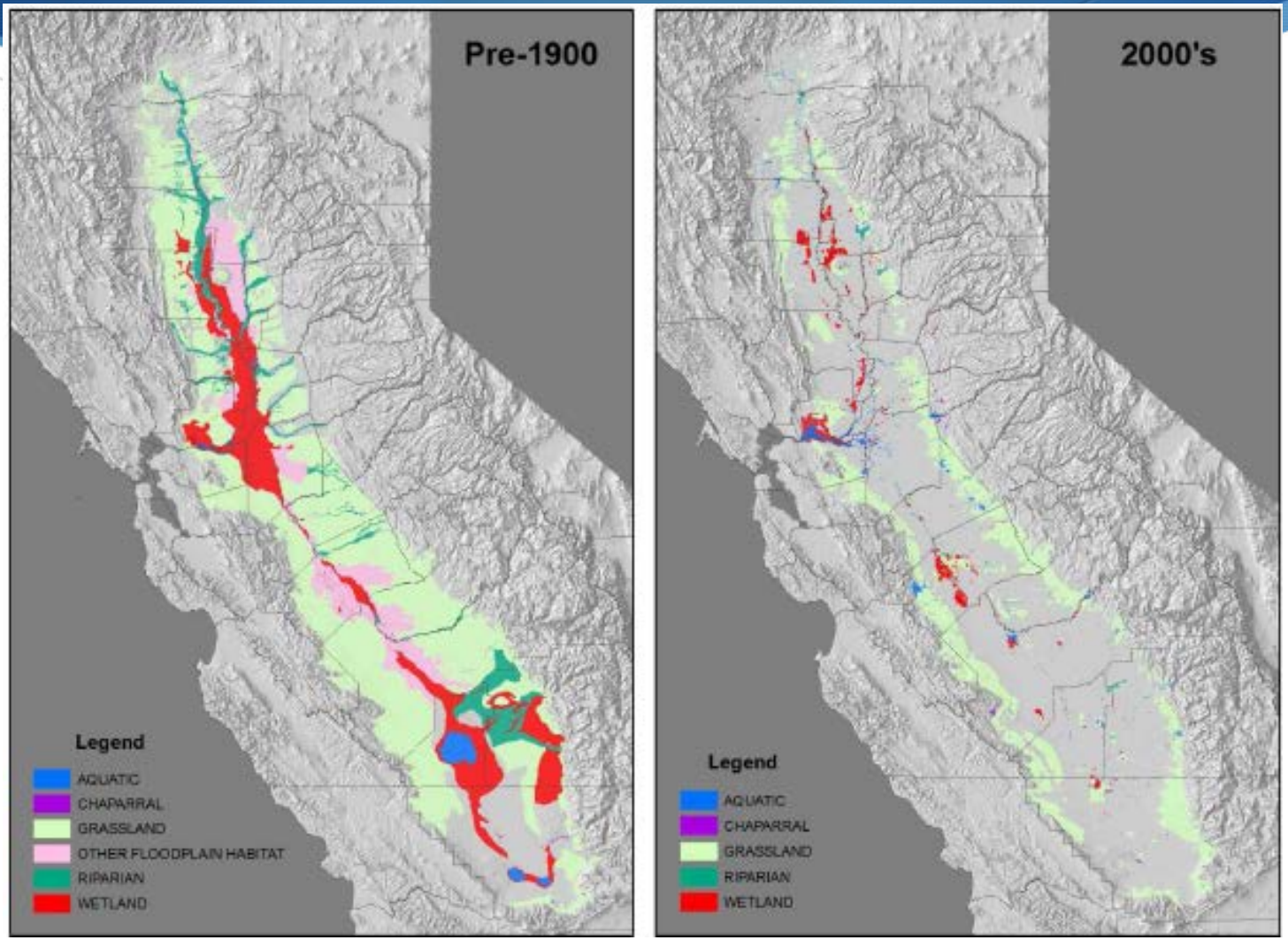
Non-Flow Measures

"…Recommended Actions, including non-flow measures, such as habitat restoration, must also be part of efforts to comprehensively address Delta aquatic ecosystem needs as a whole." *App. K, Page 27*

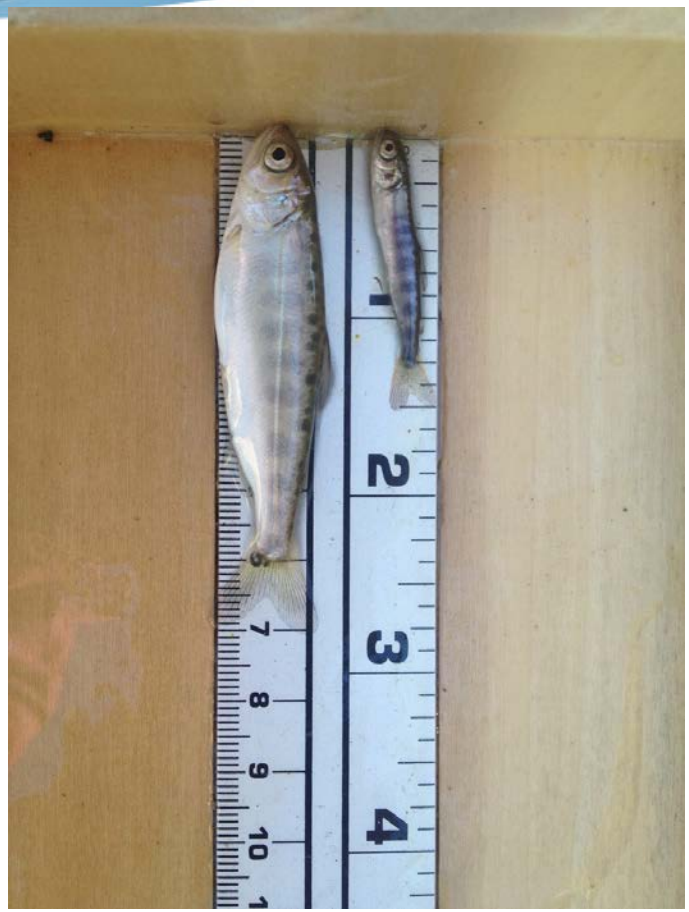
"…the non-flow measures may support a change in the required percent of unimpaired flow, within the range prescribed by the flow objectives, or other adaptive adjustments..." *App. K, Page 36*…

"The State Water Board encourages voluntary agreements that will assist in implementing the LSJR flow objectives…" *App. K, Page 27*

Past and Present



“Floodplain Fatties”



Middle Path

OFFICE OF THE GOVERNOR

September 19, 2016

Chairwoman Felicia Marcus
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Dear Chairwoman Marcus:

State Water Board staff recently released a draft proposal to update minimum flow standards for the Lower San Joaquin River to the Delta. This is only one part of the information needed. To provide a complete picture of the needs in the Delta, I urge the Board to move quickly to complete the remainder of their analysis on the Sacramento River basin.

Delay may be too costly. The need to improve our aquatic ecosystems is urgent. Many communities are paralyzed and fearful of a lengthy and unpredictable regulatory process. Voluntary agreements in which water rights holders improve stream flows and restore habitat could offer a faster, less contentious, and more durable outcome.

I have directed my departments at the Natural Resources Agency to explore the potential for a comprehensive agreement on environmental flows in both the San Joaquin and Sacramento River basins. I have asked them to report back to me by the end of October with their assessment and a schedule that enables California to start improving water quality in the Delta and its tributaries beginning in 2017. I urge the Water Board to use its authorities to assure that the process can accommodate this acceleration. We ask that the Board and staff prioritize analysis and implementation of voluntary agreements.

Sincerely,

Edmund G. Brown

CC: Members, State Water Resources Control Board

GOVERNOR EDMUND G. BROWN JR. • SACRAMENTO, CALIFORNIA 95814 • (916) 445-2841

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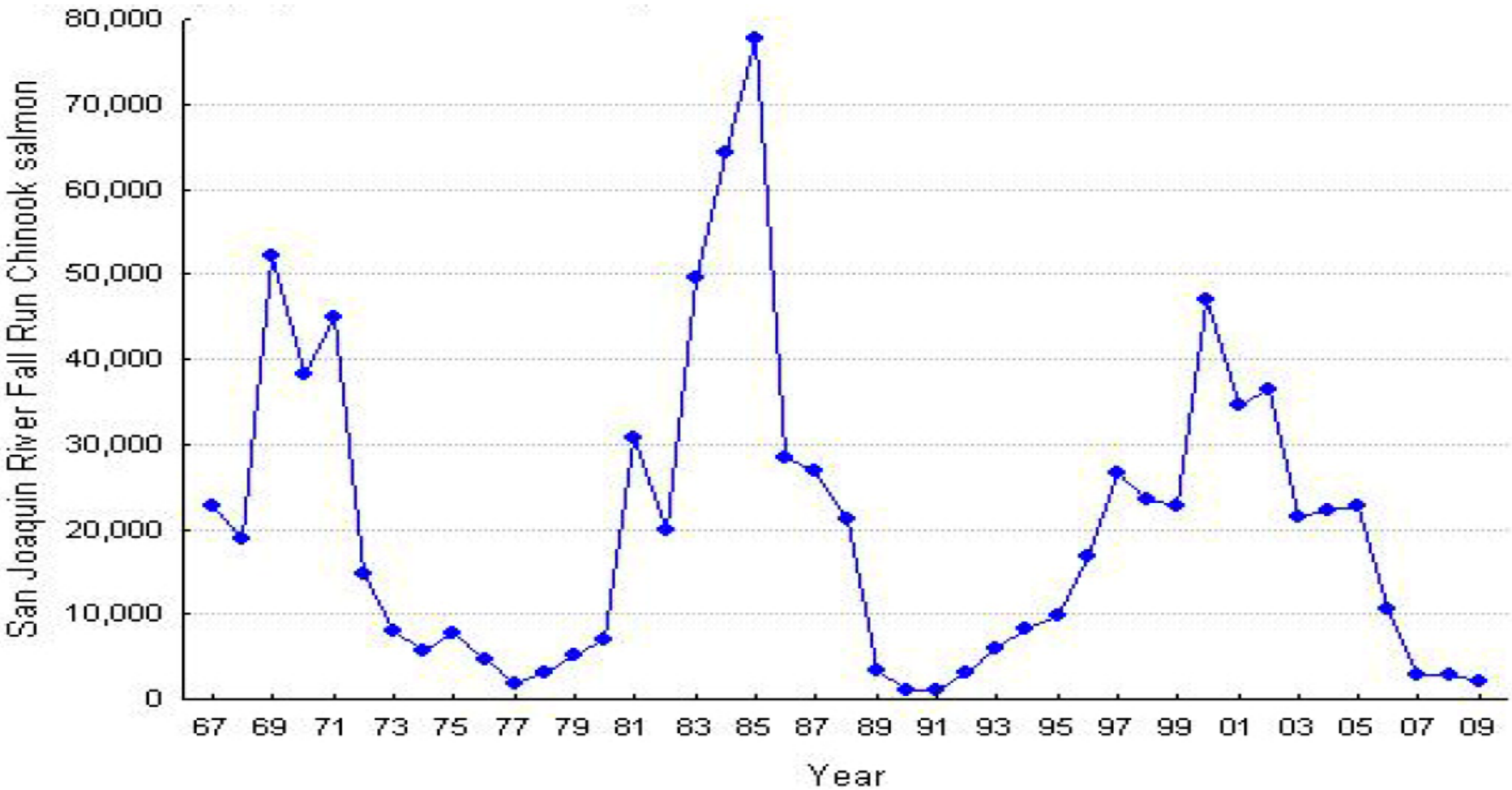
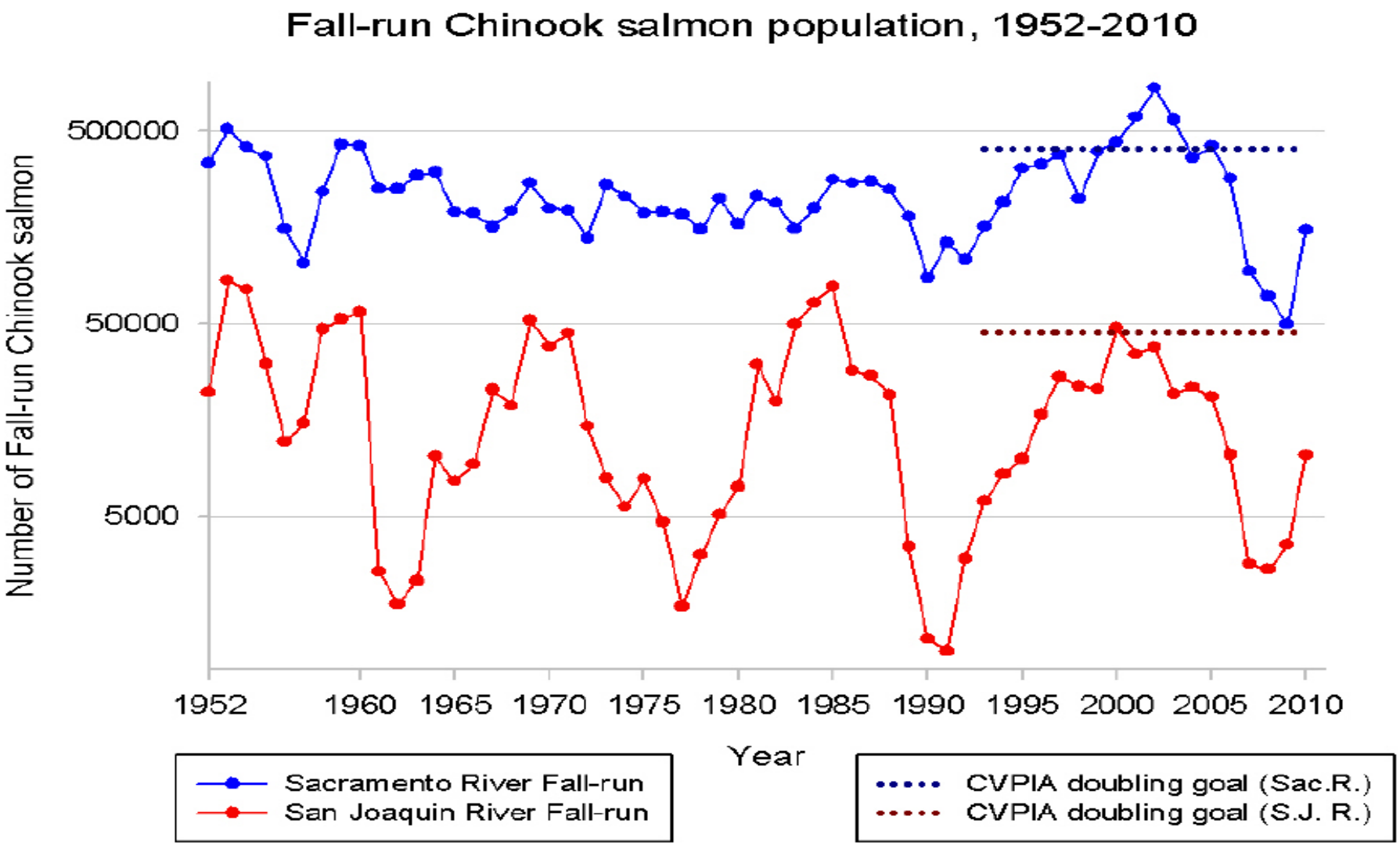
Spawning Population of San Joaquin River Fall Run Chinook Salmon, 1967-2009





The Bay Institute

Table 19-28. Annual average floodplain inundation in acre*days and percent increase during February through June for baseline and different unimpaired flow percentages.

Percent of Unimpaired Flow	Unit	Stanislaus	Tuolumne	Merced	Total
Baseline	Acre*Days	4,881	27,668	6,742	39,292
20% UF	Acre*Days	4,475	27,899	7,016	39,390
	Percent Increase	-8%	1%	4%	0%
30% UF	Acre*Days	5,618	31,882	7,895	45,395
	Percent Increase	15%	15%	17%	16%
40% UF	Acre*Days	7,509	36,644	9,055	53,208
	Percent Increase	54%	32%	34%	35%
50% UF	Acre*Days	11,805	44,426	12,055	68,287
	Percent Increase	142%	61%	79%	74%
60% UF	Acre*Days	16,818	53,936	15,879	86,634
	Percent Increase	245%	95%	136%	120%

UF = unimpaired flow

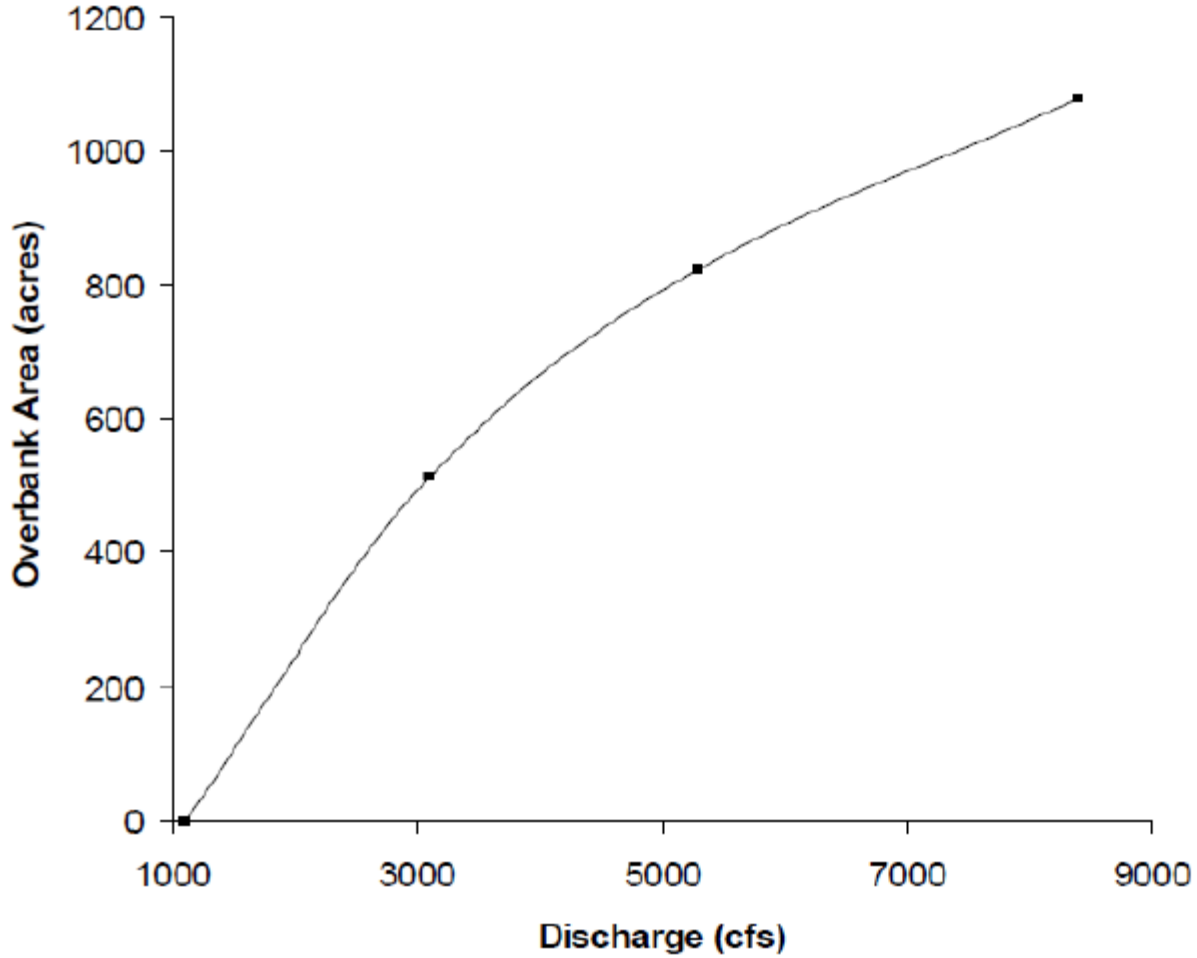


Figure 19-12. Lower Tuolumne River overbank (floodplain) inundated area as a function of discharge from RM 52 to RM 21.5. This relationship was developed by USFWS (2008).

Table 19-29. Annual average floodplain inundation in acre*days and percent increase during April through June for baseline and different unimpaired flow percentages.

Percent of Unimpaired Flow	Unit	Stanislaus	Tuolumne	Merced	Total
Baseline	Acre*Days	3,217	13,809	4,008	21,034
20% UF	Acre*Days	2,627	14,676	4,153	21,456
	Percent Increase	-18%	6%	4%	2%
30% UF	Acre*Days	3,844	19,873	5,113	28,831
	Percent Increase	19%	44%	28%	37%
40% UF	Acre*Days	5,716	26,046	6,589	38,352
	Percent Increase	78%	89%	64%	82%
50% UF	Acre*Days	9,543	33,939	9,507	52,988
	Percent Increase	197%	146%	137%	152%
60% UF	Acre*Days	13,909	41,689	13,016	68,615
	Percent Increase	332%	202%	225%	226%

UF = unimpaired flow

Table 19-30. Average annual floodplain inundation in acre*days and percent increase during April through June for baseline and different unimpaired flow percentages for the Tuolumne River.

Percent of Unimpaired Flow	Unit	All Year Types	Wet	Above Normal	Below Normal	Dry	Critical
Baseline	Acre*Days	13,809	41,553	7,501	555	602	0
20% UF	Acre*Days	14,676	43,300	9,318	964	202	0
	Percent Increase	6%	4%	24%	74%	-66%	NA
30% UF	Acre*Days	19,873	48,199	19,423	8,465	2,758	1,011
	Percent Increase	44%	16%	159%	1424%	358%	NA
40% UF	Acre*Days	26,046	50,334	30,383	19,862	8,974	4,172
	Percent Increase	89%	21%	305%	3477%	1390%	NA
50% UF	Acre*Days	33,939	56,322	41,223	31,160	16,617	9,411
	Percent Increase	146%	36%	450%	5511%	2658%	NA
60% UF	Acre*Days	41,689	63,025	50,896	40,833	24,441	15,187
	Percent Increase	202%	52%	579%	7253%	3957%	NA

UF = unimpaired flow

Note: The percent increase could not be calculated for some river and year type combinations because there was 0 Acre*Days of floodplain under baseline. These value are replaced with NA.