

APPENDIX C –
SUMMARY REPORT ROBERTS ISLAND AND UNION ISLAND RIPARIAN
WATER RIGHTS INVESTIGATION, SAN JOAQUIN COUNTY, CA, JUNE 2008

**SUMMARY REPORT
ROBERTS ISLAND AND UNION ISLAND
RIPARIAN WATER RIGHTS INVESTIGATION
SAN JOAQUIN COUNTY, CA.
MAY 2008**

Table of Contents

1. Introduction.....	3
2. Methodology.....	4
3. Summary of Findings.....	8
3.1. Swamp and Overflow Land Sales, 1859-872	8
3.2. Land Subdivision, 1873-1888.....	11
3.3. Land Subdivision Roberts Island, 1889-2008.....	12
3.4. Land Subdivision Union Island, 1895-2008	12
4. Conclusion	14

1. Introduction

Tim O’Laughlin of O’Laughlin & Paris, Attorneys at Law, requested JRP Historical Consulting, LLC (JRP) in August 2007 to undertake historical research related to riparian water rights on Union Island and Roberts Island in the southern San Joaquin Delta in T2N/R5E, T1N/R4E, T1N/R5E, T1N/R6E, T1S/R4E, T1S/R5E, T1S/R6E, T2S/R4E, T2S/R5E, Mount Diablo Meridian. (**Maps 1A and 1B**) The study’s primary focus was to identify all those parcels of land on Union Island and Roberts Island that were originally non-riparian at the time a patent was issued, or have become so over time by their having been severed from their contiguity to a natural watercourse.

Riparian water rights and the riparian doctrine were introduced into California by the California legislature’s adoption of the common law of England. Lands contiguous to streams acquired by private parties from the State of California, or under Spanish and Mexican grants have been held by the California courts to possess riparian water rights.¹ The title to parcels on Union Island and Roberts Island derive from these sources with the majority of acreage being Swamp and Overflow Land acquired from the State of California. (**Maps 2A and 2B**) The riparian right is “part and parcel” of the land and is not acquired by use, nor lost by disuse. With a grant of land the riparian water right passes to the grantee, provided that the conveyance does not reserve from its operation any riparian rights incident to the land. Riparian rights can be lost if in the subdivision of a riparian tract of land, individual parcels are so created as to be left without physical contiguity to a watercourse. Under California law, parcels severed by subdivision or conveyance from land bordering a stream are considered to have permanently lost riparian rights unless the original riparian right is reserved in the detached parcels.² Where severance from contiguity to a stream has occurred without ownership change, riparian rights may also be lost. The current study is designed to identify through historic map research those parcels on Union Island and Roberts Island that throughout their history have been at some point in time been severed from their contiguity to a watercourse and, therefore, may have lost their riparian status.

It is important to note that this study did not systematically examine actual deed transactions to determine whether or not grantors may have preserved the riparian right in detached parcels by stipulation in conveyances. Nor did it seek historical evidence regarding riparian rights on land severed from contiguity to a stream without ownership change. Rather, the principal objective has been to show the potential extent of loss of riparian water rights through the original patenting process or by subsequent land subdivision that resulted in parcels becoming detached from contiguous watercourses. The findings of this study are presented in this report and are displayed graphically in

¹ *Lux v. Haggin*, 69 Cal. 255 (1884), 10 Pac. 674 (1886); *Pope v. Kinman*, 54 Cal. 3, 4-5 (1879); and *Holmes v. Nay*, 186 Cal. 231, 235 (1921).

² *Copeland v. Fairview Land & Water Company*, 165 Cal. 148, 161, 131 (1913); *Strong v. Baldwin* 154 Cal. 150, 156-157 (1908).

data tables and on maps of Union Island and Roberts Island showing parcels which have lost their contiguity to a waterway.³ (Table 1, Maps 3A and 3B)

2. Methodology

To achieve the primary goal of this project, JRP referred to historical documents and map evidence providing information on the original patenting of land on the two islands by private individuals and subsequent land transfers affected through sale, subdivisions, and in some cases consolidations of existing parcels. Most of the land within the two islands was granted to private individuals by the State of California as Swamp & Overflowed (S&O) Lands. Thus, the California State Lands Commission's state land records related to the acquisition and disposition of grant lands was a key starting point in the research for this project. Other indispensable records were rural plat books containing information on property ownership derived from statistics maintained by county assessors historically to make annual real property tax assessments on individuals and corporations owning land within their jurisdiction. Fortunately, a reasonably good run of these records exists for San Joaquin County through 1919. In more recent years, county assessors ceased making these map books, but they were of sufficient usefulness for some commercial purposes that private companies periodically gathered the assessor's tabular information on real property ownership and published county land ownership atlases on their own. For the agricultural regions of San Joaquin County sufficient interest resulted in production of several such rural map books beginning in the 1960s. Other miscellaneous maps showing land ownership in the southern Delta country have been produced by the San Joaquin County Surveyor, licensed private surveyors and the U. S. Bureau of Reclamation.⁴

Given the general character of the low-lying lands of the southern Sacramento-San Joaquin Delta, JRP had assumed from the outset that the vast majority of the acreage on Union and Roberts islands was designated as S&O land under the Swamp and Overflow Land Act of September 28, 1850.⁵ By this act, Congress granted to the state swamp lands on the public domain requiring drainage to make them fit for cultivation and overflowed lands subject to periodic flooding requiring levees to protect the land and make it productive. This federal grant to the State of California transferred more than two million acres of public land from federal possession to the State of California, which then sold the S&O lands to private landowners who promised to reclaim them. Nearly one-quarter, or 500,000 acres, of the S & O land was located in the Sacramento-San

³ Riparian rights cannot be extended to include contiguous non-riparian parcels becoming united in ownership. Where contiguous quarter sections were granted by separate patents, each patent being based upon a separate entry, the California Supreme Court held that each parcel constituted a separate tract of land. The riparian right of those parcels contiguous to a watercourse, therefore, did not extend to the non-contiguous parcels, even though granted to the same person on the same day, provided that the non-contiguous adjacent parcels were conveyed by separate patents. On this latter point see *Lux v. Haggin* 69 Cal 255, 424-425 (1884), 10 Pac. 674 (1886); *Boehmer v. Big Rock Irrigation District*, 117 Cal. 19, 26-27, 48 (1897); *Title Insurance & Trust Co. v. Miller & Lux*, 183 Cal. 71, 82 (1920).

⁴ See Bibliography for complete list of sources.

⁵ 9 Stats. 519.

Joaquin Delta. Records of the state' acquisition of these S&O grant lands and their disposition to claimants and patentees are held by the California State Lands Commission and contain, in part, date of purchase, name of purchaser, acreage, and legal description of the parcel boundaries.

Lands patented as S&O grant lands are described by legal subdivision, not by metes and bounds. When the greater part of a legal subdivision (i.e, a 40 acre quarter quarter-section) was wet and unfit for cultivation the whole of the legal subdivision was included in the list of S&O land, if the greater part of such subdivisions was dry, it was excluded. Thus, the legal subdivisions described in the patents follow the township, range, sections and divisions of sections of the public land system, and therefore, are relatively easy to map.

Sale of S&O land on the two islands began in 1859 and continued at an irregular pace through 1872 when the last S&O Certificate of Purchase was issued by the state. With the exception of the Mexican grant land at the southern edge of each island, this thirteen year period marked the initial subdivision of the islands into private possession and corresponded with the earliest efforts to erect systems of protective levees on the rim of the island adjacent to the rivers and major sloughs and cross levees on the interior of the islands along high ridges or property boundary lines. The patents also separated the individual properties into riparian and non-riparian parcels.⁶ From information contained in these state land acquisition and disposition records, S&O parcels were platted onto maps using current section lines as projected on U.S.G.S topographic quad maps as our reference. Those S&O tracts not adjacent to a natural waterway have been classified and coded appropriately on these maps as non-riparian parcels – none of which could become reclassified later as riparian.

The remaining acreage on Union and Roberts islands not classified as S&O land was part of a Mexican land grant, known as Rancho El Pescadero. It became private property in 1843 when the Mexican Governor of California, Manuel Micheltoarena, granted an eight square league (35,546 acres) tract southwest of present day Stockton to Antonio Maria Pico. The United States confirmed the grant and issued a patent for the property on March 10, 1865 to Pico and Henry M. Naglee. The rancho included nearly all of the acreage at the southern end of both islands bordering on Old River. The northern boundary of Rancho El Pescadero coincides with modern day Grant Line Canal on Union

⁶ On these islands, land was subdivided into smaller parcels, but over the years consolidation of these small parcels into a large single block of land also occurred. These large blocks were sometimes later subdivided a second time into a configuration of smaller parcels different from the pattern existing prior to consolidation. When small parcels that are differentially riparian and non-riparian are consolidated, the riparian right does not expand to include the whole consolidated parcel. Thus, in certain situations, a parcel, or a portion of a parcel, may appear riparian on the face of a map, but understanding the history of the parcel belies its apparent riparian status. This occurred to a great extent in eastern Union Island where the land was initially subdivided into many S&O tracts, consolidated under a single owner, and then subdivided a second time irrespective of the original S&O parcel lines. The latter subdivision could create parcels which were adjacent to a waterway, but contained acreage from two or more former S&O tracts. The result is interior portions of properties bordering on streams which are partially non-riparian because the interior portion once belonged to a different parcel.

Island and with Undine Road on Roberts Island. Initial subdivision of Rancho El Pescadero, therefore, was from patentees Pico and Naglee to private parties beginning after 1865. By 1870 only a couple of parcels on the islands within the rancho had been sold and all rancho parcels at that time appear to have remained riparian to Old River.

For the period 1850 until the imposition of new tax codes during the Progressive Era in the second decade of the 20th century, property tax was the primary revenue source for both state and local governments in California. Thus assessment records provide reasonably reliable documentation on ownership and transfers of real property in the state on an annual basis. The surviving San Joaquin County Assessor Plat Books provide property ownership information for each legal parcel of land on Roberts and Union islands from the year 1879 through 1919, with the exception of 1890, 1894 and 1901 where data is unavailable, and for the years 1909 and 1910 where information is lacking for certain townships within the study area. The San Joaquin County Assessor compiled new map books each year to facilitate the assessment and taxation of real property. Each page of the plat books contains a base map showing one township and range divided into sections and quarter-sections; super-imposed over these survey lines are the parcel lines of each tract of private land together with the property owner name and number of acres in each parcel. The maps also depict major rivers and sloughs, and identify some cultural features that might influence property values such as levees and cross-levees, cuts, canals, drainage ditches; and major transportation features -- roads, railroads, wharfs, bridges and ferries. According to the 1886 *Codes and Statutes of California*, state law required county assessors to prepare assessment rolls with *written* description of land, but not necessarily maps. State code did, however, allow for the individual county Boards of Supervisor to order the assessor to create plat map books for “blocks within any incorporated city or town, and mark thereon in each subdivision the name of the person to whom it [was] assessed.”⁷ There was no state tax code requiring map books for rural lands, but, in San Joaquin County, plat books were made for rural lands throughout the county, such as those for Union and Roberts islands. Law required that ownership of property be assessed to the “persons by whom it was owned or claimed, or in whose possession or control it was” in March of each year. In addition, if property was in possession of a trustee, guardian, executor, or administrator, it was assessed to such person.⁸

While these assessment plat maps provide a reliable source for charting land subdivision and sale resulting in loss of contiguity to a waterway through 1919, there is no set of records for the period from 1920 to 1963 that provides a similarly convenient and reliable data base for tracing land disposal patterns on the islands. One San Joaquin County Map from 1926 showing property ownership was found and it was used to compare data to the previous 1919 assessment map. JRP interviewed several long-time county employees in the assessor’s office and the county surveyor’s office who believe that local surveyors Budd & Widdows were commissioned to publish county-wide property ownership maps

⁷ F.P. Deering, *The Codes and Statutes of California* (San Francisco: Bancroft-Whitney Company, 1886), 547-548, 557-558.

⁸ F.P. Deering, *The Codes and Statutes of California* (San Francisco: Bancroft-Whitney Company, 1886), 546, 553.

in the 1930s, but none could be located by us in any county offices or in other public repositories of historic maps. None of our informants recalls seeing any county mapping from the 1940s or 1950s showing property ownership and the assessment roll books kept by the assessor's office have been discarded by the county. The lack of systematic information on property ownership for the period from the late 1920s into the 1960s has been partially overcome by use of the water right application files held by the State Water Resources Control Board, but these records only provide a partial picture of property ownership. Information compiled for mapping prepared by the U. S Bureau of Reclamation in 1963 provides the next comprehensive set of data on property ownership on the two islands.⁹

For the past forty years, rural plat map books produced by private companies provide another reliable source for property ownership for the more modern era. JRP relied heavily on these types of commercial maps, which were published and updated almost annually, to bring the study up to date. These maps depict property lines and ownership in a way similar to the old county assessor maps described above, providing owner names and acreage on maps giving township, range, and section numbers. Also shown are waterways, canals, levees, railroads, and roads. The purpose of the maps as stated in one 1993 edition is "to provide farmers, ranchers, growers, loan institutions, agricultural product authorities, government agencies, realtors, and individuals who have a requirement to know land ownership and location with information that will help them in this area of interest."¹⁰

These maps were published by various private companies and have been found for San Joaquin County that contain comprehensive mapping of land ownership parcel-by-parcel for Union and Roberts islands for the following years: 1966, 1969, 1979, 1981, 1984, 1986, 1993, 1995, 1997, 2003, and 2005. Although the source of information is not given for the 1966 and 1969 maps, the remainder used ownership and parcel information derived from property ownership data maintained by the San Joaquin County Assessor. Rural plat map books beginning in 1979 differ in an important way from the earlier source maps in that they show each individual legal parcel and parcel numbers. With this information, it is possible see adjacent parcels held by the same owner as distinct parcels and determine if land had been subdivided and severed from contiguity to a waterway without conveyance of title. Source maps used from 1879 to 1979 show property ownership boundaries and may not depict distinct legal parcels within the boundaries of a larger tract held by a single owner, if any such parcels existed. From 1879 to 1979, therefore, it was not always possible to determine loss of contiguity to a waterway of land subdivided, but held by the same owner. All data for such subdivisions are from maps dated between 1979 and 2008.

⁹ As noted, mapping showing land ownership is lacking for a considerable period of time in the 1920s through 1950s. During these years subdivision and/or consolidation of property along with ownership changes may have occurred that would alter the findings of this study. Indeed, even when maps for consecutive years are available, such actions may have occurred between drafting of maps and not be evident. Closing the chronological data gaps would tend to have the effect, if any, of increasing the number of non-riparian parcels.

¹⁰ Echo Map Company, *Agri-Land, San Joaquin County, Property Ownership Maps Plat Book and Guide* ([n.p.]: Echo Map Publishing Company, 1993).

Finally, JRP was able to obtain 2007 and 2008 parcel information and mapping directly from the San Joaquin County Assessor's Office and from the First American Real Estate Service online database.¹¹ JRP spot checked the accuracy of the various types of ownership maps used from 1879 to 2005 against other sources such as property deeds, lease agreements, water right applications, and other primary and secondary historical evidence and has determined them to contain reliable property ownership and property boundary information for the purposes of this study.

The riparian right of an owner of land adjoining a stream generally applies only to natural bodies of water and in waters naturally flowing therein. Thus, our assumptions about what constitutes a natural body of water bordering or flowing through Union and Roberts islands influenced the conclusions of this study. For the purposes of this study, land adjacent only to a watercourse originally artificially created was in all cases assumed to be non-riparian. Only lands abutting natural watercourses were considered riparian. JRP examined numerous early maps, survey notes and other historical documents in determining which waterways were natural. On Roberts Island, the natural waterways are assumed to be the San Joaquin River; Burns Cut-off; Middle River; Old River; Whiskey Slough to the NE 1/4 of Section 8, T1N/5E, MDM; Turner Cut from Section 31 to the SE 1/4 of Section 30, T2N/R5E, MDM.¹² The remainder of Whiskey Slough and Turner Cut as depicted on current USGS topographic maps, along with that portion of Trapper Slough in Section 21, T1N/R5E, MDM, and the unnamed body of water between the head of Trapper Slough and Whiskey Slough in Sections 21 and 16, T1N/R5E, MDM are considered artificial waterways. On Union Island, the natural waterways are assumed to be Middle River and Old River. The Grant Line Canal, Fabian and Bell Canal, North Canal, Doughty Cut, and that portion of Salmon Slough in Section 27, T1S/R5E, MDM, are considered artificial waterways. In addition, high water sloughs that were cut off by reclamation and levee construction on the two islands have been assumed not to convey riparian status to lands once contiguous to these sloughs.¹³

3. Summary of Findings

3.1. Swamp and Overflow Land Sales, 1859-872

From the initial S&O land patents issued by the State of California to individuals on Union and Roberts islands between 1859 and 1872 and subsequent land transactions and subdivisions continuing through 2007, the vast majority of land on both islands has been severed from contiguity to natural waterways, either by the original grants or patents, or by subsequent subdivision and changes in ownership. Mapping these parcels reveals that

¹¹ San Joaquin County Assessor website. Accessed 2008 at <http://www.sjgov.org/assessor/>; Additional assessor data from First American Real Estate Service.

¹² The natural portion of the Turner Cut was also known as the East Branch of Whiskey Slough.

¹³ Mapping evidence from the 1870s and 1880s shows Whiskey Slough terminating in the NE 1/4 of Section 8, T1N/R5E MDM; the natural part of Turner Cut reaching the SW 1/4 of Section 30, T2N/R5E MDM; and Trapper Slough ending in Section 30, T1N/R5E, MDM. See Bibliography for list of maps.

virtually the only tracts still riparian are those around the perimeter of each island. Approximately seventy percent of the parcel divisions which created non-riparian tracts had occurred by 1915. (**Table 1**)

As noted above, the earliest patents of S&O land issued by the State on Union and Roberts islands were in 1859. California received title to the land from the Federal Government under the 1850 S&O Act subject to the identification of the land granted and the segregation of the lands classified as swampy or overflowed from the remainder of the public domain. The title was inchoate until the land was identified as S&O land by an approved survey and the legal title transferred to the State. The State and Federal governments often disagreed as to the extent of lands that might be segregated as S&O. Through the 1850s the State turned over this important function to the local authorities who appointed county surveyors to segregate the lands identified as S&O. These properties were then opened for sale through the State Land Office (predecessor to the State Lands Commission). It was not until 1866 that the manner by which S&O lands were identified, surveyed and selected in California was finally resolved. The Act of July 23, 1866 provided for state segregation maps and the identification of S&O lands by joint action of federal and state authorities. Patents were issued to the State of California when a list of S&O grant lands was presented to and approved by the Secretary of the Interior. The title conveyed by the patent related back and inured to the benefit of the state as of the date of the granting act.

The State often offered S&O land for sale prior to approval of the official federal survey and the S&O grant lists by the Federal Government. The State issued Certificates of Purchase to individuals claiming these S&O lands, often a decade or more in advance of issuance of an actual patent.¹⁴ Certificates of Purchase for state grant lands were typically issued upon the payment of a small percentage of the purchase price to the State Land Office. The key date for establishing the priority date for a riparian water rights claim on S&O lands under the controlling decision of the California State Supreme Court in *Lux v. Haggin* is the date of the issuance by the State of California of a Certificate of Purchase for a swampland tract.

Certificates of Purchase issued for properties on Union and Roberts islands range in date from 1859 to 1872. The earliest Certificates dating from 1859 into the middle 1860s were issued primarily for lands riparian to the San Joaquin River and to a lesser extent along Middle River. Various acts passed by the California State Legislature between 1859 and 1866 limited the maximum amount of S&O land that could be purchased by an individual to 640 acres with maximum frontage to a waterway of one half mile.¹⁵ Such limitations on the S&O claims during this period resulted in small rectangular parcels

¹⁴ In the case of the area embraced by Union Island and Roberts Island, the land was classified as S&O land without any actual survey lines being run in the field. These lands became part of two bodies of swampy and overflowed lands that were simply noted on the U.S. Surveyor's plat map as "Notoriously Swampy & Overflowed" tracts "established by the protraction of the approved plats of adjoining townships." The survey, covering T1, 2, 3, and 4 N and T 1S and R 3, 4, 5 and 6 E was approved in 1872 by J. R. Hardenberg, Surveyor General of California, under the provisions of the Act of Congress of July 23, 1866.

¹⁵ John Thompson, "The Settlement Geography of the Sacramento-San Joaquin Delta, California" (PhD. diss., Stanford, 1957), 193.

lining the San Joaquin and Middle rivers compared to the large conveyances following 1868 when acreage and frontage limitations were lifted.

Between 1859 and 1868, inclusive, a total of thirty-one Certificates of Purchase were issued for S&O land on Roberts and Union islands. The topography of the land largely determined the location of these early parcels. Generally, wide strips of high land lined the river channels surrounding both islands with the center being low, poorly drained, and frequently flooded. In addition, the upstream areas of both islands were higher than the downstream. These characteristics are still evident by the time of the first USGS topographic survey around 1914, even though considerable alterations to the landscape had occurred by this time. At this date, elevations of ten feet above sea level were common in southern Roberts Island and southeastern Union Island, while elevations at, or below, sea level were typical on the remainder of both islands. Properties along the rivers in these higher areas, therefore, were the most practical to farm and were the earliest tracts sold as S&O land. Of the thirty-one certificates issued between 1859 and 1868, twenty-seven were riparian to a natural waterway: nineteen on the San Joaquin River and nine bordering on Middle River. Of the four non-riparian tracts, three were on Union Island, two of which were in the higher, eastern part. Total non-riparian acreage for this time period was 1,520 acres.¹⁶

Passage of the Green Act in March 1868, which eliminated acreage limitations on S&O land sales, changed the pattern of S&O parcels sales on Union and Roberts islands. The initial ten year period of S&O sales on the two islands was characterized by disposition of many small parcels near rivers, while parcels sold from 1868 to 1872 were generally larger and encompassed interior areas.¹⁷ The person to claim the largest amount of land on Union and Roberts islands after 1868 was George D. Roberts of the Tideland Reclamation Company who claimed over 60,000 acres on both islands under four Certificates of Purchase in 1869.¹⁸ All of this acreage was riparian to one or more of the natural waterways on the islands. Between 1870 and 1872, claimants filed twenty-six additional Certificates of Purchase for swampland tracts, most were for small tracts of approximately 40 to 120 acres, but eight were substantially greater in size, the largest being 2,285 acres on Union Island by John Petty. A total of only four of the eighteen parcels with Certificates of Purchase dating from 1870 to 1872 were riparian to a natural waterway. Total non-riparian land created by issuance of S&O patents after the Green Act to 1872 was 5,684 acres.

¹⁶ Acreage figures for S&O land are from the disposition records at time of sale and may be slightly different from current figure of the same parcel.

¹⁷ This act was passed by the state legislature on March 28, 1868.

¹⁸ In 1868 Roberts began buying swamplands throughout the Delta, accumulating, at one time, a quarter million acres. Roberts formed the Tideland Reclamation Company in 1869 with a capitalization of \$12,000,000 and control of some 120,000 acres of S&O land in the Delta. The company's board of directors included some of the leading financial investors and land developers of the era: Judge Solomon Heydenfeldt, Lloyd Tevis and James Ben Ali Haggin. The company began actual reclamation work by constructing levees on Roberts Island in 1870 and Union Island in 1876. Alan M. Paterson, Rand F. Herbert and Stephen R. Wee, *Historical Evaluation of the Delta Waterways: Final Report* (Sacramento: California State Lands Commission, December 1978), 7-8.

A map of the Certificates of Purchase from 1859 to 1872 shows a greater number of riparian parcels and riparian acreage in both islands. Roberts Island appears as a row of small riparian parcels sold prior to the Green Act in southern Roberts Island lining the upper San Joaquin River as far north as the junction with Burns Cutoff, and four along the upper Middle River. A few other parcels are in this part of Roberts Island, but nearly all of the remaining acreage on the island is owned by George D. Roberts. Union Island in 1872 appears as several riparian tracts on the east side of the island along Middle River and three non-riparian. A large block of five additional S&O purchases were located just north of the current Grant Line Canal alignment. George D. Roberts, again, owned almost all of the rest of the island. By 1872, S&O sales on both islands created 23 non-riparian parcels for a total of approximately 7,204 acres.

3.2. Land Subdivision, 1873-1888

George D. Roberts was a land speculator and developer who created Tideland Reclamation Company to finance reclamation of Delta islands with the aim of profiting by selling the higher valued reclaimed tracts of agricultural land protected from flood by levees to individual farmers. Assessor maps from 1879 reveal that the reclamation efforts of Roberts and others had brought about some changes in land ownership patterns since 1872. On Roberts Island, the differences were minor: the small tracts along the San Joaquin and Middle rivers remained intact, and Roberts' former land was still held in large parcels by the Glasgow-California Land Company and M. C. Fisher.¹⁹ On Union Island north of Rancho El Pescadero, the changes were more profound. All of the S&O tracts in the east part of the island were consolidated under a single ownership: Thomas H. Williams and David Bixler. In fact, Williams and Bixler owned all of Union Island north of the grant line in 1879 except for a 200-acre S&O purchase, which they acquired by 1882. South of the grant line, former rancho land on both islands was still largely in the hands of grantee H.M. Naglee with the exception of a few parcels in the southeast part of Union Island and southern Roberts Island. All were riparian to Old River. Also around this time, reclamation projects began on both islands by Glasgow-California, Williams and Bixler, Naglee, and other landowners.²⁰

Subdivision of larger tracts and creation of interior non-riparian parcels was minimal on both island following S&O sales in 1872 through the 1880s, amounting to only 756 acres, all on Roberts Island. During this time landowners undertook the first large reclamation projects, but these efforts proved insufficient protection against floodwaters and breaches in the levees were frequent. Such circumstances made small farmers reluctant to invest

¹⁹ Fisher was superintendent of Glasgow until 1877 when John W. Ferris took over company operations. Ferris had personal holdings in southern Roberts Island while superintendent. See John Tompson, *Tule Breakers* (Stockton: University of the Pacific, 1983), 222-227.

²⁰ *Stockton Independent*, 28 November 1876; *San Francisco Alta*, 18 January 1875; E.E. Tucker Field Notes, 1878. Field Books, Part 2, Box 6: Book 92. William Hammond Hall Papers, California State Archives.

in, and make improvements to interior parcels, forestalling subdivision of interior lands and the lower parts of both islands.²¹

3.3. Land Subdivision Roberts Island, 1889-2008

By the late 1880s, property owners on Roberts Island began to form reclamation districts to facilitate cooperative construction of sturdier levees. Coincident with establishment of these districts, the large parcels extending from the banks to the deepest peat lands in the center of the island were subdivided, thereby creating a large number of non-riparian parcels. Reclamation District (RD) 524 formed on Middle Roberts Island in 1889 and RD 544 formed on Upper Roberts Island in 1892. From 1889 through 1895, 27 parcels were severed from their riparian streams on Roberts Island totaling 3,534 acres. All were in RD 524 and RD 544 and 18 more severances took place in 1891 and 1892 encompassing 2,601 acres. Subdivision of Lower Roberts Island into smaller tracts began around 1897 at the same time as the establishment of RD 684 in October of that year. Prior to this date Lower Roberts Island had been held in a single parcel owned by the Glasgow California Land Company. From 1896 through 1900, there were 18 parcel severances on all of Roberts Island accounting for the creation of 4,964 acres of severed land. Fifteen more severances occurred in 1897 and 1898 comprising 4,659 acres, eleven of these, were in RD 684. After these two periods of considerable activity on Roberts Island, 1,193 acres in eight parcels were severed from 1900 through 1911. Subdivision of the Wilhoit and Douglass tract on Middle Roberts Island in 1912 created 28 non-riparian parcels totaling 2,608 acres, many of which were 40 acres lots. Nine additional severances occurred on Roberts Island from 1912 to 1916 for 723 acres.²²

After 1916, the only remaining large tract with significant interior acreage still riparian on Roberts Island was 3,913 acres owned by the Woods family on Middle Roberts Island. This land was eventually subdivided and sold between 1926 and 1963 resulting in 24 parcels severed from their riparian connection to Middle River. Forty-four severances occurred from 1963 to 2008 on Roberts Island for 4,109 acres.

3.4. Land Subdivision Union Island, 1895-2008

The subdivision of land into non-riparian parcel followed a different course on Union Island. As noted above, after the sale of S&O land, the entire island north of Rancho El Pescadero was consolidated under the ownership of Williams and Bixler. These two men

²¹ *Stockton Herald*, 12 March 1884, 3; 13 March 1884, 3; 18 March 1884, 3; 18 April 1884, 3; *Mining and Scientific Press*, 11 December 1875, 374; *Stockton Independent*, 13 November 1875. Acreage figures for subdivided and severed parcels are from current assessor maps. In a few instances where historic parcel lines are different from current boundaries, the figures are estimates, or are from maps contemporary to the severance.

²² Reclamation District Number 684 Petition and Formation, 4 October 1897, *Swamp and Overflowed Lands, Vol. 3*, San Joaquin County Recorder; *Stockton Daily Independent*, 16 September 1897; Harmon S. Bonte, *Financial and General Data Pertaining to Irrigation, Reclamation and Other Public Districts in California*, California Department of Public Works Bulletin No. 37 (Sacramento: Division of Water Resources, 1930), 152, 154, 157.

were flush with capital and, rather than form a reclamation district, built levees independently beginning on the east side of Union Island in the late 1870s. By 1880, Williams and Bixler had enclosed this area with a levee along Middle River, the north/south Kidd Levee protecting the 2,500 acres of the former Kidd Ranch, the north/south Elk Ridge Cross Levee from the grant line running north to Middle River about two miles west of the Kidd Levee, and a south levee along the rancho grant line as far as the cross levee. Excavations for the south levee created a channel which was further improved into the Grant Line Canal. Floods around this time broke through the grant line levee and destroyed the integrity of the canal, thwarting plans for a shipping channel. While the levees were repaired, the canal was not immediately rebuilt.²³

Similar to events on Roberts Island, high water also periodically overwhelmed the early levees on Union Island and hampered reclamation. In addition to the 1880 flood, an 1884 inundation breached the Elk Ridge Levee and flooded land on the east side of Union Island. Throughout the 1880s, Williams and Bixler largely abandoned reclamation efforts west of the Elk Ridge Levee and it was frequently underwater. Finally, in 1891 levee construction commenced to enclose western Union Island, which involved completion the Grant Line Canal and construction of North Canal. These efforts were in vain, however, as flood waters in the same year broke through the south levee adjacent to Grant Line Canal, the west side levee along Old River, and the levee lining North Canal. These breaks were not repaired until 1898, and again left all of the land west of the Elk Ridge Levee susceptible to flooding.²⁴

While subdivision activity on Roberts Island occurred concomitant with the formation of reclamation districts, subdivision of land on Union Island does not appear to have been directly related to reclamation efforts, but rather to the dispensation of the Thomas H. Williams and David Bixler estates. Following the death of Thomas H. Williams in 1886, Williams and Bixler divided their holdings with the Williams Estate receiving all of western Union Island and roughly half of the eastern part of the island. David Bixler retained large acreage in the east and central part of the island. This event did not create non-riparian land, however, and the island remained in large riparian tracts, into the late nineteenth century.²⁵

Subdivision creating non-riparian interior tracts on the former Williams and Bixler property began to occur around 1897. Seven parcels comprising 4,590 acres became non-riparian from 1895 through 1897, six in 1897 alone for 4,551 acres. All of these were in the east part of the island. Creation of non-riparian parcels on the west side of Union Island north of the rancho grant line occurred later. Some subdividing of the Thomas H. Williams Estate did occur beginning about 1899 with a large parcel along Old River and a small tract on Middle River, but these remained riparian. Only one parcel on

²³ *Sacramento Union*, 29 May 1880, 8.

²⁴ *Stockton Daily Independent*, 8 May 1897, 5; 14 September 1878, 3; 19 June 1898, 3; E.E. Tucker Field Notes, 1880, 92:4, 5; *Stockton Herald*, 27 May 1880, 3; *Stockton Herald*, 29 May 1880, 3; *Sacramento Union*, 29 May 1880; *Sacramento Union*, 24 June 1884, 1; "The Union Island Middle Division Flooded," *Stockton Independent*, 1 June 1890, 4.

²⁵ *Stockton Daily Independent*, 8 May 1897, 5; 19 June 1898, 3.

the entire island became non-riparian from 1898 to 1911 and it was in the west side. Approximately 5,731 acres jointly owned by Thomas H. Williams Jr., F.H. Johnson and F.S. Johnson was subdivided about 1911 resulting in severance of a 2,932 acre parcel retained by F.H. Johnson. The remaining acreage held by Williams was still riparian to Middle River and also fronted on Grant Line Canal, and North Canal until 1914 when it was subdivided into four parcels, three of which, totaling 1,925 acres, were severed from Middle River.²⁶

Additional subdivision activity occurred from 1912 through 1914. During these three years, 14 parcels were subdivided on Union Island, the majority of which was the subdividing of David Bixler Estate to his heirs following the patriarch's death in 1908. This event created small and large tracts, and 2,711 acres non-riparian land. Three severances totaling 51 acres occurred on Union Island north of the rancho grant line from 1914 to the 2008.

Subdivisions resulting in new non-riparian tracts on the former Rancho El Pescadero property of Union Island all took place after 1926. Some subdividing of land within the rancho grant had occurred in the early 1880s on the east side of Union Island and in the late 1890s on the west, but all remained riparian to Old River. The riparian status of this land remained unchanged, with no parcels becoming non-riparian to 1926. Between 1926 and 1963, however, subdivision resulted in seven parcels of 1,798 acres losing riparian status. Four more were added to this list between 1963 and 1969 for 465 acres, and eleven between 1979 and 2008 comprising 1,772 acres. **(MAPS 3A AND 3B)**

Table 1				
Summary of Non-Riparian Land on Union Island and Roberts Island				
	Total Acres	Number of Subdivisions Creating Non-Riparian Tracts	Acres Severed from Riparian 1890-1915	Total Non-Riparian Acres
Union Island	32,154	52	11,951	21,609
Roberts Island	32,879	176	12,286	24,008
Total	65,033	228	24,237	45,617

4. Conclusion

By 2008, the vast majority of the interior parcels on both Union and Roberts islands were no longer riparian to natural waterways by virtue of subdivision and ownership changes. Creation of non-riparian tracts began in 1859 with the first sale of S&O land from the State of California to private parties. Following S&O land sales, subdivision continued to the present. By 2008, a total of 228 subdivisions of property resulting in non-riparian parcels had occurred on both islands: 176 on Roberts Island and 52 on Union Island. In terms of area, this is approximately 45,617 non-riparian acres out of about 65,033 total

²⁶ Part of this land along Grant Line Canal was already non-riparian S&O land.

acres on both islands, or 70 percent. This breaks down as 24,008 non-riparian acres out of about 32,879 total acres on Roberts Island, or 73 percent; and approximately 21,609 acres of about 32,154 total acres on Union Island, or 67 percent.²⁷

²⁷ Total acreage is from: United States, Bureau of Reclamation, *Central Valley Project, California, Delta Lowlands Service Area Investigations*, Report Area DL-9 and DL-10 (Sacramento: Bureau of Reclamation Water Rights Engineering Branch, 1964). Current total acreage of Roberts and Union islands may be slightly different.

5. Bibliography

Books

- Bonte, Harmon S. *Financial and General Data Pertaining to Irrigation, Reclamation and Other Public Districts in California*. California Department of Public Works Bulletin No. 37. Sacramento: Division of Water Resources, 1930.
- Deering, F.P. and J.H. Deering, *Supplement to Deering's Codes and Statutes of California*. San Francisco: Bancroft-Whitney Company, 1889.
- Deering, F.P. *The Codes and Statutes of California*. San Francisco: Bancroft-Whitney Company, 1886.
- Gates, Paul Wallace. *Land and Law in California*. Ames, Iowa: Iowa State University Press, 1991.
- Tinkham, George H. *History of San Joaquin County, California*. Los Angeles, Historic Record Company, 1923.
- Thompson, John. *Tule Breakers*. Stockton: University of the Pacific, 1983.
- Thompson, John. "The Settlement Geography of the Sacramento-San Joaquin Delta, California." PhD. diss., Stanford, 1957, 193.

Government Documents

- California State Lands Commission. *Swamp and Overflow Lands Disposition Records. Roberts and Union Islands, 1859-1872*.
- California State Water Resources Control Board. Water Rights Division. *Water Appropriation Application Files. Union and Roberts Islands, 1917-1966*.
- San Joaquin County Recorder. *Swamp and Overflowed Lands, Volumes 1-3*.
- San Joaquin County Recorder. *Various Deeds, Union and Roberts Islands*.
- United States. Bureau of Reclamation. *Central Valley Project, California, Delta Lowlands Service Area Investigations. Report Area DL-9*. Sacramento: Bureau of Reclamation Water Rights Engineering Branch, 1964.
- United States. Bureau of Reclamation. *Central Valley Project, California, Delta Lowlands Service Area Investigations. Report Area DL-10*. Sacramento: Bureau of Reclamation Water Rights Engineering Branch, 1964.
- United States. Bureau of Reclamation. *Sacramento-San Joaquin Delta Water Rights Investigation Assumed Riparian Lands and Appropriative Rights, Study Area 20*. Sacramento: Bureau of Reclamation, 1972.
- United States. Bureau of Reclamation. *Sacramento-San Joaquin Delta Water Rights Investigation Assumed Riparian Lands and Appropriative Rights, Study Area 3*. Sacramento: Bureau of Reclamation, 1972.

Maps

- Budd, H.B. *Map of Reclamation District 544*. Stockton: H.B. Budd, 1913.
- Andrews, R.T. *Subdivision of the Wilhoit and Douglass Tract*. Stockton: Wilhoit, Eaton, and Buckley, 1911.
- Budd, Henry B. *Map of San Joaquin County, California*. Stockton: Budd and Widdows, 1926.
- Budd, Henry B. *Plat of the Holt Ranch*. Stockton: Henry B. Budd, 1910.
- Carlton, D.C. *Map of San Joaquin County, California*. Stockton: George E. Crane, 1904.
- County Plat and Directory Company. *San Joaquin County, California, Official Plat Book and Directory*. La Porte, Indiana: County Plat and Directory Company, 1966, 1969.
- Doughty, Frank. *Partition Map of the Lands of David Bixler Estate, Union Island, San Joaquin County, California*. [n.p.], 1913.
- Echo Map Company. *Agri-Land, San Joaquin County, Property Ownership Maps Plat Book and Guide*. [n.p.]: Echo Map Publishing Company, 1979, 1981, 1984, 1986, 1993, 1995, 1997, 2003, 2005.
- Gibbs, J.T. *Map Showing the Lands of the Tideland Reclamation Company*. San Francisco: Britton and Rey: 1869.
- Hall, William Hammond. *Topographic and Irrigation Map of the San Joaquin Valley, Sheet 1*. Sacramento: California State Engineering Department, 1886.
- Handy, H.P. *Index Map San Joaquin County*. San Francisco: H.P. Handy, 1862.
- Henkenius, J.C. *Stockton-Bellota Drainage District* (Sacramento: California Commissioner of Public Works, [ca. 1894].
- Manson, Marsden. *San Joaquin River: San Joaquin Bridge to Stockton*. Sacramento: State Engineering Department, 1882.
- Ohm and Raab. *Owners of Record Union Island Reclamation Districts 1 & 2*. Stockton: Ohm and Raab, 1921.
- Ohm and Raab. *Subdivision Map of the Lands of Henry Finck & Company on Union Island*. Stockton: Ohm and Raab, 1918.
- Quail, F.E. *Official Map of San Joaquin County, California*. Stockton: San Joaquin County, 1905.
- Reclamation District 2. *Union Island Reclamation District 2*. [n.p., ca. 1905]
- Reclamation District 684. *Map of Reclamation District 684, Lower Division of Roberts Island*. [n.p., ca. 1897].
- Reid, John C. *Map of the County of San Joaquin*. Philadelphia: S.B. Linton, 1883.

- Ringgold, Cadwalader. *General Chart of Embracing Surveys of the Farallones Entrance to the Bay of San Francisco*. Washington: Jno. T. Towers, 1852.
- San Joaquin County. Assessor's Office. *County Plat Book*. Stockton: San Joaquin County, 1979-1919, 2007, 2008.
- Smith, Julius. *Map of the Land of the Estate of T.H. Williams, Deceased*. [n.p., ca. 1889].
- Tideland Reclamation Company. *Fresh Water Tide Lands of California*. San Francisco: M. D. Carr and Company, 1869.
- United States. General Land Office. *Plat of the Rancho El Pescadero*. San Francisco: GLO, 1861.
- United States. General Land Office. Survey Map T1N/R5E, MDM. San Francisco: GLO, 1879.
- United States. General Land Office. Survey Map T2N/R5E, MDM. San Francisco: GLO, 1879.
- USGS. *Bethany Quadrangle*. Washington: USGS, 1914, 1952, 1968.
- USGS. *Byron Quadrangle*. Washington: USGS, 1916.
- USGS. *Clifton Court Forebay Quadrangle*. Washington: USGS, 1978.
- USGS. *Holt Quadrangle*. Washington: USGS, 1913, 1952, 1968, 1978, 1994.
- USGS. *Lathrop Quadrangle*. Washington: USGS, 1915, 1952, 1968, 1976, 1987, 1994, 1996.
- USGS. *Stockton Quadrangle*. Washington: USGS, 1913.
- USGS. *Stockton West Quadrangle*. Washington: USGS, 1952, 1968, 1976, 1987.
- USGS. *Union Island Quadrangle*. Washington: USGS, 1914, 1952, 1968, 1978.
- USGS. *Woodward Island Quadrangle*. Washington: USGS, 1913, 1952, 1968, 1978.
- USGS. *Woodward Quadrangle*. Washington: USGS, 1913.
- Wallace, John. *Map of the County of San Joaquin*. San Francisco: A.L. Bancroft & Company, 1870.
- Widdows, Charles H. *Map of San Joaquin County, California*. Stockton: Budd and Widdows, 1916.
- Widdows, Charles. *Map of Survey of California Packing Corp. of Property on Union Island, San Joaquin County, California*. Stockton: Charles Widdows, 1929.
- Widdows, Charles. *Topographical Map of Chas. Parker Hilt Ranch, Roberts Island, San Joaquin County, California*. [Stockton]: Charles Widdows, 1927.

Newspapers and Journals

Byron Times

Mining and Scientific Press

San Francisco Alta

San Francisco Bulletin

San Francisco Chronicle

Stockton Daily Independent

Stockton Record

Stockton Weekly Independent

Manuscript Collections

Augusta Bixler Farms Papers. California State Historical Society. Collection contains account books, lease agreements, correspondence, and yearly reports for this farm on Union Island.

Dietrich and Leistner Realtors Records. Holt Library Special Collections. University of the Pacific. Collection contains crops mortgages and lease agreements for certain parcels in the study area.

Roley E. Wilhoit Business Ledgers. Holt Library Special Collections. University of the Pacific. Collection contains account books for this real estate company which had holdings in the study area.

William Hammond Hall Papers. California State Archives. Collection contains survey field notes and maps for study area.

Online Sources

First American Real Estate Service. Online property ownership information database. Accessed February 2008.

San Joaquin County. Assessor's Office website. Accessed 2008 at <http://www.sjgov.org/assessor/>.

DWR Water Appropriation Application Files Notes to Compliment
Application File Data Table

Water Application Data Table Column Titles Explanation:

- “Area irrigated” refers to the area of use stated in the application;
- “Other right” refers to any other rights claimed on application besides the one applied for (usually Q #23 or Q#13 on Application);
- “Prior Irrigation” is the year and acreage of any irrigation previous to year of application indicated on any document in the file (usually Q #11 on Progress Report and Qs #14, #15, #16 on Application);
- “Riparian Claim” and “Pre-14 Claim” are any overt claims by the applicant;
- “Condition” is the presence of a condition on the permit or license—see below for text of Conditions;
- “Lic Season” is the season of use granted by the License.
- “Pump at POD” refer to pumps used to pump water over levee or raise water once inside levee at time of license.
- “Conditions” are as follows:

Condition #1

“As the right of the United States to control streams in the interests of navigation is superior to any other water right, this permit will in no way hinder the United States if it desires to stop this diversion under claim of its interference with navigation.”

Condition #2

“As there is a possibility that there will not be sufficient water in the [NAME OF STREAM] during the latter part of the irrigation season to satisfy all requirements, this permit is issued subject to the express condition that the use hereunder may be regulated by the Division of Water Rights during such periods of water scarcity to the end that such use will not interfere with rights under prior applications.”

Condition #3

“In case of rotation the equivalent of such continuous flow allowance for any thirty day period may be diverted in a shorter time if there be no interference with other vested rights.” (a.k.a. rotation clause)

Condition #4

“Allowance of the amount named in this permit shall not be construed as vesting in permittee any right or color of right to water in excess of what may be reasonably needed

for beneficial use in connection with the specific purpose described in the application which is hereby approved.”

Application Notes

732

Works: Applicant completed irrigation works by time of application (1917) consisting of a pipeline and ditches.¹ Works in December 1921 consisted of a tunnel through the levee to Grant Line Canal with a 24 in. pipe with a gate at the outlet end. Water runs through by gravity at high tide. There was a pumping plant at the head of the ditch on the property lifting the water 5 feet to irrigate the higher farmland. A second POD utilized a siphon pipe over the levee with a portable engine. A booster pump was located at the intersection of three ditches to distribute water to the northeast portion of the tract. Map from 1916 showing the works described in the application depict the POD at Grant Line Canal, irrigation ditches, and the booster pump. No drainage pumps or ditches shown.²

Crops: Water distributed by ditches and used Jan-Dec. Winter irrigation is of grain crops. Total area irrigated in **1921—598: 80 ac. in alfalfa, 80 ac. of beans, 438 ac. of barley.** The barley was irrigated only before sowing.³ 1922: 500 ac. of beans.⁴ Area irrigated in 1923 was 740: 572 ac. of beans, 58 ac. of alfalfa, 110 ac. of grain. The beans were irrigated by sub-irrigation and furrows; the alfalfa was irrigated in the summer after harvesting to help rot the seeds of weeds; the alfalfa land is flooded in the fall for the purpose of making duck ponds and preparing for fall sowing. The season of use is Mar-Oct.⁵

Elizabeth A. Bixler protested the application; she claimed riparian rights to Grant Line Canal in a letter.⁶

Letters in file discussing the status of Grant Line Canal as a navigable public waterway used by large and small boats. There seems to have been some dispute over the matter (1917).

3518

Crops: Application (1923) states that the crops to be irrigated were 200 ac. alfalfa, 20 ac. of orchard, and 350 ac. of general crops. **Applicant irrigated about 300 acres of grain in 1924 using water Sept. 13- Oct. 2.** No land irrigated in 1925. 300 acres irrigated in

¹ Water Appropriation Application 732, 12 July 1917, Application File 732, SWRCB.

² H.E. Linden, “W.H. Metson Tract, Union Island,” 1916, Application File 732, SWRCB.

³ Inspection Report, 28 December 1921, Application File 732, SWRCB.

⁴ Progress Report, 26 April 1923, Application File 732, SWRCB.

⁵ Inspection Report, 13 July 1923, Application File 732, SWRCB.

⁶ Virgil M. Airola to State Water Commission, 8 January 1918; State Water Commission to Irving Martin, 9 February 1918, Application File 732, SWRCB.

1926. Some water is used for stock watering. No land irrigated in 1927; 364 ac. irrigated in 1928. **The main crop is barley** and is heavily irrigated in August prior to seeding.

Works: Pump and motor installed in 1921. In 1924 pump house, pipe line, earth irrigation ditches completed. 1928—pump with intake and discharge pipe, concrete pit, earth ditch, water was opened onto the land at higher elevations and allowed to flood (“wild flood”) to lower. This land is uneven and it is about 14 feet above the average river surface. It was gradually being leveled. Water was pumped from river. Map shows a pump at the POD and a “drainage pump” at a different location.⁷

3701

Applicant claimed a “riparian right to the same supply.” In 1919 about 100 acres were irrigated “under permit.” (Q#11 Prog. Rpt) Letter to State Water Commission states, “water has been taken by pump from the river for this purpose (irrigation) for many years.”

Works: Application states that the works were completed except for the lateral ditches at the time of application (1923) and that the water was completely applied at that time. System described on app. consisted of a pump and ditch. In 1924, the point of diversion and main canal were complete, and checking and leveling of 40 acres for alfalfa. Works at time of inspection (1927) consisted of a pump, suction pipe, discharge pipe passing through the levee. The water empties into a concrete stilling pit and then flows through a flume to lateral ditches.

Crops: Water was to be applied to 30 ac. of alfalfa and 70 acres of general crops. Applicant’s maximum use was in September 1926. In **1927 there were 45 ac. of barley and 34 acres of alfalfa under irrigation.** Water for domestic and stock use is from a well.⁸

There is a deed in folder containing a transfer of water rights clause for the SJ River.

3905

Works: in place at time of application described as a pump and earth ditches. Applicant wrote in a letter dated 3 March 1924 to the DWR requesting information on obtaining a permit to operate irrigation works already in place in order to “comply with the law.” She writes that a new levee built “some years ago” blocked off her flood gate forcing her to install a pumping plant. In 1925 the applicant had a pump installed, ditches dug, and leveled some land and irrigated 15 acres. By 1926, lateral ditches complete, and 15 acres

⁷ Water Appropriation Application 3518, 10 July 1923; Progress Report, 30 December 1924; Progress Report, 11 January 1926; Progress Report, 15 January 1927; Progress Report, 20 January 1928; Inspection Report, 18 October 1928, Map, undated [1923], Application File 3518, SWRCB.

⁸ Water Appropriation Application 3701, 1 November 1923; Progress Report, 6 December 1924; Eugene F. Goodrum to Secretary, State Water Commission, 5 September 1923; Inspection Report, 11 July 1927; Application File 3701, SWRCB.

leveled and checked. Works at time of inspection in 1939 consisted of pump, concrete distribution box, and ditches.

Crops: In 1924, she irrigated 30 acres. That year she irrigated 10 ac. alfalfa, 5 ac. beans, 5 ac. corn from April 1 to September 1. **1927: 10 ac. alfalfa, 5 ac. beans, 5 ac. corn.** In 1929, 20 ac. of alfalfa irrigated from April through November. Permittee had 23 ac. alfalfa, 6 ac. tomatoes, 26 ac. barley in 1939.⁹

4071

Application states that construction of irrigation works was completed in the fall of 1918.

Crops: to be irrigated were grain, beans, etc. Irrigation would occur from March 1 to November 1. Applicant irrigated about 100 ac. in 1918. No land irrigated in 1926; 155 acres irrigated in 1925 from Sept. 1-Oct. 1. **In 1927, 27 ac. of corn, 138 ac. of barley; water use from April 15 to Nov. 15 (when beans were grown),** max use was in October. In 1931, irrigation done in Mar-May for summer crops and Sept-Oct for grain; ranch was half in corn, half in barley in this year.

Works: 1924 (app)—pump, earthen ditch, concrete inverted siphon. Water was pumped.¹⁰

For map see “Subdivision Map of the Lands of the Henry Finck Co. on Union Island...” 3/10/1919 in Book, Vol. 9 of Official Maps and Plats, p. 53. SJCo. Recorder

There is a copy of a deed in App. folder containing a water rights transfer clause.

Report of Inspection: The flow of Old River at this point is regarded as tidal; flow is from “east and west.”

4110

Crops: to be irrigated (1924) were “grain, asparagus, beans, potatoes, etc.,” watered from March 1 to November 1. No diversion necessary in 1925 due to sub-irrigation and late rains. **600 acres irrigated in 1926: 400 ac. of asparagus, 150 ac. of beans.**

Works: Application (1924) states that the construction of irrigation works was completed at time of application “and has been in use for several years.” It consisted of 10 inch pipe siphons over the levee. The diversions in 1927 was pipe siphons as the land is lower than the water level; water dispersed by earth ditches. Map of parcel from 1924 shows

⁹ Water Appropriation Application 3905, 14 March 1924; Jennie H. Brown to DWR, 3 March 1924; Progress Report, 24 December 1926; Progress Report, 22 December 1925; Progress Report, 16 November 1929; Progress Report, 26 November 1927; Application File 3905, SWRCB.

¹⁰ Water Appropriation Application 4071, 7 July 1924; Progress Report, 10 January 1927; Progress Report, 20 December 1925; Progress Report, 12 December 1927; Inspection Report, 26 September 1928; Report of Licensee, November 18, 1931, Application File 4071, SWRCB.

siphons on Old River and North Canal. Many distribution canals cross the land. Two drainage canals are depicted on the map. One is in the center of the parcel running roughly N/S and terminates at the North Canal where there is the “Union Pump.” At the east end of the parcel is a second, parallel drainage canal that also empties into North Canal. At its terminus is the “Johnson Pump.”¹¹

Report of Licensee: water used “during winter months for flooding” (1957-1963); water used during summer months and winter months 1964-1966; water used Jan-Dec during 1970s; water used 1994-1,646 gal; 1995-1,424 gal; 1996-1,367 gal—similar figures through 2003. In 2004 and 2005, 2,603 gal. used.

4161

Crocker makes a riparian claim on Old River (Q#23 on app.).

Crops: to be irrigated as stated in application (1924) were 260 ac. of alfalfa and 46 ac. of general crops to be irrigated Mar-Oct. Map from inspection 7/12/27 shows 5 ac. orchard, 3 ac. corn, 90 ac. beans, 204 ac. alfalfa. **1926 irrigates lands: 232 ac. in alfalfa, 70 ac. in corn and grain—irrigated March-October.** 250 ac. irrigated in 1925. Crops: 1928-200 ac. alfalfa, 100 ac. grain; 1929- 200 ac. alfalfa, 86 ac. fruit and grain; 1930- 40 ac. alfalfa; 246 grain then beans, 3 ac. fruit trees.

Works: Proposed on 1924 application consisted of a pump, earth canal, and riveted steel suction pipe. Completed by 1926 were a pumping plant, irrigation ditches, drainage ditches, irrigation boxes, gates, culverts, leveling and checking. Map from inspection 7/12/27 shows a pumping plant on Old River, a main ditch along the west edge of property feeding several distribution ditches, and a drainage ditch on the eastern edge of the property leading back to the pumping plant and emptying into the river. The pump is installed so that water may be pumped from the drainage ditch to the river, from the drainage ditch to the irrigation ditch, and from the river to the irrigation ditch. a pump with a suction pipe to river; distribution ditches.¹²

Report of Licensee: These reports are very detailed, giving crop acreage and estimated water used 1930s-1942; remark about increased salinity of water during July, Aug, and Sept. because of pumping of the “Central Valley Project” (1981); concrete lined ditches by 1980s.

4209

¹¹ Water Appropriation Application 4110, 24 July 1924; Progress Report, 9 January 1926; Progress Report, 11 January 1927; Inspection Report, 8 July 1927, Henry Ohm, “Map of the Lands of Albina Bonetti,” June 1924, Application File 4110, SWRCB.

¹² Water Appropriation Application 4161, 16 August 1924; Progress Report, 23 December 1926; Progress Report, 11 January 1927; Inspection Report, 12 July 1927; Report of Licensee, 12 November 1930, Application File 4161, SWRCB.

Works: Applicant claimed irrigation works were completed in 1912 consisting of pump and earth ditches (app). Works in 1927 (inspection) consisted of two pumps, pipes, concrete pit, concrete culvert through levee, earth distribution ditches.

Crops: to be irrigated as indicated on application were 130 acres of alfalfa and 33 acres of general crops. Forty acres irrigated in 1925 from May to September. In **1926, 153 acres leveled; 100 acres were in alfalfa, 10 acres truck garden** irrigated from May 1 to September 15. In 1925 140 acres were irrigated. In 1927 the farm had 10 ac. in truck garden, 16 ac. in wheat, and 137 ac. in alfalfa irrigated from March-November. Also, 50 hogs and 10 cows watered. Licensee reported in 1931 that water was used the past three years from April to November, irrigating the entire acreage five times per year.¹³

4274

Works:

1927: pump set, 4,300 feet of main canal and temporary ditches

1929: pump, suction pipes, discharge pipe passing over levee, water distributed by unlined ditches

Use:

1926: 140 ac. beans, 200 ac. barley and wheat for 1927, water used May-Sept.

1927: 140 ac. beans, 60 ac. barley, used Apr. 15-May 15

1928: 400 ac. beans watered April –Aug

1929: 400 ac. area planted to beans or grain by flood irrigation

Comments:

Inspector suggests that the land is riparian to the source (Paradise Slough, now Doughty Cut).

4275

Comments:

Water application is for the extension of an existing system which was completed in 1918.

Inspection Report of 1929 states a tidal fluctuation of 4 feet.

Works:

At time of application there is a reinforced concrete headgate with four, 4 x 6 foot openings.

1929: same POD as App. 4276; concrete headgate with screw gates at level with high tide; water passes under levee to main canal system; water applied by flooding from Mar. 1 –Dec. 1.

¹³ Water Appropriation Application 4209, 15 September 1924; Progress Report, 19 April 1927; Progress Report, 11 January 1926; Inspection Report, 8 July 1927; Report of Licensee, 10 February 1932, Application File 4209, SWRCB.

1960 Inspection: no longer a gravity diversion—centrifugal pump instead; pumps also on Fabian and Bell canal (other POD); application covers land owned by Fabian, Ohlendord, Alves, Sorenson, and Berverdor Inc. Fabian stated that the “water was used continuously during the maximum month.” It is not stated which month this is.

Report of Licensee for the 1960-1966 do not give specific crop information, but only say “irrigation.” In these, the licensee states the season of use as April-Sept. or Oct. and use between 1,500 and 3,300 ac/ft. per season. This report was for the Fabian Estate only and not the entire area covered by the application.

Season of use on 1976-1978 Report of Licensee is Jan-Dec.

1978-1980 Report of Licensee gives water use in acre-feet per month; use is from Jan-Dec. This is in violation of the License season of use: Mar-Dec.

1978-1980 Report of Licensee gives season of use as Mar.-Oct.—no amounts given.

Bacchetti claimed in 1981 that he “may have pre-1914 or other rights” to cover a POD that irrigated a portion of parcel 189-120-10 (DWR Contact Report, 6/4/1981). This doc. also gives ownership of land covered by the application.

By 1985, this license had three POD, all with pumps (Inspection Report, 7/25/1985).

Bianchi Bros. claim riparian right to Old River for parcels 189-050-33, 189-050-23, 189-240-20, 21, and 22 (Judith Burick to SWRCB, 9/23/1991).

4276

Applicants are A. Grunauer, Louis Krohner [Kroner] and M. Grunauer. Applicant stated, "no other source of supply. claim is, however made by owners of riparian right and also right by actual use and diversion since 1918." Applicant irrigated all acreage (2514) in 1918.

Works: Map accompanying application shows the main canal drawing from Old River and supplying several lateral ditches. The main canal travels roughly from south to north and terminates at the Fabian and Bell/Grant Line Canal. At this point the map shows a “drainage pump.” Applicant claims works were completed about 1918 and consisted of a concrete headgate with 4 openings, a canal, and distribution ditches (no pump indicated on application). Works in 1929: concrete structure with four, six foot by four foot openings with screw gates. The tops of the gates are at level with high tide. Water passes under the levee through a concrete culvert with flap gates at the inner end and discharges into the main canal. “Various ramifications of the canal distribute the water to the place of use and also serve as drains.” There is a booster pump in the SE corner to raise the water to higher land.

Crops: In 1926, 1750 ac. irrigated for barley and corn from Sept. to November 15 (2500 ac. total from 1927 report?). In 1927, 300 ac. corn and 200 ac. beans irrigated from September 15 to December 1. In 1928, 1,100 ac. “grain” and 1314 ac. corn flooded in 1928 for 1929 crop March 1 to December 1. In 1931 land was planted to beans, corn and grain.¹⁴

Reference in inspection report to awaiting the San Joaquin-Sacramento Water Supervisors determination of duties on Delta lands.

Report of Licensee: water used outside of licensed season 1960s-1970s.

4432

Application states that construction of irrigation works “began in 1899,” was “completed in 1923,” and that water was “completely applied in 1917.” General crops were to be irrigated from March-October. Applicant claims “a riparian right and also right by actual usage since 1899.”¹⁵

Works: 1925 (app) were a pump, 2 riveted steel siphons, earth ditch, floodgate set below low tide. Siphon No. 2 is also used as a discharge pipe for a drainage pump. The ditch leading from siphon No. 2 “normally used as a drain.” 1929 (inspection) consisted of two siphons laid over the top of the levee, a flood gate with an iron pipe laid through the levee and a gate valve, and a pump with intake and discharge pipe. A second pump was installed on the land side of Siphon #2 which is used to “unwater” the land. Maximum diversion occurred in spring of 1929 when the entire area was irrigated in preparation for planting asparagus.¹⁶ By 1926 there was 4.2 miles of ditch.

Crops: in 1926: 300 ac. beans, 115 ac. corn, 285 ac. barley irrigated March 1-Sept. 1. In 1920, 950 acres were irrigated under permit.¹⁷ Crops in 1927: 325 ac. of beans, 90 ac. of corn, 260 ac. alfalfa, 200 ac. grain irrigated from Mar-Nov 15.¹⁸ In 1929 entire area irrigated in preparation for planting asparagus. In 1931 the entire area irrigated in spring and planted to asparagus, alfalfa, and grain.¹⁹ Water was used every month in 1933 and 1934 watering 539 ac. of asparagus and 750 ac. of corn and barley; In 1935, 856 ac. of asparagus and corn, and 125 ac. of barley.²⁰

File contains Decree of Distribution for the M.J. Lund Estate.

¹⁴ “Map of the Lands of A. Grunauer, L. Kroner, and H. Grunauer on the Fabian Tract, November 1924, Water Appropriation Application 4276, 24 October 1924; Progress Report, 7 January 1927; Progress Report, 2 December 1927; Progress Report, 21 December 1928; Inspection Report, 20 May 1929; Addendum to Report of Inspection of May 20, 1929, 5 October 1932, Application File 4276, SWRCB.

¹⁵ Water Appropriation Application 4432, 27 January 1925, Application File 4432, SWRCB.

¹⁶ Inspection Report, 21 May 1929, Application File 4432, SWRCB.

¹⁷ Progress Report, 4 January 1927, Application File 4432, SWRCB.

¹⁸ Progress Report, 19 January 1928, Application File 4432, SWRCB.

¹⁹ Inspection Report Addendum, 5 October 1932, Application File 4432, SWRCB.

²⁰ Report of Licensee, 24 October 1935, Application File 4432, SWRCB.

Report of Licensee: water use outside of licensed season 1930s.

4429

Works: By 1926 the applicant (Mrs. A. Banta [Millie?]) had installed a pump and constructed the main ditch. Works in 1929: pump with two suction pipes and a discharge pipe. Land was irrigated by the flooding method. Land is slightly rolling and irrigation is by ditches along ridges.

Crops: By 1926 the applicant grew 200 acres of barley which was irrigated in the fall of 1925. No acreage irrigated under permit in 1927 or 1928. In 1930, applicant irrigated barley in October, corn in July and August for a total of 250 acres. At the time of the 1929 inspection almost all of the permit area was planted to barley and corn. In the spring of 1931 the applicant had 244 acres planted to corn which was pre-irrigated in March. During this month the pump ran continuously for 30 days (=12-15 cfs). Land is rolling and irrigated by ditches along the ridges. Season: March-November 1. After corn crop fields are pre-irrigated for barley in October. Twenty-eight acres on south end of property not irrigated, and no plans to irrigate in 1932.²¹

Report of Licensee: No water used in 1938 because it was too wet; land leased by 1950s; water used by 1971 during months of Jan., July, Aug., Dec. to water asparagus; 1972-1974 water used May-Oct, 6 ac/ft per year; 1975-1980, 5 ac/ft. used Jan, Feb, June-Sept; 1980s use Mar-Nov, no amount given; 1999-2004, 854 gallons [? no unit given] used per year, Apr-Oct., no specific crop info.

4452

Names on application: L.A., Mary A., E.L. and F.C. Bixler. Claim made of "riparian right and right by actual diversion since 1899."

Works: completed by time of application (1925) Water was completely applied (2572 ac.) to the proposed use in 1918; "present work done merely to make cost of irrigation less." Construction work began in April 1899-80% irrigated by 1899. Works (1928 inspection) at three points of diversion: 1) concrete pipe with screw gate set one foot below low tide used mainly at high tide for flooding fields. A pump delivers water to a canal to reach higher land. 2) a cast iron pipe through levee with screw gate on land side with its top even with low tide. 3) a cast iron pipe through levee with top level with low tide. On the land side of this POD is a pump which may be used for "gravity diversion, a booster pump..., or for draining. drainage. Most of the land is irrigated by "wild flooding." ditches.

²¹ Water Appropriation Application 4429, 27 January 1925; Progress Report, 6 January 1926; Progress Report, 9 December 1927; Progress Report, 24 December 1928; Progress Report, 3 February 1931; Inspection Report, 20 May 1929; Memorandum of Field Visit, 26 May 1932, Application File 4429, SWRCB.

Crops: Water applied to “general crops” (1925 app). **Crops in 1926: 600 ac. beans; 700 ac. corn; 125 ac. “barley hay;” 300 ac. wheat, 847 ac. barley,** irrigated January-Sept. During 1927 irrigation occurred from Jan. 5-November 15.²² Crops in 1929: 500 ac. wheat; 1000 ac. barley; 20 ac. potatoes; 250 ac. white gypsum; 350 ac. red gypsum; 20 ac. alfalfa; 305 ac. beans; 90 ac. hay.²³

Office Memo: “On account of the fact that the recent investigation of the duty of water in the Sacramento-San Joaquin Delta Area is not complete, any action toward issuance of license on this project would be immature until a definite duty of water has been established. Consequently the contemplated field inspection of this project as listed for 1927 has been postponed until such time that the investigation will have been completed.”²⁴

Letter in reference to application 4452: “...final action on this and all similar filings has been deferred awaiting the determination of duties of water which will cover general irrigation preactive on sedimentary and peatlands of the Delta...A conference is scheduled for next month...”²⁵

Report of Licensee: Irrigation Jan-Dec, outside of licensed season in 1930s-1980s; reference to Tracy Pumping plant’s effect on water level in Gr. Line Canal and Middle R. (1950).

Pump capacity test in application file of 1/28/1964 and 4/8/1964.

1969 Inspection: Yamada Bros. have two pumps at POD #1; the Klein land diverts at POD # 2 and 3, one is a flood gate and the other has two pumps; Yamada has 1,066 acres; Klein has 1,548 acres west of Tracy Road; Yamada Bros is east of Tracy Road and south of Howard Road.

4471

Applicant stated that construction of irrigation works “began in 1890” and would be complete by April 1, 1925. Also: “The land has been 80% irrigated since 1890.”

Crops: The applicant stated the entire acreage to be irrigated (626) will be alfalfa. **625 acres planted to alfalfa in 1926.** Irrigation occurred during 1927 from April 1 to October 1. **1927: 250 ac. corn, 300 ac. alfalfa,** 75 acres not irrigated. Water was drawn from Black Slough.

²² Water Appropriation Application 4452, 10 February 1925; Progress Report, 25 November 1927; Progress Report, 27 December 1926; Inspection Report, 26 September 1928, Application File 4452, SWRCB.

²³ L.B. Raab to DWR, 13 October 1931, Application File 4452, SWRCB.

²⁴ “Office Memorandum on Application 4452, Permit 2244, 17 October 1927, Application File 4452, SWRCB.

²⁵ E.N. Bryan, Deputy in Charge of Water Rights to Ohm and Raab, Engineers, 24 January 1930.

Works: 1925 (app)-corrugated iron culver under levee with iron slide gate; earthen ditches. 1928-consisted of a 3 x 3 wooden flume with metal headgate about 5 feet below high tide passing under the levee and into Black Slough. This slough is 50 feet wide and 6 feet deep. Water admitted from the slough to the main earthen ditch through an intake with a metal gate. The ditch is one mile long. In 1928, half the land irrigated by strip checks and half by sub-irrigation from ditches. 625 acres leveled, checked, and “necessary ditches constructed.” in 1926.²⁶

Report of Licensee: water used outside of licensed season ca. 1970; “RD 684 maintains all records” for water use under this app.

4512

Application states that construction of irrigation works was completed by date of application (1925). Water “has been applied since 1912 on 125 acres, on the balance since spring of 1918.”

Crops: 100 acres barley, 363 acres of wheat in 1926 irrigated Oct 1-Dec 1. 463 acres irrigated in 1918. 463 ac. irrigated in 1927 “for 1928 wheat and barley crop.” 1927 season: Sept 1, Oct. 30. 125 acres irrigated in 1928 for “**1929 beans, corn, and asparagus**, season: July 15 – Sept. 30.

Works: at the time of application consisted of a pump, 24 in. cast iron flood gate, earthen ditch, and redwood stave discharge pipe.²⁷

4513

Irrigation works completed by time of application (1925) and water had been completely applied since spring of 1912 on “general crops.”²⁸

Crops: In 1926, 350 ac. beans, 300 ac. barley, 80 ac. wheat.²⁹ In 1927, 70 ac. wheat, 447 ac. corn, 500 ac. beans irrigated from May-August.³⁰

Works: at time of application (1925) consisted of an iron flood gate, and earth ditch. In 1928 (inspection) of a 24 inch iron pipe through the levee with a flood gate on the land side which has a head at high tide of four feet. There was a pump at the end to raise the water to high land. Water conveyed through ditches. The method of irrigation was “wild flooding” and sub-irrigation from the ditches. All acreage was planted to asparagus in 1932 except for 60 ac. of grain.³¹ In 1935 all acreage was in asparagus.³²

²⁶ Water Appropriation Application 4471, 20 February 1925; Progress Report, 3 January 1927; Progress Report, 6 January 1928; Inspection Report, 25 September 1928, Application File 4471, SWRCB.

²⁷ Water Appropriation Application 4512, 20 March 1925; Progress Report, 3 January 1927; Progress Report, 12 December 1927; Progress Report, 7 January 1929, Application File 4512, SWRCB.

²⁸ Water Appropriation Application 4513, 20 March 1925, Application File 4513, SWRCB.

²⁹ Progress Report, 12 December 1927, Application File 4513, SWRCB.

³⁰ Progress Report, 6 January 1927, Application File 4513, SWRCB.

³¹ Inspection Report, 25 September 1928, and Addendum, 1 March 1933, Application File 4513, SWRCB.

Deed to property in this folder; also decree of distribution for the William Ferguson Estate, 1935.

4520

Applicant claiming a riparian right.³³ Applicant claimed that 36 acres of the land had been under irrigation for the past 20 years.³⁴

Crops: In 1926, **36 ac. of alfalfa and “the rest (54 ac.)” in grain land.**³⁵ In 1927, 36 ac. of alfalfa and 25 ac. of barley irrigated May-September.³⁶ Applicant claimed to have been using water from the SJ River for irrigation for the “last thirty years” and had been improving the land gradually.³⁷

Works: 1926—pump, ditch, pipeline. 1932--water pumped from river via a pipe which passes through levee to distribution ditch. The works act as a siphon at high water times. There is also a distribution pipe of concrete. Water used to irrigate alfalfa.³⁸

4537

There are two points of diversion for this property. The applicant claims that the works of one were completed in 1898, the other in 1918. He claimed a riparian right by 27 years of use.³⁹ The inspector stated that most of the land had been irrigated since 1908.

Crops: All of the land at the time of application (1925) was in asparagus. Applicant claimed entire acreage (220) irrigated every year from 1917-1926. Irrigation lasted in 1926 from June-Dec. 15.⁴⁰ 1927-The land was planted entirely in asparagus and irrigated from April to November 1.

Works: 1925 (app) wood flume, earth ditch, floodgate, and pipe. 1927 (inspection) consisted of a masonry conduit through the levee with a flood gate to a wooden flume. The second POD is and 18 inch pipe set in the river below low tide and passing through the levee.⁴¹

Reports of Licensee indicate use of water outside of license season ca. 1950s-1980s.

4562

³² Report of Licensee, 26 October 1936, Application File 4513, SWRCB.

³³ Water Appropriation Application 4520, 26 March 1925, Application File 4520, SWRCB.

³⁴ O.C. Cutts to Department of Public Works, 3 April 1925, Application File 4520, SWRCB..

³⁵ Progress Report, 28 December 1926, Application File 4520, SWRCB.

³⁶ Progress Report, 21 November 1927, Application File 4520, SWRCB.

³⁷ Progress Report, 26 October 1931, Application File 4520, SWRCB.

³⁸ Inspection Report, 25 May 1932, Application File 4520, SWRCB.

³⁹ Water Appropriation Application 4537, 10 April 1925, Application File 4537, SWRCB.

⁴⁰ Progress Report, 28 December 1926, Application File 4537, SWRCB.

⁴¹ Inspection Report, 11 July 1927, Application File 4537, SWRCB.

Applicant claimed riparian right and “right through actual diversion and beneficial use since 1907” (Q#23).

Works: Construction of irrigation works began in 1906. By 1926 the works consisted of a floodgate, pumping plant, 400 feet of ditch, and 70 acres leveled. License was not obtained until 1951 because of slow progress in construction of irrigation works and sale of the land. Works at that time consisted of a pump and pipe through the levee to ditches.⁴²

Crops: All area to be irrigated under application is alfalfa (203 ac.).⁴³ **1926—60 acres in alfalfa, 10 acres in beans.** Irrigation was from May through August in 1926. In 1930, of the 206 acres only 100 acres had been irrigated, the rest needed leveling and checking.⁴⁴

Project slow to finish—see Progress Reports.

Field Visit 10/20/1949: 180 acres outside of permit area being irrigated; high line ditch distributes water.

Riparian rights claimed on several Reports of Licensee, 2000-2006.

4636

Crops: During **1929 applicant irrigated 50 acres for beans from May to July and 104 acres of barley.** Barley was pre-irrigated in October 1929.

Works: in 1930 consisted of a pump on the river side of levee with a suction pipe and discharge pipe passing over the levee. Water is pumped into a concrete stilling box and distributed by ditch.⁴⁵

Report of Licensee for 1934-1936 stated that about 300 ac./ft per season was used, most during June-Aug.

Report of Licensee for 1950s stated approximate water use was 5 ac./ft. per acre on 164 acres, most in summer.

By 1960s Report of Licensee indicate season of use as including Dec. Jan. some of these reports state “year around” for season of use. License is for Mar.-Nov; 1970s Report of Licensee: season Apr.-Oct.; 4-4.5 ac/ft per acre.

⁴² Inspection Report, 10 March 1950, Application File 4562, SWRCB.

⁴³ Water Appropriation Application 4562, 29 April 1925.

⁴⁴ Progress Report, 27 January 1927; Progress Report 11 December 1930, Application File 4562, SWRCB.

⁴⁵ Water Appropriation Application 4636, 15 June 1925; Progress Report, 22 November 1929; Inspection Report, 2 June 1930, Application File 4636, SWRCB.

4637

Works: completed at time of application (1925) were a 3x3 foot concrete culvert or floodgate and a centrifugal pump; 4.3 miles of unlined main ditch; same at 1927 Inspection; The floodgate was “too high for the ordinary flow of the river and is only used at very high stages” (1927);

Report of Licensee: water used Jan-Dec. 1940s; 1950s—water used “primarily during the irrigation season from April through October.”

Report of Inspection (1973) prompted by a change of ownership. The report indicates the supply is from “natural flow.” Diversion is by pumping. Lands originally known as the Moran Ranch. Water pumped from river to ditch. Irrigation by furrow or flooding depending on crop. License split between 3 parcels, H.T. Moran, Lafayette Ranch, and Geo. E. Moran. Table showing maximum rate of diversion shows the earliest date of water use as August 1925. Table shows water use March-Sept. with April and August being the months of highest use.⁴⁶

Legal description of land contained in file for a parcel irrigated under this application. The transfer was from Moran, Moran, and Harrington in 1972. There is no mention of riparian water rights being transferred in this document. The land is riparian to Middle River: 189-210-11; 189-210-12.

4662

Works: Irrigation works were completed by time of application (1925) described as a 12 in. metal siphon and earth ditches. Works in 1928 consisted of a steel siphon, wooden flume, and distribution ditches.

Crops: beans and barley are rotated. The barley is wild flooded and beans irrigated by strip checks. **Entire permit area planted to beans irrigated in 1926; in 1927 to barley with no irrigation.** Report of Licensee from 1947 seems to indicate a change of ownership of the property. The new owner (F.J. Wright) writes that he did not know a license was necessary and, “No water was used through this system up to June 1, 1947 at which time it was used to irrigate a new alfalfa crop consisting of 101 acres.”

Inspection Report from 1963 indicated the land was irrigate every year (determined by interviewing) and that the water supply in the Grant Line Canal is from the “Delta Pool” (Q=Is supply natural flow?) and water level varies with tide.⁴⁷

Report of Licensee: no water used 1983-1991 because there “no water in the by-pass” (Grant Line Canal).

⁴⁶ Water Appropriation Application 4637, 15 June 1925; Inspection Report, 1973, Application File 4637, SWRCB.

⁴⁷ Water Appropriation Application 4662, 24 July 1924; Inspection Report, 26 September 1928; Report of Licensee, 29 October 1947, Inspection Report, 1963, Application File 4662, SWRCB.

Report of Inspection, 12/6/1963: inspector described Grant Line Canal as “an alternate channel water can flow in either direction depending upon tides;” still gravity diversion—siphon, no pump.

4820

Applicant claims a “riparian right and also right by actual usage since 1915.”

Crops: Proposed (app) crops to be irrigated were 173 ac. alfalfa, and 30 ac. orchards. 200 acres irrigated in **1927 from March 1 to September 1 consisting of 60 ac. alfalfa, 110 ac. beans, 31 ac orchard.** Maximum use in 1927 was in May. In 1926, 40 ac. of orchard, 10 ac. onions, 40 ac. alfalfa irrigated April 1 to September 1; 145 acres were irrigated in 1923.

Works: Construction of proposed irrigation works began in 1915 (app). In 1927, works consisted of a pump, concrete pipe, and earth ditches.⁴⁸

Report of Licensee: water use given beginning in 1960s;

4921

Crops: No land irrigated in 1926. 1927-- **225 acres of barley in 1927 irrigated August 20-November 18.** 140 acres irrigated in 1928; in **1929 owner irrigated 133 ac. of corn and 106 ac. of barley.** In 1929, irrigation season was from February 1 to October 1; August and September were the periods of maximum use.

Works: in 1927 consisted of a pump, concrete pipe passing through levee, and distribution ditches.⁴⁹

4922

Works: Application states that the irrigation works consisting of a pump, ditch, and pipeline was complete by 1912. Works in fall of 1928 consisted of a pump with suction pipe and discharge pipe, and ditches. The orchard was irrigated by wild flooding.

Crops: Water was to be used on 5 acres of alfalfa, 20 ac. orchard, and 147 ac. of general crops. In 1926 and 1925 there were **125 ac. of alfalfa and 20 ac. orchard** irrigated from March to September. In 1927: 25 ac. orchard, 5 ac. alfalfa were irrigated.⁵⁰

⁴⁸ Water Appropriation Application 4820, 31 October 1925; Progress Report, 23 November 1927; Progress Report, 5 January 1927; Inspection Report, 25 September 1928, Application File 4820, SWRCB.

⁴⁹ Water Appropriation Application 4921, 13 February 1926; Progress Report, 5 December 1927; Progress Report, 6 January 1927; Inspection Report, 2 June 1930, Application File 4921, SWRCB.

⁵⁰ Water Appropriation Application 4922, 13 February 1926; Progress Report, 15 January 1927; Progress Report, 24 November 1927; Inspection Report, 25 September 1928; Application File 4922, SWRCB.

Report of Licensee: water used outside of licensed season in 1950s; reference to the CVP pumps lowering the water level one foot lower than normal at low tide.

4979

Works: were completed at time of application (1926) consisting of a pump, and earth ditch. In 1927 (inspection)—a pump with discharge and intake pipe, concrete stilling pit, earth ditches and furrows.

Crops: In 1926, the land had 75 acres of beans irrigated May 15- September 15; in 1925 40 acres were irrigated. Works in 1927 consisted of a pump, pipe, concrete stilling pit, and distribution ditches and furrows.⁵¹

Reports of Licensee: water use outside of licensed season; Report of Inspection 3/30/1926: flow of Middle River regarded by inspector as “partially” natural flow.

5047

Works: Application states that construction began on the works in 1917 and would be complete by June 1929. Application only lists Middle R., Salmon Slough (2), and Grant Line Canal as points of diversion. It appears, however, that one of the Salmons Slough points is on Old River.

Crops: to be irrigated (app-1926) were 50 acres of alfalfa and 1264 acres general crops. In 1924, 770 acres were irrigated; **In 1927 the parcel had 450 acres of beans, 200 acres of grain, and 40 acres of alfalfa under irrigation** from April 15 to October 1. In 1928 there were **520 acres of beans, 350 acres of barley, and 270 acres of corn.** In 1929: 200 acres of beans irrigated in September and 500 acres of “other crops.” Grant Line Canal referred to as “a dead end branch of Salmon Slough.” Works at time of inspection in 1930 consisted of four pumping plants with suction and discharge pipes: one on Middle River, two on Salmon Slough, and one on Grant Line Canal. The land was levied and crossed by additional levees, ditches, and shallow sloughs. Land to be planted in beans or corn was preirrigated in May “in accordance with the usual methods practiced in that locality.” The practice of preirrigation entails pumping water until the soil is completely saturated and “water stands in lakes on the surface.” Beans were irrigated again in August, but more lightly than in May. From 1933-1935 the licensee irrigated tomatoes, beans, barley, asparagus from April-October.⁵²

In a letter to the applicant from DWR the following statement appears:

⁵¹ Water Appropriation Application 4979, 30 March 1926; Progress Report, 9 February 1927; Inspection Report, 8 July 1927, Application File 4979, SWRCB.

⁵² Water Appropriation Application 5047, 8 June 1926; Progress Report, 26 January 1928; Progress Report, 13 February 1929; Progress Report, 20 February 1930; Inspection Report, 2 June 1930; Report of Licensee, 22 October 1935, Application File 5047, SWRCB.

It is desired at this time to invite your attention to the fact that should all development and use of water from the source named herein be consummated as proposed under prior applications and permits pending before this office, it is probable that during the latter part of the irrigation season of a normal year, there will be insufficient water to provide the amount applied for in this application. Consequently you are advised that should this application be approved the permit will contain a clause somewhat as follows: SEE CONDITION #2 ABOVE.⁵³

5064

Works: began on irrigation works in 1915 and the land was fully irrigated in 1915 or 1916. At the time of the application (1926), the works consisted of floodgate, terra cotta pipe, pump, flume, and ditch. In 1928, 72 acres were irrigated from May to October. The works were the same as those used by M.G. Oliveira (see #5121). Works at time of inspection (1929) consisted of a terra cotta pipe through levee with an iron screw gate set in a wooden flume at the intake. The top of the pipe is at level with low tide. Water flows to the parcel through the “Oliveiras ditch” to the property. About 80% of the land is irrigated by gravity from a ditch along the southeastern boundary, the remainder by water run along the railroad borrow pit and pumped to the higher land on the west. Irrigation is by flooding.

Crops: The entire permit area was irrigated in **1926, 1927, 1928, and was in May 1929 all in barley**. The season of use is May-Oct.⁵⁴

Report of Licensee: No water used from 1932-1934; “could not afford to spend any money on flume;” the DWR did not revoke this license despite non-beneficial use for three years because of economic hardship.

Report of Licensee: water used to irrigate asparagus in November only (1941-1943); later that decade asparagus watered twice per year (summer and late fall).

Report of Licensee 1990-2004: indicate season of use from March-Oct. license is for May-Oct. – no specific crop info given for this period.

5102

Applicant stated that construction of irrigation works was completed in 1912, irrigated 270 acres that year, and was in use at the time of application (1926).

Crops: Inspector reported in September and October 1926, the applicant irrigated the entire permit area of 270 acres planted to **12 ac. alfalfa, 15 ac. corn, and 245 ac. barley**. In 1927 and up to September 1928, the applicant had irrigated 25 ac. of corn and alfalfa only.

⁵³ H.A. Kluegel, Chief of DWR to Fred Witt, 24 November 1923, Application File 3701, SWRCB.

⁵⁴ Water Appropriation Application 5064, 19 June 1926; Inspection Report, 21 May 1929, Application File 5064, SWRCB.

Works: 1928-Water supplied to earth ditch at high tide and high stages of river by 166 foot brick culvert passing through levee. The bottom of the culvert was on level with low tide. An iron screw gate was on the river side. Flow through the culvert was controlled by flow in the main ditch and the varying head in the river. A pump was on the river side of the levee with a intake and discharge pipe which was used when the river was low.⁵⁵

Report of Licensee: land is leased by 1940s; by 1977, 414,720 gallons used for irrigation; by 1982 5.5 ac/ft per year; certain years water used outside of licensed season of use; no crop information for 1990s.

5120

Application states that construction of irrigation works was completed in 1913 and was in use at the time of application (1926). Water was completely applied to the proposed use in 1913 to 335 acres. Application states that “Claim is made of riparian right and also by actual usage since 1913.” Claim repeated on 2003 Report of Licensee: “Using appropriative & Riparian water rights.”

Crops: Applicant irrigated **300 acres of beans, and 35.4 acres of barley** in 1927 from March 15 to September 20 (entire permit area.) Planted in 20 ac. of beans and 30 ac. of corn in September 1928. Applicant expected to plant the entire area to asparagus, which has a July-Nov. irrigation season.

Works: 1928-140 feet of 24 inch cast iron pipe through levee with gate valve on land side. The top of the intake is about 2 feet below low tide giving a head of six feet on center of the pipe. Water passes into an earthen ditch.⁵⁶

Report of Licensee: water used outside of licensed season; use is Jan, April, May, June, July, and Dec. to water beans and asparagus; water used “all year” through 1960s; concrete lined ditches by 1970s; water still siphoned from river in 2003.

Report of Inspection 6/14/1967: still gravity (siphon-no pump) diversion; irrigated by a “hyline ditch” down middle of property served by siphons and distributed on land by various means depending on crop. Approx. 4.2 cfs used based on 1 cfs per 80 acres. Inspector stated that “the head on the diversion system varies considerably due to tidal action and the [USBOR] Tracy Pumping Plant.”

APN 189-250-22

5121

⁵⁵ Water Appropriation Application 5102, 15 July 1926; Progress Report, 6 December 1927; Inspection Report, 25 September 1928, Application File 5102, SWRCB.

⁵⁶ Water Appropriation Application 5120, 22 July 1926; Progress Report, 3 December 1927; Inspection Report, 26 September 1928, Application File 5120, SWRCB.

Water was completely applied in “1915 or 1916.”

Works: Application states that work in the irrigation system began in 1915 and was completed at the time of application (1926). The system at the time of application consisted of ditches, terra cotta pipe, and a 7,600 foot long flume. Works in 1928: a terra cotta pipe through levee with an iron screw gate set in a wooden flume at the intake. The top of the pipe is at level with low tide. Water flows to the parcel in a flume and a ditch. The irrigation is accomplished by allowing the water to “percolate from the ditches.”

Crops: The crops to be irrigated as indicated on application were 200 acres of alfalfa and 177.6 acres of general crops. In 1926, 320 acres were irrigated. In **1927 there were 250 acres alfalfa, 10 ac. corn, and 35 ac. beans** irrigated from May 1-September 1. In 1928 the applicant had 250 acres of alfalfa, 10 ac. of corn, and 35 acres of beans. In 1930—73 ac. irrigated; in 1931—335 acres irrigated; in 1932—377 ac. all irrigated to pasture for dairy cattle. In 1935 water was used during entire spring and summer irrigation period (March-Sept) on entire acreage to water beans, corn, alfalfa, “horse beans.” Water was also used for “flooding to wash land,” from October to January, domestic purposes, watering stock, and house garden. In 1939 licensee grew corn, sunflowers, tomatoes, asparagus, beets, potatoes and used water to leach alkaline salts from ground.⁵⁷

Deed of sale of water rights dated February 20, 1915 from A.G. Keagle to L.B. Stevenson. (Stevenson land is not adjacent to water-See 1916 Assess. map). Keagle had rights recorded in Book G of Miscellaneous, Vol. 21, page 370, SJ Co. Also right to convey water through the land of Keagle by flume or ditch. Right being conveyed is to water “sufficient to irrigate his lands...and for domestic purposes” and not “more than one-half capacity of said irrigation ditch.” Construction of the flume began after the 1915 cropping season.⁵⁸

Report of Licensee: by 1940s, water is being used outside of licensed season; by 1975 water being used Jan-Dec.; Report of Licensee 2001: “Appropriative rights herein overlap riparian, pre-1914 appropriative and groundwater rights appurtenant to the land.”

Consumptive use of water on alfalfa in the Delta during July is .65 acre-feet per acre.

5201

"claim of riparian rights having irrigated approximately 80% in July 1924."

Works: begun in April 1924 to build a system consisting of a pump and earth ditches; Works in 1931 consisted of ditches and pump.

⁵⁷ Water Appropriation Application 5121, 22 July 1926; Progress Report, 3 December 1927; Addendum to Inspection Report of September 25, 1928, 14, March 1933; Inspection Report, 25 September 1928; Report of Licensee, 18 October 1935; Report of Licensee, 22 July 1940, Application File 5121, SWRCB.

⁵⁸ A.G. Keagle to L.B. Stevenson, Deed, Application File 5121, SWRCB.

Crops: 40 acres irrigated in 1923. In 1927 progress consisted of ditches and 10 acres checked to alfalfa. **150 acres irrigated from January to December in 1927 planted in grain, beans, corn, alfalfa.** About 60 acres irrigated in 1928 from February to December. In 1929 owner continued to construct irrigation works and planted corn, beans, and grain. He claimed to have used water every month with maximum use occurring during March, June, and October. In 1931 the owner used water for flooding the land for planting of grain and corn on 160 acres. Water was used from October 10th to November 15th, and in May.⁵⁹

Report of Licensee: complaint that water was unusually dirty and salty because of CVP drawing water (1951).

5364

Applicant claimed an additional water right (Q#23) stating, “water has been used for 6 years. 370 acres of land have been irrigated.”

Works: Construction work was completed by time of application (1927) consisting of earth ditches and pump. Works in 1929 were a pump, pipe and ditches.

Crops: Water was to be applied to 200 acres of alfalfa and 196 ac. of general crops. **In 1928 396 ac. irrigated, planted to corn and barley.** Irrigation season was from April to December 1. No license in file.⁶⁰

Report of Licensee: season stated as Jan-Dec in late 1950s-1960s; 1978-1980, 1984-1996 season of use stated by licensee as Jan-Dec.

5/11/1967 Inspection: now two pumps at POD; ditch is lined; pump KWH listed 1964-1966.

6877

In 1932, 250 ac. of potatoes, 325 ac. of corn, 598 ac. barley, 40 ac. beans; water used Jan-Dec. Land has been irrigated since 1920 from the same point of diversion. Works consisted of steel pipe, pump, and ditches.⁶¹

Report of Licensee: 1500 ac/ft per year used 1938-1940; license covers two parcels, ca. 1960, Francis Lamb changed his POD and relinquished all right in the irrigation system formerly owned by he and R.N. Blossom, the other land owner.

⁵⁹ Water Appropriation Application 5201, 13 September 1926; Progress Report, 25 January 1928; Progress Report, 24 December 1928; Progress Report, 17 January 1930; Progress Report, 9 April 1932; Application File 5201, SWRCB.

⁶⁰ Water Appropriation Application 5364, 24 February 1927; Inspection Report, 21 May 1929, Application File 5364, SWRCB.

⁶¹ Water Appropriation Application 6877, 10 February 1925; Progress Report, 17 November 1932, Application File 6877, SWRCB.

6936

Application states that construction of irrigation works was complete by time of application (1931) consisting of a pump and concrete pipe. It was to irrigate 79 acres of alfalfa.⁶² In 1931, 79 acres irrigated; 1932: 5 acres irrigated; no acres irrigated in 1933.⁶³ In 1934, ditches rebuilt, 79 acres irrigated in September for next years barley.⁶⁴ No license in file.

Report of Licensee: irrigates out of license season—1950s, 1960s; some water use amounts given; water to property via a pipeline from SJ River to a concrete lined ditch; drainage ditch used.

7667

Decree of Final Distribution in folder.

8318

Clause on Permit: “Allowance of the amount named in this permit shall not be construed as vesting in permittee any right or color of right to water in excess of what may be reasonably needed for beneficial use in connection with the specific purpose described in the application which is hereby approved.”

9764

Copy of deed in folder: Moran to Lund; transfer of ownership info ca. 1939-1960 on Report of Licensee 1961.

10611

Black Slough: “At the time the flood levee was constructed (ca. 1888) and for a number of years thereafter the peat land bordering Black Slough were considerably higher than at present and a gate was put in the levee to drain the slough at low stages of the river. That was about 55 years ago. As the peat lands sank it was found possible to irrigate by gravity from the slough. The old drainage gate became covered and pipes were places through the levee at a slightly different location to admit water for the purpose. Then, about 15 years ago, the existing gate was built over the old drain gate and the pipes were abandoned. Flow through the gate was at one time regulated by the local reclamation district.” The gate was operated by an agent of the landowners in 1943.

⁶² Water Appropriation Application 6936, 13 April 1931, Application File 6936, SWRCB.

⁶³ Progress Report, 1933, Application File 6936, SWRCB.

⁶⁴ Progress Report, 9 October 1934, Application File 6936, SWRCB.

Water admitted through levee by a screw gate to canal (Bl. Slough); Letter of 4/26/1948 from DWR states that “the source from which water is first diverted or taken under control is San Joaquin river and the location of the gate admitting water to Black Slough from the river is the point of diversion described in the application. The source of the appropriation is, therefore, San Joaquin River.”

Five users diverting from the slough at time of License; “water first taken under control” at SJ River POD; In reference to Black Slough, “That waterway is largely artificial and can doubtless be considered as part of the conduit.” (Inspection Report, 4/23/1946);

Works under the river levee were a 3x3 wooden flume with iron slide gate. About midway between the river and the place of use water was diverted from the slough through a 30 inch by 32 inch gate into the permittee’s ditch (4/23/1946 Inspection).

11739

Distribution of Francis H. Saunders Trust in folder (1982).

14022

Estimates of consumption based on KWH in Inspection Reports in app.

14023

Inspection Report from 1950 has consumptive use figures, and a good sketch of the works.

11694

This folder contains a lengthy letter by I.N. Robinson describing all of his holdings on both Roberts and Union (12/20/1991).

17475

“Whiskey Slough at this point is a controlled channel by means of wooden flap gates the water is allowed into the channel during high tide and closed at low tide so that the water is high enough at most time for the gravity gates to be used” (1960 Inspection); “Appropriative rights herein overlap riparian, pre-1914 appropriative and groundwater rights appurtenant to the land” (Report of Licensee 7/7/2004).

17592

Construction work was completed at time of application; applicant makes riparian claim (Application, 1957); gravity flow through two iron gates in levee to a wooden box; water level in Whiskey Slough “very high” at time of field visit, and a drain pump was working; DWR inspector stated that “the place of use is riparian unless there may have

been a possible severance by levee or road right of way;" also: "the source of water during the low flow period could be return drainage water from above or water forced up from other sloughs in the delta by tidal action. Just below the point of diversion at the point where Whiskey Slough passes through the fill of AT&SF railroad there is a flap gate which allows the tidal waters to flow upstream and be held in the slough for diversion during low periods. The application is for uses of water which have been made by applicant for many years..." (Memorandum of Field Visit, 5/9/1958); Question on report: Is supply natural flow? A= "Tidal channel;" "this portion of the slough is controlled by gates;" "Water is diverted by gravity into the borrow of the ATSF RR thence into several lateral ditches where the water is siphoned out..." "This land appears riparian however there are several roads and also the main line of the EBMUD pipeline are near or on the permittees property which may have severed the riparian right;" Inspector stated that the applicant was "old and is also senile;" The POD is on a "tidal channel" and there is "always or almost always sufficient supply, at extreme low tides there is not enough water for this gravity system to work due to the control flap gate from the main source" (Report of Inspection, 7/18/1960). Flow entirely dependent on tide; minimum flow occurs "low tide;" still gravity flow; change of ownership at this date; reference the diversion system being part of the "Kuckuk Water District" (Report of Inspection, 5/9/1964); "Appropriative rights herein overlap riparian, pre-1914 appropriative and groundwater rights appurtenant to the land" (Report of Licensee 7/7/2004).

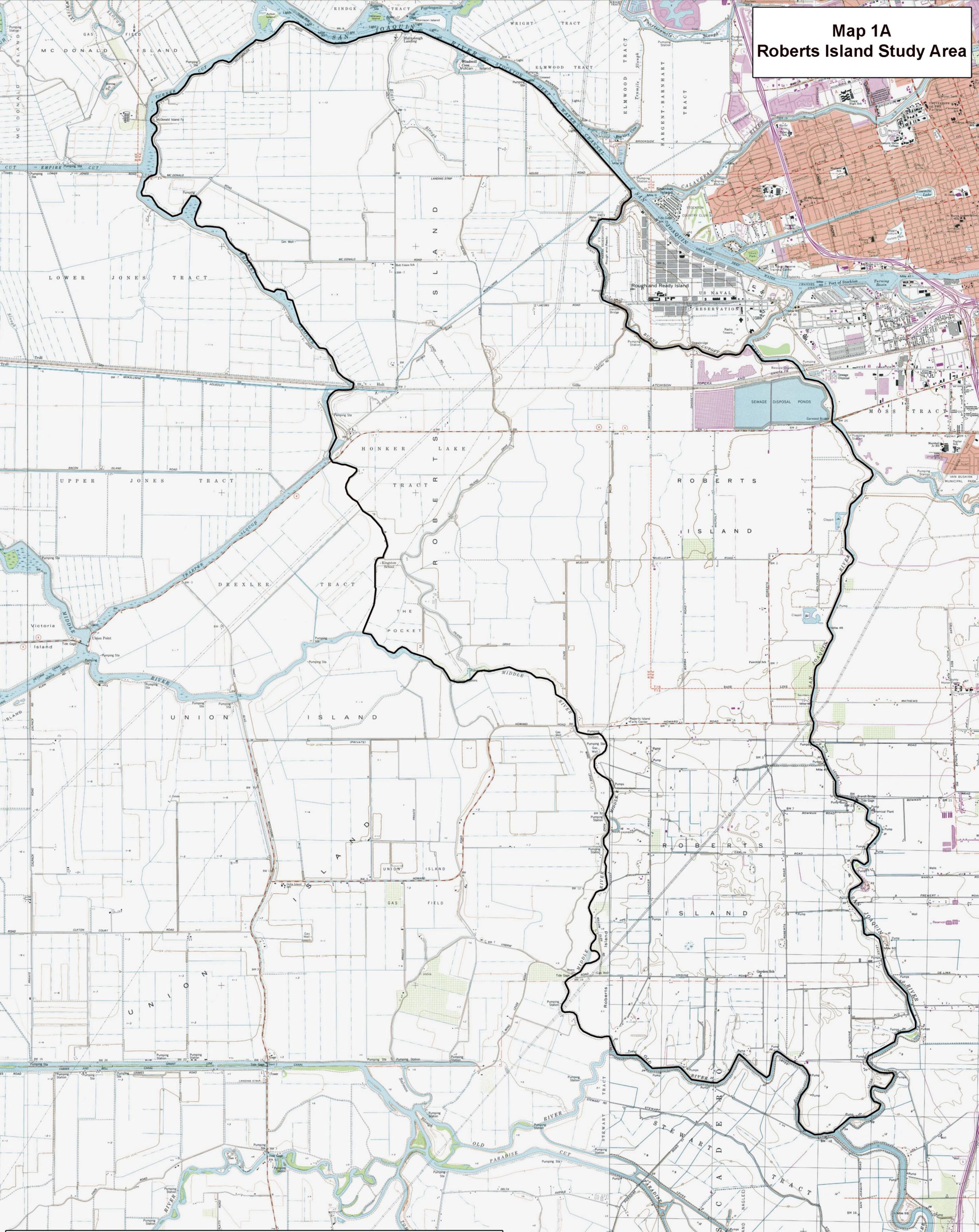
17638

"this is a tidal channel therefore there is probably only a small amount of natural flow if any." Comments made by DWR inspector May 1960 in reference to riparian rights.

21162

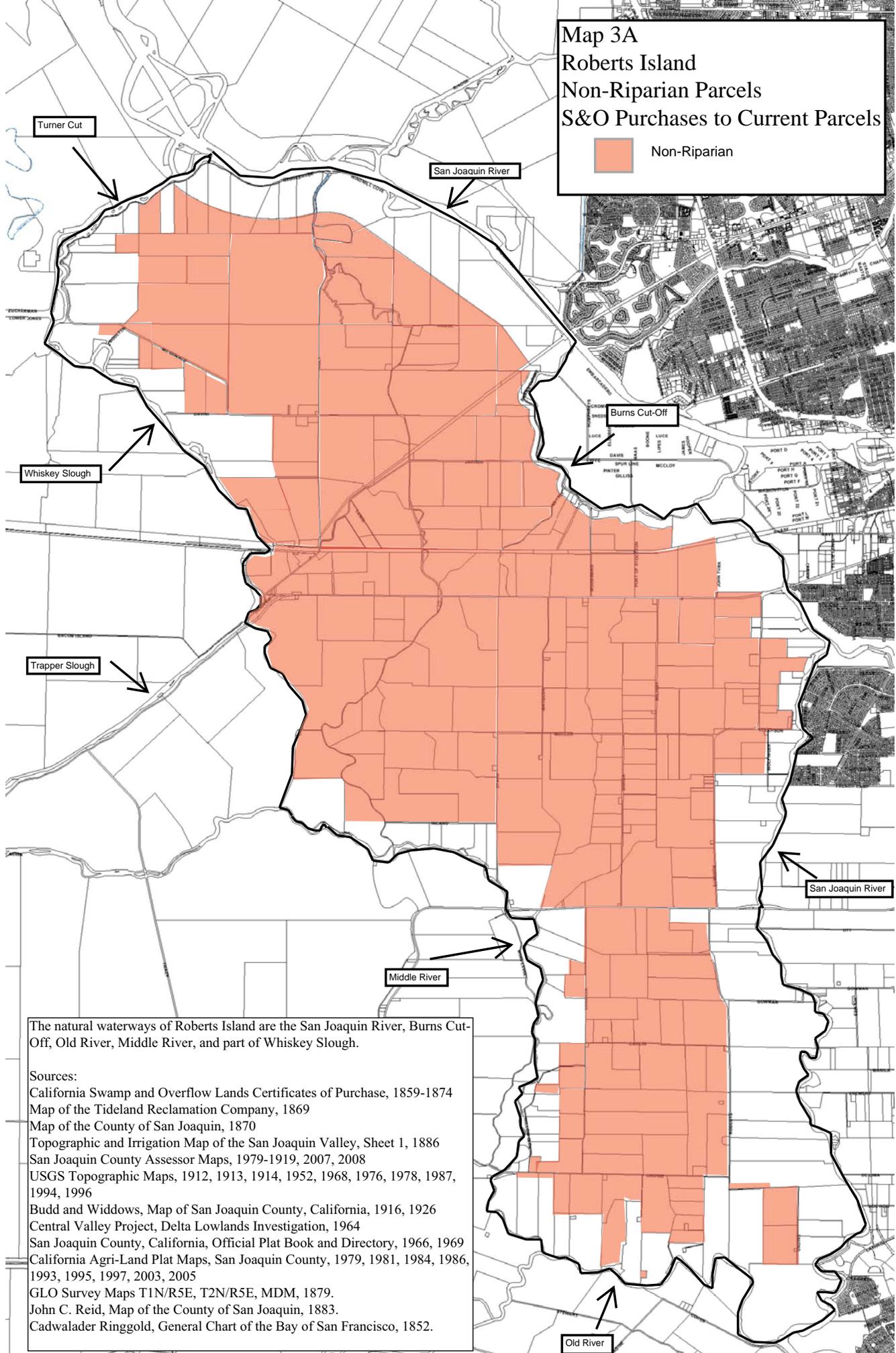
Protest filed by USBOR because the diversion would injure CVP diversions; USBOR claims prior right; DWR Inspector 1988: "place of use can be said to be riparian to the source since it is located on Roberts Island in the Delta." Pump power consumption in file for 1995; Condition: "The equivalent of such continuous flow allowance for any 30-day period may be diverted in a shorter time if there be no interference with other rights and instream beneficial uses and provided further that all terms or conditions protecting instream beneficial uses are observed;" DWR requested proof of riparian or pre-1914 right, 8/23/2000 letter; Term 91 went into effect 6/28/2000; licensee had no contractual or groundwater supply.

**Map 1A
Roberts Island Study Area**



Map 3A
Roberts Island
Non-Riparian Parcels
S&O Purchases to Current Parcels

 Non-Riparian

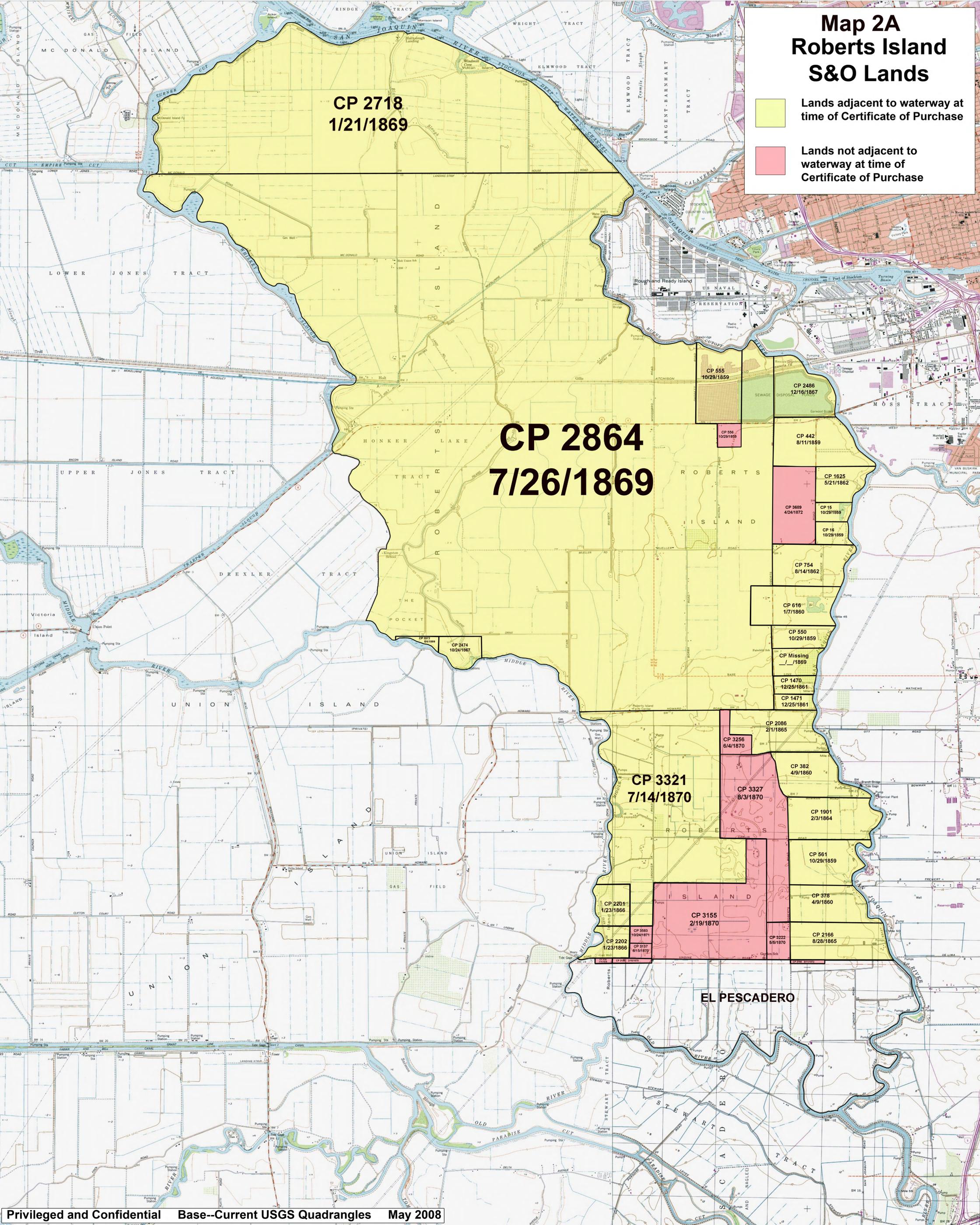


The natural waterways of Roberts Island are the San Joaquin River, Burns Cut-Off, Old River, Middle River, and part of Whiskey Slough.

- Sources:
- California Swamp and Overflow Lands Certificates of Purchase, 1859-1874
 - Map of the Tidelands Reclamation Company, 1869
 - Map of the County of San Joaquin, 1870
 - Topographic and Irrigation Map of the San Joaquin Valley, Sheet 1, 1886
 - San Joaquin County Assessor Maps, 1979-1919, 2007, 2008
 - USGS Topographic Maps, 1912, 1913, 1914, 1952, 1968, 1976, 1978, 1987, 1994, 1996
 - Budd and Widdows, Map of San Joaquin County, California, 1916, 1926
 - Central Valley Project, Delta Lowlands Investigation, 1964
 - San Joaquin County, California, Official Plat Book and Directory, 1966, 1969
 - California Agri-Land Plat Maps, San Joaquin County, 1979, 1981, 1984, 1986, 1993, 1995, 1997, 2003, 2005
 - GLO Survey Maps T1N/R5E, T2N/R5E, MDM, 1879.
 - John C. Reid, Map of the County of San Joaquin, 1883.
 - Cadwalader Ringgold, General Chart of the Bay of San Francisco, 1852.

Map 2A Roberts Island S&O Lands

- Lands adjacent to waterway at time of Certificate of Purchase
- Lands not adjacent to waterway at time of Certificate of Purchase



**CP 2718
1/21/1869**

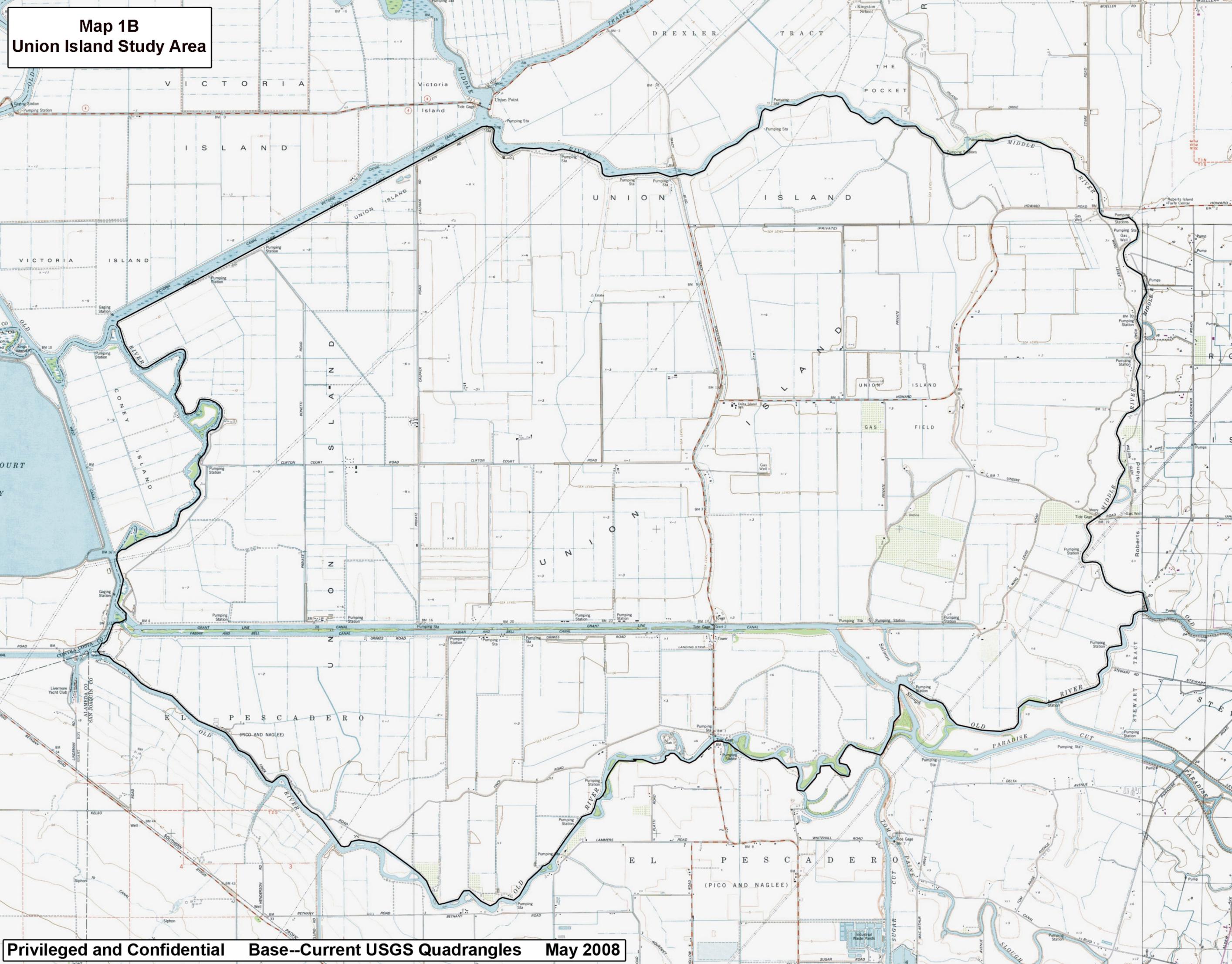
**CP 2864
7/26/1869**

**CP 3321
7/14/1870**

- CP 555
10/29/1859
- CP 2486
12/16/1867
- CP 442
8/11/1859
- CP 1625
5/21/1862
- CP 3689
4/24/1872
- CP 15
10/29/1859
- CP 16
10/29/1859
- CP 754
8/14/1862
- CP 616
1/7/1860
- CP 550
10/29/1859
- CP Missing
/1869
- CP 1470
12/25/1861
- CP 1471
12/25/1861
- CP 2086
2/11/1865
- CP 3256
6/4/1870
- CP 382
4/9/1860
- CP 1901
2/3/1864
- CP 561
10/29/1859
- CP 378
4/9/1860
- CP 2166
8/28/1865
- CP 2201
1/23/1866
- CP 3583
10/24/1871
- CP 2202
1/23/1866
- CP 3137
8/15/1870
- CP 3155
2/19/1870
- CP 3222
8/5/1870

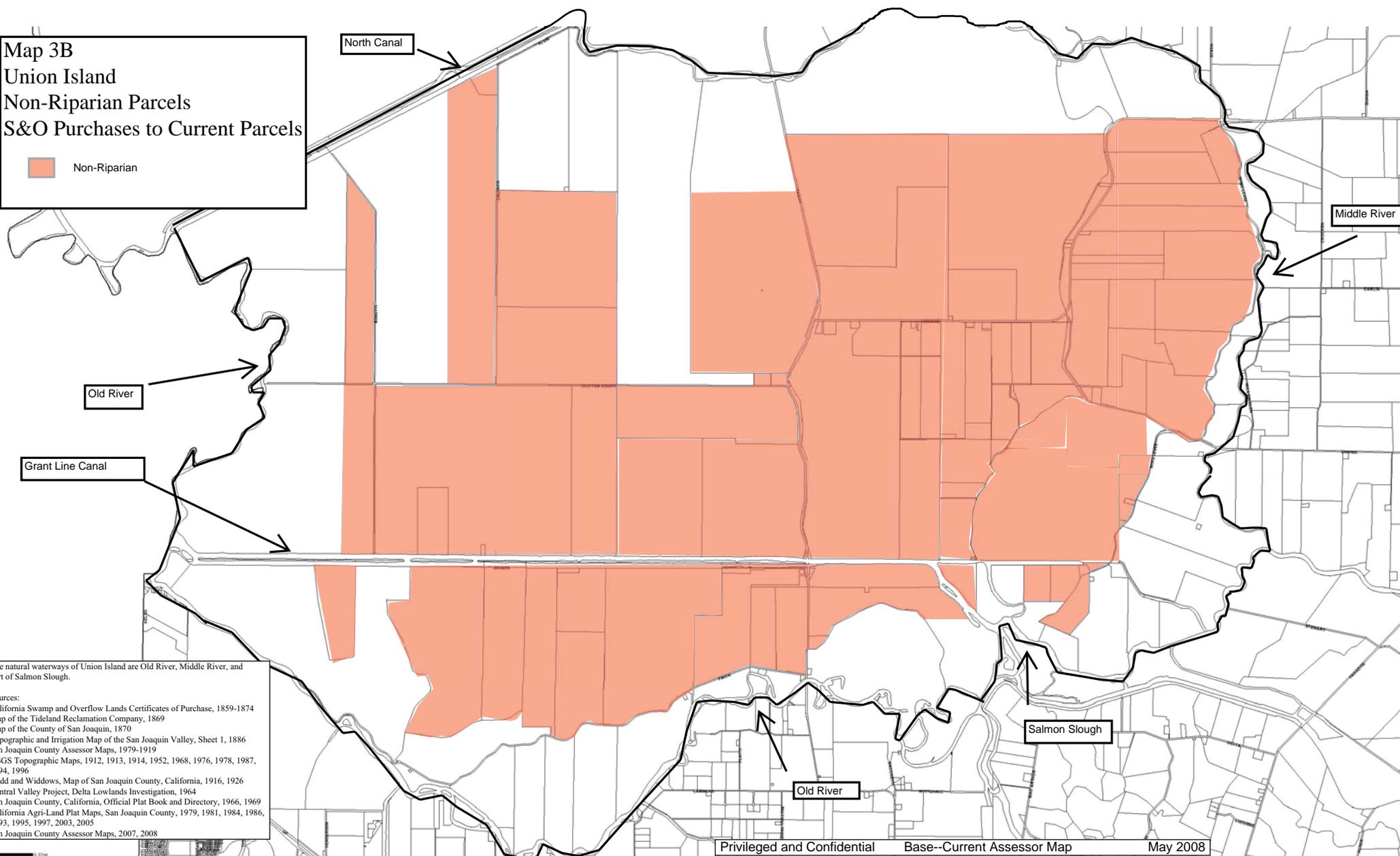
EL PESCADERO

**Map 1B
Union Island Study Area**



Map 3B
Union Island
Non-Riparian Parcels
S&O Purchases to Current Parcels

Non-Riparian

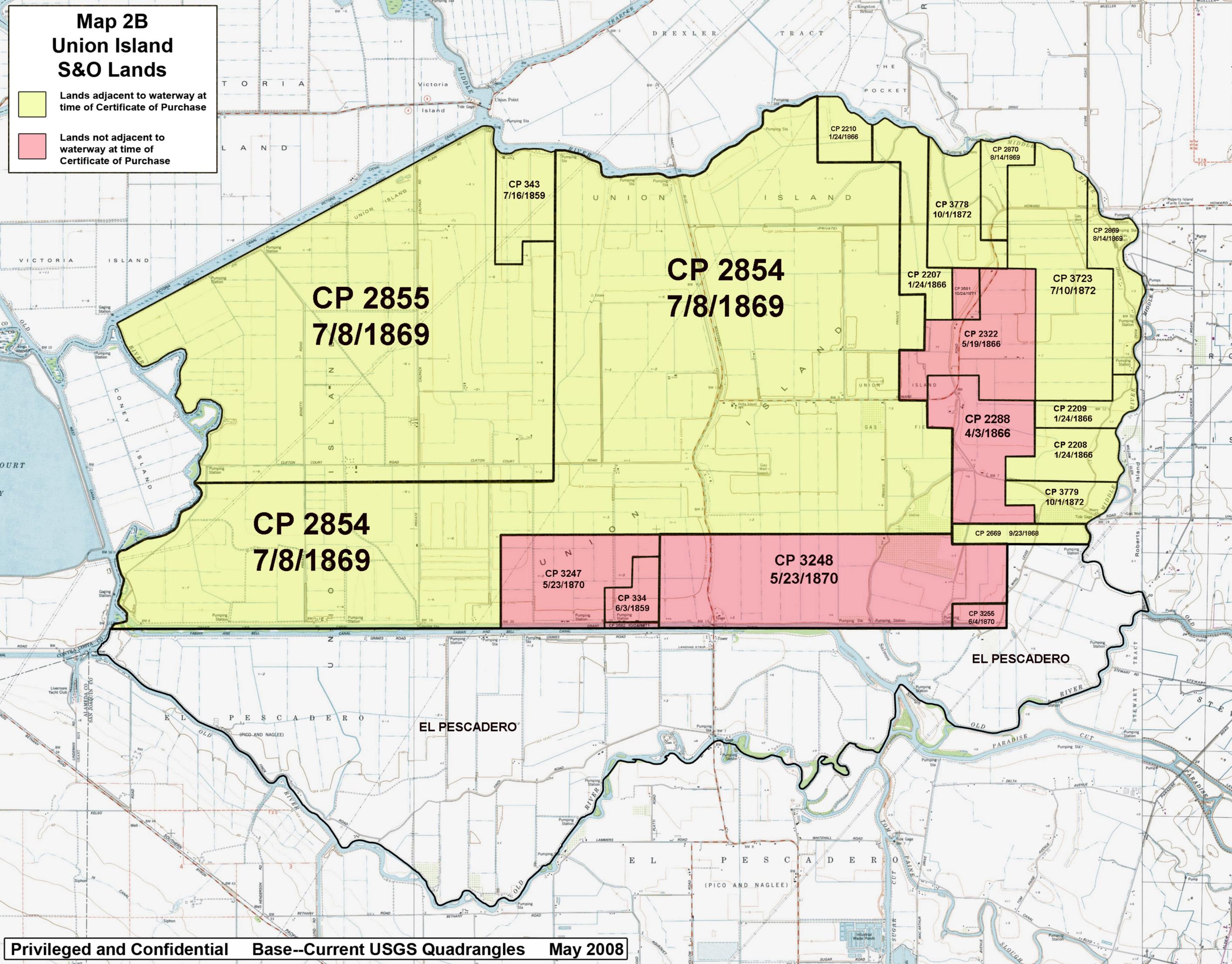


The natural waterways of Union Island are Old River, Middle River, and part of Salmon Slough.

Sources:
 California Swamp and Overflow Lands Certificates of Purchase, 1859-1874
 Map of the Tideland Reclamation Company, 1869
 Map of the County of San Joaquin, 1870
 Topographic and Irrigation Map of the San Joaquin Valley, Sheet 1, 1886
 San Joaquin County Assessor Maps, 1979-1919
 USGS Topographic Maps, 1912, 1913, 1914, 1952, 1968, 1976, 1978, 1987, 1994, 1996
 Budd and Widdows, Map of San Joaquin County, California, 1916, 1926
 Central Valley Project, Delta Lowlands Investigation, 1964
 San Joaquin County, California, Official Plat Book and Directory, 1966, 1969
 California Agri-Land Plat Maps, San Joaquin County, 1979, 1981, 1984, 1986, 1993, 1995, 1997, 2003, 2005
 San Joaquin County Assessor Maps, 2007, 2008

Map 2B Union Island S&O Lands

- Lands adjacent to waterway at time of Certificate of Purchase
- Lands not adjacent to waterway at time of Certificate of Purchase



CP 2855
7/8/1869

CP 2854
7/8/1869

CP 2854
7/8/1869

CP 3247
5/23/1870

CP 334
6/3/1859

CP 3248
5/23/1870

CP 3255
6/4/1870

CP 2210
1/24/1866

CP 2870
8/14/1869

CP 3778
10/1/1872

CP 2207
1/24/1866

CP 3723
7/10/1872

CP 2322
5/19/1866

CP 2288
4/3/1866

CP 2209
1/24/1866

CP 2208
1/24/1866

CP 3779
10/1/1872

CP 2669 9/23/1868