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**STATEMENT OF DANTE JOHN NOMELLINI,
MANAGER AND CO-COUNSEL OF THE CENTRAL DELTA WATER AGENCY**

**PRESENTED TO THE NATIONAL ACADEMIES,
WATER SCIENCE AND TECHNOLOGY BOARD**

January 26, 2010

It is my opinion that the current plight of the fisheries in the Bay-Delta Estuary is the result of the State and Federal Trust Agencies looking the other way while their sister agencies, the California Department of Water Resources and United States Bureau of Reclamation have operated the State Water Project (SWP) and Federal Central Valley Project (CVP) to favor export of water from the Delta over protection of the water needs in the Delta and other areas of origin including the fishery needs.

The promises and law underpinning the export of water by the SWP and CVP was intended to limit the export of water to that which is truly surplus to the present and future needs of the Delta and other areas of origin. In other words, when water is in short supply, the exports must be reduced and if necessary reduced to zero. I have attached relevant quotes and law.

The arms-length relationship between the fishery agencies and their sister agencies which they are expected to regulate has been destroyed through the CALFED Framework Agreement and other collaborative efforts making the process less open and very vulnerable to political

influence.

The export contractors other than the water right settlement contractors were well aware that their contracts were limited to surplus water and knew the risks associated with planting permanent crops based on a limited supply. They are now applying heavy political pressure to turn the surplus water contracts into a firm supply. Political pressure may weaken the regulatory protections but will not generate a real solution for the water.

In 1978, the State Water Resources Control Board made two important but ignored determinations:

“To provide full mitigation of project impacts on all fishery species now would require the virtual shutting down of the export pumps.” and

“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.”

In the face of such determinations, exports were not curtailed but rather substantially increased. I have attached an exhibit showing the increasing exports.

In 1986, after the California Appellate Court found Decision 1485 to be inadequate, the State Water Resources Control Board commenced proceedings to better protect fish. Although due to the intervention of the Governor no decision was adopted, these proceedings are generally cited in reference to the draft decision, D-1630.

In addition to the fishery agency testimony in that proceeding, the conclusions of Luna Leopold in his peer review of the Tiburon Report that “The logical and in my opinion the imperative step is to preclude henceforth any additional diversions of water from the Delta system.” should be examined. I have provided a CD with relevant portions of the record in said proceedings.

The failure of the SWP to annually provide the 5 million acre feet of supplemental water from the North Coast, and the water export contractor rejection of improved fish screens at the SWP and CVP Delta export facilities have greatly aggravated the problem.

Exports have an obvious impact due to the direct killing of fish, reversal of flows, degradation of the San Joaquin River, and reduction of water available for outflow however, critical to the solution is Delta outflow and flow from both the San Joaquin and Sacramento Rivers. Even with exports at zero, adequate flow must be restored. Proper enforcement of the affirmative obligations of the SWP and CVP projects to provide salinity control, restore the natural production of anadromous fish and fully mitigate their impacts is a major part of the solution.

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

§ 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.)

§ 11453

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.

WATER CODE

§ 11460. Prior right to watershed water

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§ 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

EDMUND G. BROWN
Governor



December, 1960

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.

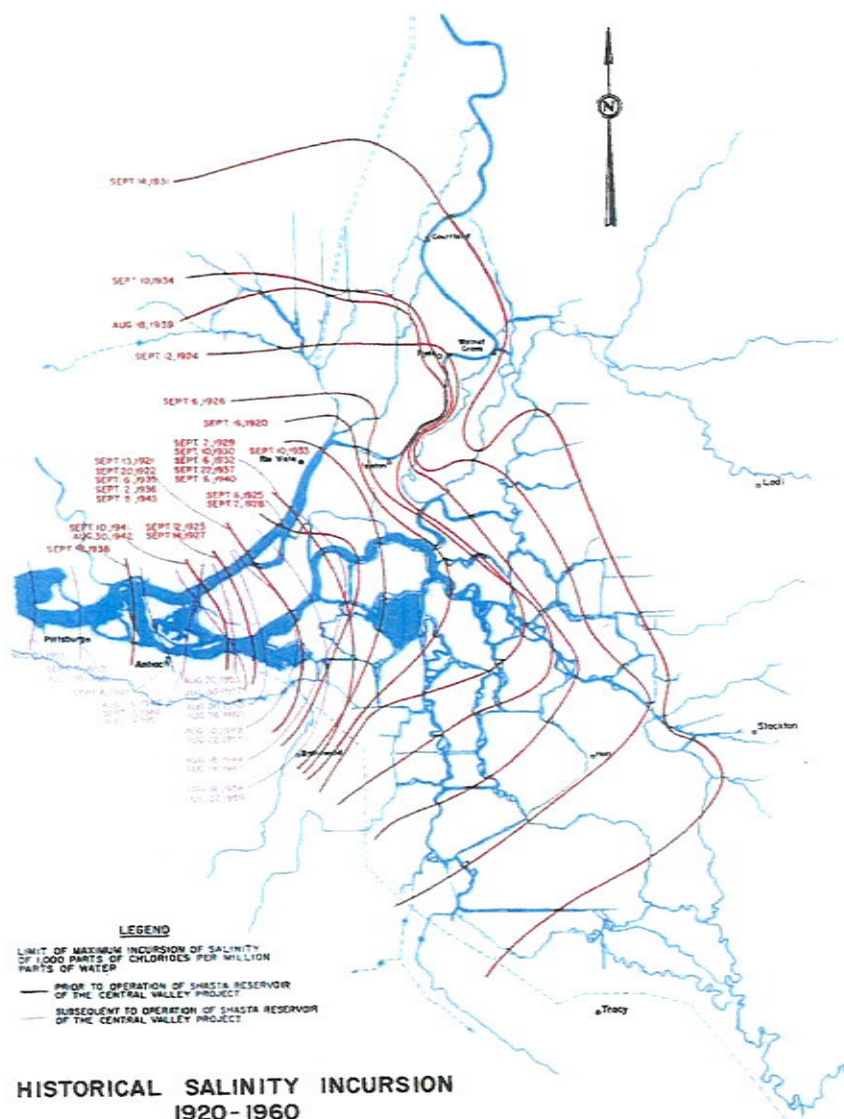
The evaluation of project accomplishments, benefit-cost ratios, and costs of project services, are intended only to indicate the relative merits of these solutions and should not be considered in terms of absolute values. Benefits related to recreation are evaluated for comparative purposes. Detailed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

HARVEY O. BANKS
Director

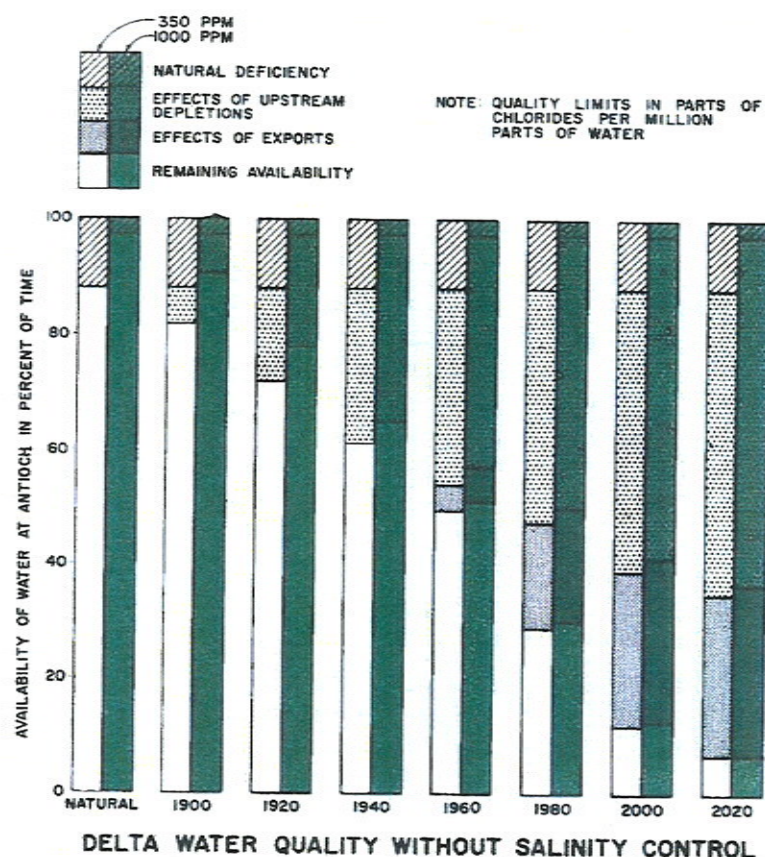
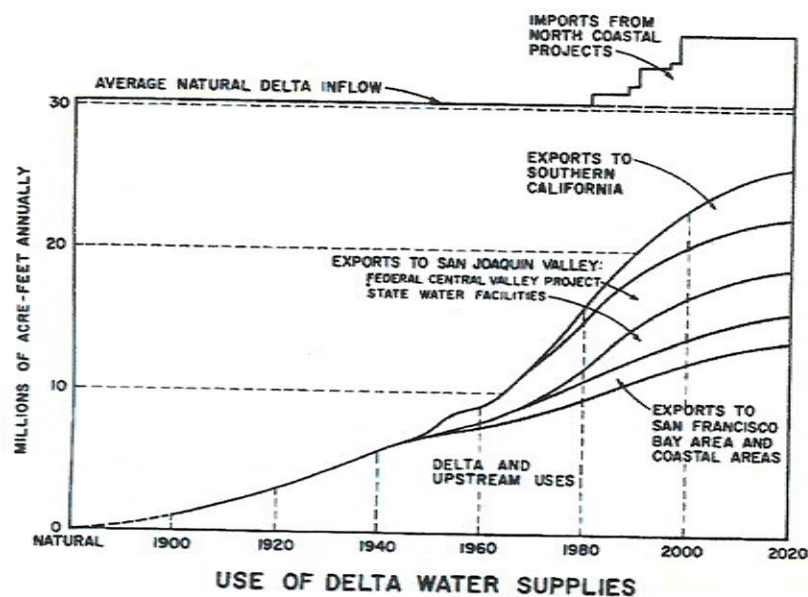
Delta Problems — salinity incursion and water supplies



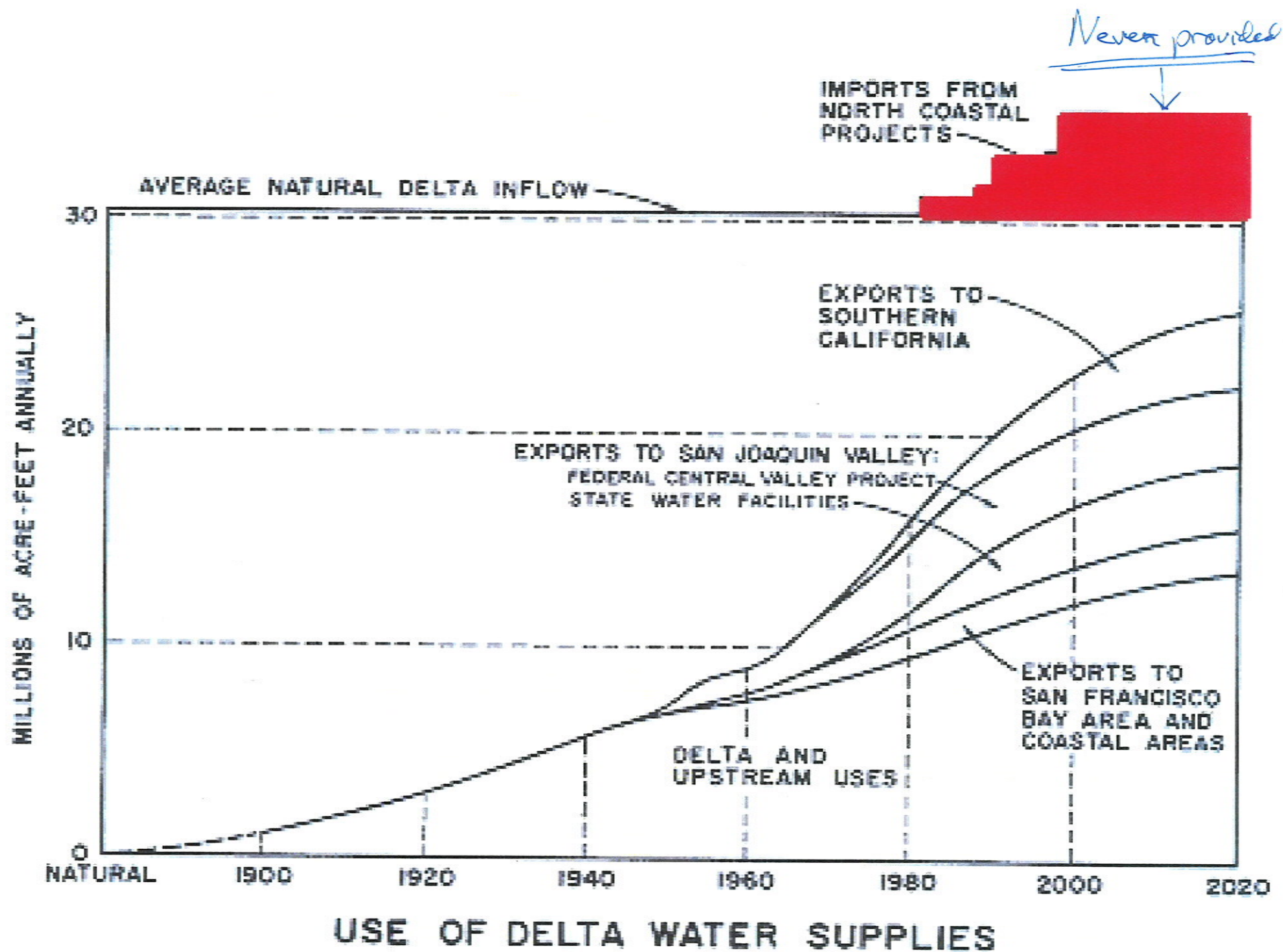
Salinity incursion into the Delta results from the flooding and ebbing of ocean tides through the San Francisco Bay and Delta system during periods when the fresh water outflow from the Delta is insufficient to repel the saline water. The natural fresh water outflow from the Central Valley was historically 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.

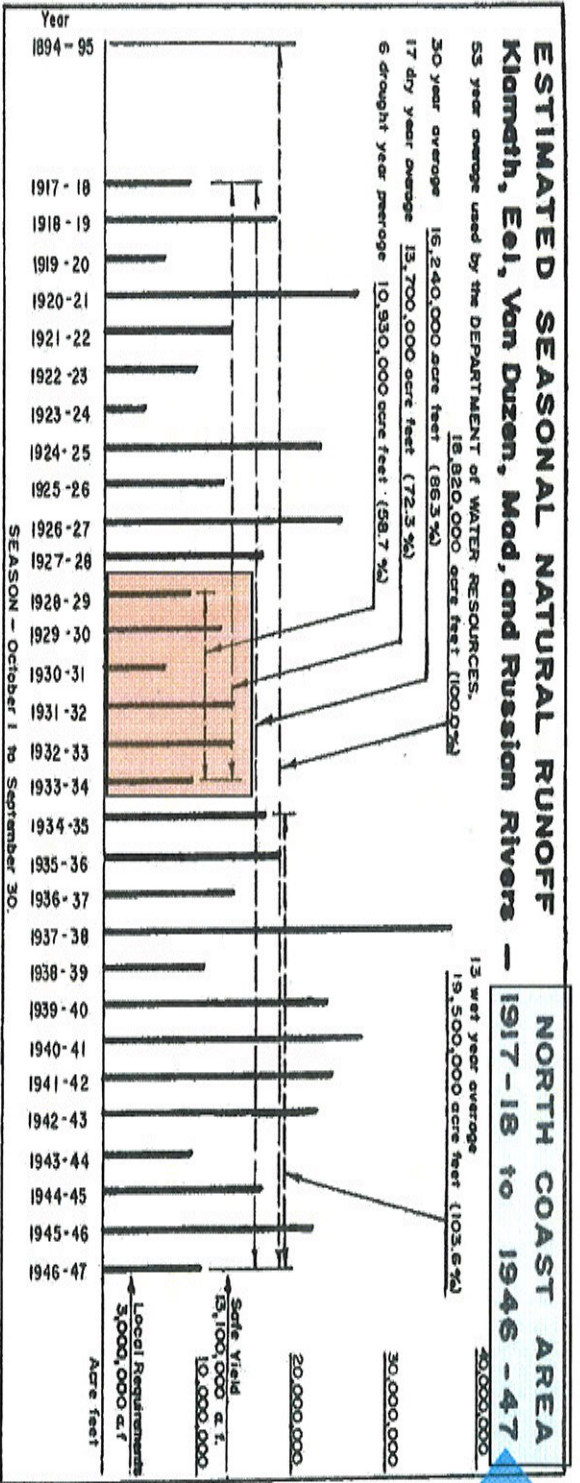
The natural availability of good quality water in the Delta is directly related to the amount of surplus water which flows to the ocean. The graph to the right indicates the historic and projected availability of water in the San Joaquin River at Antioch containing less than 350 and 1,000 parts chlorides 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.



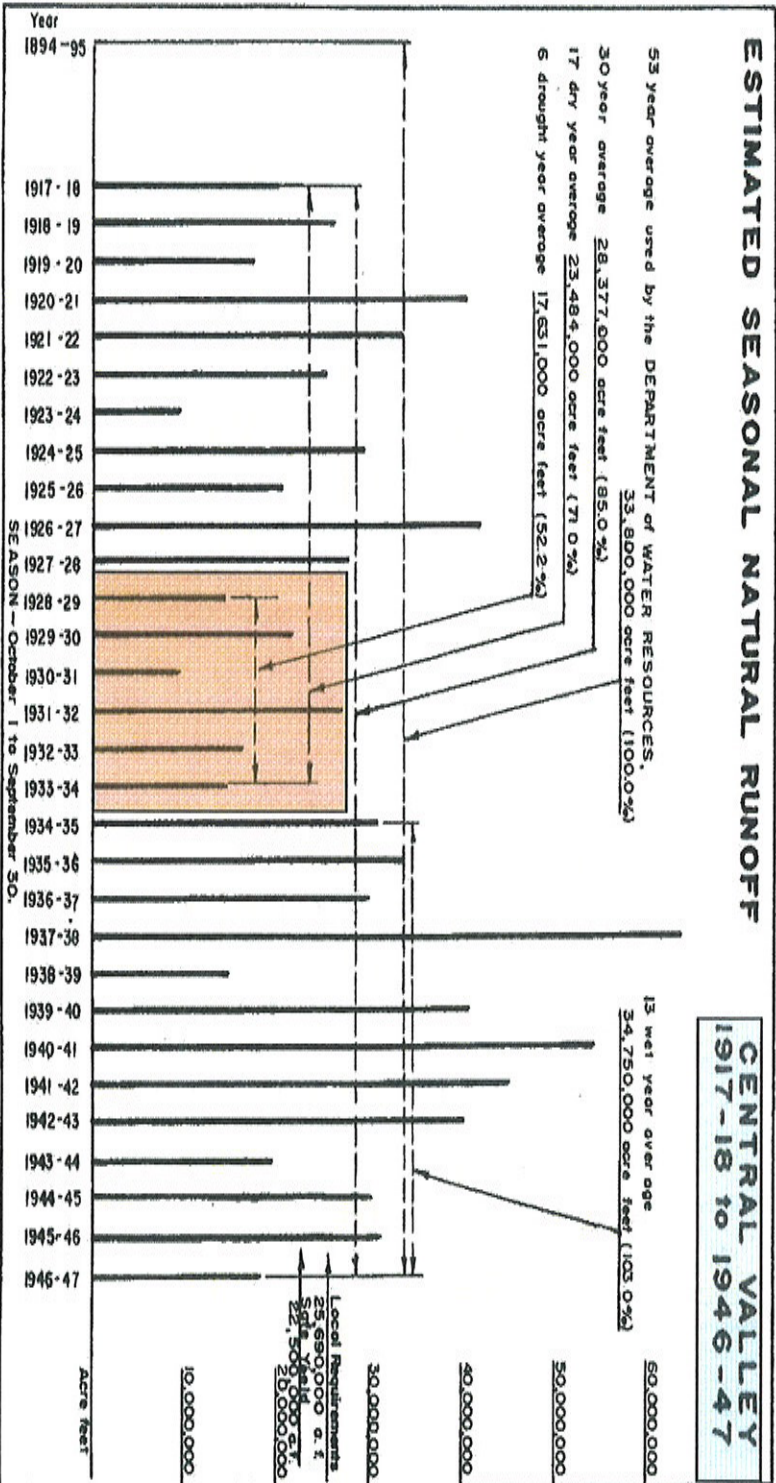
The magnitude of the past and anticipated future uses of water in areas tributary to the Delta, except the Tulare Lake Basin, is indicated in the diagram to the left. It may be noted that, while the present upstream use accounts for reduction of natural inflow to the Delta by almost 25 percent, upstream 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.



WEBER FOUNDATION STUDIES



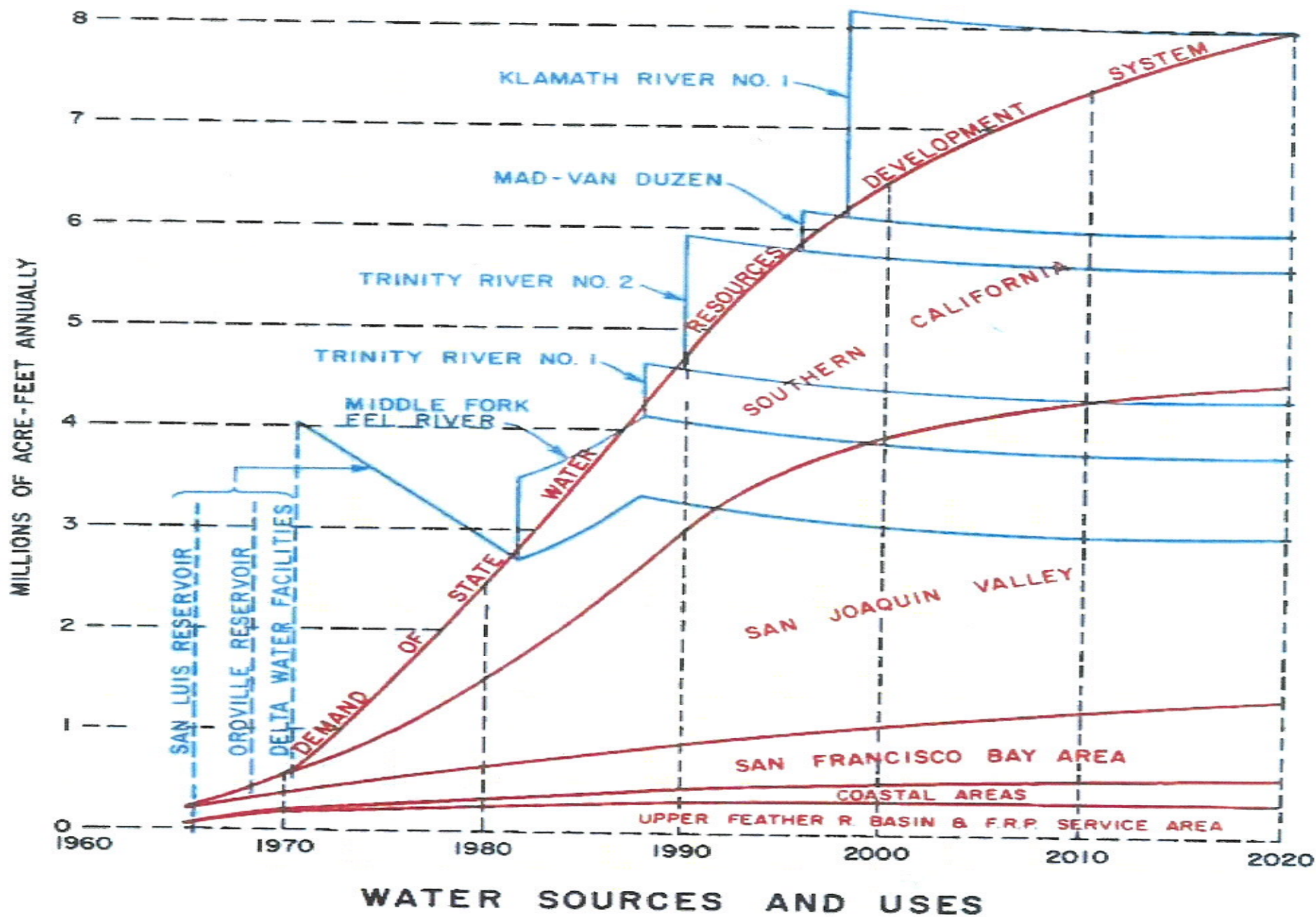
Surplus
7,930,000 AF/Y



SHORTAGE
8,049,000 AF/Y

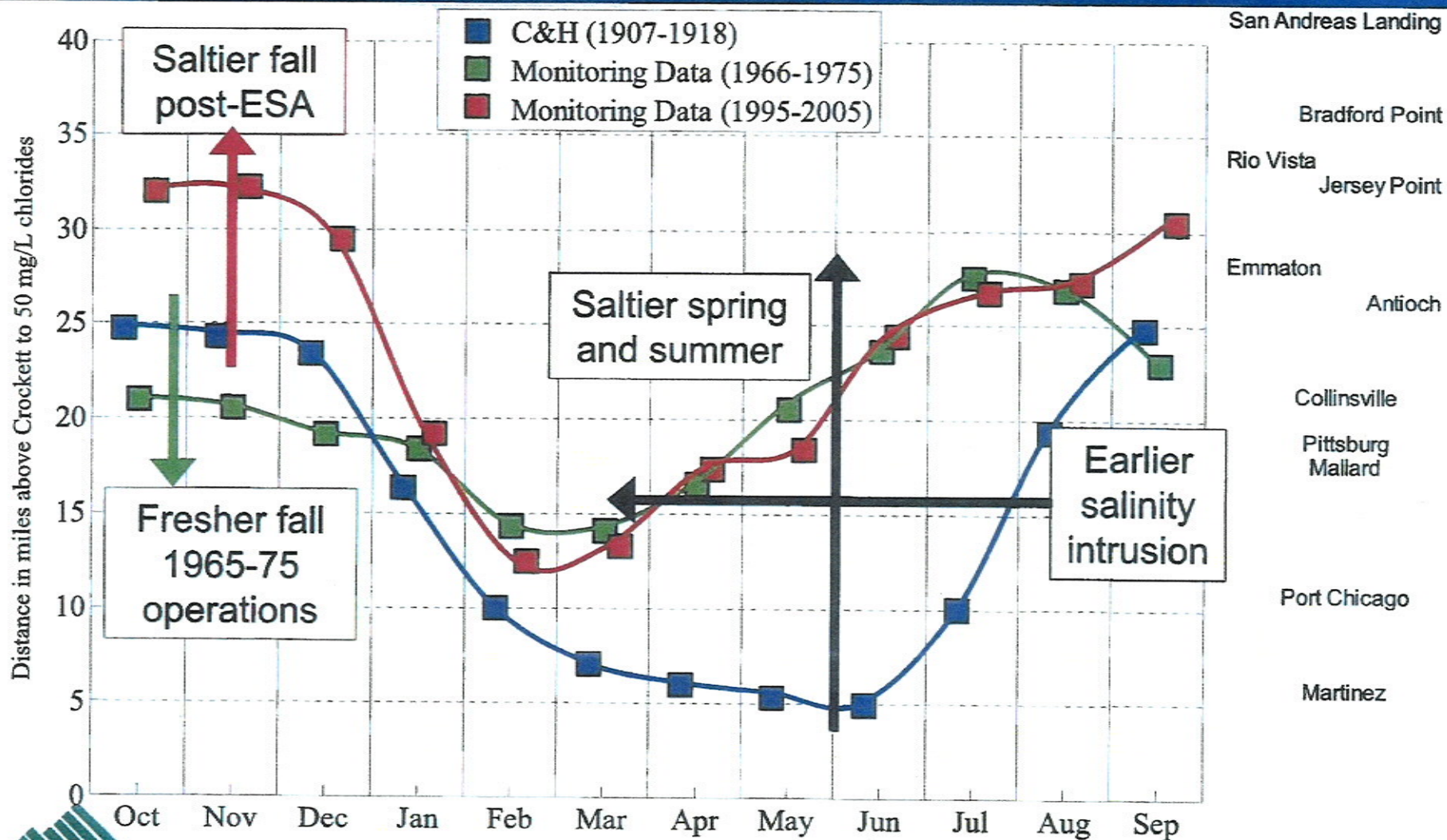
Unimpaired Flow Sacramento and San Joaquin Valley from Department of Water Resources California Data Exchange Center

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



Distance to Fresh Water (50 mg/l)

has increased dramatically in spring, early summer and fall

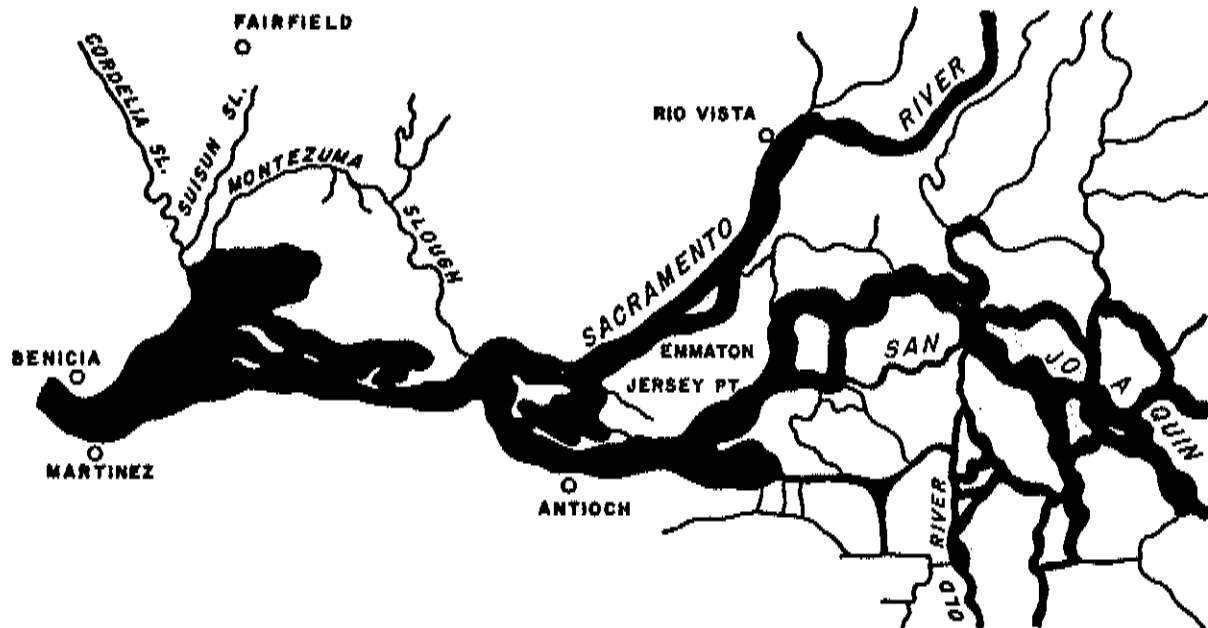


water right Decision 1485

In the Matter of Permit 12720 (Application 5625) and Other
Permits of United States Bureau of Reclamation for the
Federal Central Valley Project and of California Department
of Water Resources for the State Water Project.

DECISION IN FURTHERANCE OF JURISDICTION RESERVED
IN DECISIONS D 893, D 990, D 1020, D 1250, D 1275, D 1291,
D 1308, D 1356, and PERMIT ORDER 124

Sacramento-San Joaquin Delta and Suisun Marsh



August 1978
STATE WATER RESOURCES CONTROL BOARD

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.

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.

D 1485
1978

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

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

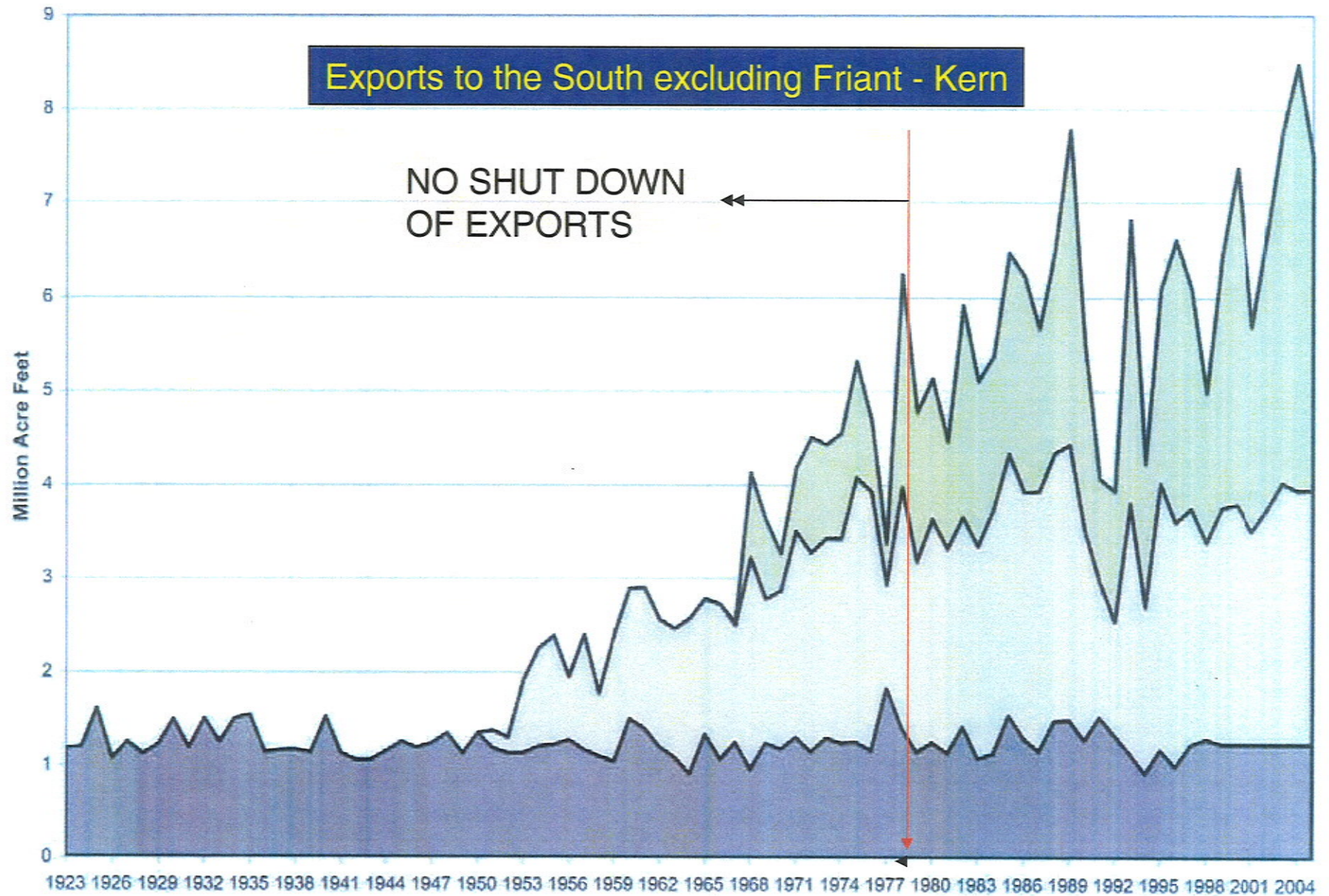
in a one-third reduction in combined firm exportable yield of State and federal projects. In theory, the existing Basin 5B Plan purports to provide full protection to the Marsh. However, during the 1976-77 drought when the basin plan was in effect, the Marsh received little if any protection because 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

NOT PROVIDED

■ In-Delta Diversions ■ Tracy Exports ■ Banks Exports

Figure 6



RECENT SWP AND CVP EXPORTS

ACRE FEET

2003	6,283,886	
2004	6,796,002	
2005	5,931,429	
2006	6,145,335	
2007	5,378,683	Low Salmon Returns
2008	4,124,733	No Salmon Fishing

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. 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. x)

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-San Francisco 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 selecting 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.