

The background of the slide is a light gray gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance. The largest droplet is in the bottom right corner, while others are smaller and more numerous in the top left and bottom center areas.

SAN JOAQUIN TRIBUTARIES AUTHORITY

Proposed Amendments to the Bay-Delta Plan

2016

The Plan

Table 3: Objectives for Fish & Wildlife*

Unimpaired Flow (UIF)

- “unimpaired flow” of “30% - 50%” based on min. 7-day running avg. on tributaries
- “February through June”

Vernalis Objective

- “800 – 1,200 cfs” at Vernalis
- “February through June”

*SED, at Appx. K, p. 18

The Plan (cont.)

Table 3: Objectives for Fish & Wildlife*

Narrative Objective

“Maintain inflow conditions from the San Joaquin River watershed to the Delta at Vernalis sufficient to support and maintain the natural production of viable native San Joaquin River watershed fish populations migrating through the Delta. Inflow conditions that reasonably contribute toward maintaining viable native migratory San Joaquin River fish populations include, but may not be limited to, flows that more closely mimic the natural hydrographic conditions to which native fish species are adapted, including the relative magnitude, duration, timing, and spatial extent of flows as they would naturally occur. Indicators of viability include population abundance, spatial extent, distribution, structure, genetic and life history diversity, and productivity.”

*SED, at Appx. K, p. 18



What are the expected impacts of the Plan?

The SED is silent...

No analysis of 30%-50% UIF in the SED

- Analyses in SED “represent examples of system operation” (one example)
- More constraints are needed “to ensure feasibility . . . so that the reservoirs are not drained entirely . . .”
- Carryover storage was increased “to minimize impacts on instream temperature . . . caused by lower reservoir levels and a limited coldwater pool.”

SED, at F.1-31

What was modelled in the SED?

- Les Grober, Bay-Delta Phase I Hearing, Nov. 29, 2016
 - “The modeling shows how it can happen, but it’s not prescribing how it must happen.” (time,1:11:05)
 - “It clearly could happen in other ways that would take less water.” (time,1:11:27)

http://www.waterboards.ca.gov/board_info/media/nov2016/baydelta_phase1_hearing_112916.shtml

What Plan is currently under consideration?

The Plan

- 30%-50% UIF (Feb – June)
- 800 -1,200 cfs Vernalis (Feb – June)
- Narrative Objective
- 1,000 cfs Vernalis October Flow

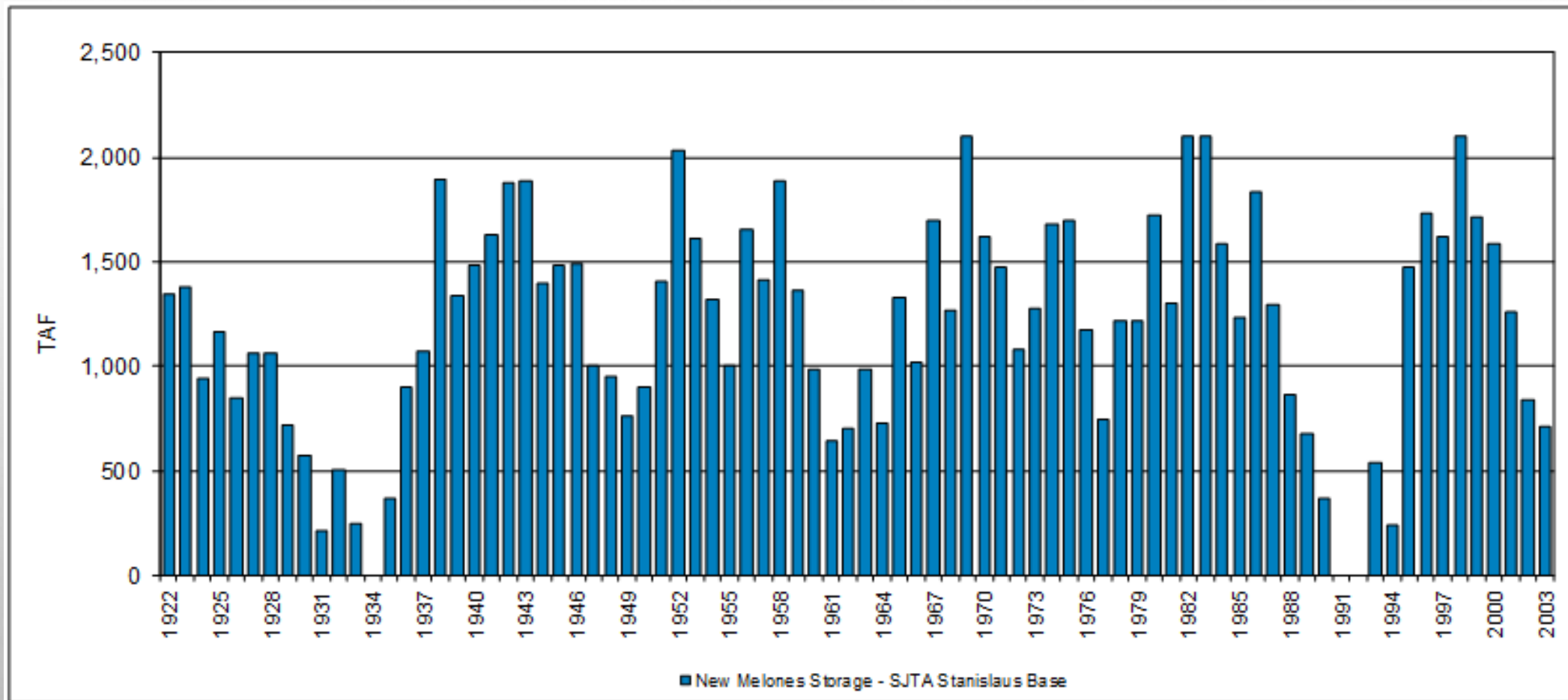
Not the Plan

- No “block” or “budget” of water
- No flow shifting
- No carryover storage requirement
- No reservoir refill criteria
- No water temperature objective
- No “greater than flow” on the tributaries

Impacts on storage under True 40% UIF

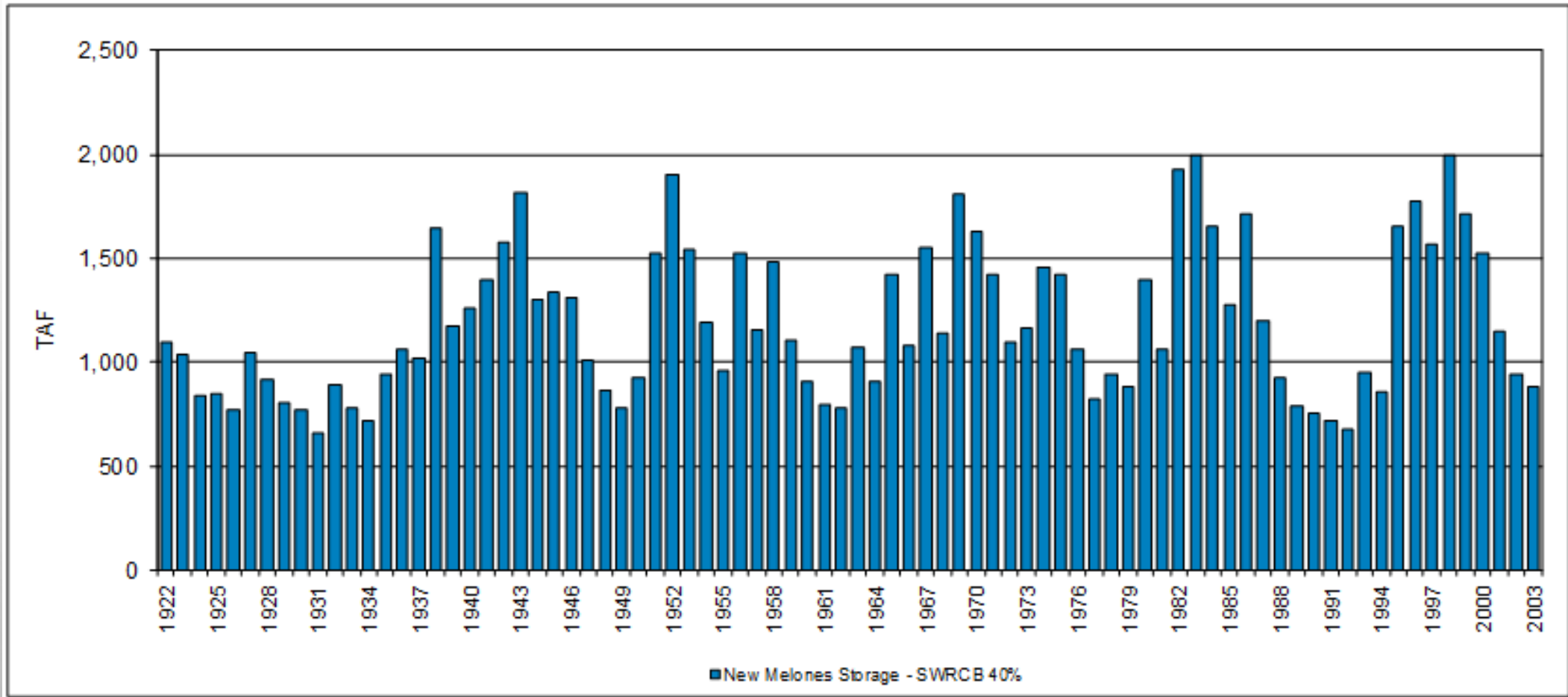
- These impacts were not modeled in the SED
- New Melones example by SJTA consultants

New Melones Storage (End of Sept.) Current*



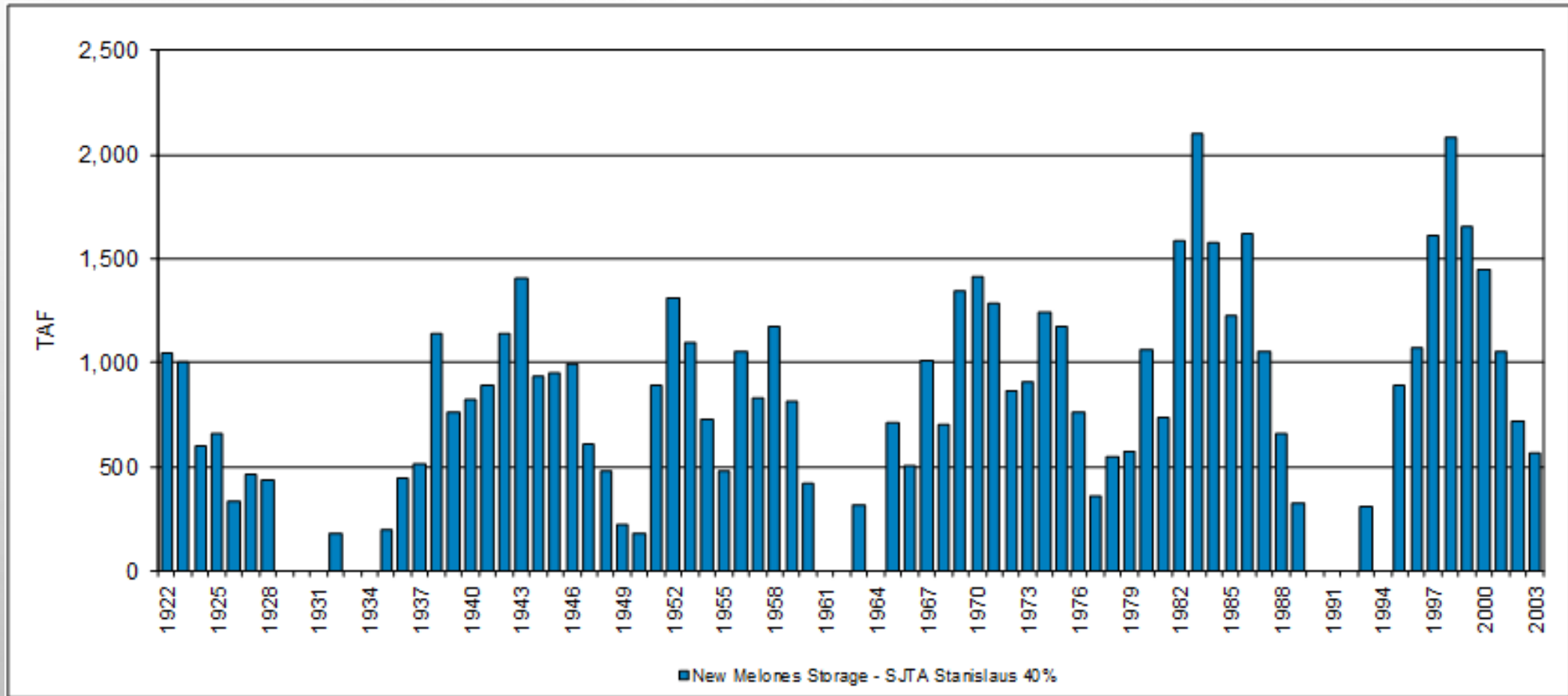
*Current: D-1641, RPA flows (Appx. 2-e), Dissolved Oxygen (D. Steiner)

New Melones Storage (End of Sept.) SED Results, 40% UIF*



*SED 40%: carryover storage, refill criteria, flow shifting
(SED, Appx. F1, Attachment 1, Table 28, p. 88-90 [Graph by D. Steiner])

New Melones Storage (End of Sept.) True 40%*



*True 40%: No carryover storage, no refill criteria, no flow shifting (D. Steiner)

Why is the True 40% UIF not in the SED?

- If reservoir constraints are excluded “it’s not going to be a very interesting result; I’m not sure if we would drain the reservoirs but we’d come close to it in some years and we’d lose all temperature control for many months.”

Les Grober, Bay-Delta Phase I Hearing, Nov. 29, 2016 (time, 1:17:30)

What if the real Project had been modelled?

- “I’m not sure what one would achieve with that what if because it would have such large redirected effects on temperature at other times of the year.”

Les Grober, Bay-Delta Phase I Hearing, Nov. 29, 2016 (time, 1:13:40)

If the Project is not feasible without non-plan components,
then what is the proposed solution?

State Water Board Proposed Solutions

More Objectives

- “operational objectives” need to be developed in a separate proceeding for supply, storage and temperature “to best protect beneficial uses” (SED, at F.1-31)
- “Staff thinking” was that these requirements are “better developed at a project level rather than imposed right at the water quality control plan level.”*

Change the Objectives

- The Program of Implementation states LSJR Flow Objectives can be changed via adaptive management to dispense with UIF and to shift flows outside Feb - June

*Erin Mahaney, Bay-Delta Phase I Hearing, Nov. 29, 2016 (time, 1:14:40)

The Proposed Solutions do not work

- Objectives cannot be created or changed without another WQCP hearing. (Water Code, § 13244)
- The Program of Implementation (POI) must achieve the objectives; it is not a tool for creating or changing objectives. (Water Code, § 13242)

The Plan is not done

- SED calls for development of more objectives for storage and temp. (SED, F.1-31)
- Plan defers critical decisions to the POI in violation of the Water Code
- Beneficial uses can only be protected through objectives, not through adaptive management measures in a POI
- This is NOT a Program vs. Project level CEQA issue; if the WQCP is adopted, the objectives must be “fully implement[ed]” (*State Water Resources Control Bd. Cases* (2006) 136 Cal.App.4th 674, 729 [Justice Robie])

What are the stated benefits to fisheries?

Species in Plan area*

- Fall-run Chinook salmon
- Spring-run Chinook salmon
- Central Valley steelhead
- Green sturgeon
- Delta smelt
- Longfin smelt
- Sacramento splittail
- Kern brook lamprey
- River lamprey
- California Roach
- Pacific lamprey
- Hardhead
- Rainbow trout
- Largemouth bass
- Striped bass
- White sturgeon
- American shad
- Kokanee

Species analyzed in SED

- Fall-run Chinook salmon

*SED, 7-9 to 7-14

What is the stated benefit to fisheries?

- Average of 1,103 fall-run Chinook Salmon (FRCS) production annually (SED, 19-84)
- Average annual production of C.V. FRCS is 707,598 (yrs. 1976-2014)*
- Increase of 0.0016, or 0.16% (less than a quarter of one percent)

*http://www.casalmon.org/PDFs/Chinookprod_CompleteDraft2015Reports6.30.16.pdf

What is the stated benefit to fisheries?

- At a rate of 40% ocean harvest, an additional 441 FRCS will be harvested
- Average dress weight of C.V. FRCS is 10.7 lbs*
- The price at the dock is \$5.54/lb (SED, 20-63)
- Economic benefit = \$26,141/year

* Review of 2015 Ocean Salmon Fisheries: Stock Assessment and Fishery Evaluation Document for the Pacific 20 Coast Salmon Fishery Management Plan.

What are the benefits to fisheries?

Year Type	Month	SBBASE	SBBASE	SBBASE	SBBASE
		FISH	FISH	FISH	FISH
		STANISLAUS CONFLUENCE	TUOLUMNE CONFLUENCE	MERCED CONFLUENCE	SJR AT MOSSDALE
W	June-95	725	-	-	766
W	June-96	-	-	8	148,338
W	June-97	-	-	24,544	26,138
W	June-98	-	-	-	99,076
AN	June-99	-	-	437	-
AN	June-00	-	-	6,724	1,260
D	June-01	-	-	-	80,702
D	June-02	2,604	-	-	4,783
BN	June-03	2,215	-	-	4,056
D	June-04	1,046	-	3,662	42,441
W	June-05	6	32	1,066	61,137
W	June-06	-	-	-	-
C	June-07	1,788	-	-	1,337
C	June-08	17	-	-	2
BN	June-09	382	-	3	-
AN	June-10	12	-	46	5,002

What are the benefits to fisheries?

Increment improvement with respect to SBBASE

SB40 (-) SBBASE

Year Type	Month	STANISLAUS CONFLUENCE	TUOLUMNE CONFLUENCE	MERCED CONFLUENCE	SJR AT MOSSDALE
W	June-95	(725)	-	-	(766)
W	June-96	-	2,441	96,910	(737)
W	June-97	-	-	133,978	310,881
W	June-98	-	-	-	8,440
AN	June-99	-	-	163,406	44,107
AN	June-00	-	-	47,998	120,027
D	June-01	435	-	16,323	(28,211)
D	June-02	(552)	-	62,347	46,347
BN	June-03	(1,277)	-	305,451	90,337
D	June-04	(79)	-	115,619	(1,474)
W	June-05	(6)	(32)	(1,066)	91,879
W	June-06	-	-	-	-
C	June-07	(8)	-	4,299	(1,089)
C	June-08	391	-	9,755	636
BN	June-09	(382)	-	(3)	1,143
AN	June-10	1,535	-	(46)	18,291
	Ave	(42)	151	59,686	43,738
	Max	1,535	2,441	305,451	310,881
	Min	(1,277)	(32)	(1,066)	(28,211)

Staff is backing away from SalSim

- In running SalSim, “we were surprised to see that it didn’t produce a lot of fish.” (time, 7:34:15)*
- SalSim “could be useful, but . . . it wasn’t useful.” (time, 7:53:30)*

*Les Grober, Bay-Delta Phase I Hearing, Nov. 29, 2016

Chinook Salmon Passage

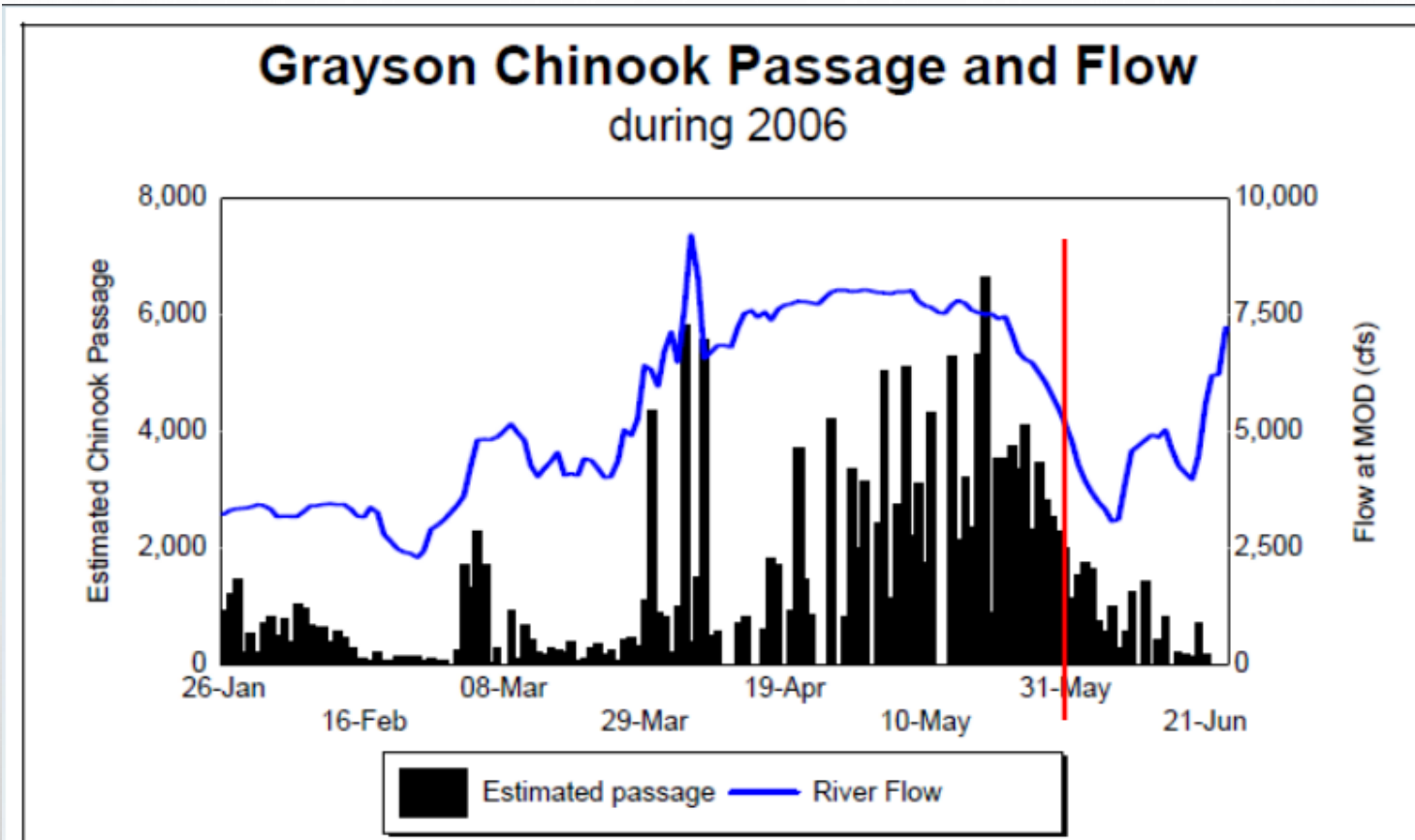


Figure 10. Daily estimated passage of unmarked Chinook salmon at Grayson and river flow at Modesto (MOD) during 2006.

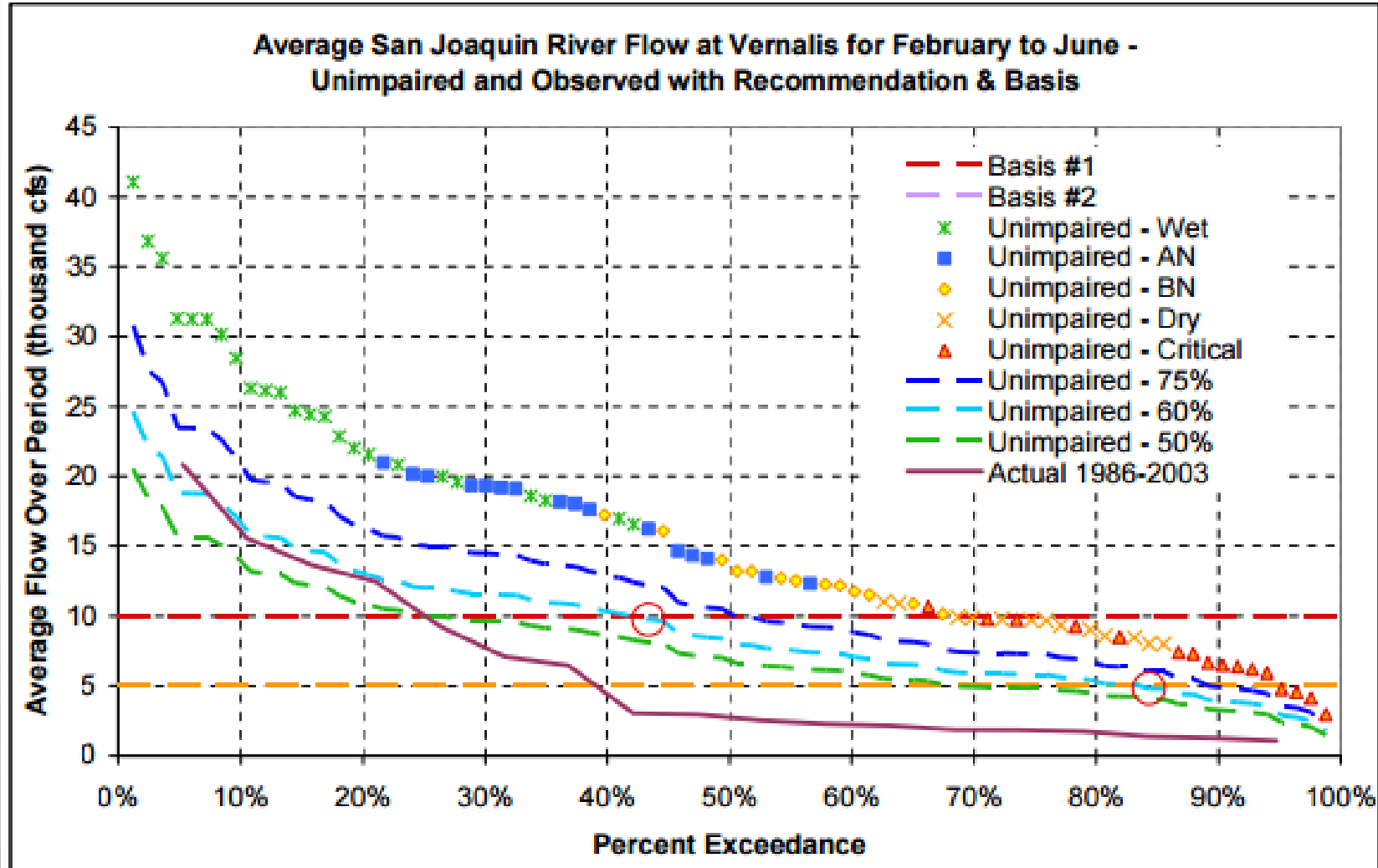
A Bait and Switch on Unimpaired Flow

The Bait

- The Delta Flow Criteria Report from 2010:
 - Avg. 5,000 cfs March – June at Vernalis will “substantially” improve FRCS survival and abundance*
 - Avg. 10,000 cfs March – June may achieve doubling of San Joaquin basin fall-run*
 - 60% UIF from February - June achieves an average of 5,000 cfs in 85% of years, and 10,000 cfs in 45% of years

*Delta Flow Criteria Report (2010), page 119, available at http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/final_rpt_080310.pdf

The Bait



The Switch

- The Delta Flow Criteria Report utilized the entire SJR watershed
 - Stanislaus, Tuolumne, Merced, Chowchilla, Fresno, Upper San Joaquin, Tulare Lake Basin outflow, San Joaquin Valley Floor, and San Joaquin Valley west side minor streams*
- WQCP uses only the Stanislaus, Tuolumne and Merced

*Delta Flow Criteria Report (2010), page 97

The Switch

- Achieving 10,000 cfs (~20,000 af/day) from February-June (150 days) would require 3,000,000 acre-feet
- Total average annual UIF on the 3 tributaries is 3,722,000 acre feet*
- 80% UIF from the 3 tributaries is needed to achieve the doubling goal

*SED, at 5-20, 5-24, 5-28

Transparency Issues

- Where is the modelling for the True 40% UIF
 - Staff reported to the Board, “we certainly have that.” *
 - But, “I’m not sure the level of detail.” *
 - “We’ll see how much additional effort” will be needed and “when we can get that to you.” *
 - SJTA still has not seen it.

*Les Grober, Bay-Delta Phase I Hearing, Nov. 29, 2016 (time, 1:16:55; 1:21:15; 1:21:40)

Transparency Issues

- Technical Workshops have not disclosed how the assumptions were developed for the modeling.
- Staff has directed presenters not to answer questions about development of modeling assumptions.