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Issue 10
San Joaquin River Exchange Contractors Water Authority

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BEFORE THE STATE WATER RESOURCES CONTROL BOARD

OF THE STATE OF CALIFORNIA

In the Matter of

Periodic Review of the 1995 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary

TESTIMONY OF SAN JOAQUIN RIVER EXCHANGE CONTRACTORS WATER AUTHORITY: TESTIMONY OF CHRIS WHITE, P.E. ON ISSUE 2: SOUTHERN DELTA ELECTRICAL CONDUCTIVITY

Hearing Date: March 15, 2005
Time: 9:00 a.m.

1.0 My name is Chris White, and I am a Registered Civil Engineer (California RCE 48073, August 1991). Since 1991 I have worked within the region that includes the service area of the San Joaquin River Exchange Contractors Water Authority on issues relating to irrigation and drainage. For the last 11 years, I have served as District Engineer (1993 to today), and then General Manager (2000 to today) of the Central California Irrigation District. My educational and work experience is set forth on SJREC-1.

2.0 The San Joaquin River Exchange Contractors Water Authority ("Exchange Contractors") serves an area of approximately 240,000 acres lying adjacent to the San Joaquin River in the area from the City of Mendota at the South and extending northward approximately 80 miles to Crows Landing. The largest proportion of the service area consists of Central California Irrigation District approximately 145,000 acres, Firebaugh Canal Water District consisting of approximately 22,000 acres, and San Luis Canal Company consisting of approximately 47,000 acres. The Districts are situated on the West side of the San Joaquin

River, and have sustained irrigated agriculture since the 1880s. A portion of the Districts lie downslope and adjacent to the irrigated areas of the San Luis Unit of the Central Valley Project. SJREC-2 is a map of the Exchange Contractors service area, and SJREC-3 is a map showing the upslope areas of the San Luis Unit relative to lands within the Exchange Contractors service area.

3.0 The Exchange Contractors receive water service primarily from the Delta-Mendota Canal in exchange for our historic rights to San Joaquin River water, and all of the CCID, SLCC and FCWD drain into the San Joaquin River.

4.0 My purpose for this testimony is to build upon the testimony of Dr. Burt, to demonstrate how a Vernalis standard of 1.1 mmhos/cm or greater is appropriate. It is critical that your Water Quality Control Plan of the Southern Delta not be based upon promulgating unrealistic standards at Vernalis and at upstream points with the intent to stop drainage flows that have accumulated in the soil profile for over 40 years. We are here today to provide evidence as to the necessary elements for your plan for salinity as measured at Vernalis and upstream locations.

I would make the following points to you and hopefully provide convincing testimony to support these points:

A. The establishment of salinity standards at Vernalis which simply express a longing for a pristine San Joaquin River, rather than recognizing that a man-altered river exists, and is being utilized by the Bureau of Reclamation as a drainage system instead of the San Luis Drain, are not only unrealistic, they are destructive to the efforts that in fact can be accomplished to manage salinity and to preserve the beneficial uses of the San Joaquin River. A salt standard of .7 mmhos/cm EC, especially if adopted as the basis for TMDL loads at upstream points is not necessary to protect beneficial uses. The harm of the standard is that they destroy beneficial uses of water and valuable farm land.

B. The concept of a Water Quality Control Plan for salinity is fatally flawed if the Board simply sets a numerical standard for salinity in which upstream agricultural users are driven to remove surface drainage from the San Joaquin River during the whole irrigation season. The approach will result in the management of drainage flows only temporarily and will soon

devolve into unmanaged poor-quality drainage from shallow groundwater and the destruction of our productive farm land. The correct approach is to compel the United States Bureau of Reclamation (Reclamation) to implement and fund their drainage management plan as required under D-1641. Reclamation has already been ordered by the Court, in accordance with the San Luis Act, to provide drainage to the San Luis Unit. Reclamation's current use of the San Joaquin River as a stealth drain is the major cause of water quality degradation. Instead of simply setting standards that will harm virtually every water user adjacent to the River, the Board needs to compel Reclamation to deal with the drainage discharges from the San Luis Unit and impacted down slope lands.

Some of your Board Members may not be fully acquainted with the following facts:

1.0 The San Luis Act requires that a drainage system be constructed and operated by the Bureau as a part of the delivery of water to the San Luis Unit. The Bureau failed for a number of reasons to comply with this requirement.

2.0 The San Luis Unit's irrigated lands lie upslope of the Central California Irrigation District, Firebaugh Canal Water District and San Luis Canal Company. SJREC-3 depicts this area.

3.0 Poor-quality drainage water from the San Luis Unit seeps in the underground aquifers downslope into Central California Irrigation District and Firebaugh Canal Water District, and that water is extremely poor-quality.

4.0 In addition to the seepage, the failure to have a drainage system results in groundwater pressures being transmitted downslope to our service areas. A farmer who conserves the water applied to his crops perfectly in the Exchange Contractors will still find the tile drainage system for his farm or surface water drains running full of highly saline water. Such farms may have been irrigated since the early 1900s. SJREC-4 demonstrates the typical way in which poor-quality water reaches these drains. Your regulatory system treats our farmers as the dischargers, yet there is absolutely nothing that our farmers within the Exchange Contractors can do to substantially reduce the drainage flows.

5.0 The answer to solving water quality problems in the San Joaquin River is for

Reclamation to provide drainage to the San Luis Unit and our adjacent area. Such a plan the Westside Regional Drainage Plan, has been developed and is based on in-valley disposal. The plan is implementable by Reclamation, is technically feasible, and modeling shows that it is the key tool that can be used to meet Vernalis Standards.

6.0 The Firebaugh Canal Water District's predecessor and CCID went to Federal Court in 1963 and again in 1968 to require that the Bureau build and operate its drainage system for the San Luis Unit as the San Luis Act requires. Each time the Court refused an injunction on the grounds that the Bureau promised that the export system out of the Central Valley would be constructed and operated. It was never constructed and operated. Only a collector system for some 42,000 acres was constructed, and that water was delivered only to Kesterson. That system was shut down in 1986.

7.0 In 2000, finally the 9th Circuit in the case of *Firebaugh v. United States* ordered the Bureau to provide for construction and maintenance of a drainage system for the San Luis Unit. The Court gave the Bureau the option to consider and implement other options than the physical San Luis Drain to the Bay, and unfortunately, this has caused the Bureau to delay taking any action. Since 1985, on the 42,000 acres, and since the early 1970s as to the remaining approximately 200,000 acres, the Bureau is operating what we refer to as its "Stealth Drainage System" in which the drainage through shallow aquifers and increases in groundwater pressures in the downslope areas are causing the drainage of poor-quality water to eventually reach the San Joaquin River either as surface drainage or as groundwater accretion flows.

8.0 In 2000, in its Decision 1641 (the Bay Delta Decision), the SWRCB Board ordered that by April of 2005, the Bureau of Reclamation provide to the SWRCB its plan for implementing the drainage system. A plan would seem to require financing. The Bureau has not provided any reports to your Board. We have asked previously that this Board enforce its Decision 1641 Order and obtain progress reports and commitments.

9.0 Against this backdrop, the SWRCB and its Central Valley Regional Board can continue to adopt salinity, boron and selenium standards at Vernalis and at upstream locations, the Regional Water Quality Control Board can pretend that the Bureau's "Stealth Drainage

System" in fact is not utilizing the San Joaquin River as a drain, and ignoring the fact that although the flow of salinity through this River system and the tributaries can be managed to protect all beneficial uses, it cannot be stopped, and attempting through regulatory standards to demand .7 mmhos/cm EC at Vernalis and above, is both unnecessary but also unrealistic and counterproductive.

10.0 We believe that a better plan exists, and the key is your rejection of the fiction that by regulatory requirements and standards, the SWRCB and Regional Board will somehow prevent the use of the San Joaquin River by the Bureau of Reclamation as a "stealth drain". The steps in that "better plan" are as follows:

A. Reject the idea that by establishing stringent standards for salt at Vernalis, standards that are not necessary to productively continue agricultural use in the South Delta, you can return the San Joaquin River to a pristine natural stream. 1.1 mmhos/cm EC water is routinely applied to crops and soils within the Exchange Contractors, and with modern farming methods, no adverse effects on yields occur. As Dr. Burt explains, soil leaching and soil salinity management permit water of much higher salinity to preserve even the most salt-sensitive cropping.

B. Instruct your Regional Board that the mindless regulation of selenium, boron and salt will only have the effect of guaranteeing that the San Luis Unit farmers and the poor downslope farmers within the Exchange Contractors where this poor-quality water is appearing are not the dischargers of these constituents.

C. How will that management be evidenced? We have a plan which the Upslope San Luis Unit Contractors and the Exchange Contractors are cooperatively attempting to implement called the "Westside Regional Drainage Plan". It involves reducing groundwater pressures by groundwater pumping both in the San Luis Unit and within the Exchange Contractors, placing that water in the water applied to the lands and attempting to manage salts by dilution and blending in the water supplies of both the Upslope areas and the Exchange Contractors. Simultaneously, the drainage systems will be managed to treat as much salinity, boron and selenium as practicable by placing segregated and collected drainage waters upon an

area which will concentrate salts and, finally, the Bureau of Reclamation installing and operating a treatment plant by reverse osmosis to physically collect and transport the salts out of the basin. The Westside Drainage Plan has a price tag of over $100 million, about one-tenth of the latest estimate for the San Luis Drain to the Carquinez Strait area. The Plan, however, requires that discharges continue to the San Joaquin River in a managed fashion at least in the short-run.

11.0 The Westside Regional Plan cannot be effective unless it is recognized that establishing discharge permits for the Grassland Bypass Project, as an example, that require in 2009 that any water entering the San Joaquin River from Salt and Mud Sloughs, have no greater than 2-ppm selenium or no greater than the .7 mmhos/cm EC that the Regional Board seems to be patterning after your current standard at Vernalis as an upstream standard, is counterproductive and contrary to a managed drainage plan. The Westside Regional Drainage plan will require time to develop and be effective. All those premature requirements will do is require that we stop all drainage, salt up the land in this area, pack the shallow groundwater with selenium, boron and salt-enriched water which will accrete and flow into the San Joaquin River over a period of years in a totally uncontrolled fashion, and do so long after your requirements have destroyed the productivity of our lands.

A. The local interests have found a way to fund a large part of the cost of this Westside Regional Drainage Plan, but the United States needs to contribute a substantial amount of the cost and take responsibility for the ultimate treatment first by land disposal and then by mechanical treatment of the residual drainage water. The Bureau needs your support and guidance to find the remainder of the money for this effort now.

12.0 <u>So what should this Board do in regard to establishing the Salinity Standard in the South Delta?</u>

1. Indicate that you understand that the San Joaquin has a number of beneficial uses, including both irrigation and drainage, and that since for the last 40 years drainage water has entered the soil profile and is migrating downstream both in the forms of pressure and physical water, that the salinity standards have to recognize the inevitability of poor-quality drainage water flowing into the San Joaquin River for a number of years. Adopt a

requirement of 1.1 mmhos/cm EC during the irrigation season at Vernalis to preserve reasonable and beneficial uses.

2. Order the Bureau, in conformance with your Decision 1641, to come before you immediately and explain whether they have a different plan than the Westside Regional Drainage Plan that the local interests, out of desperation and the Bureau delay, have developed. Ask for assurance of financial contributions to the implementation of that drainage plan immediately by the United States. The Grassland Bypass Drainage Plan, which currently collects and segregates the worst quality waters, is facing a requirement that all collected waters be removed from Mud and Salt Sloughs by 2009 because the drainage water selenium exceeds 2 ppb. If the Regional Board adopts a standards of .7 mmhos/cm EC at upstream locations, taking its cue from you, even though this standard is not necessary and does not in any way protect irrigation use as a beneficial use, all local attempts to try to fill in for the Bureau's obvious neglect and failure will be doomed, and more, not less, saline conditions can be expected at Vernalis due to uncontrolled drainage and accretion flows.

3. Utilizing the powers of the SWRCB under Decision 1641, indicate that you understand that the plan for drainage through a drain of the Bureau has not been implemented, and if the Bureau of Reclamation and its funding showed progress toward a management system for its stealth flows and cooperation with both the San Luis Unit irrigators and the Exchange Contractors occurs and the plan is implemented immediately, showing promise of managing salts and that further enforcement using your water right powers would not be required.

4. Explain to your Regional Board and implement yourself in the review of the Regional Board regulatory activities, including TMDLs and establishment of upstream standards, the principle that establishing water quality plan standards based on a longing that the San Joaquin River be returned to a pristine natural stream is not reality, and it is not necessary to preserve beneficial uses. Recognize in your plan for the Southern Delta that attempts to regulate, ignoring that this is a managed waterway accommodating both irrigation and drainage uses will be counterproductive, destroying the beneficial use of the Exchange Contractors farm land,

destroying the efforts to manage the release of drainage water to the San Joaquin in periods and manners in which the least risk of impairment of beneficial uses will occur.

If called to testify in this matter, I could and would testify to each of the above matters, except as to those matters stated upon information and belief, and as to those matters I believe them to be true and correct.

Executed this 14th day of March, 2005 at Los Banos, California.

CHRIS WHITE, P.E.

STATEMENT OF QUALIFICATIONS

CHRIS WHITE
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(209) 827-8616

Professional Qualifications: Registered Civil Engineer and Licensed Land Surveyor, California.

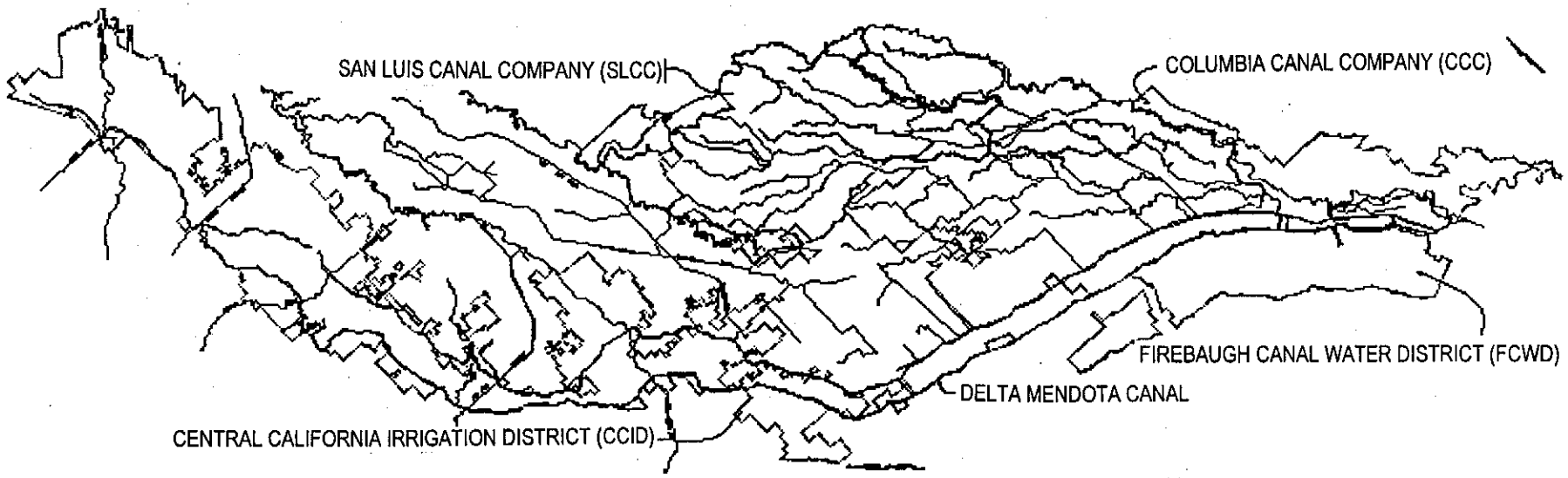
1995 to Present: Assistant Manager and District Engineer, Central California Irrigation District, Los Banos, California, a member agency of the San Joaquin River Exchange Contractors Water Authority (Exchange Contractors).

1993 to 1995: District Engineer, Central California Irrigation District.

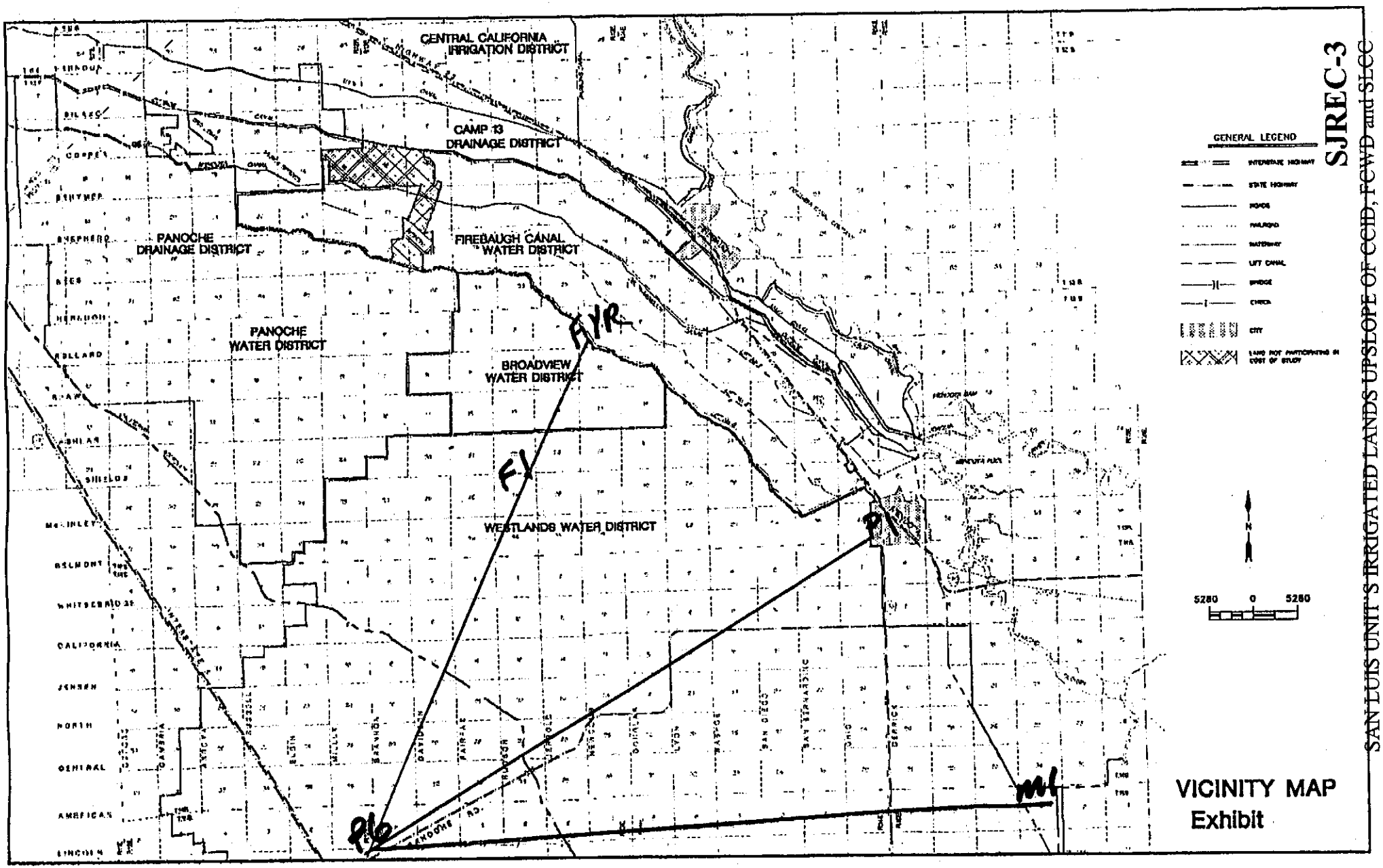
1991 to 1993: Project Engineer and Vice President, Stoddard and Associates, Los Banos, California.

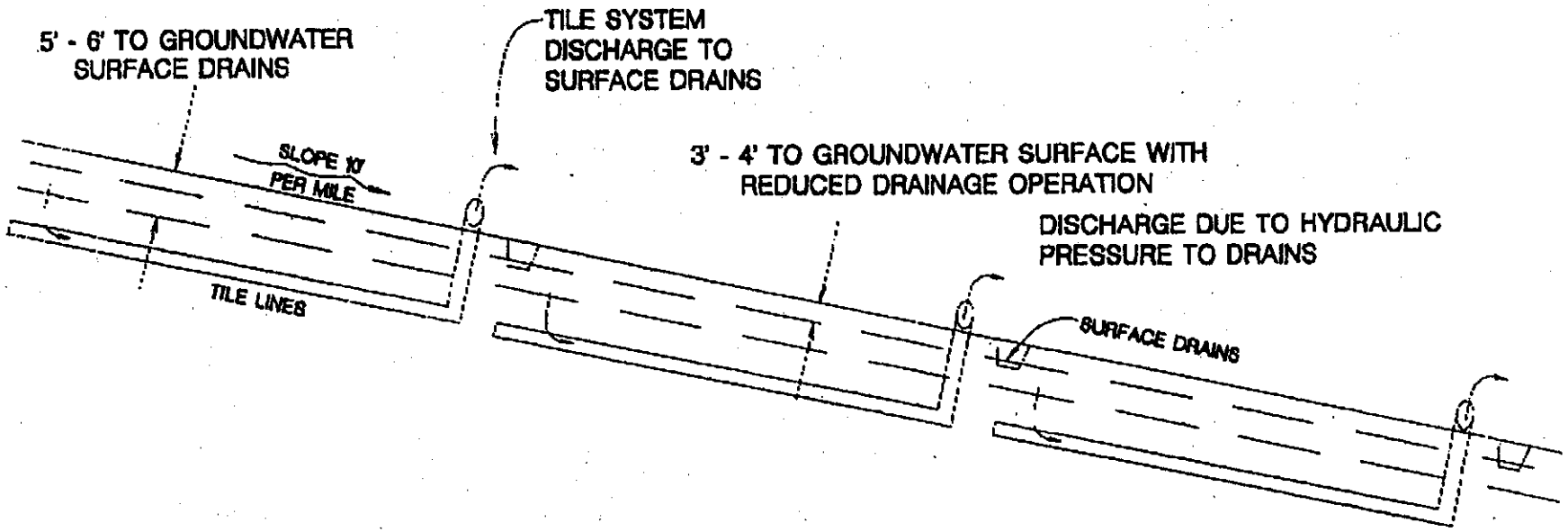
SJREC-2
SERVICE AREA of SJREC

SAN JOAQUIN RIVER EXCHANGE CONTRACTORS
SERVICE AREA



SAN JOAQUIN RIVER EXCHANGE CONTRACTORS
WATER AUTHORITY
EXHIBIT SJREC-2


CENTRAL CALIFORNIA IRRIGATION DISTRICT
CAMP 13 DRAINAGE DISTRICT
PANOCHE DRAINAGE DISTRICT
FIREBAUGH CANAL WATER DISTRICT
PANOCHE WATER DISTRICT
BROADVIEW WATER DISTRICT
WESTLANDS WATER DISTRICT
FYR
FI
GENERAL LEGEND
5280 0 5280
SJREC-3
SAN LUIS UNIT'S IRRIGATED LANDS UPSLOPE OF CCID, FCWD and SLCC
VICINITY MAP
Exhibit



Exhibit

TILE DRAINAGE ON LOWER LYING LANDS

San Joaquin River Exchange Contractors Water Authority

SJREC-4

DIAGRAM – TILE DRAINAGE ON LOWER LYING LANDS WITHIN SJREC