

Talk to Water Education Foundation, May 4, 2011

Sacramento River's Renegade Flood Control System and its Unique Water Right Settlement Agreements

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I have three issues to discuss tonight - Sacramento River Flood Control Project, Sacramento River water right settlement contracts and the North Delta water right settlement contract.

These issues are all related and each issue leads to the next.

1) First issue- FLOOD CONTROL PROJECT

When California became a State, the Sacramento Valley had a large River running through it. Below Redding, the River had built itself high banks - explain.

On either side of these high banks were what we call "basins" - low areas falling away from the high banks.

Through these high banks were occasional breaks which were called sloughs. High water would spill out of the River through the sloughs and fill the basins. The basins were therefore overflowed periodically and were to a degree swampy.

Enter the Arkansas Act of Congress in 1850 - to make swamp and overflowed lands into productive farm land-- Arkansas, which had a large area along the Mississippi which was overflowed and swampy, was apparently the sponsor of the Act.

It provides, however, that other States may qualify. The Act authorized the federal govt to convey S&O lands to the State for sale to buyers who would "reclaim them" through levees and drainage in order to make them farmable. Once the buyers had "reclaimed" them, the purchase price was to be refunded to them.

Calif. is said to have acquired over 2,000,000 acres of S&O lands. 65,000,000 acres in all.

Process in Calif started about 1855 with surveys in the Delta, along the Sacramento and San Joaquin Rivers and in the Tulare Lake basin.

Fed then granted to Calif., State sold to private owners, owners arranged for "reclamation" and then got the payment back.

This is no doubt where the term "reclamation district" came from - the wording in the Arkansas Act.

"Reclamation" has two diametrically opposed meanings - for flood control, it means taking water off of lands, for the Bureau of Reclamation it means bringing water to dry lands!!

All lands in the Delta and many along the Sacramento River were surveyed and granted as Swamp and Overflowed Lands ("S&O Surveys").

\$1/acre originally. Not enough to "reclaim" so authority granted to form a "district" which could assess the lands for benefits from the reclamation and to pay its additional costs.

Levee building begun by Recl Dists - on top of natural high River banks, and closing off the sloughs which released flood water.

Enter Will S. Green of Colusa, publisher of the Colusa Sun from 1863 to 1905. Can't hold the flood waters between the levees. Not an engineer, so no one paid attention.

Green also leading irrigation figure --- Glenn Colusa

Col. Alexander of the COE, and expert, said no - keep water in the Channel to scour for navigation - practice which prevailed on the Miss. and still does.

This is why I call our flood control plan a "renegade" - not in line with the "expert" opinion at the time!

Green - Also member of the Legislature in 1868. Introduced the Act which enabled "Reclamation Districts" to be formed to assess lands and pay for the needed levees and drainage.

Green continued urging that means be developed to carry flood water outside the main channel. No one listened.

Recl Districts formed and work continued building levees on the high River banks, and closing off natural sloughs.

1885 - Lamb sued RD 108, which had been formed in 1870. 108 can't close off Wilkins Slough - it pushes more flood water on me!!

“Common Enemy” doctrine was discovered in Eng. Common Law. Case in 1700’s - Sea a common enemy, so is a flood.

Each can protect himself, but cannot complain when another does so.

Cal. S. Ct said - if this were not true we couldn’t even protect the State capitol - as flood protection would not be possible!!

1880’s - fight - farmers vs hydraulic miners. Rivers filling up and spilling.

Bottom of Yuba River at M/ville was higher than the level of the City. Filled orchards almost to the tops of trees.

Ct said must use land so as not to injure another - another Common Law concept.

Can’t decide on financial impact.

Read Gold Vs. Grain - Robt Kelley - but it was really grain vs. gold - the RRs favored the grain!

Cong/man in foothills obtained Debris Commision Act in 1893 - Commission - w/in COE, could allow hydralic mining if debris adequately provided for. But too late, facilities serving miners had been demolished already by nature..

Act had, however, reference to protection of life and property, not just navigation, the traditional federal interest. This provided a “federal interest” in flood ctrlol on the Sacto River, helped to justify federal participation in funding our flood control system.

1894 - Local engineers, Manson and Grunsky proposed a system that would allow much of the flood water to move outside of levee system. Called “bypasses” -1st use of term. Anticipated 300,000 cfs maximum flow

FIRST ILLUSTRATION!! (M& G Plan) Our local engineers agreed with Green!

Then - 1st State Plan - In 1904 Dabney, chair of a State Flood Control Commission, proposed a plan of levees which would carry floods - 240,000 cfs maximum anticipated.

Then came the 1907 and 1909 floods - each about 600,000 cfs - back to the drawing boards!

Finally came Col Jackson of the COE and the Jackson Plan. He followed, unknowingly perhaps, Will Green's recommendation in the 1860's, as well as the plan of Manson and Grunsky in the 1890's - to keep the flood flows out of the River.

The capacity approx. 600,000 cfs - set by the 1907 and 09 floods

This plan was adopted by the State and approved by the COE

Started by the State. Assessments for the bypasses.

Too much for the State, so the Corps took over, thanks to the "federal interest" in providing Sacramento River flood protection as expressed in the Debris Commission Act of 1893.

In 1926 the California Central Valley Flood Control Assoc was formed by the major flood control agencies along the Sacramento River and Delta to promote the federal financing. Association still in operation, advocating flood control improvements and protection of the system.

SECOND ILLUSTRATION - MBK --- Let's see what it looks like!

Difficult to visualize its capacity - like the blind men and the elephant we see only bits and pieces.

See how small the River looks. Past Sacramento it would carry 500,000 cfs with only 100,000 cfs in the River.

Flew over it once -- remarkable

Capacity provided all the way to Collinsville, below Rio Vista

Took out Wood Island -- as much as Panama Canal

Started at the bottom - taking the cork out of the bottle!

For history of the Sacramento River F.C. Proj. see Battling the Inland Sea also by Robert Kelley.

Of special interest to City of Sacramento is the Sacramento Weir.

Unfortunately for the City, out of 600,000 cfs in the 1907 and 09 floods, only 100,000 came down the American.

We know now that's way too low an estimate.

Only 100,000 cfs can go downstream in the River below Sacto.

Some years ago 130,000 released - had to be done, the chance was taken

Countryman for COE, Houston for USBR, Kennedy for DWR made that brave decision.

I heard 130,000 cfs from American, went out to see the River -below the Sacramento weir. Logs floating upstream!! (Knew they would be)

On the Mississippi, the COE continued to try to keep the flood waters in the levee system, until 1927 when the need for escape became apparent. Too late!

For a dramatic story of the 1927 Mississippi flood, see

Rising Tide - Great Miss. flood of 1927 by John Barry

Still not much progress on Miss. in relieving the system capacity. NIMBY!

Need dramatically and tragically shown just now with the COE blowing the Mississippi levee, flooding 130,000 acres of farms to save Cairo.

California was nearly 100 yrs ahead in its "bypass" planning. Aren't we lucky!!

Sacramento River F.C. Project adequate since 1930's. Local failures, but no failure in design.

But fortunately we now also have the additional benefit of three major flood control and water storage dams on the Sacto and tribs

And that leads to my next issue -

2nd Issue - SACTO RIV. WATER RIGHT SETTLEMENT

Starts with Shasta Dam completion in 1945 - obvious to users that the regimen of the River would be changed.

Less water flow in winter, more in summer.

How much of the increased summer flow came from dam storage releases, and how much from natural inflow?

Obvious that potential conflicts would arise.

Will users be diverting natural flow or released stored water, and how much of which?

All the same color!!

The Calif. Central Valley Flood Control Assoc, formed in 1926 to promote the flood control plan, urged the formation of a similar group for water users along the River and in the Delta to work on this water right issue

That group, an offshoot of the Flood Control Association was formed in 1940s and 50s. Called Sacramento River and Delta Water Association, or SRDWA.

It included practically all of the major diverters from the River and many from the Delta.

Representatives of SRDWA began meetings with USBR and DWR to develop an agreement identifying how the natural flow and the storage releases would be accounted for.

Extensive and detailed studies were made, cooperatively, involving all three participants- State, federal and SRDWA. Each of these provided their own engineering advisors to analyse the flows and the demands upon them. Study results released in 1956.

Negotiations continued --

At one point, the USBR became impatient and threatened to file a suit involving all users and claim payment for water back to 1945 when Shasta was closed, plus interest. Fortunately they saw enough progress to drop that threat.

By the 1960's, a basic understanding had largely been reached. The Secretary of Interior sent a panel of three engineers from Washington to see what was holding up the settlement. Their answer was the Delta, which involved issues not only of water usage but of water quality.

It was decided that the settlements should proceed from Sacramento upstream, and that the Delta be set aside for separate analysis and resolution.

October of 1963, the final settlement was reached in the Washington office of Secretary of Interior Mo Udall. The Secty sat in a rocking chair for our

visit - custom in the Kennedy admin, with Pres' bad back;

Tragically, Pres Kennedy was killed a few weeks later.

With a general form of agreement reached it then became necessary to negotiate separately with each potential contractor as to their individual rights and needs.

The result was individual contracts which identified the "base" supply of water available on the average to that user under its prior water rights. Also defined the "project" supply needed to supplement the base, or water right water, and accomodate the contractor's need.

The base was free. The project water required a payment to the USBR as operator of the Project.

In 1964, the first of the contracts was signed by Sutter Mutual Water Company. The others followed, with, I believe, every user of water from the Saramento between Redding and Sacramento. They have proven to be quite successful.

The contracts were renewed in 2004 for another 40 years without significant change, except, of course, an increase in the payment for Project water.

And now the Delta!

3rd issue - NORTH DELTA WATER RIGHT CONTRACT

State Senator Miller from Contra Costa saw that the Shasta Dam of the CVP and the Oroville Dam of the State Water Project could adversely impact the Delta.

To deal with this issue, the Delta would need to be defined. Section 12220 of the Water Code does that.

Then Delta protection provisions of the Water code were adopted providing that the Projects may not adversely affect those lands. Importantly, they do not say, however, that the Delta may benefit from those Projects. It must not be damaged by them.

A Delta Water Agency was formed by the legislature in 1986 covering all of the 600,000 acres, more or less, - the entire Delta as defined in W.C. section 12220. The Delta Water Agency was authorized to "negotiate an agreement with the US and the State, or either, to

(a) "protect the water supply of the lands w/in the Agency against intrusion

of ocean salinity” and

(b) ”assure the lands within the agency a dependable supply of water of suitable quality sufficient to meet present and future needs”

The Delta Water Agency had 11 directors - 5 from the North, 5 from the South and one from Contra Costa. Nothing could be agreed upon by the 11 directors.

Under the 1986 Act, the Delta Agency would terminate unless such an agreement was entered into by Dec. 31, 1973.

Nothing was done, so the Delta Agency Act expired, and a great opportunity was lost!!

The northern Delta representatives, having been involved in the SRDA discussions with the USBR, decided to form a separate North Delta Water Agency to pursue a contract. The Legislature formed the NDWA in 1974.

The Central and South Delta Agencies also were separately authorized.

North Delta Water Agency is the only one to have followed the direction of the 1986 Act.

THIRD EXHIBIT - NDWA

The NDWA approached the USBR about a contract similar to that signed with the River diverters above Sacramento. It proved unworkable as the acreage limitation would have to be applied by the USBR.

Too complex an issue for the Delta where, unlike the Sacramento, most diverters are individuals, not Districts or water companies.

Negotiations then turned to the State DWR. In 1981 a contract was developed with the DWR and presented to the landowners for approval. The approval was overwhelming - something like 80% or more, as I recall.

The North Delta Water Agency - Dept of Water Res. contract was signed in 1981 and has worked well.

It provides for the users within the Agency, to be entitled to such water as may be needed for reasonable and beneficial purposes. No better water right is possible in California.

It also provides for a standard of water quality to be maintained at specific locations within the NDWA.

Like the Sacramento River Water Contracts, it was necessary to compensate the DWR for the benefits provided by the operation of the State Project for the water use assurances, to be available even in deficient years, and also for the maintenance of the water quality.

The price paid to the DWR has increased, based on a formula provided in the Contract. The agreement has worked well for the water users in NDWA as indicated by the recent strong vote of the landowners approving an increased assessment to meet future needs in monitoring, and if necessary, enforcing the Contract.

You may wonder how this fits with the proposed cross Delta facility for State and federal water. The North Delta contract provides that “the Agency consents to the State’s export of water from the Delta so long as this contract remains in full force and effect and the State is in compliance therewith.”

Presumably, this is the reason the DWR was willing, even anxious in 1981, to enter into this Contract. The “peripheral canal” was a very lively issue then.

The Contract also provides, however, that the State will not use eminent domain to acquire water rights in the North Delta.

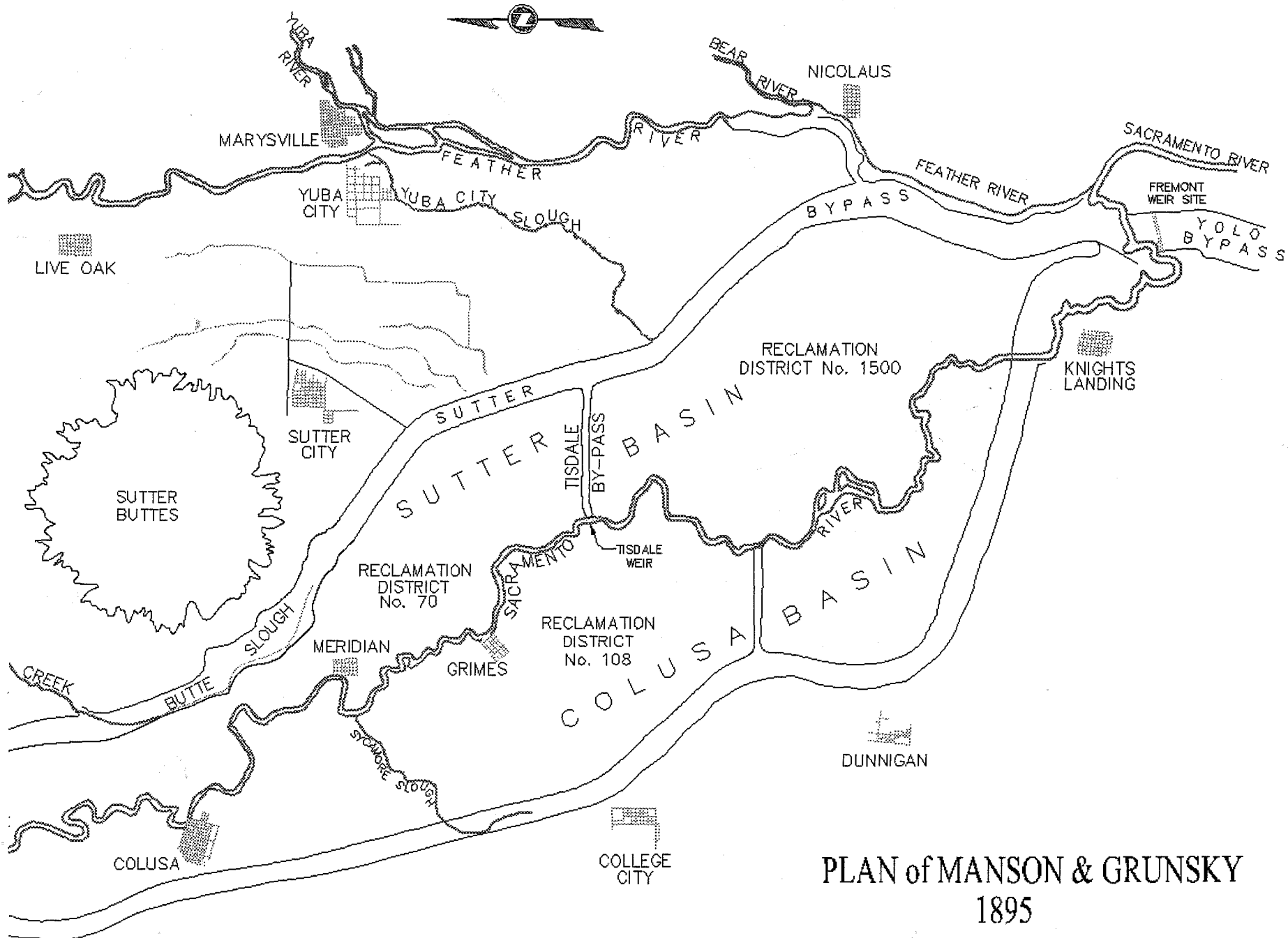
It also provides that if the standards in the Contract are not met, the NDWA shall be entitled to “specific performance of its provisions by a decree of the Court requiring the State to meet the standards set forth in the Contract.” A really tough authority!

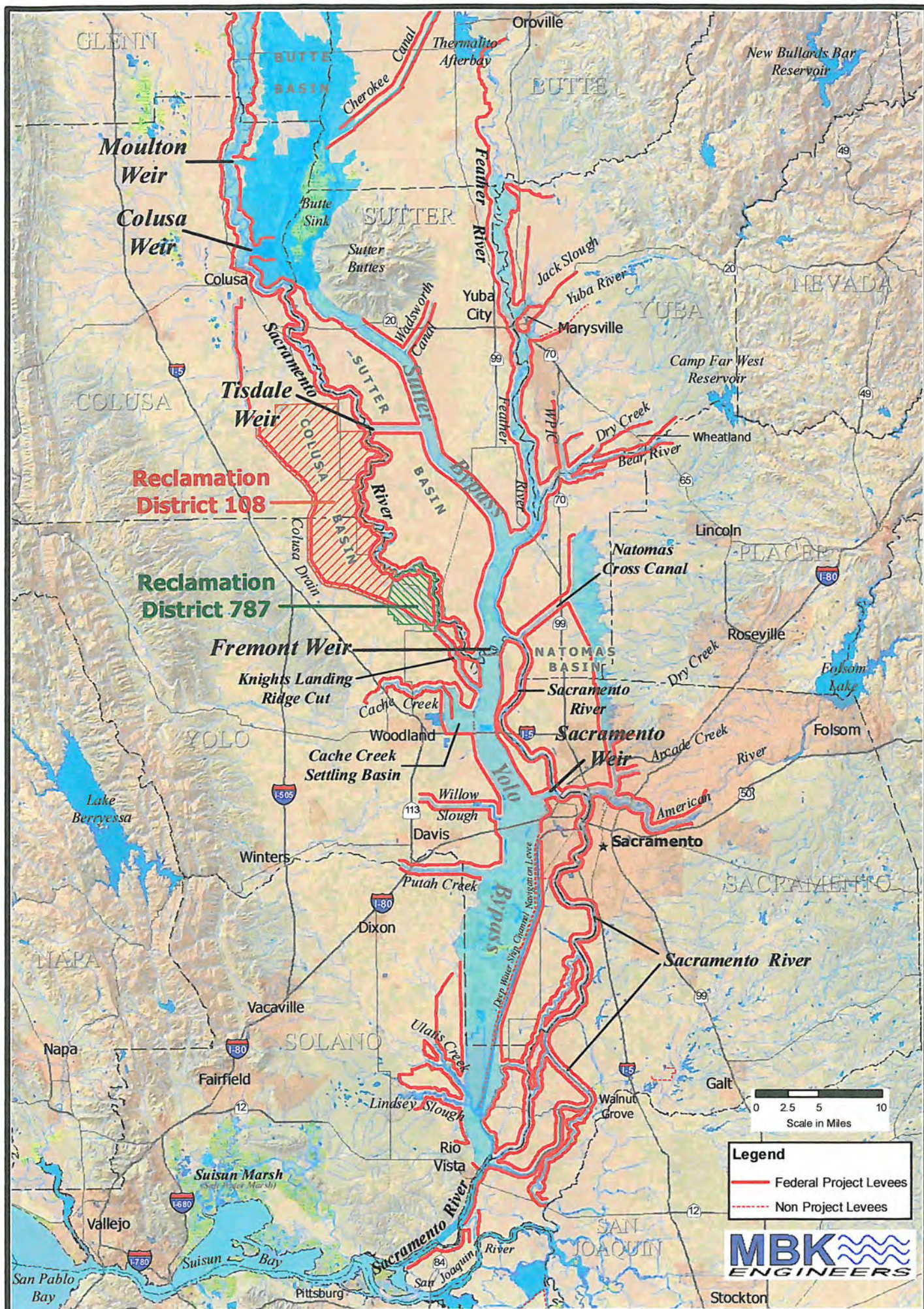
(DWR staff - It can’t say that!!!) Read it - only 4 pages long!

These water right contracts on the River and in the North Delta to have been extremely important and helpful. In their absence there would certainly have been, beginning by 1970, at least, an adjudication of the rights of all of the River and Delta diverters, and probably of the tributaries. An awesome thought!!

The USBR threatened such a suit in the 1960’s, before the River contract settlement was achieved. Such a tremendous law suit, in the federal courts, might not have been resolved even yet, and with huge expense to all!!

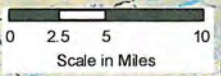
The Sacramento River Flood Control Project





Reclamation District 108

Reclamation District 787



Legend

- Federal Project Levees
- - - Non Project Levees

MBK ENGINEERS

Stockton