CENTRAL DELTA WATER AGENCY

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COUNSEL
Dante John Nomellini
Dante John Nomellini, Jr.

December 2, 2013

Via Email cwpcom@water.ca.gov

Department of Water Resources
California Water Plan Update

Re: California Water Plan Update 2013 - Comments

Ladies and Gentlemen:

Chapter 5. Conveyance-Delta

5-1 Line 14. The conveyance of water through the Delta supplies a portion of the water for more than ? million Californians.

5-1 Line 17. The most important and economic use in the Delta is agriculture not recreation. The sentence should read in addition to being a key agricultural region and a key recreational destination . . .

5-1 Line 31. The CVP does not provide water sufficient to irrigate one-third of California's agricultural land. Except as to water rights settlement water and some Class I deliveries, the CVP water is intended as a supplemental supply. The use of the word "sufficient" is not supportable.

5-1 Line 37. Again, the suggestion that CVP water meets the needs would appear to be an overstatement.

5-2, Line 14, et seq. The impact on the water flow in the Delta is not just the movement of water for operations of the SWP and CVP, but also the SWP and CVP upstream diversions to storage, the upstream delivery to contractors, the related inducement of greater upstream

consumptive use, the SWP and CVP depletion of unregulated flows and the export pumping inducement of salinity intrusion.

The failure of the SWP to develop the 5 million acre feet per annum of supplemental water to the Delta from the North Coast watersheds by the year 2000, and the failure of the SWP and CVP to construct a Valley Drain should be cited as major adverse factors affecting the Delta.

5-3 Lines 10 and 11. The words "and enhances" are left out. See WC 85054 and 85020(b).

5-3. The general discussion of the Delta Reform Act leaves out an essential part. Reduced reliance on the Delta by the SWP and CVP is a critical element in protecting and enhancing the unique cultural, recreational, natural resource, and agricultural values in the Delta. See WC 85021.

5-3 through 5-8. The discussion of the BDCP is clearly "predecisional". The Draft Environmental Impact Report/Environmental Impact Statement has not been released for comment and has not been approved. The discussion appears to simply be an advocacy argument for an illegal "predecision" by the Department of Water Resources. The discussion should be replaced with a more impartial and balanced discussion, including consideration of the following:

Isolated conveyance is inconsistent with WC 12205 and the promised retention of the common pool for both the interior delta and export water use.

The administrative draft indicates that during drier periods pumping from the South Delta would be the principal means for CVP and SWP exports and that such a condition would occur about 50% of the time.

There is no apparent relationship between the amount of wetland habitat in the Delta and the declines in the fisheries since the commencement of the SWP operations.

The effects of Sea Level rise at the Golden Gate are dampened by storage in the Bays and channels extending to the Delta and a more responsible discussion and analysis should be substituted. California Water Plan Update 2009, Vol 4 Reference Guide - Accounting for Climate Change at page 4 includes a graph showing 19 year Mean Tide Levels at the Golden Gate as leveling out or going down. The plan should include a more responsible discussion which also includes an updated analysis of the 19 Year Mean Tide levels at the Golden Gate as well as in the Delta.

These comments have been limited due to time limitations.

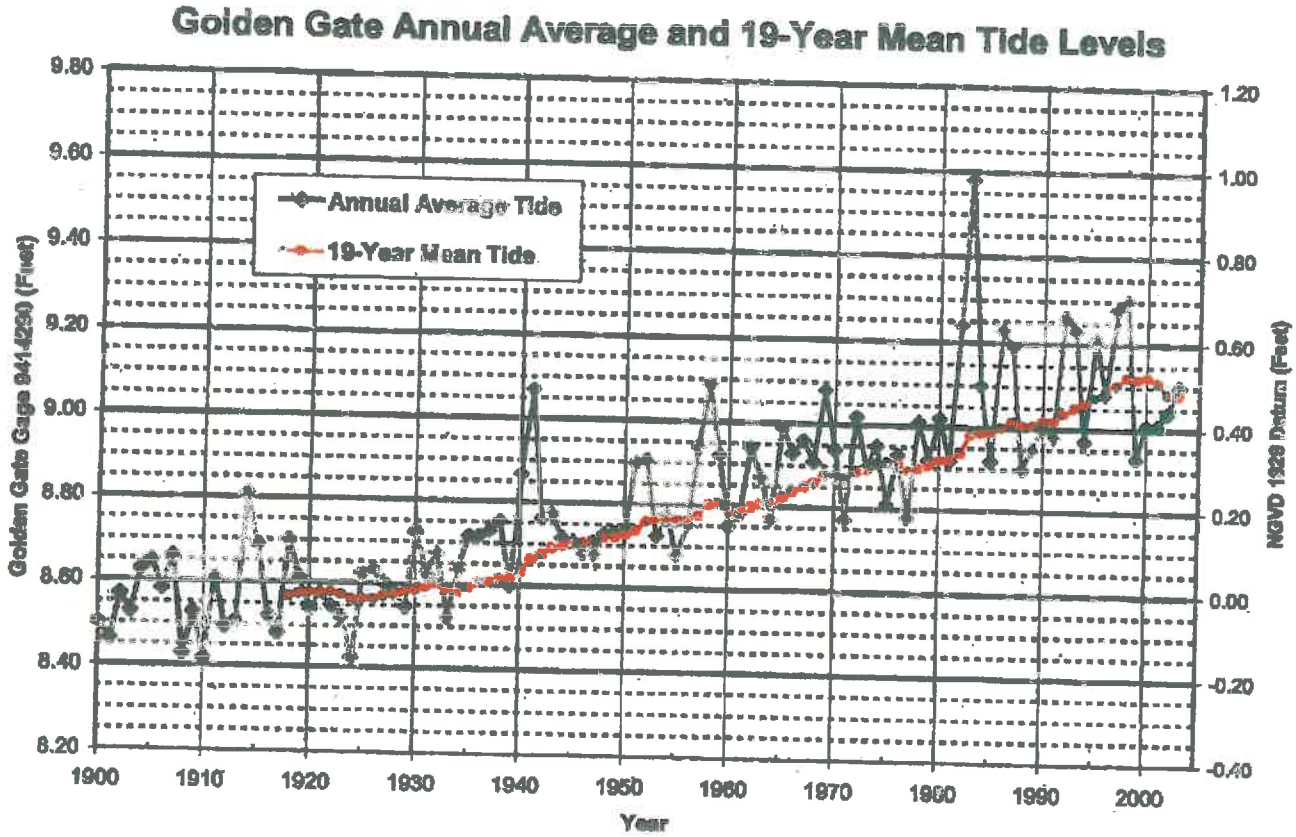
Yours very truly,

Dante John Nomellini
Secretary and Counsel

Attachments include the following:

(1) Exhibits showing the relationship of sea level at various locations along the Pacific Coast and at Alameda.
(2) Documents relating to the SWP and CVP promises and law limiting the projects to "surplus" water.
(3) Documents reflecting the lack of available water in the Delta Watershed and the need and plan for SWP supplies to come from the North Coast.
(4) Export pumping as related to fish declines.
(5) Excerpt from SWRCB D1485 finding that mitigation of fishery impacts would require shutting down of the export pumping.
(6) The response of the projects by increasing export pumping.
(7) Tiburon Report excerpts relating to the need to curtail diversions from the Delta System.
(8) Document showing Delta Reclamation Completed by 1925 unrelated to fish declines since late 1960's.
(9) Yolo Bypass uncertain salmon survival results.
(10) USACE Comments on projections of Delta levee failures.
(11) My calculations of projections versus actual failures since 2003.
(12) CDWA Framework Comments dated November 25, 2013.

Figure 3:



Note: This figure was updated 12/08/04

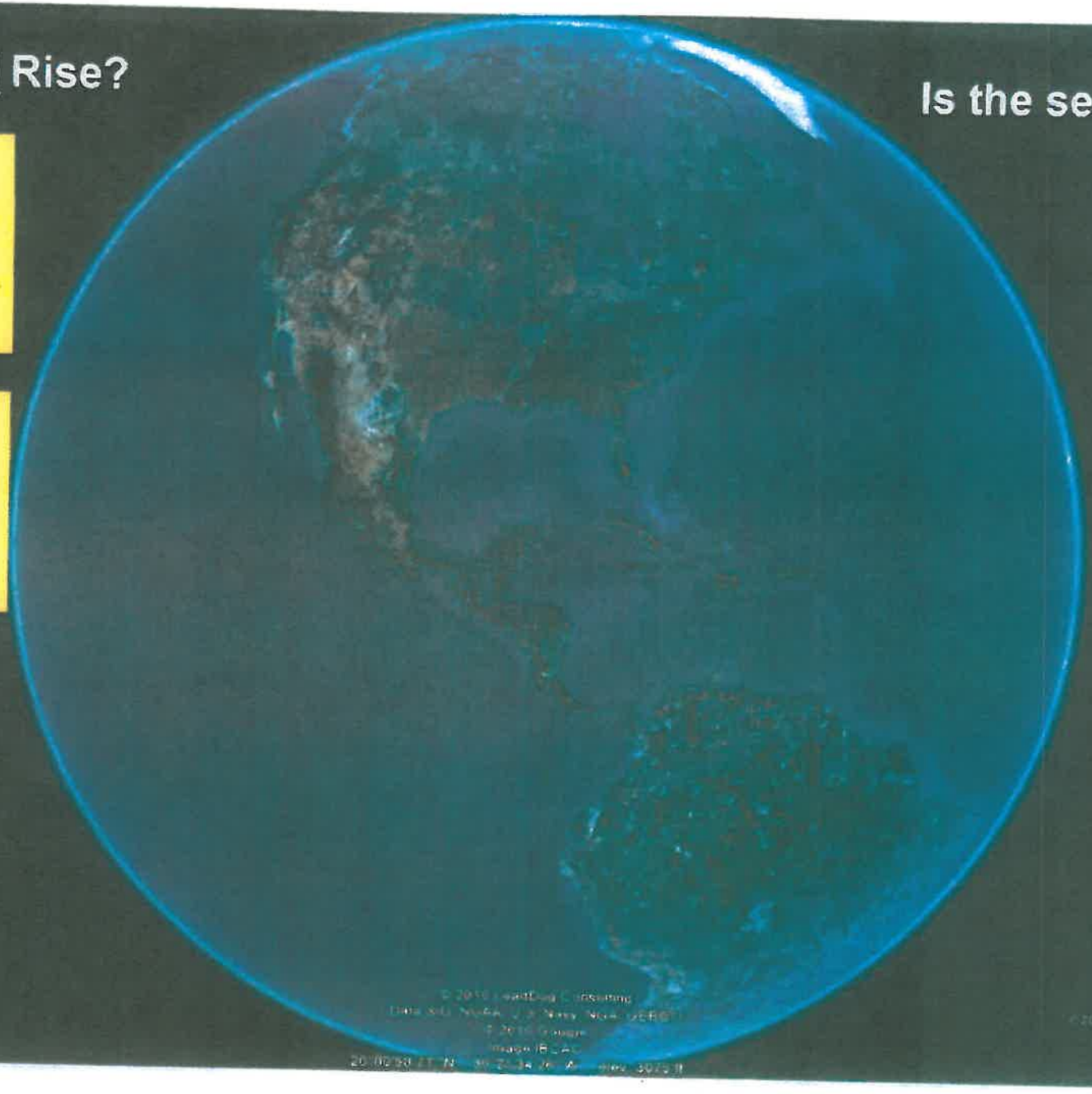
Sea Level Rise?

Golden Gate
Last 100 Years

7 92 inches

Alameda
Last 100 Years

3 24 inches



Is the sea level?

Sea Level Trends

Alabama
Alaska
California
Connecticut
Delaware
Florida
Georgia
Hawaii
Louisiana
Maine
Maryland
Massachusetts
New Jersey
New York
North Carolina
Oregon
Pennsylvania
Rhode Island
South Carolina
Texas
Virginia
Washington
Washington DC
Island Stations

Sea Level Trend Table in mm/yr

Sea Level Trend Table in feet/century

Global Stations

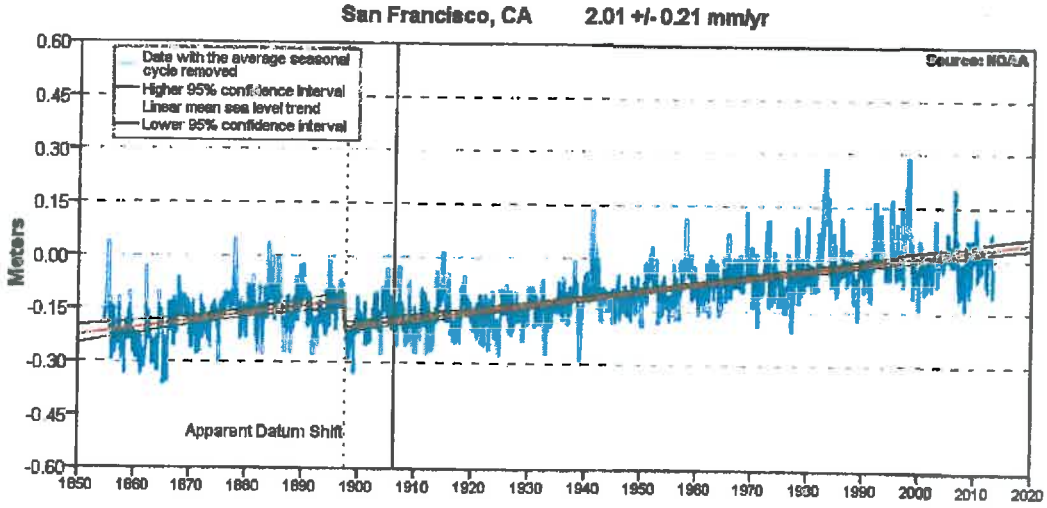
Global Sea Level Trend Table in mm/yr

Global Sea Level Trend Table in feet/century

Average Seasonal Cycle Data

Main Page

Mean Sea Level Trend
9414290 San Francisco, California

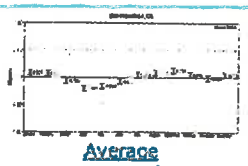


The mean sea level trend is 2.01 millimeters/year with a 95% confidence interval of +/- 0.21 mm/yr based on monthly mean sea level data from 1897 to 2006 which is equivalent to a change of 0.66 feet in 100 years.

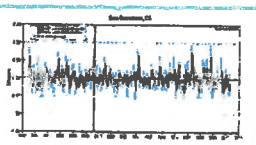
NEW! Updated Mean Sea Level Trends

The plot shows the monthly mean sea level without the regular seasonal fluctuations due to coastal ocean temperatures, salinities, winds, atmospheric pressures, and ocean currents. The long-term linear trend is also shown, including its 95% confidence interval. The plotted values are relative to the most recent Mean Sea Level datum established by CO-OPS. The calculated trends for all stations are available as a table in millimeters/year or a table in feet/century (0.3 meters = 1 foot).

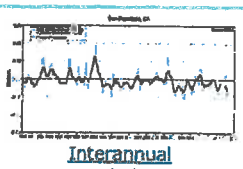
If present, solid vertical lines indicate times of any major earthquakes in the vicinity of the station and dashed vertical lines bracket any periods of questionable data.



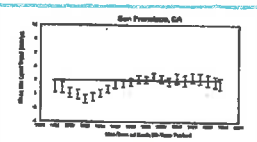
Average seasonal cycle



Interannual variation for all data



Interannual variation since 1990



Variation of 50-year mean sea level trends

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Sea Level Trends

Alabama
Alaska
California
Connecticut
Delaware
Florida
Georgia
Hawaii
Louisiana
Maine
Maryland
Massachusetts
New Jersey
New York
North Carolina
Oregon
Pennsylvania
Rhode Island
South Carolina
Texas
Virginia
Washington
Washington DC
Island Stations

Sea Level Trend Table in mm/yr

Sea Level Trend Table in feet/century

Global Stations

Global Sea Level Trend Table in mm/yr

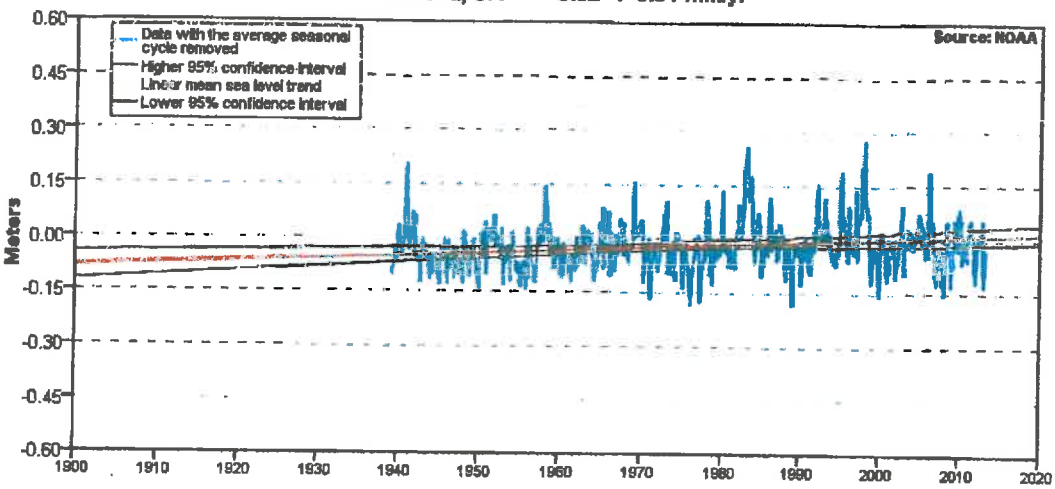
Global Sea Level Trend Table in feet/century

Average Seasonal Cycle Data

Main Page

Mean Sea Level Trend
9414750 Alameda, California

Alameda, CA 0.82 +/- 0.51 mm/yr

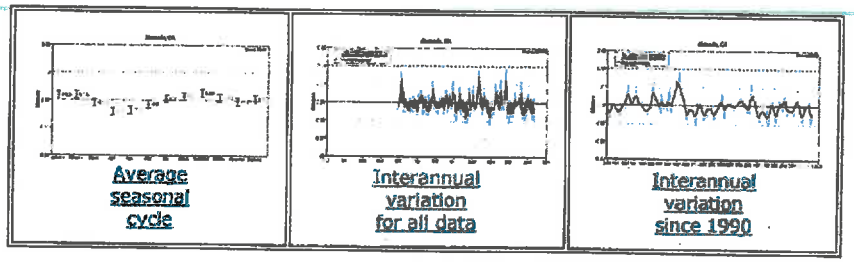


The mean sea level trend is 0.82 millimeters/year with a 95% confidence interval of +/- 0.51 mm/yr based on monthly mean sea level data from 1939 to 2006 which is equivalent to a change of 0.27 feet in 100 years.

NEW! Updated Mean Sea Level Trends

The plot shows the monthly mean sea level without the regular seasonal fluctuations due to coastal ocean temperatures, salinities, winds, atmospheric pressures, and ocean currents. The long-term linear trend is also shown, including its 95% confidence interval. The plotted values are relative to the most recent Mean Sea Level datum established by CO-OPS. The calculated trends for all stations are available as a table in millimeters/year or a table in feet/century (0.3 meters = 1 foot).

If present, solid vertical lines indicate times of any major earthquakes in the vicinity of the station and dashed vertical lines bracket any periods of questionable data.



Average seasonal cycle | Interannual variation for all data | Interannual variation since 1990

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Sea Level Trends

Alabama
Alaska
California
Connecticut
Delaware
Florida
Georgia
Hawaii
Louisiana
Maine
Maryland
Massachusetts
New Jersey
New York
North Carolina
Oregon
Pennsylvania
Rhode Island
South Carolina
Texas
Virginia
Washington
Washington DC
Island Stations

Sea Level Trend Table in mm/yr

Sea Level Trend Table in feet/century

Global Stations

Global Sea Level Trend Table in mm/yr

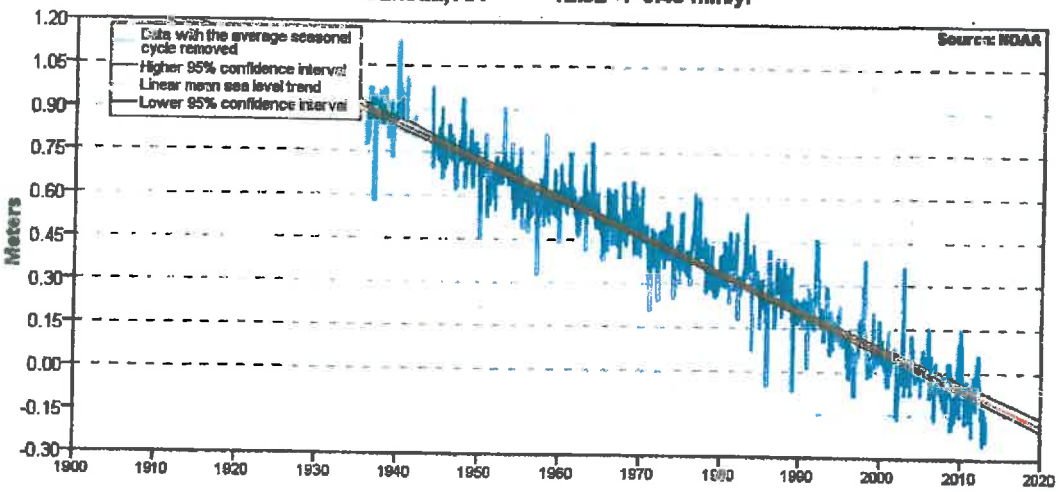
Global Sea Level Trend Table in feet/century

Average Seasonal Cycle Data

Main Page

Mean Sea Level Trend
9452210 Juneau, Alaska

Juneau, AK - 12.92 +/- 0.43 mm/yr



The mean sea level trend is -12.92 millimeters/year with a 95% confidence interval of +/- 0.43 mm/yr based on monthly mean sea level data from 1936 to 2006 which is equivalent to a change of -4.24 feet in 100 years.

NEW! Updated Mean Sea Level Trends

The plot shows the monthly mean sea level without the regular seasonal fluctuations due to coastal ocean temperatures, salinities, winds, atmospheric pressures, and ocean currents. The long-term linear trend is also shown, including its 95% confidence interval. The plotted values are relative to the most recent Mean Sea Level datum established by CO-OPS. The calculated trends for all stations are available as a table in millimeters/year or a table in feet/century (0.3 meters = 1 foot).

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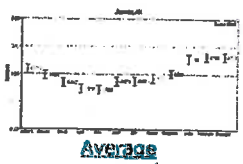
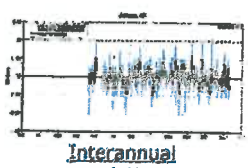
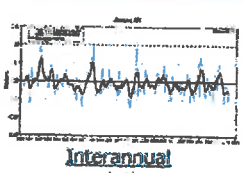


Average seasonal cycle



Interannual variation for all data



Interannual variation since 1990

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NOAA / National Ocean Service

Linear mean sea level (MSL) trends and 95% confidence intervals in feet/century

Station Name	First Year	Year Range	For all data to 2006		Previously Published Trends	
			MSL Trend	+/- 95% Confidence Interval	MSL Trend	+/- 95% Confidence Interval
Nawiliwili, HI	1955	52	0.50	0.19	0.50	0.24
Honolulu, HI	1905	102	0.49	0.08	0.49	0.09
Mokuoloe, HI	1957	50	0.43	0.24	0.37	0.30
Kahului, HI	1947	60	0.76	0.17	0.69	0.28
Hilo, HI	1927	80	1.07	0.12	1.10	0.13
Johnston Atoll	1947	57	0.25	0.18	0.22	0.20
Midway Atoll	1947	60	0.23	0.18	0.03	0.20
Guam, Marianas Islands	1993	14	2.77	2.91	0.03	0.58
Pago Pago, American Samoa	1948	59	0.68	0.29	0.49	0.36
Kwajalein, Marshall Islands	1946	61	0.47	0.27	0.34	0.32
Chuuk, Caroline Islands	1947	49	0.20	0.58	0.22	0.58
Wake Island	1950	57	0.63	0.19	0.62	0.23
Bermuda	1932	75	0.67	0.15	0.60	0.19
Eastport, ME	1929	78	0.66	0.07	0.70	0.08
Bar Harbor, ME	1947	60	0.67	0.09	0.72	0.11
Portland, ME	1912	95	0.60	0.05	0.63	0.06
Seavey Island, ME	1926	76	0.58	0.10	0.57	0.11
Boston, MA	1921	86	0.86	0.06	0.87	0.07
Woods Hole, MA	1932	75	0.86	0.07	0.85	0.08
Nantucket Island, MA	1965	42	0.97	0.15	0.98	0.20
Newport, RI	1930	77	0.85	0.06	0.84	0.07
Providence, RI	1938	69	0.64	0.09	0.62	0.11
New London, CT	1938	69	0.74	0.08	0.70	0.10
Bridgeport, CT	1964	43	0.84	0.19	0.85	0.26
Montauk, NY	1947	60	0.91	0.10	0.85	0.12
Port Jefferson, NY	1957	36	0.80	0.25	0.80	0.25
Kings Point, NY	1931	76	0.77	0.08	0.79	0.09
The Battery, NY	1856	151	0.91	0.03	0.91	0.03
Sandy Hook, NJ	1932	75	1.28	0.08	1.27	0.10
Atlantic City, NJ	1911	96	1.31	0.06	1.31	0.07
Cape May, NJ	1965	42	1.33	0.24	1.27	0.34
Philadelphia, PA	1900	107	0.92	0.07	0.90	0.08
Reedy Point, DE	1956	51	1.14	0.22		
Lewes, DE	1919	88	1.05	0.09	1.04	0.11
Ocean City, MD	1975	32	1.80	0.55		
Cambridge, MD	1943	64	1.14	0.13	1.15	0.15
Chesapeake City, MD	1972	35	1.24	0.51		
Baltimore, MD	1902	105	1.01	0.05	1.02	0.05
Annapolis, MD	1928	79	1.13	0.08	1.16	0.09
Solomons Island, MD	1937	70	1.12	0.09	1.08	0.11
Washington, DC	1924	83	1.04	0.11	1.03	0.13
Kiptopeke, VA	1951	56	1.14	0.14	1.18	0.17

Colonial Beach, VA	1972	32	1.57	0.40	1.73	0.46
Lewisetta, VA	1974	33	1.63	0.34	1.59	0.50
Gloucester Point, VA	1950	54	1.25	0.15	1.30	0.17
Sewells Point, VA	1927	80	1.46	0.09	1.45	0.10
Portsmouth, VA	1935	53	1.23	0.15	1.23	0.15
Chesapeake Bay Bridge Tunnel, VA	1975	32	1.98	0.37	2.30	0.56
Oregon Inlet Marina, NC	1977	30	0.92	0.58		
Beaufort, NC	1953	54	0.84	0.14	1.22	0.41
Wilmington, NC	1935	72	0.68	0.13	0.73	0.16
Southport, NC	1933	74	0.68	0.15		
Springmaid Pier, SC	1957	50	1.34	0.25	1.70	0.31
Charleston, SC	1921	86	1.03	0.08	1.08	0.09
Fort Pulaski, GA	1935	72	0.98	0.11	1.00	0.13
Fernandina Beach, FL	1897	110	0.66	0.07	0.67	0.08
Mayport, FL	1928	79	0.79	0.10	0.80	0.12
Daytona Beach Shores, FL	1925	59	0.76	0.21		
Miami Beach, FL	1931	51	0.78	0.14	0.78	0.14
Vaca Key, FL	1971	36	0.91	0.20	0.85	0.28
Key West, FL	1913	94	0.74	0.05	0.74	0.06
Naples, FL	1965	42	0.66	0.20	0.68	0.28
Fort Myers, FL	1965	42	0.79	0.21	0.75	0.29
St. Petersburg, FL	1947	60	0.78	0.10	0.79	0.12
Clearwater Beach, FL	1973	34	0.80	0.26	0.91	0.42
Cedar Key, FL	1914	93	0.59	0.06	0.61	0.07
Apalachicola, FL	1967	40	0.45	0.29	0.50	0.38
Panama City, FL	1973	34	0.25	0.27	0.10	0.41
Pensacola, FL	1923	84	0.69	0.09	0.70	0.10
Dauphin Island, AL	1966	41	0.98	0.28	0.96	0.38
Grand Isle, LA	1947	60	3.03	0.19	3.23	0.22
Eugene Island, LA	1939	36	3.17	0.41	3.20	0.41
Sabine Pass, TX	1958	49	1.86	0.35	2.15	0.46
Galveston Pier 21, TX	1908	99	2.10	0.09	2.13	0.10
Galveston Pleasure Pier, TX	1957	50	2.24	0.27	2.42	0.34
Freeport, TX	1954	53	1.43	0.37	1.93	0.48
Rockport, TX	1948	59	1.69	0.22	1.51	0.26
Port Mansfield, TX	1963	44	0.63	0.32	0.67	0.48
Padre Island, TX	1958	49	1.14	0.25	1.13	0.36
Port Isabel, TX	1944	63	1.19	0.14	1.11	0.17
San Diego, CA	1906	101	0.68	0.07	0.71	0.07
La Jolla, CA	1924	83	0.68	0.09	0.73	0.11
Newport Beach, CA	1955	39	0.73	0.34	0.73	0.34
Los Angeles, CA	1923	84	0.27	0.09	0.28	0.10
Santa Monica, CA	1933	74	0.48	0.13	0.52	0.16
Rincon Island, CA	1962	29	1.06	0.54	1.06	0.54
Santa Barbara, CA	1973	34	0.41	0.60	0.91	0.64
Port San Luis, CA	1945	62	0.26	0.16	0.30	0.20
Monterey, CA	1973	34	0.44	0.44	0.61	0.70
San Francisco, CA	1897	110	0.66	0.07	0.70	0.09

Redwood City, CA	1974	33	0.68	1.02		
Alameda, CA	1939	68	0.27	0.17	0.29	0.21
Point Reyes, CA	1975	32	0.69	0.50	0.82	0.82
Port Chicago, CA	1976	31	0.68	0.90		
North Spit, CA	1977	30	1.55	0.52		
Crescent City, CA	1933	74	-0.21	0.12	-0.16	0.14
Port Orford, OR	1977	30	0.06	0.71		
Charleston, OR	1970	37	0.42	0.38	0.57	0.56
South Beach, OR	1967	40	0.89	0.34	1.15	0.47
Garibaldi, OR	1970	37	0.65	0.60		
Astoria, OR	1925	82	-0.10	0.13	-0.05	0.15
Toke Point, WA	1973	34	0.52	0.45	0.93	0.68
Neah Bay, WA	1934	73	-0.53	0.12	-0.46	0.14
Port Angeles, WA	1975	32	0.06	0.46	0.49	0.71
Port Townsend, WA	1972	35	0.65	0.38	0.93	0.57
Seattle, WA	1898	109	0.68	0.06	0.69	0.06
Cherry Point, WA	1973	34	0.27	0.39	0.46	0.60
Friday Harbor, WA	1934	73	0.37	0.11	0.41	0.13
Ketchikan, AK	1919	88	-0.06	0.09	-0.04	0.10
Sitka, AK	1924	83	-0.67	0.10	-0.71	0.14
Juneau, AK	1936	71	-4.24	0.14	-4.16	0.16
Skagway, AK	1944	63	-5.62	0.21	-5.47	0.27
Yakutat, AK	1979	28	-3.79	0.45	-1.89	0.17
Cordova, AK	1979	28	0.84	0.45	2.29	0.39
Valdez, AK	1979	28	-1.61	0.51	-0.11	0.65
Seward, AK	1964	43	-0.57	0.30	-0.48	0.39
Seldovia, AK	1964	43	-3.10	0.36	-3.26	0.50
Nikiski, AK	1973	34	-3.21	0.49	-3.51	0.76
Anchorage, AK	1972	35	0.29	0.51	0.91	0.75
Kodiak Island, AK	1975	32	-3.42	0.44	-3.96	0.68
Sand Point, AK	1972	35	0.30	0.43	0.02	0.60
Adak Island, AK	1957	50	-0.90	0.18	-0.86	0.23
Unalaska, AK	1957	50	-1.88	0.22	-2.11	0.28
Guantanamo Bay, Cuba	1937	35	0.54	0.26	0.54	0.26
Lime Tree Bay, Virgin Islands	1977	30	0.57	0.40		
Charlotte Amalie, Virgin Islands	1975	32	0.39	0.32	0.16	0.47
San Juan, Puerto Rico	1962	45	0.54	0.17	0.47	0.23
Magueyes Island, Puerto Rico	1955	52	0.44	0.12	0.41	0.16

On October 12, 1948, Secretary of the Interior Krug, in a public speech at Oroville, stated: "Let me state, clearly and finally, the Interior Department is fully and completely committed to the policy that no water which is needed in the Sacramento Valley will be sent out of it." He added: "There is no intent on the part of the Bureau of Reclamation ever to divert from the Sacramento Valley a single acre-foot of water which might be used in the valley now or later." (Staff 9, p. 799 & SRDWA 19).

On November 15, 1949, Regional Director Richard L. Boke reaffirmed these main policy statements and summarized them in a letter to Congressman Clair Engle, stating, "We believe the foregoing is a summary of the main policy statements by Government officials on the subject of importation of Sacramento Valley water to the San Joaquin Valley." (Staff 9, p. 799 & SRDWA 19).

PROMISE NOT KEPT

D 990 at pages 70 and 71

Title THE CALIFORNIA WATER RESOURCES DEVELOPMENT BOND ACT

Year/Election 1960 general

Proposition type bond (leg)

Popular vote Yes: 3,008,328 (51.5%); No: 2,834,384 (48.5%)

Pass/Fail Pass

Summary This act provides for a bond issue of one billion, seven hundred fifty million dollars ($1,750,000,000) to be used by the Department of Water Resources for the development of the water resources of the State.

For

Argument in Favor of California Water Resources Development Bond Act

Your vote on this measure will decide whether California will continue to prosper.

This Act, if approved, will launch the statewide water development program which will meet present and future demands of all areas of California. The program will not be a burden on the taxpayer; no new state taxes are involved; the bonds are repaid from project revenues, through the sale of water and power. In other words, it will pay for itself. The bonds will be used over a period of many years and will involve an approximate annual expenditure averaging only $75 million, as compared, for example with $600 million a year we spend on highways.

Existing facilities for furnishing water for California's needs will soon be exhausted because of our rapid population growth and industrial and agricultural expansion. We now face a further critical loss in the Colorado River supply. Without the projects made possible by this Act, we face a major water crisis. We can stand no more delay.

If we fail to act now to provide new sources of water, land development in the great San Joaquin Valley will slow to a halt by 1965 and the return of cultivated areas to wasteland will begin. In southern California, the existing sources of water which have nourished its tremendous expansion will reach capacity by 1970 and further development must wholly cease. In northern California desperately needed flood control and water supplies for many local areas will be denied.

This Act will assure construction funds for new water development facilities to meet California's requirements now and in the future. No area will be deprived of water to meet the needs of another. Nor will any area be asked to pay for water delivered to another.

To meet questions which concerned, southern California, the bonds will finance completion of all facilities needed, as described in the Act. Contracts for delivery of water may not be altered by the Legislature. The tap will be open, and no amount of political maneuvering can shut it off.

Under this Act the water rights of northern California will remain securely protected. In addition, sufficient money is provided for construction of local projects to meet the pressing needs for flood control, recreation and water deliveries in the north.

A much needed drainage system and water supply will be provided in the San Joaquin Valley.

Construction here authorized will provide thousands of jobs. And the program will nourish tremendous industrial and farm and urban expansion which will develop an ever-growing source of employment and economic prosperity for Californians.

Our Legislature has appropriated millions of dollars for work in preparation, and construction is now underway. It would be tragic if this impressive start toward solution of our water problems were now abandoned.

If we fail to act now to insure completion of this constructive program, serious existing water shortages will only get worse. The success of our State is at stake. Vote "Yes" for water for people, for progress, for prosperity!

§ 11460. Prior right to watershed water

In the construction and operation by the department of any project under the provisions of this part a watershed or area wherein water originates, or an area immediately adjacent thereto which can conveniently be supplied with water therefrom, shall not be deprived by the department directly or indirectly of the prior right to all of the water reasonably required to adequately supply the beneficial needs of the watershed, area, or any of the inhabitants or property owners therein.

(Added by Stats.1943, c. 370, p. 1896. Amended by Stats.1957, c. 1932, p. 3410, § 296.)

are fully redeemed and paid. *(Added by Stats.1943, c. 370, p. 1896.)*

§ 11454. Rates and charges; contracts; indemnification provisions

Under such regulations and upon such terms, limitations, and conditions as it prescribes, the department may do any of the following:

(a) Fix and establish the prices, rates, and charges at which the resources and facilities made available by the project shall be sold and disposed of.

(b)(1) Enter into contracts and agreements and do any and all things which in its judgment are necessary, convenient, or expedient for the accomplishment of the purposes and objects of this part.

(2) The contracts and agreements may include provisions for the indemnification of parties with whom the department contracts as necessary to accomplish the purposes and objects of this part, except that the contracts and agreements may not include provisions for the indemnification, including indemnification for any costs of defense, of any party to those contracts or agreements for that party's acts or omissions involving negligence, gross negligence, recklessness, or willful misconduct or for acts or omissions involving negligence, gross negligence, recklessness, or willful misconduct on the part of that party's employees, agents, or contractors.

(3) The Legislature finds and declares that the amendments made to this subdivision during the 1997 portion of the 1997–98 Regular Session are declaratory of existing law. *(Added by Stats.1943, c. 370, p. 1896. Amended by Stats.1957, c. 1932, p. 3410, § 293; Stats.1997, c. 566 (S.B.543), § 1, eff. Sept. 29, 1997.)*

§ 11455. Revenue requirements

The department shall enter into such contracts and fix and establish such prices, rates, and charges so as at all times to provide revenue which will afford sufficient funds to pay all costs of operation and maintenance of the works authorized by this part, together with necessary repairs and replacements thereto, and which will provide at all times sufficient funds for redemption of all bonds and payment of interest thereon, as and when such costs and charges become due and payable. *(Added by Stats. 1943, c. 370, p. 1896. Amended by Stats.1957, c. 1932, p. 3410, § 294.)*

ARTICLE 3. LIMITATION OF POWERS

Section
11460. Prior right to watershed water.
11461. Purchase of watershed water rights.
11462. Creation of new property rights.
11463. Exchange of watershed water.
11464. Conveyance of property.
11465. Revision of charges, established by contract.

§ 11460. Prior right to watershed water

In the construction and operation by the department of any project under the provisions of this part a watershed or area wherein water originates, or an area immediately adjacent thereto which can conveniently be supplied with water therefrom, shall not be deprived by the department directly or indirectly of the prior right to all of the water reasonably required to adequately supply the beneficial needs of the watershed, area, or any of the inhabitants or property owners therein. *(Added by Stats.1943, c. 370, p. 1896. Amended by Stats.1957, c. 1932, p. 3410, § 296.)*

§ 11461. Purchase of watershed water rights

In no other way than by purchase or otherwise as provided in this part shall water rights of a watershed, area, or the inhabitants be impaired or curtailed by the department, but the provisions of this article shall be strictly limited to the acts and proceedings of the department, as such, and shall not apply to any persons or state agencies. *(Added by Stats.1943, c. 370, p. 1896. Amended by Stats.1957, c. 1932, p. 3410, § 297.)*

§ 11462. Creation of new property rights

The provisions of this article shall not be so construed as to create any new property rights other than against the department as provided in this part or to require the department to furnish to any person without adequate compensation therefor any water made available by the construction of any works by the department. *(Added by Stats.1943, c. 370, p. 1896. Amended by Stats.1957, c. 1932, p. 3410, § 298.)*

§ 11463. Exchange of watershed water

In the construction and operation by the department of any project under the provisions of this part, no exchange of the water of any watershed or area for the water of any other watershed or area may be made by the department unless the water requirements of the watershed or area in which the exchange is made are first and at all times met and satisfied to the extent that the requirements would have been met were the exchange not made, and no right to the use of water shall be gained or lost by reason of any such exchange. *(Added by Stats.1943, c. 370, p. 1896. Amended by Stats.1957, c. 1932, p. 3411, § 299.)*

§ 11464. Conveyance of property

No water right, reservoir, conduit, or facility for the generation, production, transmission, or distribution of electric power, acquired by the department shall ever be sold, granted, or conveyed by the department so that the department thereby is divested of the title to and ownership of it. *(Added by Stats.1943, c. 370, p. 1896. Amended by Stats.1957, c. 1932, p. 3411, § 300.)*

§ 11465. Revision of charges, established by contract

The department shall not make any change, alteration, or revision of any rates, prices, or charges established by any contract entered into pursuant to this part except as

applicable, and with like effect. Where the law applicable to such agency does not set forth a procedure for the judicial determination of the validity of the public agency's bonds, the action shall be had as in the case of the judicial determination of the general obligation bonds of irrigation districts under the Irrigation District Law (Division 11 (commencing with Section 20500) of this code), as it may now or hereafter be amended, as nearly as the same may be applicable, and with like effect. *(Added by Stats.1966, 1st Ex.Sess., c. 42, p. 351, § 1, eff. May 2, 1966.)*

Part 4.5

SACRAMENTO–SAN JOAQUIN DELTA

Chapter		Section
1.	General Policy	12200
2.	The Delta	12220
3.	Sacramento-San Joaquin Delta Levees	12225

CHAPTER 1. GENERAL POLICY

Section
12200. Legislative findings and declaration.
12201. Necessity of maintenance of water supply.
12202. Salinity control and adequate water supply; substitute water supply; delivery.
12203. Diversion of waters from channels of delta.
12204. Exportation of water from delta.
12205. Storage of water; integration of operation and management of release of water.

§ 12200. Legislative findings and declaration

The Legislature hereby finds that the water problems of the Sacramento-San Joaquin Delta are unique within the State; the Sacramento and San Joaquin Rivers join at the Sacramento-San Joaquin Delta to discharge their fresh water flows into Suisun, San Pablo and San Francisco Bays and thence into the Pacific Ocean; the merging of fresh water with saline bay waters and drainage waters and the withdrawal of fresh water for beneficial uses creates an acute problem of salinity intrusion into the vast network of channels and sloughs of the Delta; the State Water Resources Development System has as one of its objectives the transfer of waters from water-surplus areas in the Sacramento Valley and the north coastal area to water-deficient areas to the south and west of the Sacramento-San Joaquin Delta via the Delta; water surplus to the needs of the areas in which it originates is gathered in the Delta and thereby provides a common source of fresh water supply for water-deficient areas. It is, therefore, hereby declared that a general law cannot be made applicable to said Delta and that the enactment of this law is necessary for the protection, conservation, development, control and use of the waters in the Delta for the public good. *(Added by Stats.1959, c. 1766, p. 4247, § 1.)*

§ 12201. Necessity of maintenance of water supply

The Legislature finds that the maintenance of an adequate water supply in the Delta sufficient to maintain and expand agriculture, industry, urban, and recreational development in the Delta area as set forth in Section 12220, Chapter 2, of this part, and to provide a common source of fresh water for export to areas of water deficiency is necessary to the peace, health, safety and welfare of the people of the State, except that delivery of such water shall be subject to the provisions of Section 10505 and Sections 11460 to 11463, inclusive, of this code. *(Added by Stats.1959, c. 1766, p. 4247, § 1.)*

§ 12202. Salinity control and adequate water supply; substitute water supply; delivery

Among the functions to be provided by the State Water Resources Development System, in coordination with the activities of the United States in providing salinity control for the Delta through operation of the Federal Central Valley Project, shall be the provision of salinity control and an adequate water supply for the users of water in the Sacramento-San Joaquin Delta. If it is determined to be in the public interest to provide a substitute water supply to the users in said Delta in lieu of that which would be provided as a result of salinity control no added financial burden shall be placed upon said Delta water users solely by virtue of such substitution. Delivery of said substitute water supply shall be subject to the provisions of Section 10505 and Sections 11460 to 11463, inclusive, of this code. *(Added by Stats.1959, c. 1766, p. 4247, § 1.)*

§ 12203. Diversion of waters from channels of delta

It is hereby declared to be the policy of the State that no person, corporation or public or private agency or the State or the United States should divert water from the channels of the Sacramento-San Joaquin Delta to which the users within said Delta are entitled. *(Added by Stats.1959, c. 1766, p. 4249, § 1.)*

§ 12204. Exportation of water from delta

In determining the availability of water for export from the Sacramento-San Joaquin Delta no water shall be exported which is necessary to meet the requirements of Sections 12202 and 12203 of this chapter. *(Added by Stats.1959, c. 1766, p. 4249, § 1.)*

§ 12205. Storage of water; integration of operation and management of release of water

It is the policy of the State that the operation and management of releases from storage into the Sacramento-San Joaquin Delta of water for use outside the area in which such water originates shall be integrated to the maximum extent possible in order to permit the fulfillment of the objectives of this part. *(Added by Stats.1959, c. 1766, p. 4249, § 1.)*

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

Bulletin No. 76

REPORT TO THE
CALIFORNIA STATE LEGISLATURE

ON THE

DELTA WATER FACILITIES

AS AN INTEGRAL FEATURE OF

THE STATE WATER RESOURCES DEVELOPMENT SYSTEM

STATEMENT OF CLARIFICATION

This preliminary edition presents a comparison of alternative solutions to the Delta problems. This bulletin shows that the Single Purpose Delta Water Project is the essential minimum project for successful operation of the State Water Facilities. This bulletin also presents, for local consideration, optional modifications of the Single Purpose Delta Water Project which would provide additional local benefits.

The evaluation of project accomplishments, benefit-cost ratios, and costs of project services, are intended only to indicate the relative merits of these solutions and should not be considered in terms of absolute values. Benefits related to recreation are evaluated for comparative purposes. Detailed recreation studies, presently in progress, will indicate specific recreation benefits.

Subsequent to local review and public hearings on this preliminary edition, a final edition will be prepared setting forth an adopted plan. The adopted plan will include, in addition to the essential minimum facilities, those justifiable optional modifications requested by local entities.

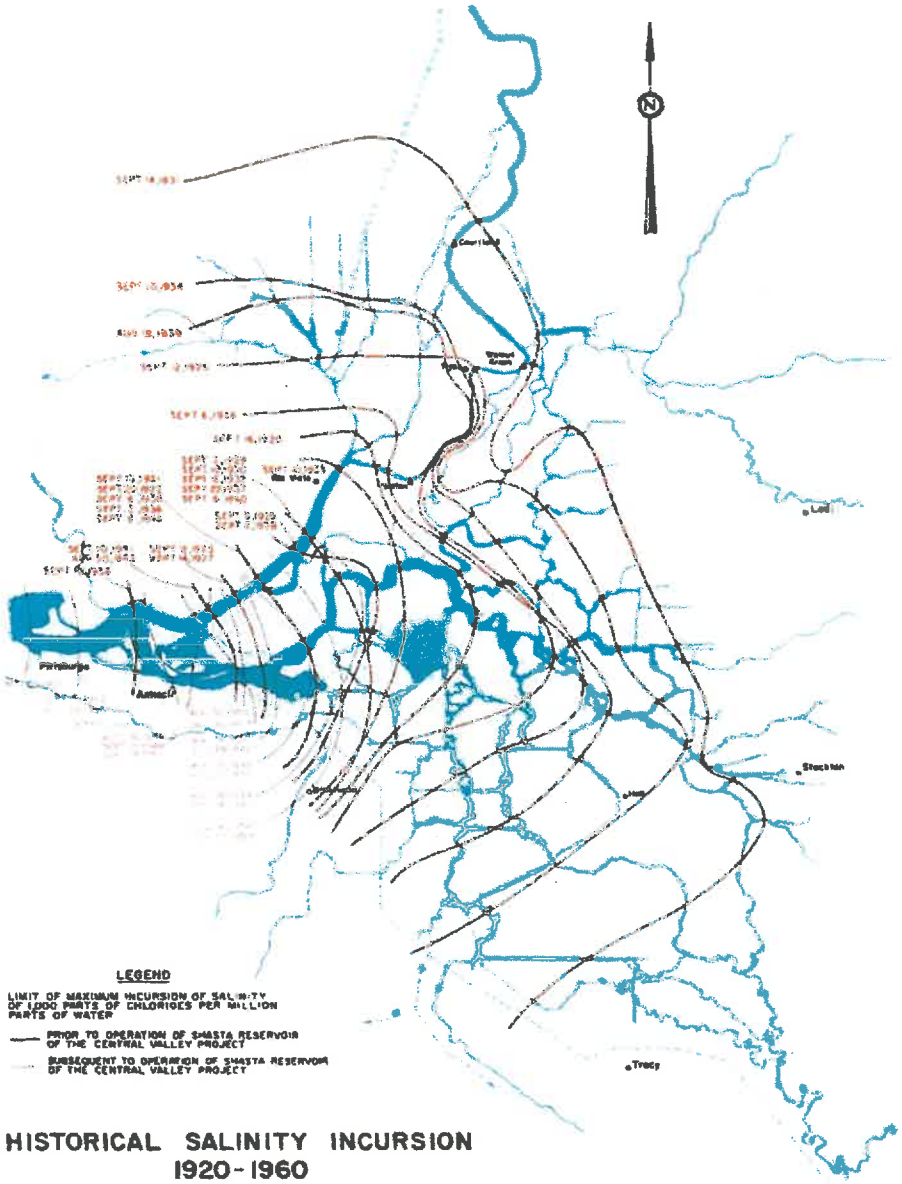
John A. Wilson

EDMUND G. BROWN
Governor

HARVEY O. BANKS
Director

December, 1960

Delta Problems — salinity incursion and water supplies

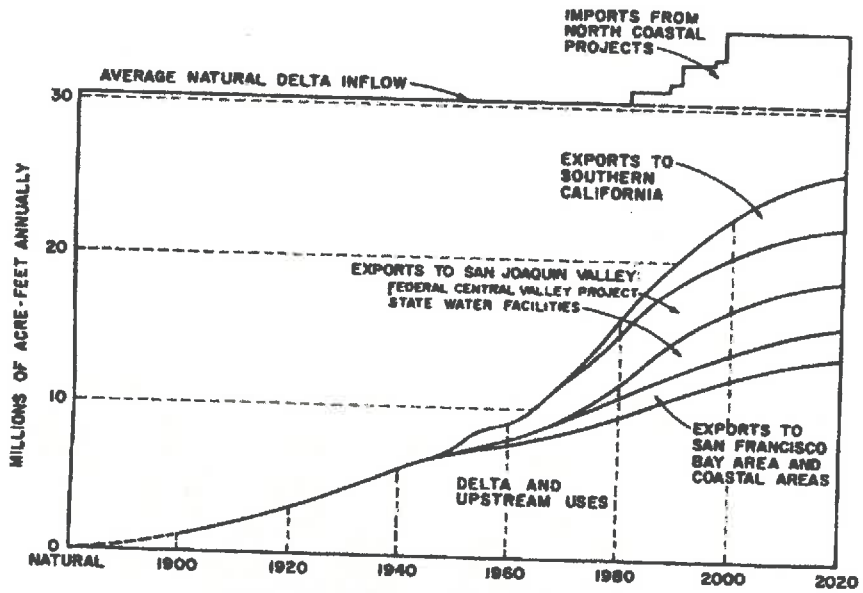


HISTORICAL SALINITY INCURSION
1920-1960

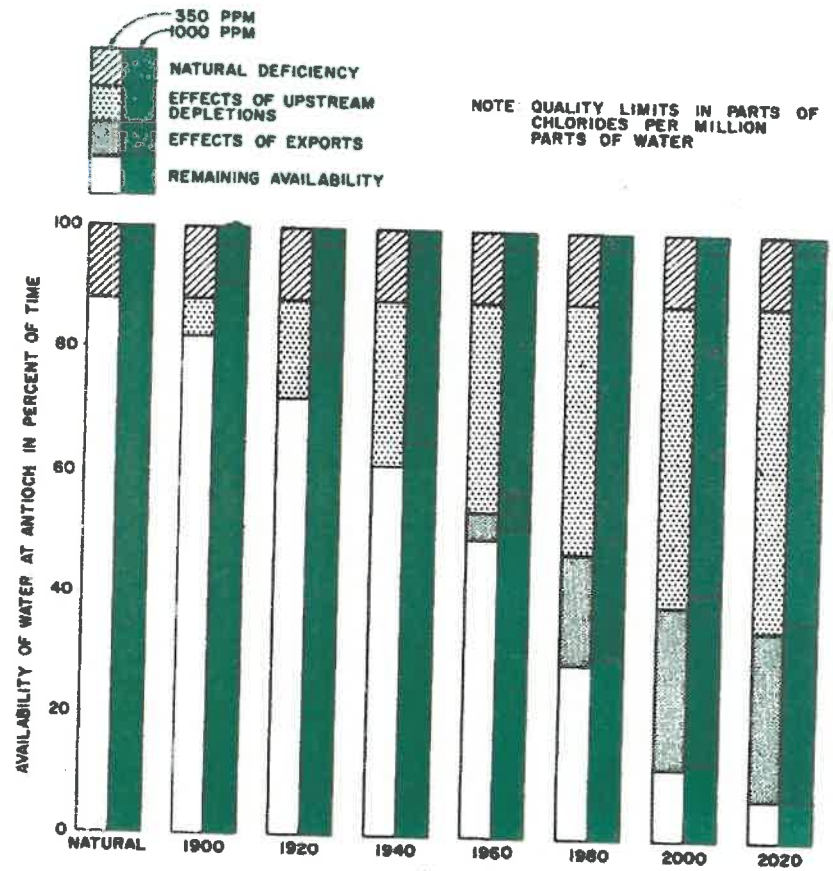
Salinity incursion into the Delta results from the flooding and ebbing of ocean tides through the San Francisco Bay and Delta system during periods when the fresh water outflow from the Delta is insufficient to repel the saline water. The natural fresh water outflow from the Central Valley was historically inadequate to repel salinity during summer months of some years. The first known record of salinity encroachment into the Delta was reported by Cmdr. Ringgold, U. S. Navy, in August 1841, whose party found the water at the site of the present city of Antioch very brackish and unfit for drinking. Since that time, and particularly after the turn of the century, with expanding upstream water use salinity incursion has become an increasingly greater problem in Delta water supplies. The maximum recorded extent of salinity incursion happened in 1931, when ocean salts reached Stockton. Since 1944 extensive incursion has been repulsed much of the time by fresh water releases from Central Valley Project storage in Shasta and Folsom Reservoirs. Without such releases, saline water would have spread through about 90 percent of the Delta channels in 1955 and 1959. Although upstream uses might not have reached present levels in the absence of the Central Valley Project, salinity problems would still have been very serious during most years.

Further increase in water use in areas tributary to the Delta will worsen the salinity incursion problem and complicate the already complex water rights situation. To maintain and expand the economy of the Delta, it will be necessary to provide an adequate supply of good quality water and protect the lands from the effects of salinity incursion. In 1959 the State Legislature directed that water shall not be diverted from the Delta for use elsewhere unless adequate supplies for the Delta are first provided.

The natural availability of good quality water in the Delta is directly related to the amount of surplus water which flows to the ocean. The graph to the right indicates the historic and projected availability of water in the San Joaquin River at Antioch containing less than 350 and 1,000 parts chlorides per million parts water, under long-term average runoff and *without* specific releases for salinity control. It may be noted that even under natural conditions, before any significant upstream water developments, there was a deficiency of water supplies within the specified quality limits. It is anticipated that, without salinity control releases, upstream depletions by the year 2020 will have reduced the availability of water containing less than 1,000 ppm chlorides by about 60 percent, and that exports will have caused an additional 30 percent reduction.

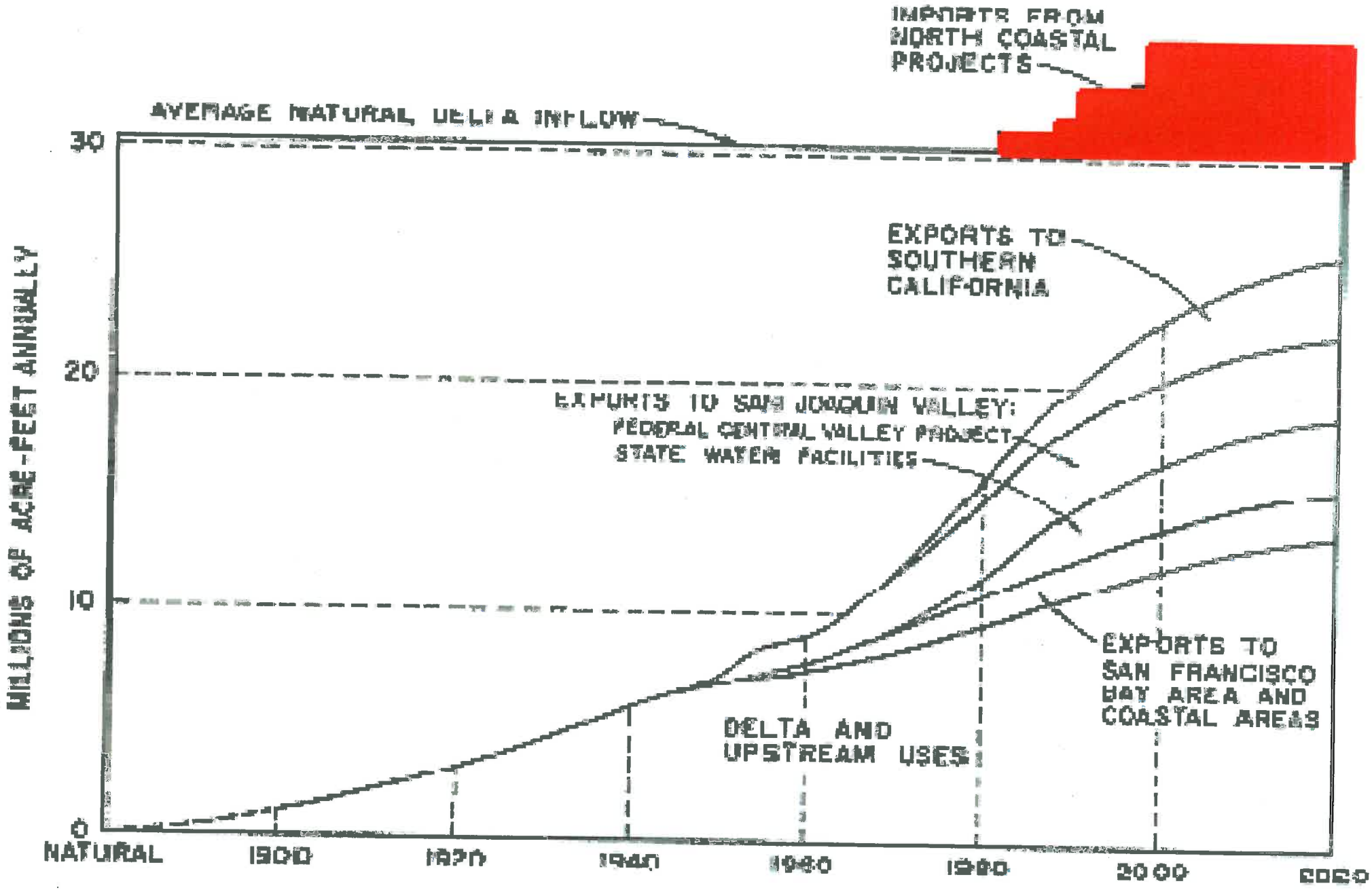


USE OF DELTA WATER SUPPLIES

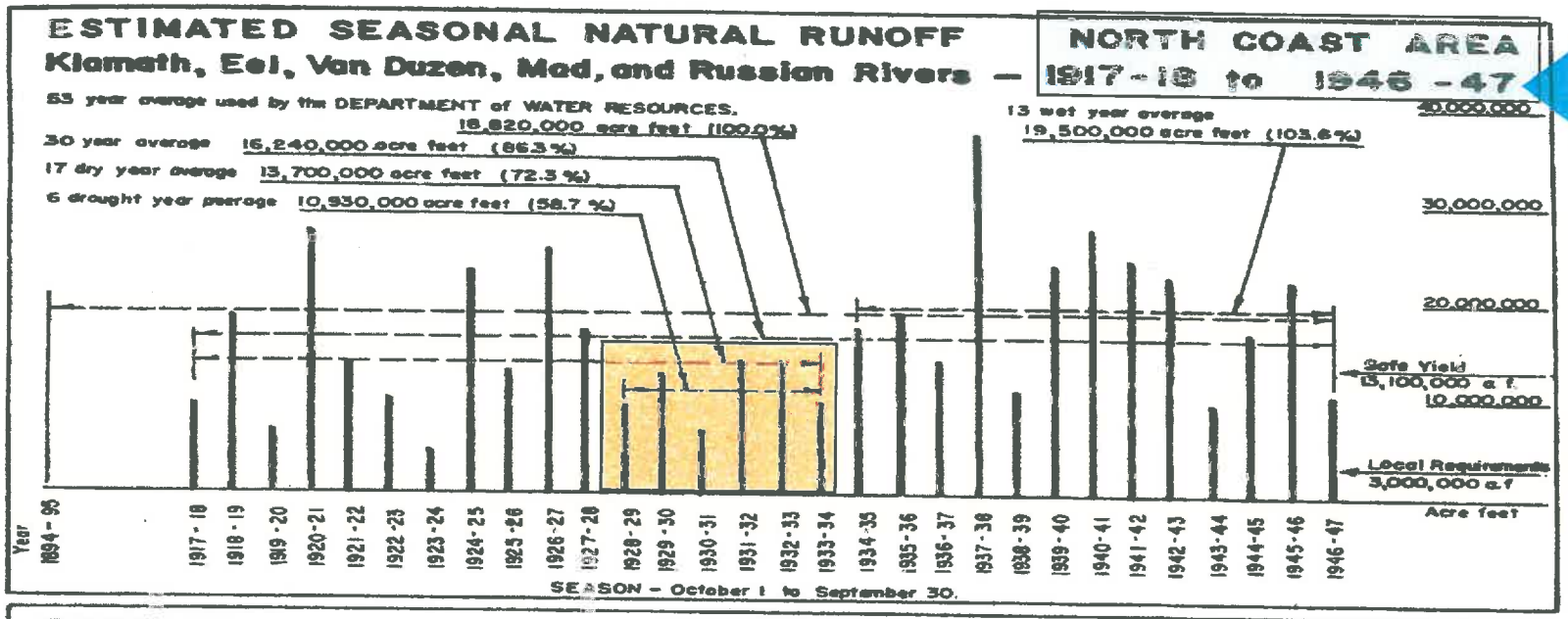


DELTA WATER QUALITY WITHOUT SALINITY CONTROL

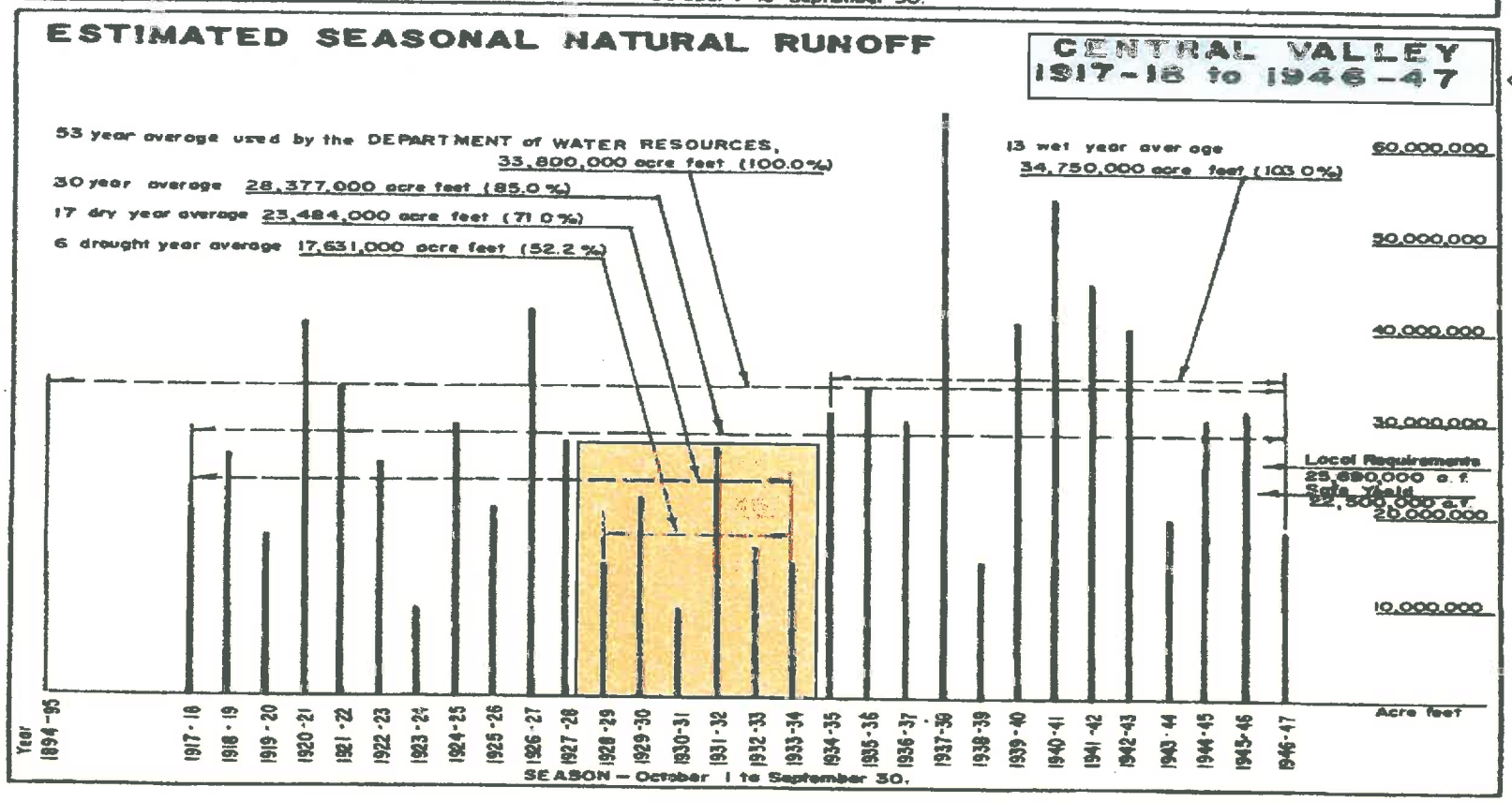
The magnitude of the past and anticipated future uses of water in areas tributary to the Delta, except the Tulare Lake Basin, is indicated in the diagram to the left. It may be noted that, while the present upstream use accounts for reduction of natural inflow to the Delta by almost 25 percent, upstream development during the next 60 years will deplete the inflow by an additional 20 percent. By that date about 22 percent of the natural water supply reaching the Delta will be exported to areas of deficiency by local, state, and federal projects. In addition, economical development of water supplies will necessitate importation of about 5,000,000 acre-feet of water seasonally to the Delta from north coastal streams for transfer to areas of deficiency.



USE OF DELTA WATER SUPPLIES



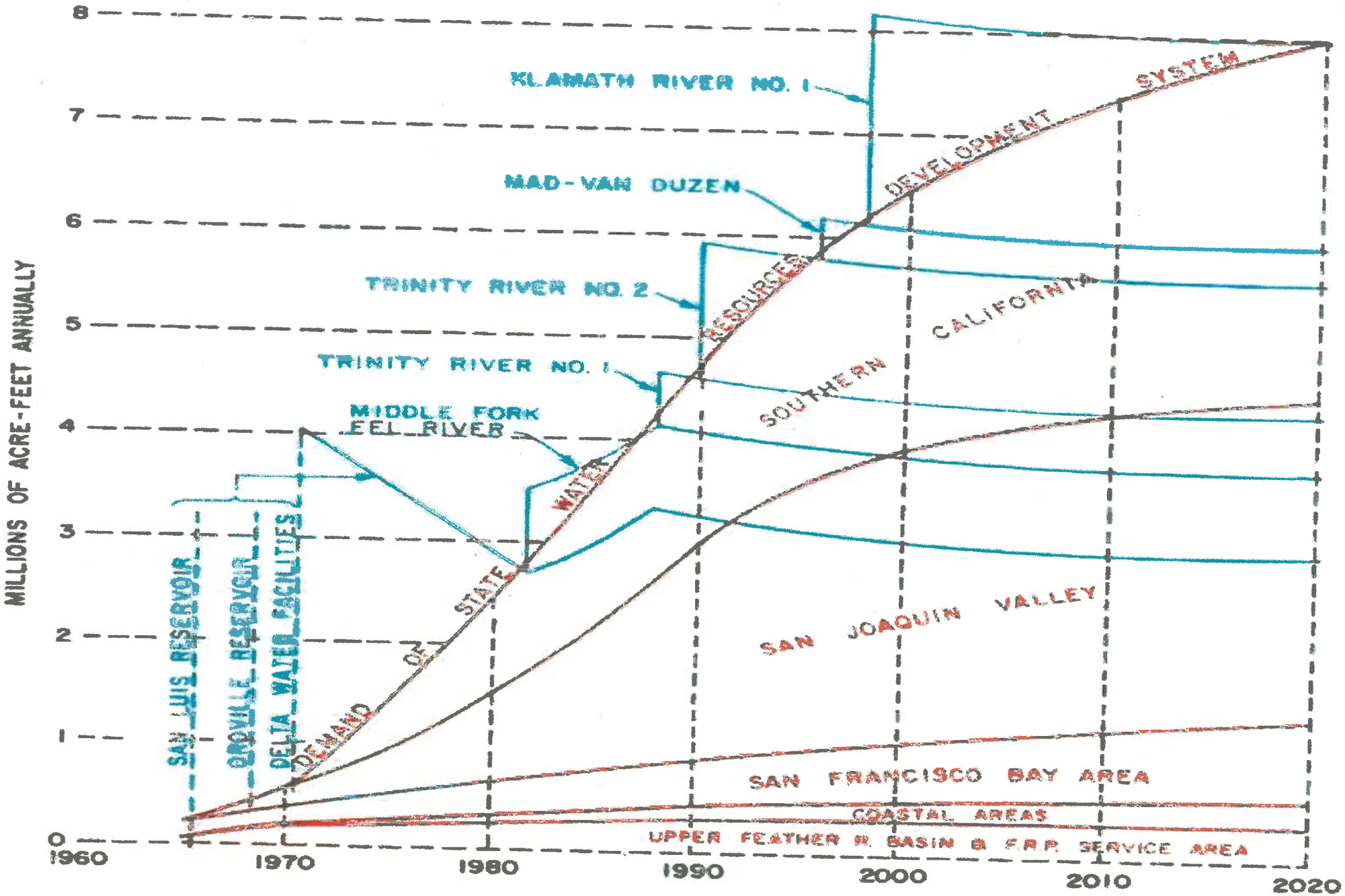
Surplus
7,930,000 AF/ YR



SHORTAGE
8,049,000 AF/Y

Unimpaired Flow Sacramento and San Joaquin Valley from Department of Water Resources California Data Exchange Center

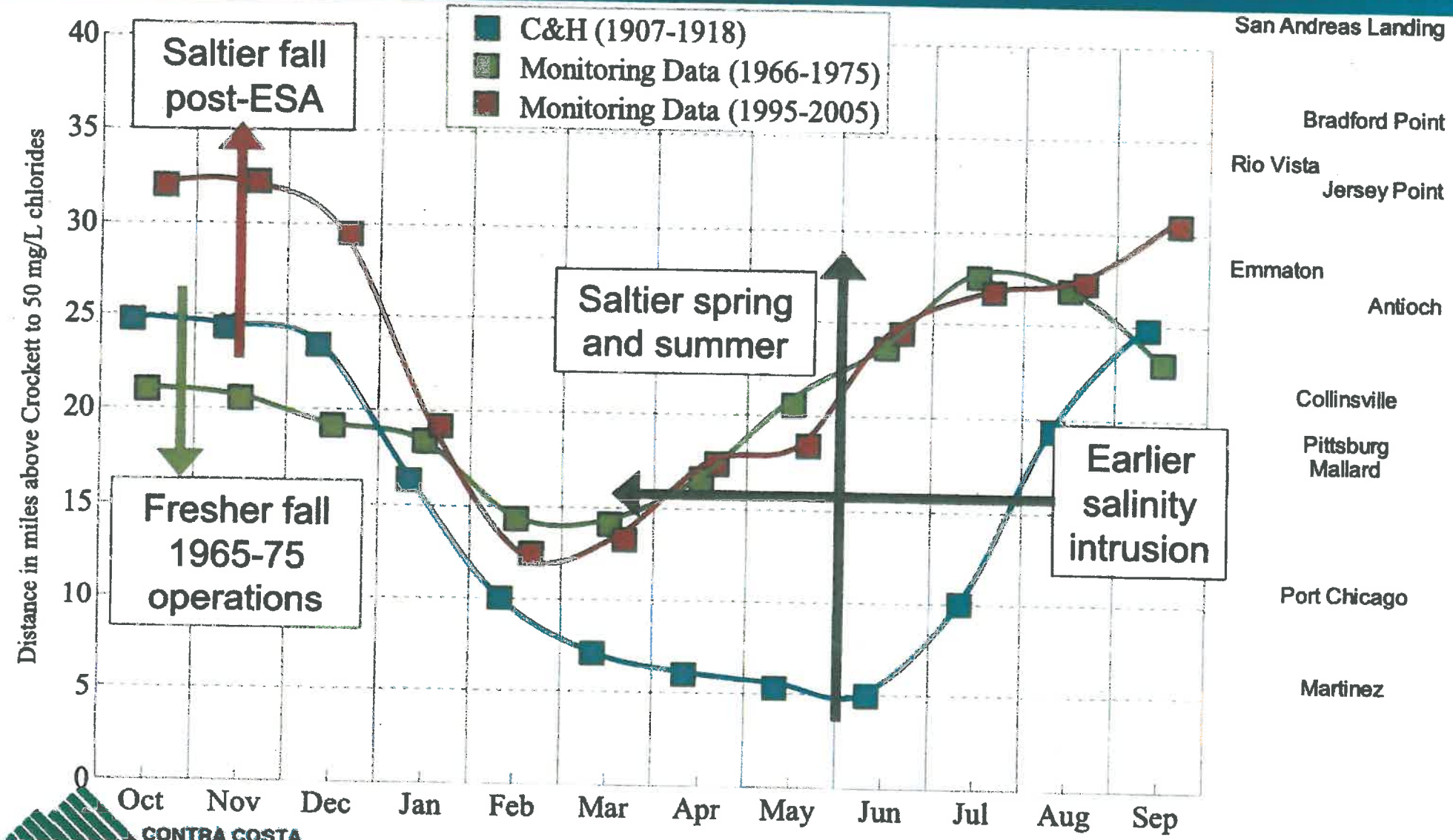
Water Year	Water Year Sum	Water Year Average
1929	11.24	
1930	16.77	
1931	7.76	
1932	19.75	13.12
1933	12.28	
1934	10.91	
1976	10.17	8.17
1977	6.17	
1987	11.35	
1988	11.71	
1989	18.38	12.71
1990	11.72	
1991	11.64	
1992	11.45	
2007	12.79	13.25
2008	13.71	



WATER SOURCES AND USES

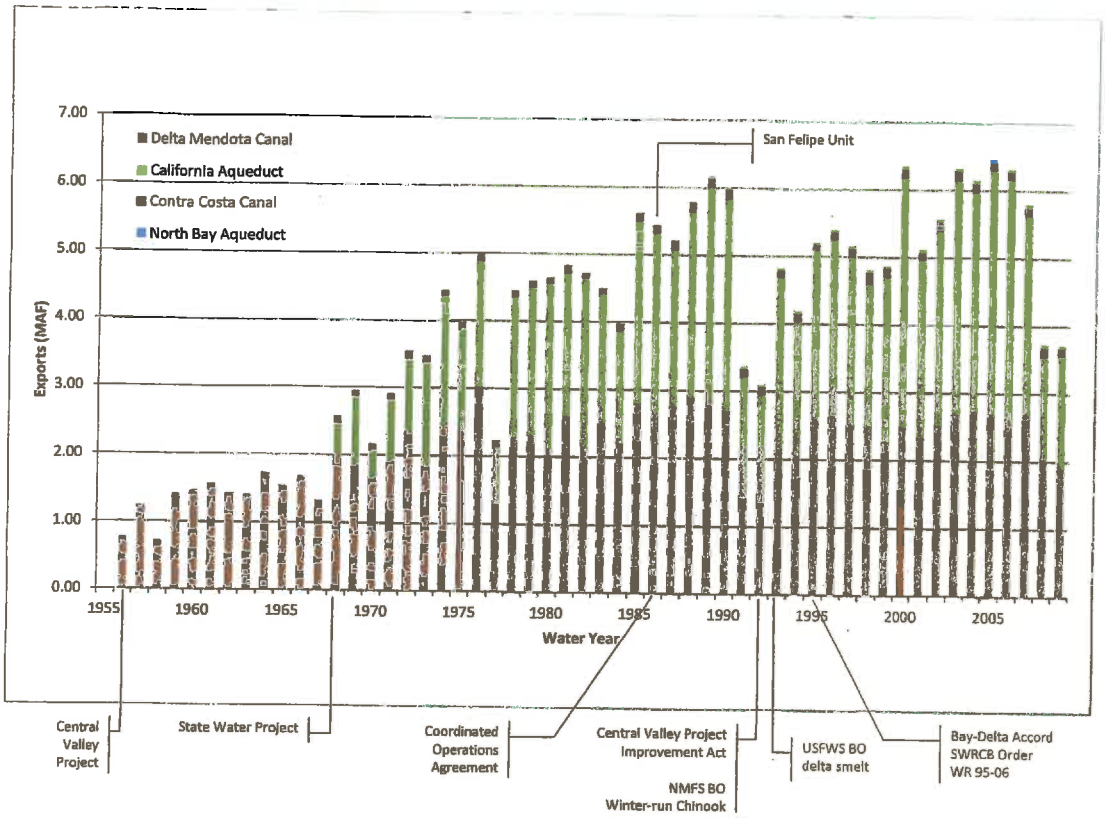
Distance to Fresh Water (50 mg/l)

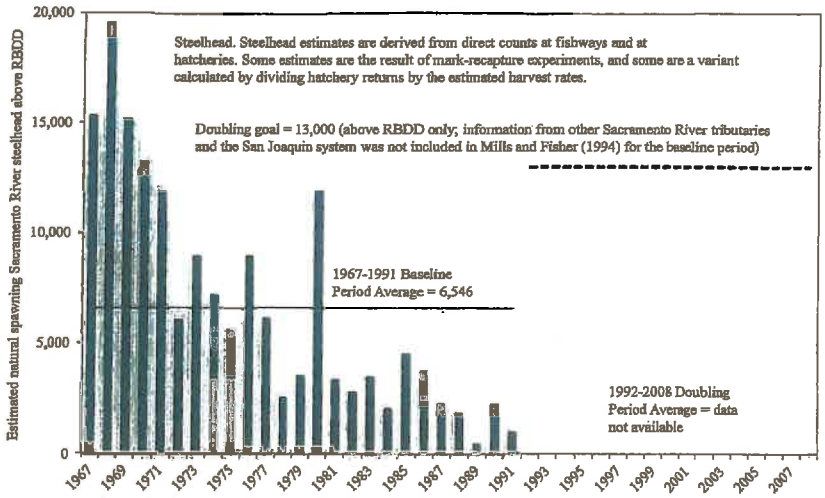
has increased dramatically in spring, early summer and fall

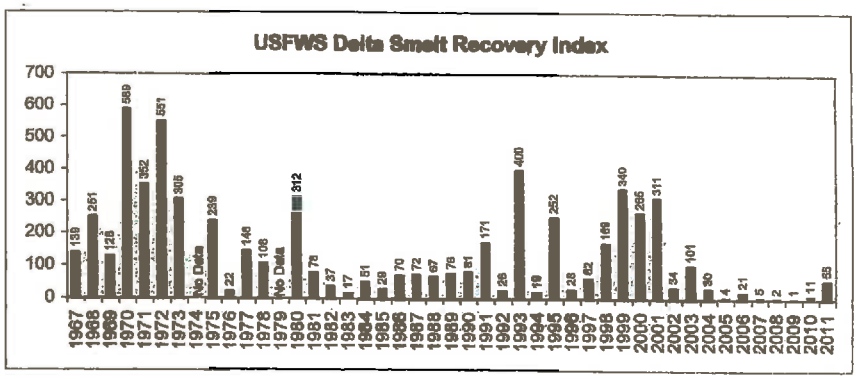


CONTRA COSTA WATER DISTRICT

June 11, 2007
Delta Vision Variable Delta Workshop


Delta Mendota Canal
California Aqueduct
Contra Costa Canal
North Bay Aqueduct
Exports (MAF)
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
Water Year
San Felipe Unit
Central Valley Project
State Water Project
Coordinated Operations Agreement
Central Valley Project Improvement Act
NMFS BO Winter-run Chinook
USFWS BO delta smelt
Bay-Delta Accord SWRCB Order WR 95-06


Estimated natural spawning Sacramento River steelhead above RBDD
20,000
15,000
10,000
5,000
0
Steelhead. Steelhead estimates are derived from direct counts at fishways and at hatcheries. Some estimates are the result of mark-recapture experiments, and some are a variant calculated by dividing hatchery returns by the estimated harvest rates.
Doubling goal = 13,000 (above RBDD only; information from other Sacramento River tributaries and the San Joaquin system was not included in Mills and Fisher (1994) for the baseline period)
1967-1991 Baseline Period Average = 6,546
1992-2008 Doubling Period Average = data not available
1967
1969
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007


USFWS Delta Smelt Recovery Index
700
600
500
400
300
200
100
0
No Data
No Data

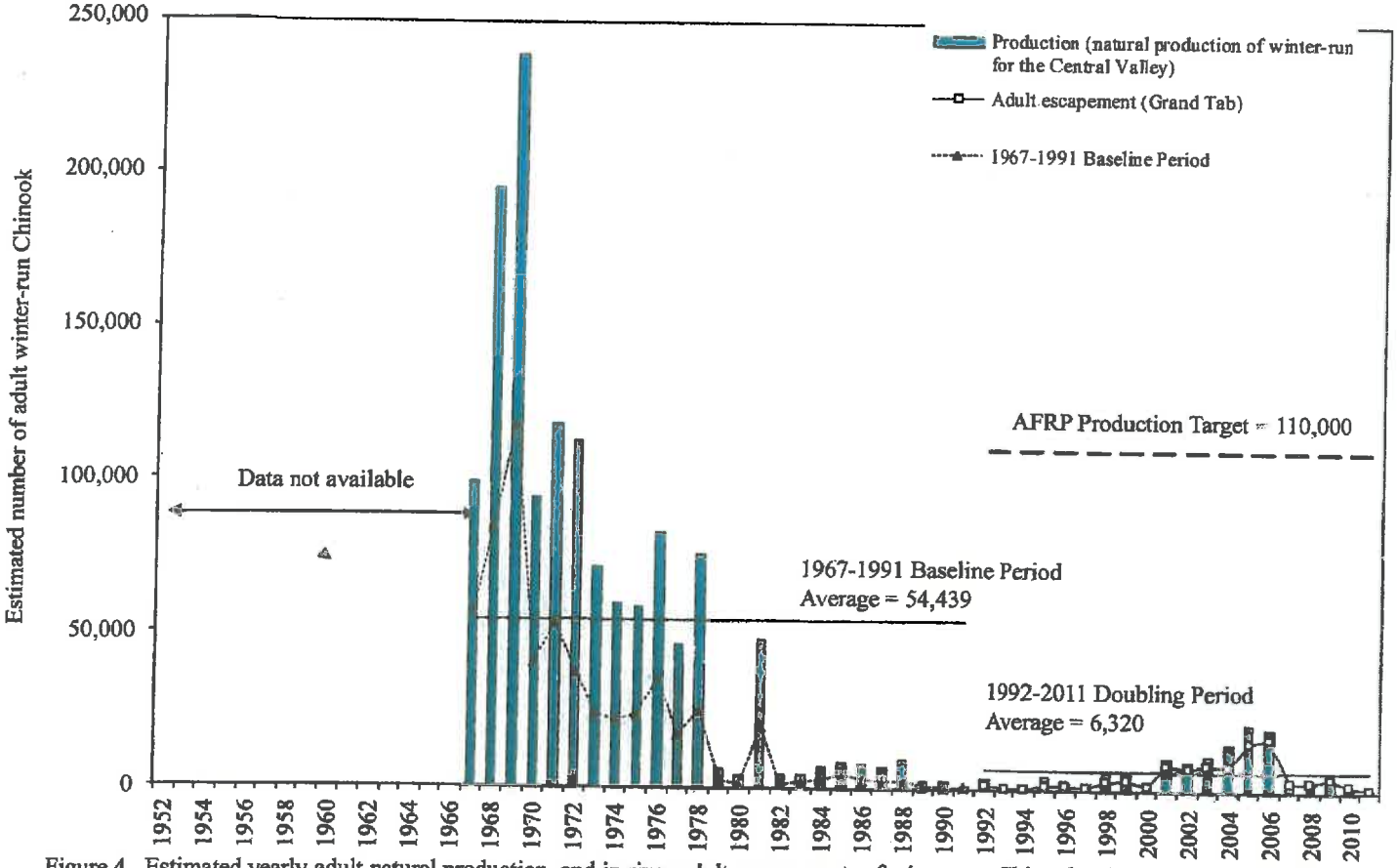


Figure 4. Estimated yearly adult natural production, and in river adult escapements of winter-run Chinook salmon in the Central Valley rivers and streams. 1992 - 2011 numbers are from CDFG Grand Tab (Apr 24, 2012). 1967-1991 Baseline Period numbers are from Mills and Fisher (CDFG, 1994).

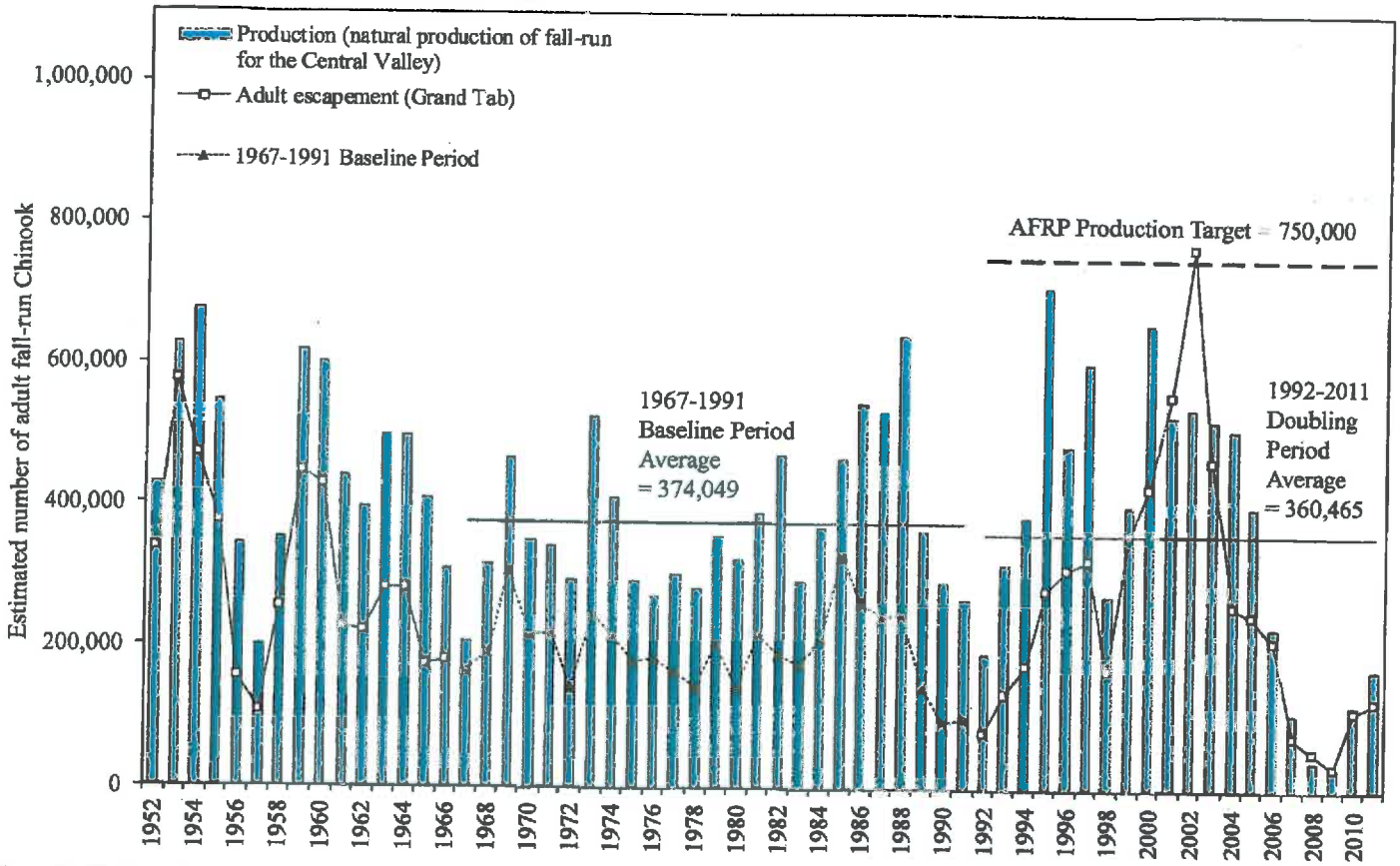


Figure 2. Estimated yearly natural production and in-river escapement of adult fall-run Chinook salmon in the Central Valley rivers and streams. 1952 - 1966 and 1992 - 2011 numbers are from CDFG Grand Tab (Apr 24, 2012). 1967-1991 Baseline Period numbers are from Mills and Fisher (CDFG, 1994).

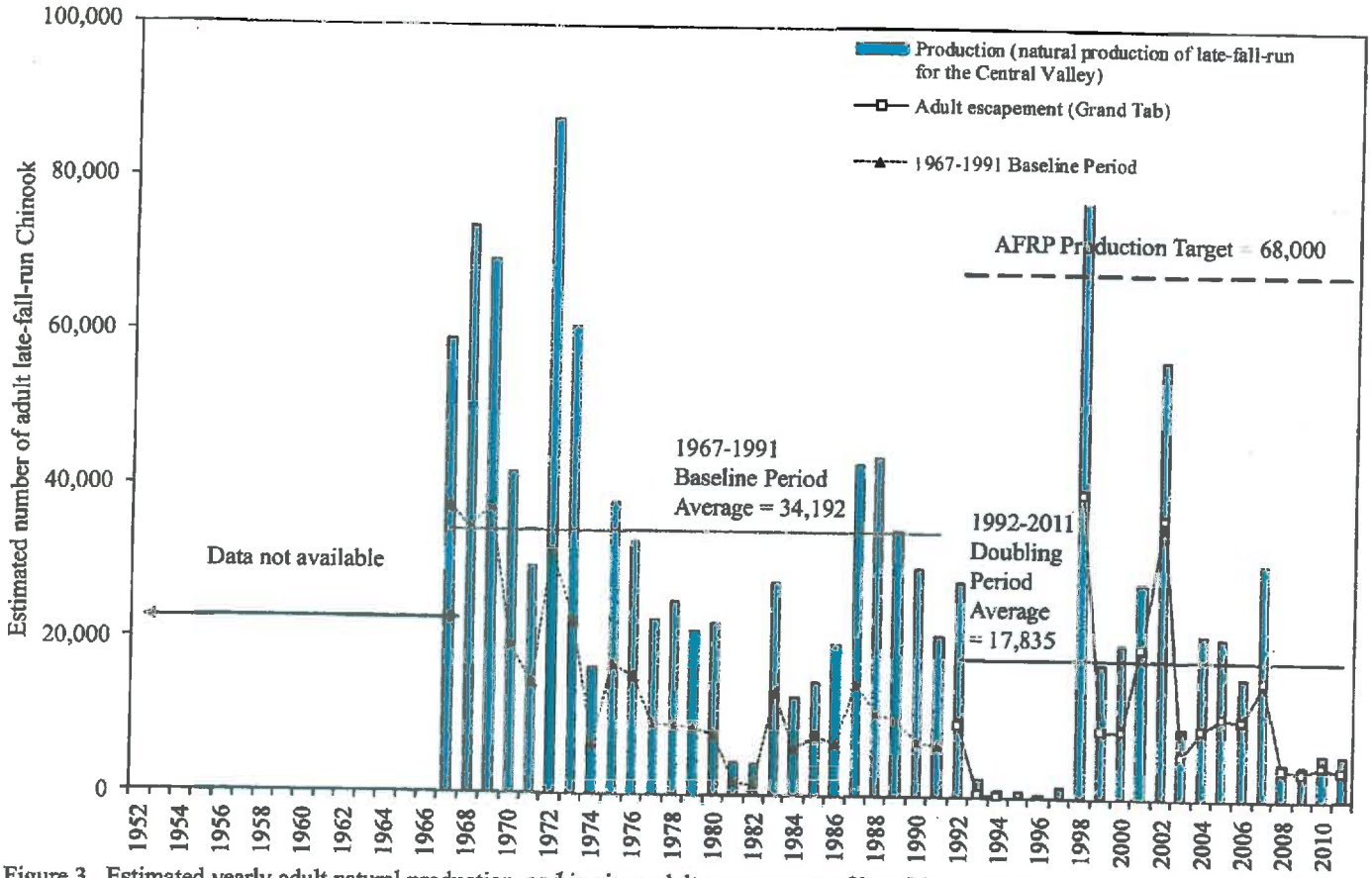
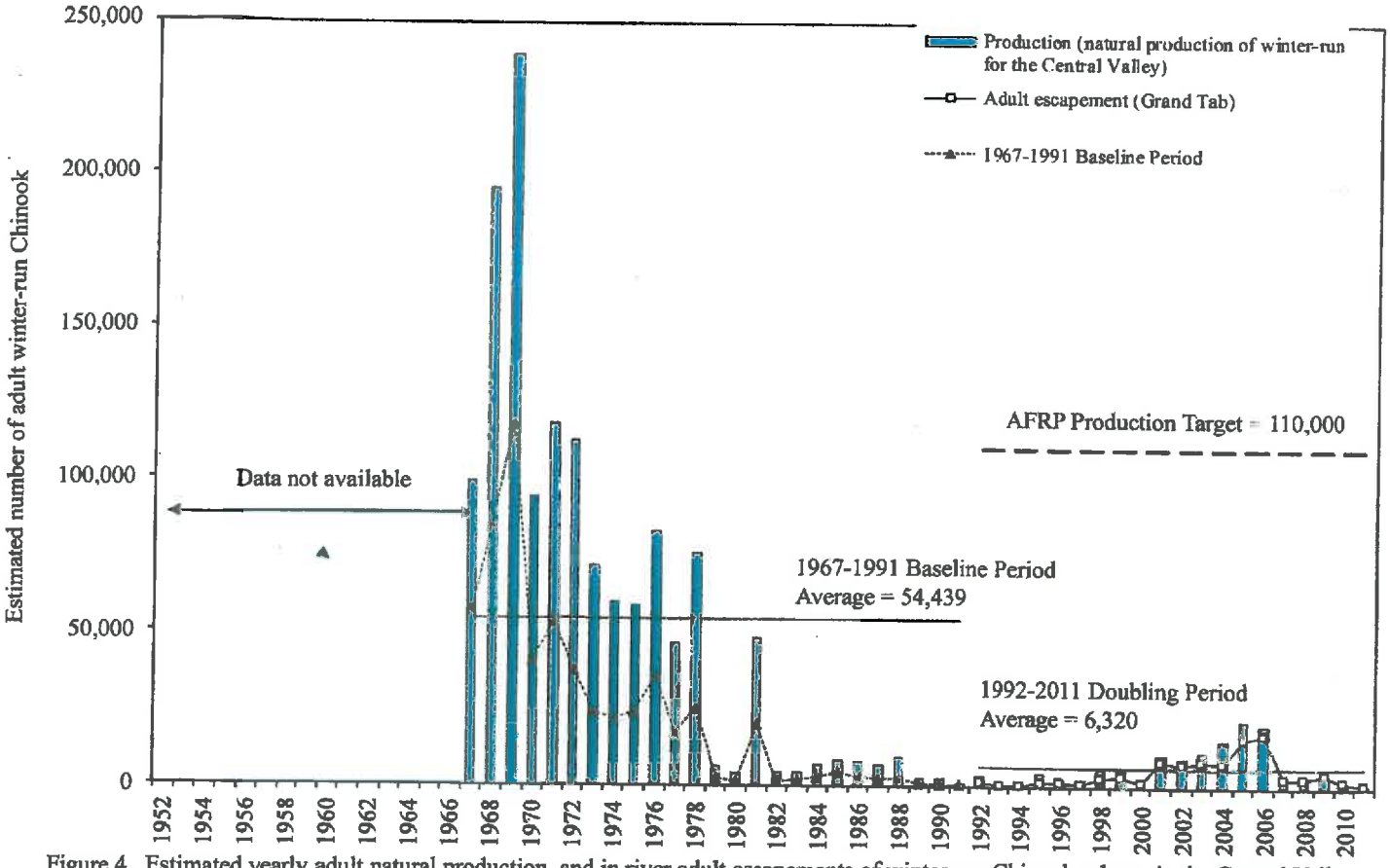


Figure 3. Estimated yearly adult natural production, and in-river adult escapements of late-fall-run Chinook salmon in the Central Valley rivers and streams. 1992 - 2011 numbers are from CDFG Grand Tab (Apr 24, 2012). 1967-1991 Baseline Period numbers are from Mills and Fisher (CDFG, 1994).



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2-1-13

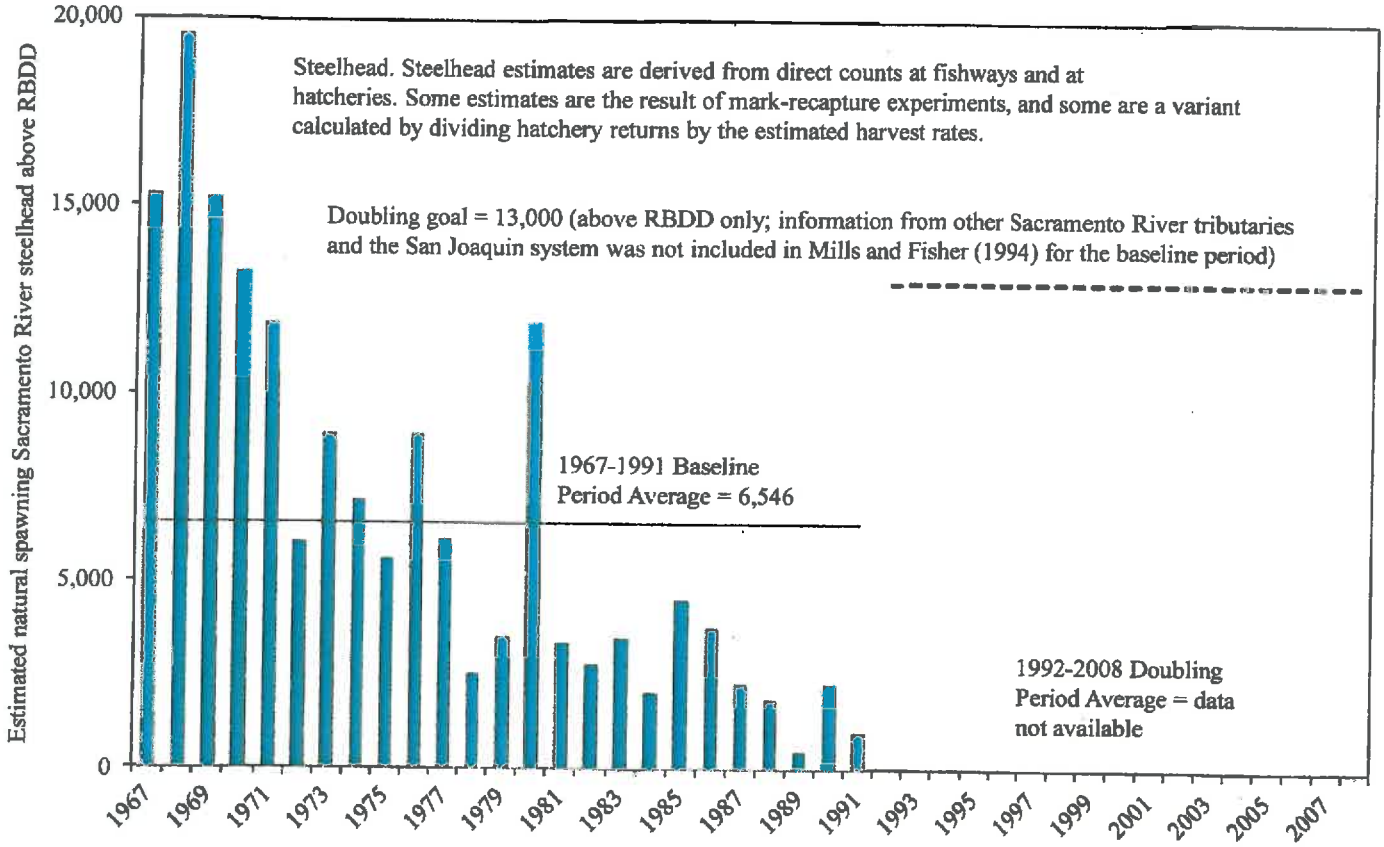
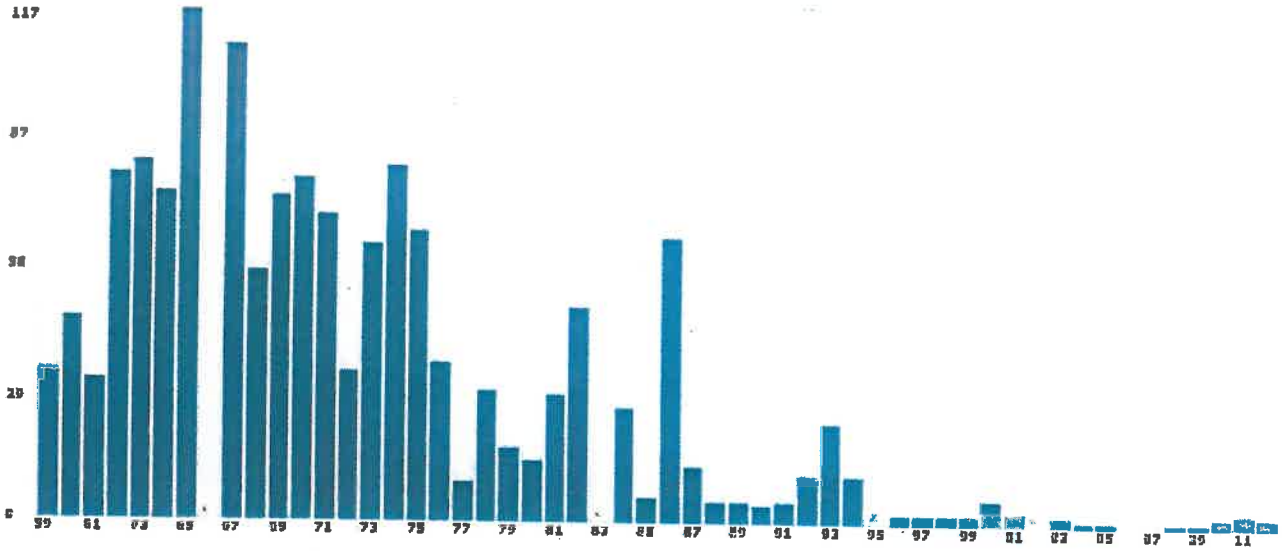


Figure 36. Estimated yearly number of natural spawning of steelhead on the Sacramento River, upstream of the RBDD (Mills and Fisher, 1994). Data for 1992-2008 is from CDFG, Red Bluff. 2008 sampling was curtailed in June due to high water temperatures.

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

Striped Bass Indices



Striped Bass Indices

YEAR	INDEXDATE	DELTA INDEX	SUISUN BAY INDEX	TOTAL INDEX
1959	12-Jul	30.7	3.0	33.7
1960	16-Jul	32.0	13.6	45.6
1961	21-Jul	25.2	6.4	31.6
1962	26-Jul	46.8	32.1	78.9
1963	3-Aug	38.2	43.5	81.7
1964	1-Aug	54.7	20.7	75.4

executed. The criteria in the draft agreement were recommended by Fish and Game and endorsed by the Department, and were extensively analyzed by the Board staff. Based on our most current assessment, the fishery standards provide significantly higher protection than existing basin plans. The Striped Bass Index is a measure of young bass survival through their first summer. The Striped Bass Index would be 71 under without project conditions (i.e., theoretical conditions which would exist today in the Delta and Marsh in the absence of the CVP and SWP), 63 under the existing basin plans, and about 79[3/] under this decision.

D 1485
1978

While the standards in this decision approach without project levels of protection for striped bass, there are many other species, such as white catfish, shad and salmon, which would not be protected to this level. To provide full mitigation of project impacts on all fishery species now would require the virtual shutting down of the project export pumps. The level of protection provided under this decision is nonetheless a reasonable level of protection until final determinations are made concerning a cross-Delta transfer facility or other means to mitigate project impacts.

NO SHUT DOWN
INSTEAD
INCREASED EXPORT

3/ There is some indication that factors other than those considered in the Board's analysis of without project levels may also affect striped bass survival. The effects of these factors are such that the without project levels would be greater than 71. However, the magnitude of this impact is unknown and cannot be quantified at this time.

D 1485
1978

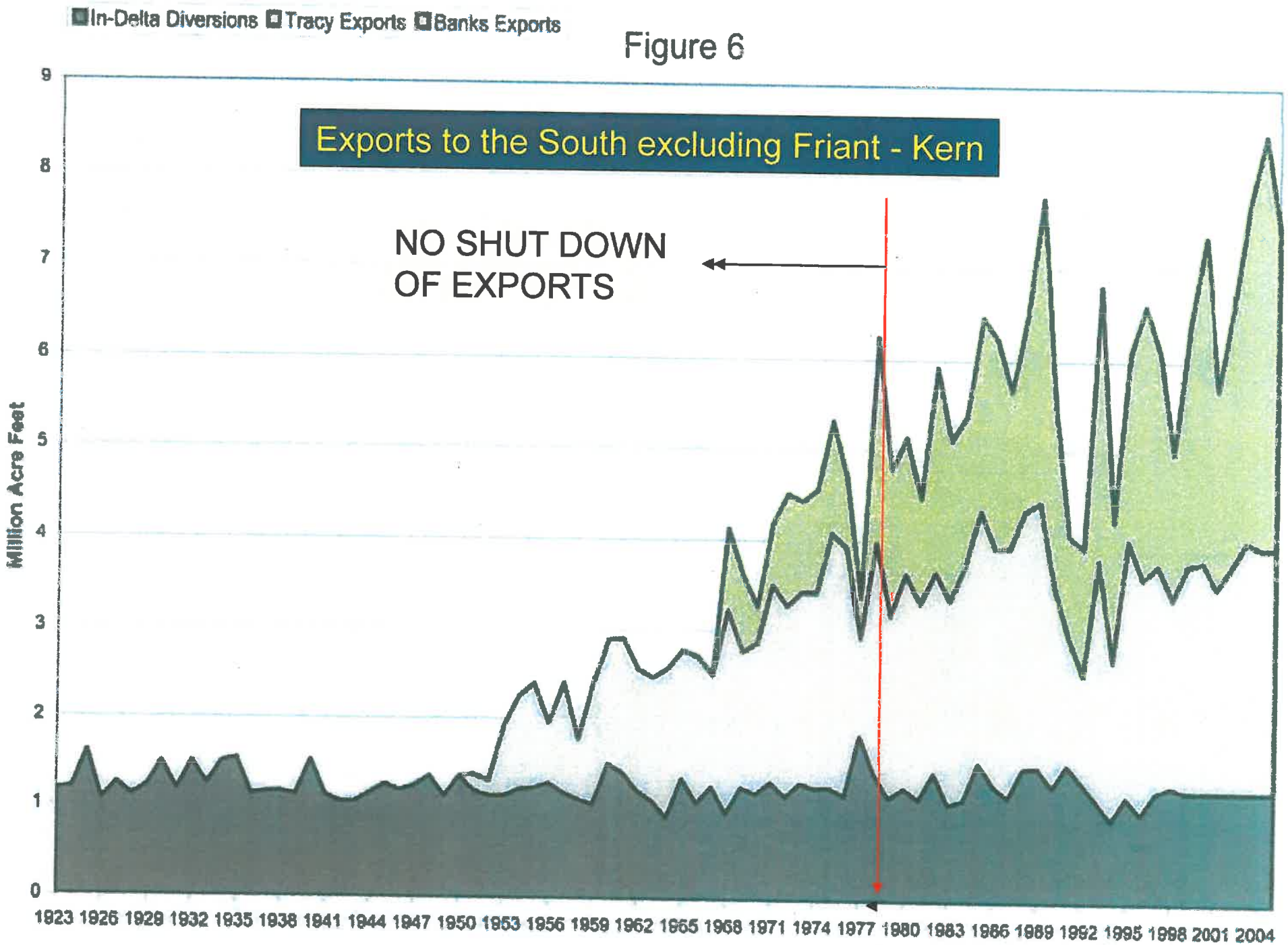
051837

NOT PROVIDED

Suisun Marsh. Full protection of Suisun Marsh now could be accomplished only by requiring up to 2 million acre-feet of freshwater outflow in dry and critical years in addition to that required to meet other standards. This requirement would result in a one-third reduction in combined firm exportable yield of State and federal projects. In theory, the existing Basin 5B Plan purports to provide full protection to the Marsh. However, during the 1976-77 drought when the basin plan was in effect, the Marsh received little if any protection because the system almost ran out of water and emergency regulations had to be imposed. This decision balances the limitations of available water supplies against the mitigation responsibility of the projects. This balance is based on the constitutional mandate "...that the water resources of the State be put to beneficial use to the fullest extent of which they are capable..." and that unreasonable use and unreasonable diversion be prevented (Article 10, Section 2, California Constitution).

The Bureau, the Department, Fish and Game, and U. S. Fish and Wildlife Service are working together to develop alternative water supplies for the Marsh. Such alternative supplies appear to represent a feasible and reasonable method for protection of the Marsh and mitigation of the adverse impacts of the projects. Under this decision the Department and Bureau are required, in cooperation with other agencies, to develop a plan for Suisun Marsh by July 1, 1979. The Suisun Marsh plan should ensure that the

Figure 6


In-Delta Diversions
Tracy Exports
Banks Exports
Exports to the South excluding Friant - Kern
NO SHUT DOWN
OF EXPORTS
Million Acre Feet
0
1
2
3
4
5
6
7
8
9
1923 1926 1929 1932 1935 1938 1941 1944 1947 1950 1953 1956 1959 1962 1965 1968 1971 1974 1977 1980 1983 1986 1989 1992 1995 1998 2001 2004

RECENT SWP AND CVP EXPORTS

ACRE FEET

10-1-00	9-30-01	**4,936,508**	
01	02	**5,374,069**	
02	03	**6,111,599**	
03	04	**5,943,982**	
04	05	**6,285,421**	
05	06	**6,134,202**	
06	07	**5,602,914**	Very Low Salmon Returns
07	08	**3,498,716**	No Salmon Fishing
08	09	**3,475,696**	No Salmon Fishing
09	10	**4,586,655**	

Data From:

USBR Annual Federal-State Operation Reports
Jones Pumping Plant and Banks Pumping Plant

SACRAMENTO DELTA WATER SUPPLY AND REVIEW OF THE TIBURON REPORT

Luna B. Leopold
Consulting Engineer

October 1987

California must take heed of well documented experience in the Soviet Union where diversion of fresh water from the natural supply to an estuary has resulted in immense economic loss and the near destruction of an important estuary. x) Regulation of the Don River has resulted in an increase of salinity of the Azov Sea by a mere 7 percent and the result was to reduce total fish production from about 15 to 3 thousand tonnes annually. This has been documented in detail by Volovik (1986) and reviewed in the Tiburon report here being discussed.

The Tiburon report as it will here be called is a detailed study of the water situation in the Sacramento Delta. The reference is:

Rozengurt, M., Herz, M.J., and Feld, S.,1987, Analysis of the influence of water withdrawals on runoff to the Delta-SanFrancisco Bay ecosystem (1921-1983): Paul F. Romberg Tiburon Center for Environmental Studies, Tech. Rept. No 87-7.

This voluminous study cannot be either read or taken lightly for it is statistical, detailed, and in many places less than clear. Nevertheless the more one studies it the more impressive is the informational content. The present review deals only with the discussion and data dealing with annual flow data whereas the Tiburon report analyses both annual and monthly data.

The present discussion is an attempt to bring out those points that seem most significant and to present some reanalysis to clarify and emphasize some of the important conclusions.

The data base is reviewed in some detail. It appears that during the planning and construction stages of water development and diversion in the Sacramento system, two somewhat shortcut data compilations were used. The "Four River Index" is a data base that includes runoff from only 75 % of the total drainage area. A "modified method" had previously been employed also relecting less than the full runoff. Finally a compilation was made that estimated the runoff not only from the major rivers but included runoff from the foothill areas and is thought to represent a good approximation of the full runoff volume of 100% of the basin area. The Tiburon report shows that the planning done in the early years based on these less than full runoff volumes have given an over-optimistic picture of the water available for diversion from the Delta system.

x) emphasis added

Natural outflow less Regulated Outflow
average values in millions of acre feet

Time Period	Depletion
1921-1929	3.77
1930-1939	3.79
1940-1949	4.73
1950-1959	6.64
1960-1969	8.74
1970- 1979	10.94
1980-1982	12.70

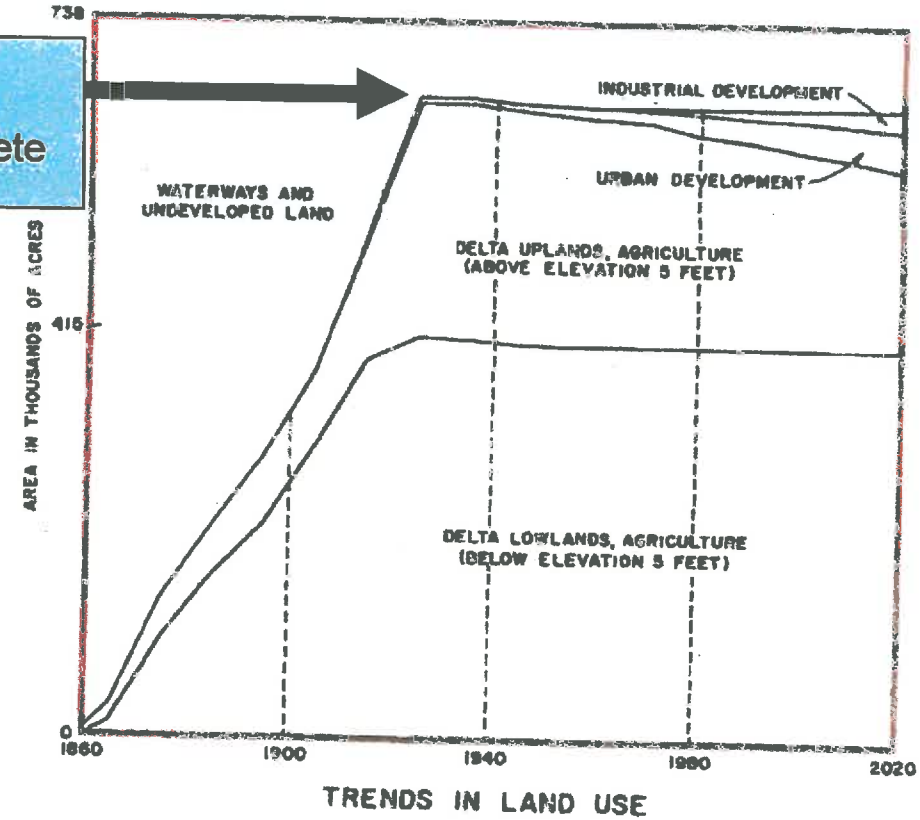
In conclusion, my studies confirm the general conclusions in the Tiburon report. The depletions have been massive and continue to increase. They have greatly increased the percentage of years of critical drought in the Delta and the Bay.

It is my professional opinion that no set of standards of water quality can be written that can have the practical effect of protecting the ecosystem from further degradation if diversions increase over the present level. Because forecasts of runoff are imperfect the effect of diversions in a year that turns out to be dry will already have taken its toll on the ecosystem before water quality measurements can compare the condition with the standards.

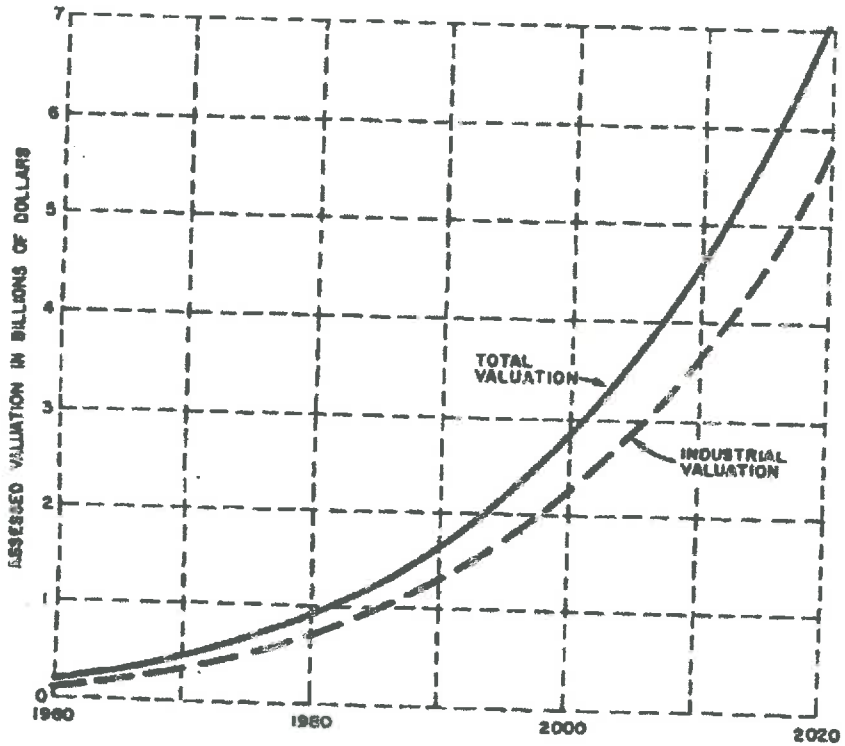
The logical and in my opinion the imperative step is to preclude henceforth any additional diversions of water from the Delta system.

Several towns and cities are located in the upland areas and an industrial complex is expanding in the Delta. Early industrial development cente kindred products, steel production, fibrebo building activity. Large water-using ind paper products, and chemicals, have deve area where water, rail, and highway transportation, coupled with water supplies, has stimulated growth. The manufacturing employment in this area was about 10,000 people in 1960.

1925 Delta Reclamation Complete



TRENDS IN LAND USE



PROJECTED ASSESSED VALUATIONS WITHIN THE WESTERN DELTA STUDY AREA

A deep-draft ship channel serving commercial and military installations terminates at Stockton, and another is being constructed to Sacramento. Water-borne shipments in the Delta amounted to about 6,000,000 tons annually in recent years.

The Delta encompasses one of California's most important high quality natural gas fields. Since 1941 the field has produced about 300,000,000 cubic feet of methane gas for use in the San Francisco Bay area.

With the growing significance of recreation, the Delta has blossomed into a major recreation area at the doorsteps of metropolitan development in the San Francisco Bay area, Sacramento, and Stockton. In 1960, nearly 2,800,000 recreation-days were enjoyed in this boating wonderland.

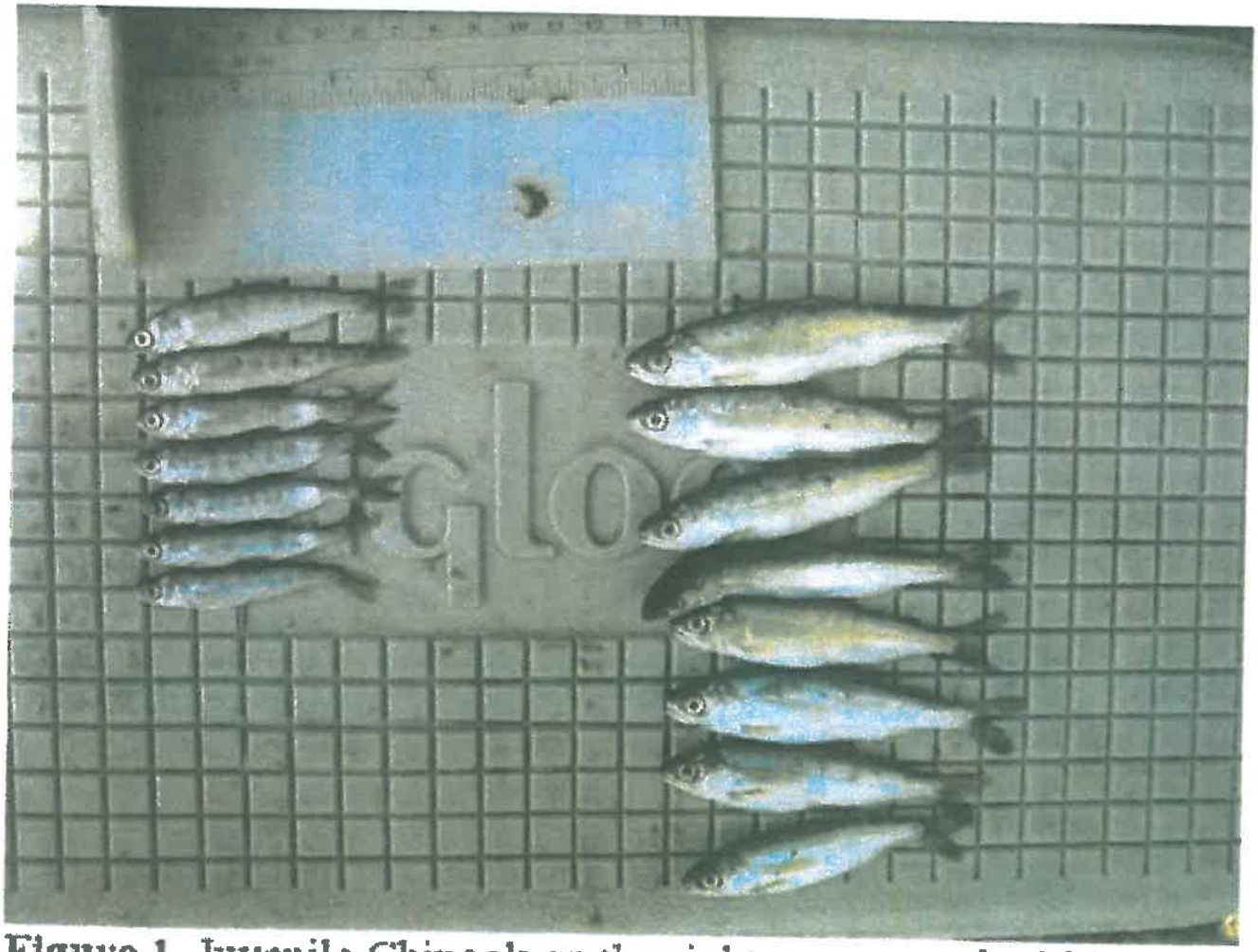


Figure 1. Juvenile Chinook on the right were reared within an enclosure within the Cosumnes River floodplain while those on the left were reared within an enclosure in the river below the floodplain (intertidal Delta habitat).

In the study "Habitat Use and Stranding Risk of Juvenile Chinook Salmon on a Seasonal Floodplain" by Sommer, et al. (2004), a copy of which is attached, the authors build upon the above study with further testing in 2000 and present their analysis of ocean survival.

The author's abstract provides:

> "Although juvenile Chinook salmon *Oncorhynchus tshawytscha* are known to use a variety of habitats, their use of seasonal floodplains, a highly variable and potentially risky habitat, has not been studied extensively. Particularly unclear is whether a seasonal floodplain is a net "source" or net "sink" for salmonid production. . . Adult ocean recoveries of tagged hatchery fish indicate that seasonal floodplains support survival at least comparable with that of adjacent perennial river channels. These results indicate that floodplains appear to be a viable rearing habitat for Chinook salmon, making floodplain restoration an important tool for enhancing salmon production.

The data provided for ocean survival is as follows:

> Table 1. – Number of coded wire tags recovered in the ocean and commercial fisheries for Chinook salmon released in the Yolo Bypass and Sacramento River. The total number of tagged fish released in each location for each year is shown in parentheses. The survival ration is calculated as the number of Yolo Bypass recoveries divided by the number of Sacramento River recoveries.

Release Group	1998 (53,000)	1999 (105,000)	2000 (55,000)
Yolo Bypass	75	136	27
Sacramento River	35	138	47
Survival Ration	2.14	0.99	0.57

A more complete analysis is required.

EXTRACTS OF USACE MAY 23, 2007 COMMENTS

The assumption that the 23 large watershed's 100-year flows can be added together to produce the 100-year Delta flow is invalid.

The assumption that failures in a levee system will not significantly reduce stage elevations along channel is questionable.

Annual mean number for seismic levee failures is 3.41 . . . . 341 failures per 100 years which is 341 more than observed in the past 100+ years . . . . Surely, these numbers cannot be credible results.

The average of 7.35 flood failures per year is three times the (undocumented) 2.60 number and nearly 6 times the observed flood failure rate from 1950 to 2006. Thus, as with the seismic failure number above, this flood number simply appears way outside the bounds of credibility.

Return periods of 2.7 or 5 years for many levees just seem incorrect and incompatible with decades of recent data.

Overall, the seismic fragilities simply appear unrealistic - with far too many breaks to be credible.

Figure 6-40 implies that for a M 7.5 event this type of levee has a 10% chance of displacing 10 ft. at all PGAs > 0.10. This seems Really Extreme.

Conclusion that 40% of historical failures (2.6) are from through seepage results in over 1.0 per year is different than historical rate and needs to be explained.

At first glance, the calculated annual number of failures is, to be polite, "extraordinary" albeit not as extreme as the seismic results above.

The estimated 30 or more island breaches in the next 25 years due to flood events seem too high/pessimistic.

The BAU assumption that levee crest elevations will not be raised in response to increased tidal and flood elevations is not realistic.
1 ft easy, 3 ft maybe doable for 100 years of effort.

DELTA LEVEE FAILURE PREDICTIONS

2013	Current Year
-2003	Year of Prediction
10	Years

Predicted Seismic Failures	3.41 per year	34.1
Predicted Flood Failures	7.35 per year	73.5
		105.6
Failures - Jones Tract 2004		- 1.0
No Seismic No Flood		
Failures - Behind		104.6

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November 25, 2013

Via Email to
Wendy.Masarweh@water.ca.gov

Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-001

Attn: Ms. Wendy Masarweh

Re: Framework Comments
FloodSafe –
Framework for DWR Investment in the Delta

Dear Ladies and Gentlemen:

Thank you for the opportunity to comment on the Framework.

Reclamation of Swamp and Overflowed Lands MUST be Continued And Should be Mentioned

The importance of maintaining and improving Delta levees protecting "Swamp and Overflowed" lands to meet the State's obligation to the United States should be referenced.

Much of the Delta is Swamp and Overflowed land.

Construction of levees along and surrounding the Swamp and Overflowed lands was pursuant to the efforts of the State of California to reclaim the Swamp and Overflowed Lands granted to it by the United States. Such lands were acquired by the State of California from the Federal Government by virtue of the Act of Congress of September 28, 1850 (9 U.S. Stats. at Large, p. 519), generally known as the Arkansas Act. In accepting the grant from the Federal Government the State is bound to carry out in good faith the objects for which the grant was made and thereby assumed an obligation to reclaim the lands.

"The object of the Federal Government in making this munificent donation to the general States was to promote the speedy reclamation of the lands and thus invite to them

population and settlement, thereby opening new fields for industry and increasing the general prosperity." See Kimball v. Reclamation Fund Commissioners (1873) 45 Cal. 344, 360.

The State patented such lands into private ownership conditioned on efforts towards reclamation. Swampland Districts (Reclamation Districts) organized pursuant to State law were typically the mechanism whereby such reclamation efforts were accomplished.

Provision of Salinity Control and an Adequate Water Supply for the Delta Is a Prerequisite to the Export of Water from the Delta. Levees Are Critical to Provision of Such Salinity Control and an Adequate Water Supply

The importance of improving Delta levees to maintain ocean salinity repulsion and reduce the risk of interruption of local Delta water urban and agricultural diversions, as well as diversions for export, is not given enough emphasis. The levee systems are necessary to protect the various islands and tracts which provide irreplaceable habitat for numerous species, including the hundreds of thousands of waterfowl of the Pacific Flying which winter on the Delta croplands. The levees provide and protect hundreds of miles of meandering sheltered waterways and shoreline habitat critical to the protection and enhancement of the unique cultural, recreational, natural resource, and agricultural values of the Delta. Protection of Delta lands from flooding is necessary to avoid the huge loss of freshwater due to the increased evaporation from the resulting waterbody in comparison to that from the farming of crops. The difference is estimated to be about 2 acre feet per acre per year which if extended over thousands of acres, which could be as high as 400,000 acres, would greatly aggravate the effort to provide a reliable water supply for California. The flooding of Delta Islands and tracts also increases the tidal prism thereby increasing the burden of repulsing salinity.

Water Code §§12200 through 12205 are particularly specific as to the requirements to provide salinity control for the Delta and provide an "adequate water supply in the Delta sufficient to maintain and expand agriculture, industry, urban and recreational development."

For ease of reference, the following Water Code sections are quoted with emphasis added:

"§12200. Legislative findings and declaration

The Legislature hereby finds that the water problems of the Sacramento-San Joaquin Delta are unique within the State; the Sacramento and San Joaquin Rivers join at the Sacramento-San Joaquin Delta to discharge their fresh water flows into Suisun, San Pablo and San Francisco bays and thence into the Pacific Ocean; the merging of fresh water with saline bay waters and drainage waters and the

withdrawal of fresh water for beneficial uses creates an acute problem of salinity intrusion into the vast network of channels and sloughs of the Delta; the State Water Resources Development system has as one of its objectives the transfer of waters from water-surplus areas in the Sacramento Valley and the north coastal area to water-deficient areas to the south and west of the Sacramento-San Joaquin Delta via the Delta; water surplus to the needs of the areas in which it originates is gathered in the Delta and thereby provides a common source of fresh water supply for water-deficient areas. It is, therefore, hereby declared that a general law cannot be made applicable to said Delta and that the enactment of this law is necessary for the protection, conservation, development, control and use of the waters in the Delta for the public good. *(Added by Stats. 1959, c. 1766, p. 4247, §1.)*

§12201. Necessity of maintenance of water supply

The Legislature finds that the maintenance of an adequate water supply in the Delta sufficient to maintain and expand agriculture, industry, urban, and recreational development in the Delta area as set forth in Section 12220, Chapter 2, of this part, and to provide a common source of fresh water for export to areas of water deficiency is necessary to the peace, health, safety and welfare of the people of the State, except that delivery of such water shall be subject to the provisions of Section 10505 and Sections 11460 to 11463, inclusive, of this code. *(Added by Stats. 1959, c. 1766, p 4247, §1.)*

§12202. Salinity control and adequate water supply; substitute water supply; delivery

Among the functions to be provided by the State Water Resources Development System, in coordination with the activities of the United States in providing salinity control for the Delta through operation of the Federal Central Valley Project, shall be the provision of salinity control and an adequate water supply for the users of water in the Sacramento-San Joaquin Delta. If it is determined to be in the public interest to provide a substitute water supply to the users in said Delta in lieu of that which would be provided as a result of salinity control no added financial burden shall be placed upon said Delta water users solely by virtue of such substitution. Delivery of said substitute water supply shall be subject to the provisions of Section 10505 and Sections 11460 to 11463, inclusive, of this code. *(Added by Stats. 1959, c. 1766, p 4247, §1.)*

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In determining the availability of water for export from the Sacramento-San Joaquin Delta no water shall be exported which is necessary to meet the requirements of Sections 12202 and 12203 of this chapter. *(Added by Stats. 1959, c. 1766, p 4249, §1.)*

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Seepage into adjoining levees and lands and impacts from wind generated waves across flooded islands greatly increase the burden of protecting adjacent areas from flooding. All levee systems should be maintained and improved while still recognizing the need to give some emphasis to funding levee systems deemed to be more critical than others. The Delta Risk Management Strategy (DRMS) Phase I – Topical Area – Impact to Infrastructure Final dated June 15, 2007 at page 32 reports the replacement costs of Delta Infrastructure Current and 2050 that could be damaged as a result of levee breaching and island flooding.

Table 7-8 Comparison of Total Replacement Costs of Delta Infrastructure – Current and 2050[a]

Inundation Level	Current (2005)[c]	2050	Cost Ratio: 2050/Current
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Sea level rise could increase the risk and area of flooding. Improvement as well as maintenance of levees system wide is clearly justified.

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For the Delta there are serious concerns with regard to increased production of methyl mercury. There are also significant problems associated with predation and stranding. Increases in the tidal prism could also result in altering the outmigration of small salmonids resulting in increased predation.

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November 25, 2013

Via Email to
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Department of Water Resources
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Attn: Ms. Wendy Masarweh

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