Proposed Cease and Desist Order Hearing

Check one of the following:	Gallo Vineyards, Inc.
•	Mark and Valla Dunkel
	Mussi et al.
	X Yong Pak and Sun Young

scheduled to commence May 5, 2010

Exhibit Identification Index

Modesto Irrigation District, State Water Contractors,

PARTICIPANT: and San Luis & Delta-Mendota Water Authority

Exhibit Identification Number	entification Exhibit Description Status of Evidence		ence	
		Introduced	Accepted	By Official Notice
MSS 1	Testimony of Stephen R. Wee			
MSS 1A	Wee Statement of Qualifications			
MSS 1B	Chain of Title Summary			
MSS 1C	Map #131-180-07-C			
MSS 1D	Map #131-180-07-E			
MSS 1E	Map #131-180-07-F			
MSS 1F	1896 Deed			
MSS 1G	Map #131-180-07-G			
MSS 1H	Map #131-180-07-K			
MSS 1I	Sept. 29, 1911, Agreement			
MSS 1J	Sept. 29, 1911, Agreement		15,000	
MSS 2A	Sequencing Map 1			
MSS 2B	Sequencing Map 2		0.700	
MSS 2C	Sequencing Map 3			
MSS 2D	Sequencing Map 4			
MSS 2E	Sequencing Map 5			
MSS 2F	Sequencing Map 6			

Proposed Cease and Desist Order Hearing

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Modesto Irrigation District, State Water Contractors,

PARTICIPANT: and San Luis & Delta-Mendota Water Authority

Exhibit Identification Number	Exhibit Description	Status of Evidence		
		Introduced	Accepted	By Official Notice
MSS 2G	Sequencing Map 7			
MSS 2H	Sequencing Map 8			
MSS 3	Testimony of Philip Johnson			
MSS 3A	Johnson Statement of Qualifications			
MSS 3B	August 1937 aerial photograph			77
MSS 3C	May 1940 aerial photograph			
MSS 3D	July 1957 aerial photograph			
MSS 3E	June 1963 aerial photograph			
MSS 3F	August 1963 aerial photograph			
MSS 3G	May 1968 aerial photograph	***		
MSS 3H	April 1985 aerial photograph			
MSS 3I	June 1987 aerial photograph			
MSS 3J	March 1993 aerial photograph			
MSS 3K	Sept. 2000 aerial photograph			
MSS 4	Testimony of David A. Goldhamer, Ph.D			
MSS 4A	Goldhamer Statement of Qualifications			
MSS 4B	Consumptive Use Chart	-		

PROOF OF SERVICE

I am over 18 years of age and not a party to the within action; my business address

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5 is 400 Capitol Mall, Suite 1800, Sacramento, California, I am employed in Sacramento

County, California.

I Gilberto J. Castro declare as follows:

On April 1, 2010, I served a copy of the following documents:

EXHIBIT IDENTIFICATION INDEX AND EXHIBITS FOR HEARING REGARDING ADOPTION OF DRAFT CEASE AND DESIST ORDER AGAINST: YONG PAK AND SUN YOUNG (DUCK SLOUGH) - SAN JOAQUIN **COUNTY - SCHEDULED TO COMMENCE ON MAY 5, 2010**

On the following interested parties in the above-referenced case number to the following:

SEE ATTACHED SERVICE LIST

[X] BY MAIL

By following ordinary business practice, placing a true copy thereof enclosed in a sealed envelope, for collection and mailing with the United States Postal Service where it would be deposited for first class delivery, postage fully prepaid, in the United States Postal Service that same day in the ordinary course of business

I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration was executed on April 1, 2010, at Sacramento, California.

DIEPENBROCK HARRISON

Service List

YONG PAK AND SUN YOUNG c/o John Herrick, Esq. 4255 Pacific Avenue, Suite 2 Stockton, CA 95207 jherrlaw@aol.com c/o Dean Ruiz, Esq. Harris, Perisho & Ruiz 3439 Brookside Road, Suite 210 Stockton, CA 95219 dean@hpllp.com	DIVISION OF WATER RIGHTS PROSECUT TEAM c/o David Rose State Water Resources Control Board 1001 I Street Sacramento, CA 95814 DRose@waterboards.ca.gov
CENTRAL DELTA WATER AGENCY c/o Dean Ruiz, Esq. Harris, Perisho & Ruiz 3439 Brookside Road, Suite 210 Stockton, CA 95219 dean@hpllp.com	SOUTH DELTA WATER AGENCY c/o John Herrick Attorney at Law 4255 Pacific Avenue, Suite 2 Stockton, CA 95207 jherrlaw@aol.com c/o Dean Ruiz, Esq. Harris, Perisho & Ruiz 3439 Brookside Road, Suite 210 Stockton, CA 95219 dean@hpllp.com
SAN JOAQUIN COUNTY AND THE SAN JOAQUIN COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT c/o DeeAnne M. Gillick Neumiller & Beardslee P.O. Box 20 Stockton, CA 95201-3020 dgillick@neumiller.com tshepard@neumiller.com	STATE WATER CONTRACTORS c/o Stanley C. Powell Kronick, Moskovitz, Tiedemann & Girard 400 Capitol Mall, 27th Floor Sacramento, CA 95814 spowell@kmtg.com
MODESTO IRRIGATION DISTRICT c/o Tim 0'Laughlin Ken Petruzzelli O'Laughlin & Paris LLP 117 Meyers St., Suite 110 P.O. Box 9259 Chico, CA 95927-9259 towater@olaughlinparis.com kpetruzzelli@olaughlinparis.com	SAN JOAQUIN FARM BUREAU c/o Bruce Blodgett 3290 North Ad Art Road Stockton, CA 95215-2296 director@sjfb.org

DIEPENBROCK HARRISON CALIFORNIA DEPARTMENT OF WATER
RESOURCES
c/o Erick Soderlund
1416 Ninth Street, Room 1118
Sacramento, CA 95814
esoderlu@water.ca.gov

DIEPENBROCK HARRISON

- 3 -

MSS Exhibit 1

2	Kenneth Petruzzelli, State Bar No. 227192 O'LAUGHLIN & PARIS LLP
	P.O. Box 9259
3	Chico, California 95927 Telephone: (530) 899-9755
4	Facsimile: (530) 899-1367
5	Attorneys for MODESTO IRRIGATION DISTRICT
6	Clifford W. Schulz, State Bar No. 039381 Stanley C. Powell, State Bar No. 254057
7	KROŇICK, MOSKOVITZ, TIEDEMANN & GIRARD A Professional Corporation
8	400 Capitol Mall, 27th Floor Sacramento, California 95814
9	Telephone: (916) 321-4500 Facsimile: (916) 321-4555
10	Attorneys for STATE WATER CONTRACTORS
11	Jon D. Rubin, State Bar No. 196944
12	Valerie C. Kincaid, State Bar No. 231815 DIEPENBROCK HARRISON
13	A Professional Corporation 400 Capitol Mall, Suite 1800
14	Sacramento, CA 95814-4413
15	Telephone: (916) 492-5000 Facsimile: (916) 446-4535
16	Attorneys for SAN LUIS & DELTA-MENDOTA WATER AUTHORITY
17	
18	BEFORE THE CALIFORNIA
19	STATE WATER RESOURCES CONTROL BOARD
20	
21	In the Matter of Draft Cease and Desist TESTIMONY OF STEPHEN R. WEE
22	Order No. 2009-00XX-DWR Against Yong Pak and Sun Young
23	- Tong Lak and San Louing
24	
25	My name is Stephen R. Wee and I am a principal with JRP Historical Consulting, LLC.
26	In this position, I have served as a consulting historian for major historical research investigations
27	covering a wide range of topics, including services as an expert historian in legal cases involving
28	pre-1914 appropriative water rights, riparian water rights, historic inland navigation, and other
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TESTIMONY OF STEPHEN R. WEE

environmental issues. My Statement of Qualifications is marked as MSS Exhibit 1A.

I, and other historians employed by JRP Historical Consulting, LLC working under my direct supervision, obtained the chain of title documents for San Joaquin County Assessor's Parcel Number (APN) 131-180-07 (Parcel) from the San Joaquin County Recorder's office in Stockton, the San Joaquin County Historical Society Museum in Micke Grove, Lodi, and the California State Lands Commission, in Sacramento. I reviewed each document for the chain of title and present a summary of each document in MSS Exhibit 1B. MSS Exhibit 1B includes information on: (1) instrument date; (2) date recorded; (3) grantor; (4) grantee; (5) document type; (6) document number; and (7) map number.

The documents for the chain of title for the Parcel indicate that on July 26, 1869, the State of California issued Certificate of Purchase No. 2864 to G. D. Roberts. Certificate of Purchase No. 2864 issued pursuant to the "Swamp and Overflow Land Act of September 28, 1850" (9 Stats. 519). See MSS Exhibit 1C. At the time the State of California issued Certificate of Purchase No. 2864, the Parcel was part of a larger tract that was contiguous to Burns Cutoff, the San Joaquin River, Whiskey Slough, and the Middle River. CP 2864 was transferred from Roberts to Tideland Reclamation Company in 1871 and from Tideland Reclamation Company to J.P. Whitney on 1875.

On November 24, 1876, the United States of America and California issued a patent to J. P. Whitney. That patent included approximately 40,213 acres and all of the lands in Certificate of Purchase No. 2864 on Roberts Island, including the Parcel.

On December 12, 1876, the Parcel was transferred as part of a larger piece of land, containing 28,115 acres, to Morton C. Fisher ("1876 Tract"). *See* MSS Exhibit 1D. As a result of that transfer, the 1876 Tract remained contiguous to Burns Cutoff, the San Joaquin River, Whiskey Slough, and the Middle River.

On November 6, 1896, the Parcel was transferred as part of a larger piece of land, containing about 769 acres ("1896 Tract"), to E.W.S. Woods. *See* MSS Exhibit 1E. As a result of this transfer, the 1896 Tract was no longer contiguous to Burns Cutoff, San Joaquin River, Middle River, and Whiskey Slough. The deed for the transfer of the 1896 Tract contains no

language that preserved riparian water rights; the deed states that the transfer is made "together with all and singular the tenements, hereditaments and appurtenances thereunto belonging or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof." See MSS Exhibit 1F.

On December 26, 1922, the 1896 Tract was transferred as life estate to Alice M. Woods. and the remainder to Lloyd H., Armand H., and Marcy S. Woods. In this transfer, the 1896 Tract was further divided and the Parcel was included in a larger 585 acre piece of land ("1922 Tract"). See MSS Exhibit 1G.

Between 1922 and 1986, the 1922 Tract changed ownership multiple times. The Parcel's current boundaries resulted from a transaction dated November 30, 1988. MSS Exhibit 1H. From 1988 to the present, the Parcel changed ownership a number of times. According to records of the San Joaquin County Recorder, Yong Kil Pak and Young Sun Pak currently own the Parcel as joint tenants.

The changes reflected in the chain of title described above are depicted graphically in MSS Exhibits 2A-2H.

I, and other historians employed by JRP Historical Consulting, LLC working under my direct supervision reviewed files of the San Joaquin County Recorder's office in Stockton, the San Joaquin County Historical Society Museum in Micke Grove, Lodi, and the California State Lands Commission, in Sacramento, to identify evidence of water use on the Parcel prior to 1914. We found no notices of appropriation for water diversion and use filed pursuant to the 1872 Civil Code for the Parcel. In 1911, two agreements were executed between E. W. S. Woods and the Woods Irrigation Company. MSS Exhibits 1I and 1J.

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MSS Exhibit 1A

STEPHEN R. WEE

PRESIDENT, JRP HISTORICAL CONSULTING LLC

EDUCATION

M.A., History (United States), University of California, Davis

Emphasis on Environmental History, California and the American West

B.A., History, University of Washington, Seattle

Graduated *Magna Cum Laude*Emphasis on United States History

BUSINESS AND PROFESSIONAL CREDENTIALS

President, JRP Historical Consulting, LLC, 2006-present

Founding Partner and Principal, JRP Historical Consulting, 1981 – 2006

Superior Accomplishment Award in Recognition of Exceptional Performance, Director, California Department of Transportation, June 2002.

Information Center Procedural Advisory Committee, Standing Committee of the California Historic Resources Commission, 1999-2002

Political Action Committee/CHA Editorial Board (1986-1994), Board of Directors/ Executive Board (1997-1999), California Council for the Promotion of History

Commissioner, City of Davis Historical Resources Management Commission, 1990-1993

Historic Resources Subcommittee, California Heritage Resource Data Management Advisory Committee, California Office of Historic Preservation, 1987

Registered Professional Historian, California Council for the Promotion of History, 1985-present

Founding Partner, California-Pacific Research Associates, 1978-1980

Interagency Research Coordinator (Historical Studies), California State Lands Commission / Land Law Division, California Department of Justice, Office of the Attorney General, Sacramento, 1976-77

EXPERT WITNESS TESTIMONY AND REPORTS

Robert M. Harding, Plaintiff v. City of Elsinore; Santa Ana Watershed Project Authority, Case No. RIC 445294, Superior Court, State of California, County of Riverside, Western Division. Expert Historian deposition on behalf of defendants regarding history of public roads and trails and their dedication for public uses in Elsinore township and the townsite of Lake Elsinore, 1840s-1920s (October 21, 2009).

In Re the General Adjudication of Rights to the Use of Water from the Snake River Drainage Basin Water System, State of Idaho v. United States; State of Idaho; and all unknown claimants to the use of water from the Snake River Drainage Basin Water System, Subcase Nos. 63-30978 & 63-31973,

JRP Historical Consulting LLC 2850 Spafford Street, Davis, CA 95618 March 28, 2010

- District Court of the Fifth Judicial District of the State of Idaho, Twin Falls, ID. Submission of Expert Report regarding the U. S. Forest Service's Claims to groundwater on Idaho National Forests as a Federal Reserved Water Rights under the Organic Act of 1897, Boise: State of Idaho, Office of the Attorney General, 2008-present.
- Summary Report: Roberts Island and Union Island Riparian Water Rights Investigation, San Joaquin County, CA (June 2008), Appendix C to the San Joaquin River Group Authority, South Delta Hydrology and Water Rights, Report to the State Water Rights Control Board, Bay-Delta Strategic Workplan (2008).
- State Water Resources Control Board, Division of Water Rights, Lake Arrowhead Administrative Civil Liability Enforcement Hearing (CDO No. 262.31-18; ACL No. 262.5-40). Expert Report and Testimony before the SWRCB regarding pre-1914 consumptive water rights of the Lake Arrowhead Community Services District and Lake Arrowhead Country Club, November 8-9, 2005. Sacramento: Ellison, Schneider & Harris, LLP, Attorneys at Law, 2005.
- In Re the General Adjudication of Rights to the Use of Water from the Snake River Drainage Basin Water System, State of Idaho v. United States; State of Idaho; and all unknown claimants to the use of water from the Snake River Drainage Basin Water System, Case No. 39576, District Court of the Fifth Judicial District of the State of Idaho, Twin Falls, ID. Submission of Expert report and deposition testimony before US Attorney for Shoshone-Paiute Tribe related to Federal Reserved Water Right Claims for the Duck Valley Indian Reservation, Idaho and Nevada, based upon the purposes for the creation of the Duck Valley Indian Reservation. Boise: State of Idaho, Office of the Attorney General, 2004 2006.
- In the Matter of the Determination of the Relative Rights of the Waters the Klamath River a Tributary of the Pacific Ocean. Lead Case No. 003. Before the Hearing Office Panel for the State of Oregon Water Resources Department. Expert Report on behalf of Klamath Water Users Association and others regarding pre-1909 appropriative water rights claims for certain claimants under the U.S. Bureau of Reclamation's Klamath Irrigation Project, Upper Klamath River Basin, OR and CA. Sacramento: Somach, Simmons & Dunn, Sacramento, Attorneys at Law, 1997-2005.
- State Water Resources Control Board, Administrative Civil Liability Complaint Hearings Against Lloyd L. Phelps, Jr., Joey P. Ratto, Jr., and Ronald D. Conn and Ron Silva, et al. (Complaint Nos. 262.5-28 through 30; Water Right Order No. 2004-0004) regarding Riparian Water Right Claims on Roberts Island, San Joaquin County, CA. Testimony for South San Joaquin Water Users Association and O'Laughlin & Paris, Attorneys at Law, February 25, 2003.
- California Historic Resources Commission Hearing, Re. Coronado Belt Railroad Eligibility for Listing in the California Register of Historical Resources, Riverside Hearing, November 8, 2002. San Diego: Cities of San Diego, National City, Chula Vista and Imperial Beach, 2002. Provided an expert report and oral testimony before the Commission regarding the eligibility of the Coronado Belt Railroad for listing in the California Register of Historical Resources.
- Orradre v. Monterey County Water Resources Agency. Water Right Hearing State Water Resources Control Board: Application No. 30532 by Monterey County Water Resources Agency. Submission of declarations on behalf of the applicant relating to pre-1914 water claims for agricultural purposes in the Salinas Valley. Sacramento: Downey Brand Seymour & Rohwer, 2000 2001.

- In Re the General Adjudication of Rights to the Use of Water from the Snake River Drainage Basin Water System, State of Idaho v. United States; State of Idaho; and all unknown claimants to the use of water from the Snake River Drainage Basin Water System, Case No. 63-25243, District Court of the Fifth Judicial District of the State of Idaho, Twin Falls, ID. Submission of Expert Report and deposition testimony before US Attorneys for Department of Justice, Environmental and Natural Resources Division related to the U. S. Forest Service's Claims to Federal Reserved Water Rights under the Organic Act of 1897, Boise: State of Idaho, Office of the Attorney General, 1998.
- Putah Creek Water Cases. Solano Irrigation District v. The Names of All Appropriative Water Rights Holders in Upper Basin, et al., Solano Superior Court No. 108552 and Putah Creek Council v. Solano Irrigation District and Solano County Water Agency, Sacramento Superior Court No. 515766, 1996. Testimony for Solano Irrigation District and Solano County Water Agency.
- Nickel Enterprises v. State of California, Kern County Superior Court, 1993. Testimony for California Department of Justice, Office of the Attorney General. Historic navigation on the Kern River.

LITIGATION RESEARCH SERVICES

- Historical Water Use on the Coeur D'Alene Indian Reservation, Idaho. Northern Idaho Stream Adjudication: Coeur D'Alene Lake, Idaho. Boise: State of Idaho, Office of the Attorney General, 2010-present.
- History of Groundwater Development and Use in Antelope Valley to fulfill the changing military missions of Edwards Air Force Base, Kern, San Bernardino and Los Angeles Counties, CA. Historical research related to federal reserved water right claims for military purposes at Edwards AFB. Washington, D.C.: U. S. Department of Justice, 2008 to present.
- History of Fontana Union Water Company's Lytle Creek Diversion on the San Bernardino National Forest.

 Research and prepare a report documenting water diversion and intake facilities on Lytle Creek prior to the establishment of the national forest reserve in 1893. Prepared for Fontana Union Water Company, Cucamonga Valley Water District and San Gabriel Water District for submission to the Chief Counsel for Natural Resources, U. S. Department of Agriculture, 2009.
- Historical Research regarding history of public roads and trails and their dedication for public uses in Elsinore township and the townsite of Lake Elsinore, San Diego and Riverside Counties, CA, 1840s-1920s Riverside: Aklufi & Wysoki, Attorneys at Law, 2006-2009.
- Groundwater and Federal Reserved Water Rights Under the Organic Act of 1897. In Re the General Adjudication of Rights to the Use of Water from the Snake River Drainage Basin Water System, State of Idaho v. United States; State of Idaho; and all unknown claimants to the use of water from the Snake River Drainage Basin Water System. District Court of the Fifth Judicial District of the State of Idaho, Twin Falls, ID. Boise: State of Idaho, Office of the Attorney General, 2008-present.
- Due Diligence Research on Appropriative and Riparian Water Rights Associated with a large historic ranch in Madera County, CA, 2009 Present.
- Pre-1914 Water Rights Investigation: Merced County, CA, 2008 Present.

- Historic Meandering of the Blackfoot River within a U. S Army Corps of Engineers Flood Control Project Area involving Shoshone-Bannock Indian Lands within the Fort Hall Reservation, Idaho. Boise: Idaho Attorney General's Office, 2008.
- Historic Meandering of the River Bend Section of the Russian River, Sonoma County, CA. Sacramento: Lennihan Law, APC, 2008.
- Pre-1914 Water Rights Investigation, for a historic ditch on Sheridan Creek, near Inwood, Shasta County, CA. Sacramento: Lennihan Law, APC, 2007-2008.
- Historical Water Rights Investigation related to Federal Reserved Water Rights Claim to the Fort Boise Military Reservation, Boise, Idaho. In Re the General Adjudication of Rights to the Use of Water from the Snake River Drainage Basin Water System, State of Idaho v. United States; State of Idaho; and all unknown claimants to the use of water from the Snake River Drainage Basin Water System. District Court of the Fifth Judicial District of the State of Idaho, Twin Falls, ID. Boise: State of Idaho, Office of the Attorney General, 2007 2008.
- Riparian Lands and Agricultural Land Uses Investigation for Roberts and Union Islands, southern San Joaquin Delta, San Joaquin County, CA. Chico: O'Laughlin & Paris LLP, 2007 2009.
- Pre-1914 Water Rights Investigation for Idyllwild Water District regarding Strawberry Creek, a tributary to the San Jacinto River. SWRCB Complaint No. 33-05-01 In Re. Strawberry Creek, Riverside County, CA. Sacramento: Ellison, Schneider & Harris, Attorneys at Law, LLP, 2007 2008.
- Historical Water Rights Investigation: Upper and Middle Snake River Basin Water Development for Agriculture vs. Hydroelectric Power Uses, Idaho. In Re the General Adjudication of Rights to the Use of Water from the Snake River Drainage Basin Water System, State of Idaho v. United States; State of Idaho; and all unknown claimants to the use of water from the Snake River Drainage Basin Water System, Idaho Power Company Sub-cases. District Court of the Fifth Judicial District of the State of Idaho, Twin Falls, ID. Boise: State of Idaho, Office of the Attorney General, 2006 Present.
- Pre-1914 Water Rights Investigation: White Mallard Duck Club Property, Butte Creek, Colusa, Sutter and Butte Counties, CA. Sacramento: Lennihan Law, APC, 2006-2007.
- Historical Investigation of Pre-1914 and Riparian Water Rights to Big Springs (aka, Bass Springs), a Tributary of Montgomery Creek, Shasta County, CA. Chico: O'Laughlin & Paris, Attorneys at Law, 2005-2007.
- Historical Investigation and Expert Testimony on Pre-1914 Water Rights of the Lake Arrowhead Community Services District and Lake Arrowhead Country Club, Lake Arrowhead, San Bernardino County, CA. Sacramento: Ellison, Schneider & Harris, LLP, Attorneys at Law, 2004 2005.
- Historical Investigations on Water Quality of Upper Klamath Lake, Klamath County, Oregon, California. Sacramento: Ellison, Schneider & Harris, LLP, Attorneys at Law, 2004 2005.
- Historic Research related to the Federal Reserved Water Right Claims for the Duck Valley Indian Reservation, Idaho and Nevada, In Re the General Adjudication of Rights to the Use of Water from the Snake River Drainage Basin Water System, State of Idaho v. United States; State of Idaho; and all unknown claimants to the use of water from the Snake River Drainage Basin

- *Water System*, Case No. 39576, District Court of the Fifth Judicial District of the State of Idaho, Twin Falls, ID. Boise: State of Idaho, Office of the Attorney General, 2004 2007.
- Historical Investigations on the Klamath River Fishery, Klamath County, Oregon, and Siskiyou and Humboldt Counties, California. Sacramento: Ellison, Schneider & Harris, LLP, Attorneys at Law, 2004 2005.
- Riparian Water Rights Investigation, City of Santa Cruz, Santa Cruz County, CA. Sacramento: Lennihan Law, APC and City of Santa Cruz, 2004 2006.
- Research Related to Santa Clara Valley Water District's Water Rights Under the Central Valley Project and State Water Project and Related Matters, Duane, Morris & Heckscher, LLP, Attorneys at Law, 2004 2005.
- Historic Research related to the Federal Reserved Water Right Claims of the City of Pocatello (Claim No. 29-11609), In Re the General Adjudication of Rights to the Use of Water from the Snake River Drainage Basin Water System, State of Idaho v. United States; State of Idaho; and all unknown claimants to the use of water from the Snake River Drainage Basin Water System, Case No. 39576, District Court of the Fifth Judicial District of the State of Idaho, Twin Falls, ID. Boise: State of Idaho, Office of the Attorney General, 2004.
- Pre-1914 Water Rights Investigation for a Tract of Agricultural Land located on the Sacramento River above Knights Landing, Yolo County, CA. Downey Brand Seymour & Rohwer, Attorneys at Law, 2004-2005.
- Historical Investigation regarding Oroville Dam, Hydroelectric Power Production, and the California State Water Project. Metropolitan Water District of Los Angeles, 2003 2004.
- Pre-1914 Water Rights Investigation and Jurisdictional Water Rights History of Mathews Reservoir on Cajalco Creek, Riverside County, CA. Sacramento: Ellison, Schneider & Harris, LLP, Attorneys at Law for Metropolitan Water District of Los Angeles, 2003 2004.
- Pre-1914 Water Rights Investigation, Santa Cruz County, CA. Sacramento: Lennihan Law, APC and City of Santa Cruz, 2003 2004.
- Pre-1914 Water Rights Investigation: El Dorado Canal, South Fork of the American River Canyon, El Dorado County. Sacramento: Ellison, Schneider & Harris, LLP, Attorneys at Law, 2003 2004.
- Pre-1914 and Riparian Water Rights Investigation on 1,000 acres near Tracy, San Joaquin County. Sacramento: Lennihan Law, APC, and the City of Tracy, Public Works Department, 2003.
- Riparian Water Rights Investigation for Hearing before State Water Resources Control Board regarding Water Claims on Roberts Island, San Joaquin County, CA. Chico: O'Laughlin & Paris, Attorneys at Law, 2003.
- Water Rights Investigation for a Coastal Ranch in Monterey County, CA. Sacramento: Kronick, Moskovitz, Tiedemann & Girard, Attorneys at Law August 2002 2007.
- Legislative History of Selected Provisions of the California Water Code relating to Areas of Origin. Sacramento: Somach, Simmons & Dunn, Attorneys at Law, 2002-2003.
- Pre-1914 Water Right Investigation for Water Appropriations on the North Fork of the American River, Sacramento County. Sacramento: Ellison, Schneider & Harris, LLP, Attorneys at Law, 2002.

- Historical Occurrences of Salmon and Steelhead Migrations in Solano County Streams. Fairfield: Solano County Water Agency. September 2000 April 2001.
- Legislative History of Selected Provisions of the 1914 Water Code. Sacramento: Ellison & Schneider, LLP, Attorneys at Law, 2000-2001.
- Orradre v. Monterey County Water Resources Agency. Monterey County, CA. Research regarding pre-1914 and riparian water rights claims in the Salinas Valley. Sacramento: Downey Brand Seymour & Rohwer, Attorneys at Law, 2000 – 2001.
- State of California v. Schoendorf. Monterey County, CA. Research on land ownership, water rights and domestic water uses of springs located on a section of the Big Sur Coast. Sacramento: Downey Brand Seymour & Rohwer, Attorneys at Law, 2000 2001.
- Bovin Trust Claim Klamath River Adjudication. Research on pre-1909 water rights claim on the Link River, Klamath Falls, Oregon. Portland, OR: Davis Wright Tremaine, LLP, Attorneys at Law, 2000.
- Historical Research and expert witness services re. claims by the United States for Federal Reserved Water Rights under the Organic Act of 1897 for National Forests within the Snake River Basin. In Re the General Adjudication of Rights to the Use of Water from the Snake River Drainage Basin Water System, State of Idaho v. United States; State of Idaho; and all unknown claimants to the use of water from the Snake River Drainage Basin Water System, District Court of the Fifth Judicial District of the State of Idaho. Boise, ID: State Of Idaho, Office of the Attorney General, 1997-2000.
- Klamath River Basin Adjudication. Research services for a water rights adjudication on the Klamath River in Oregon. Historical research and expert witness services regarding land and water use, reclamation project development, and the California Oregon Interstate Compact. Sacramento: DeCuir & Somach (Somach, Simmons & Dunn), Sacramento, Attorneys at Law, 1997 2005.
- Salinas River Adjudication Hearings, Monterey County, California. State Water Resources Control Board Hearings, Pre-1914 Appropriative Water Rights Investigations for various irrigated properties in the upper and lower Salinas River Basin. Sacramento: Ellison & Schneider, Attorneys at Law, 1996-2000.
- Research on the legislative history of the Boulder Canyon Act for Metropolitan Water District of Southern California. Sacramento: Ellison & Schneider, Attorneys at Law, 1999.
- Riparian Water Rights Investigation. Research on riparian water rights claims in the Sacramento-San Joaquin Delta for the Bay-Delta Hearings before the State Water Resources Control Board. Chico, CA: O'Laughlin & Paris, et al., 1999 -2001.
- Pre-1914 and Riparian Water Rights Investigation. Land and Water Use history on a 5,400 acre ranch/vineyard in Alexander Valley, Sonoma County, CA. Sacramento: Ellison, Schneider & Harris, Attorneys at Law, 1998-2001.
- Stanislaus River Water Rights Adjudication. Research into the history of the State Water Commission adjudication (1923-26) of the waters of the Stanislaus River, Sacramento: Ellison & Schneider, Attorneys at Law, 1999.
- Pre-1914 and Riparian Water Rights Investigation. Land and Water Use history on a 1,400 acre vineyard in Knights Valley, Sonoma County, CA. Sacramento: Ellison, Schneider & Harris, Attorneys at Law, 1998-2001.

- Pre-1914 and Riparian Water Rights Investigation. Land and Water Use history on a 900 acre vineyard in West Fork Gualala River Valley, Sonoma County, CA. Sacramento: Ellison & Schneider, Attorneys at Law, 1999.
- Carmel River Adjudication, Monterey County, California. State Water Resources Control Board, Pre-1914 Appropriative Water Rights Investigation for lands in the Carmel River Basin. Sacramento: Ellison & Schneider, Attorneys at Law, 1995-1997.
- Blankenship v. California Coastal Commission. Investigation of Historical Uses of Roads and Trails in Escondido Canyon, Santa Monica Mountains, Los Angeles County, CA. Los Angeles: Lands and Natural Resources Division, California Department of Justice, Office of the Attorney General and the California Coastal Commission, 1995-1997.
- Solano Irrigation District v. The Names of All Appropriative Water Rights Holders in Upper Basin, et al., and Putah Creek Council v. Solano Irrigation District and Solano County Water Agency Putah Creek Water Adjudication: Historical research and expert witness testimony regarding Mexican Land Titles, Land Ownership and Agricultural Uses in the Putah Creek Riparian Corridor, and Historic Navigation on Putah Creek. Oroville: Minasian, Minasian, Minasian, Spruance, Baber, Meith & Soares, Attorneys at Law and Solano Irrigation District and Solano County Water Agency, 1994-1996.
- Pre-1914 Appropriative Water Rights Investigation: Bar X Ranch Irrigation System, Lake County, CA. Report prepared in support of State Water Resources Control Board, Division of Water Rights, "Statement of Water Diversion and Use." Oakland: Fitzgerald, Abbott & Beardsley, Attorneys at Law, 1996.
- Historical research and analysis of land and water rights for municipal water projects, City and County of San Francisco Public Utilities Commission and Water Department, City and County of San Francisco, 1988-present.
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MSS Exhibit 1B

	1	
MAP#		
DOCUMENT #	A:29:576	P:3:444
DOCUMENT	Quitclaim Deed	Patent
GRANTEE	Joel P. Whitney	J.P. Whitney
GRANTOR	Tideland Reclamation Company	United States of America and State of California
DATE	3/27/1875	1/17/1877
INSTRUMENT	2/25/1875	11/24/1876

INSTRUMENT	DATE	GRANTOR	GRANTEE	DOCUMENT	DOCUMENT #	MAP#
12/12/1876 1/22/1877	1/22/1877	Joel P. Whitney	Morton C. Fisher	Deed	A:33:339	
6/20/1877	6/20/1877	Morton C. Fisher, London, England	Glasgow California Land Company	Deed	A:35:480	131-180-07-E

TRACT 131-180-07

NSTRUMENT DATE	DATE	GRANTOR	GRANTEE	DOCUMENT	DOCUMENT #	MAP#
11/6/1896	11/14/1896	Glasgow California Land Company	John N. Woods and E.W.S. Woods	Deed	A:90:449	131-180-07-F
12/28/1909	12/28/1909	John N. Woods	E.W.S. Woods	Decree of Distribution	A:181:131	

MAP #	
DOCUMENT #	G:27:38
DOCUMENT	Agreement
GRANTEE	Woods Irrigation Co.
GRANTOR	E.W.S. Woods
DATE	09/30/1911
INSTRUMENT	09/29/1911

TRACT 131-180-07

MAP #	
DOCUMENT #	G:27:41
DOCUMENT	Contract
GRANTEE	E.W.S. Woods
GRANTOR	09/29/1911 09/30/1911 Woods Irrigation Co.
DATE	09/30/1911
INSTRUMENT	09/29/1911

	v =
Alice M. Woods (wife), Lloyd H. Woods (son), Armand H. Woods (son) and Marcy S. Woods (son)	E.W.S. Woods Ar

TRACT 131-180-07

MAP#		131-180-07-J		
DOCUMENT #	OR:719:279	OR:3630:432		
DOCUMENT	Decree of Distribution	Corporation Grant Deed		
GRANTEE	Celia Mary Woods (wife)	George R. Patterson Construction Company		
GRANTOR	Armand H. Woods	Union Safe Deposit Bank, Trustee of the Estate of Celia Mary Woods		
DATE	1/17/1941	3/14/1972		
INSTRUMENT	1/13/1941	3/10/1972		

MAP#		131-180-07-K	
DOCUMENT #	87002355	88103789	
DOCUMENT	Grant Deed	Grant Deed	
GRANTEE	Estate of George R. Patterson and Estate of Rosario E. Patterson	Estate of George R. Patterson and Estate of Rosario E. Patterson	
GRANTOR	George R. Patterson Construction Company	Bank of Stockton, Executor of the Estate of George R. Patterson and Estate of Rosario E. Patterson	
DATE	1/3/1987	12/2/1988	
INSTRUMENT	12/10/1986	11/30/1988	

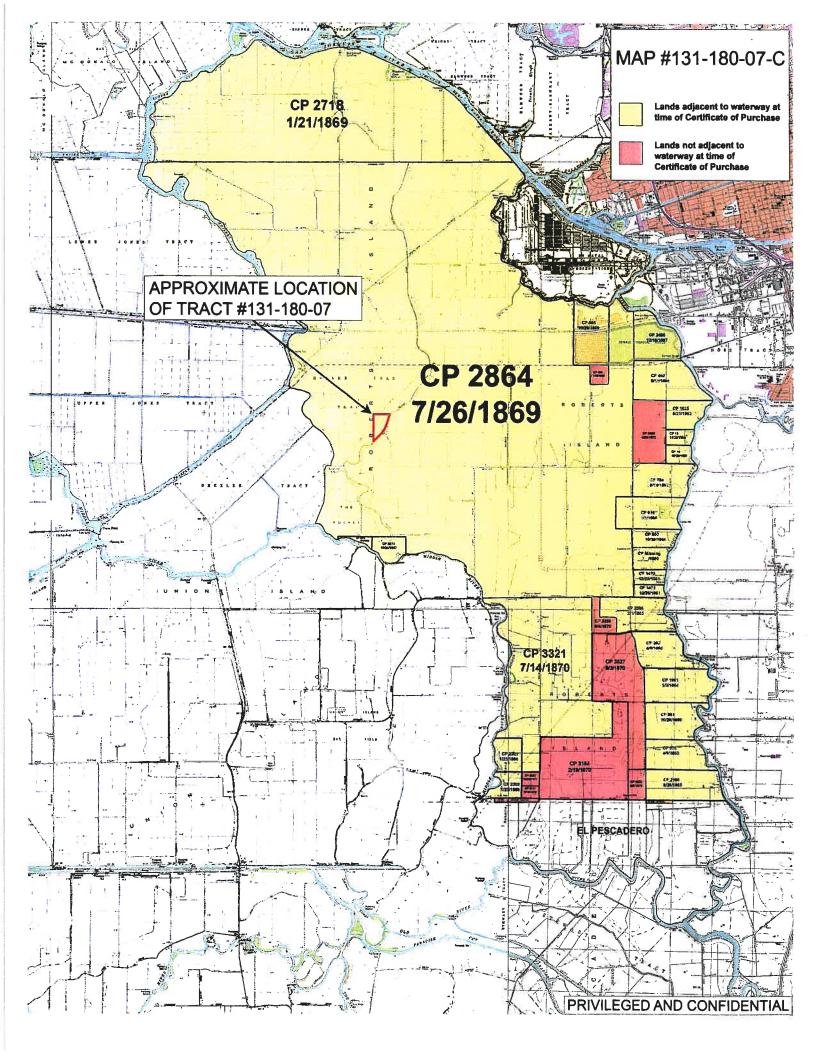
TRACT 131-180-07

NSTRUMENT	DATE	GRANTOR	GRANTEE	DOCUMENT	DOCUMENT #	MAP#
4/24/1990	4/24/1990	Estate of Rosario E. Patterson	Milton J. Welser	Decree of Distribution	90040488	
4/24/1990	4/24/1990	Estate of George R. Patterson	Milton J. Welser	Decree of Distribution	90040489	
12/9/1998	12/24/1998	Milton J. Welser	Milton Joseph Welser Revocable Trust, Milton Joseph Welser, Trustee	Grant Deed	98154297	

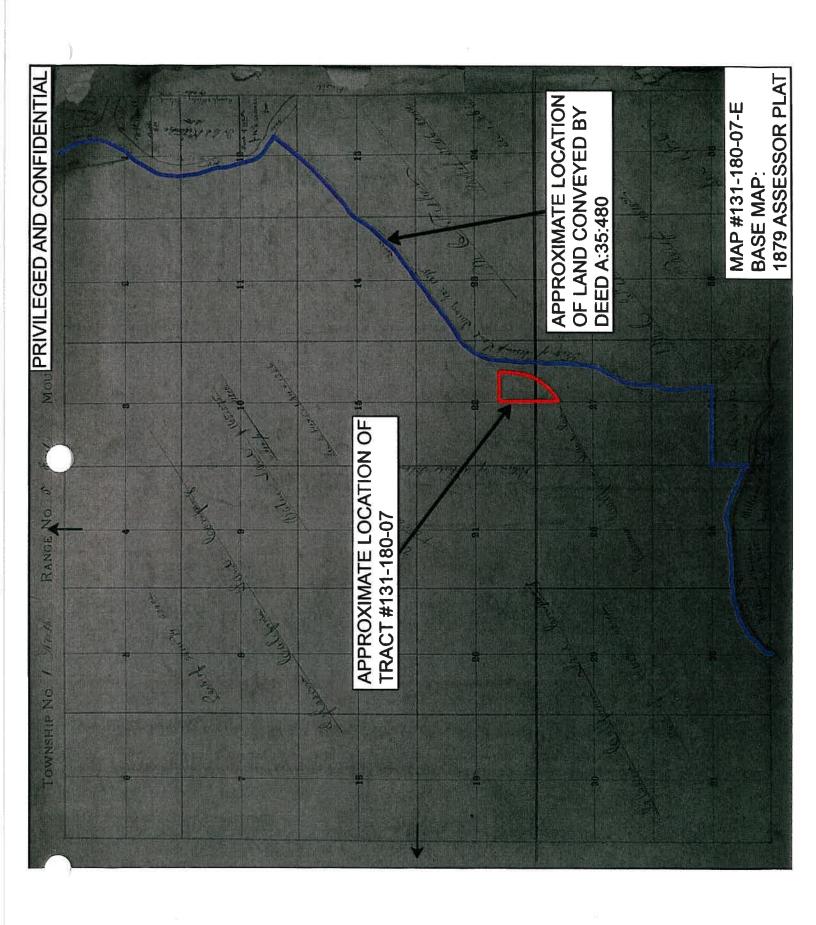
INSTRUMENT	DATE	GRANTOR	GRANTEE	DOCUMENT	DOCUMENT #	MAP #
12/3/2002	12/16/2002	Milton Joseph Welser (deceased)	Bradford Alaric Welser	Affidavit	2002-226221	
12/3/2002	12/16/2002	Bradford Alaric Welser, Trustee of the Milton Joseph Welser Revocable Trust	Bradford Alaric Welser	Grant Deed	2002-226222	
7/14/2003	7/22/2003	Bradford Alaric Welser	Mason Myoungsun Au and Dong Ki Song	Grant Deed	2003-161840	

MAP#					
DOCUMENT #	2004-161005	2005-223246			
DOCUMENT	Grant Deed	Grant Deed			
GRANTEE	Dong Ki Song and Mi Young Song (husband and wife)	Yong Kil Pak and Young Sun Pak (husband and wife)	Yong Kil Pak and Young Sun Pak	-39	
GRANTOR	Mason Myoungsun Au and Dong Ki Song	Dong Ki Song and Mi Young Song (husband and wife)	Current Owners		
DATE	7/21/2004	9/7/2005			
INSTRUMENT	6/18/2004	9/1/2005			

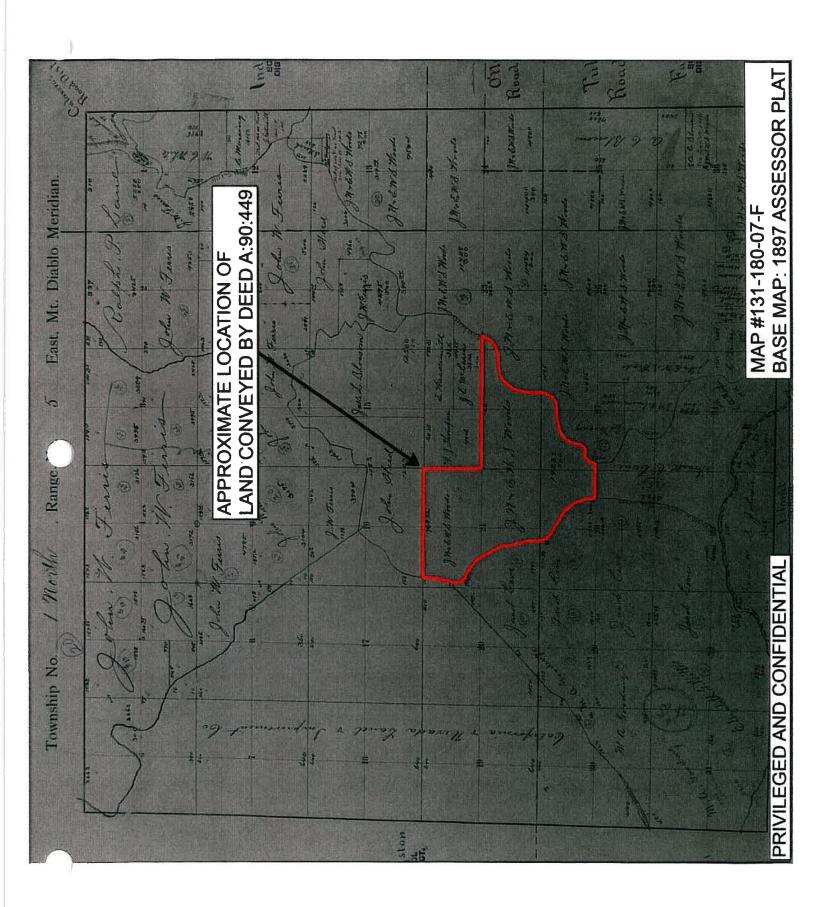
MSS Exhibit 1C



MSS Exhibit 1D



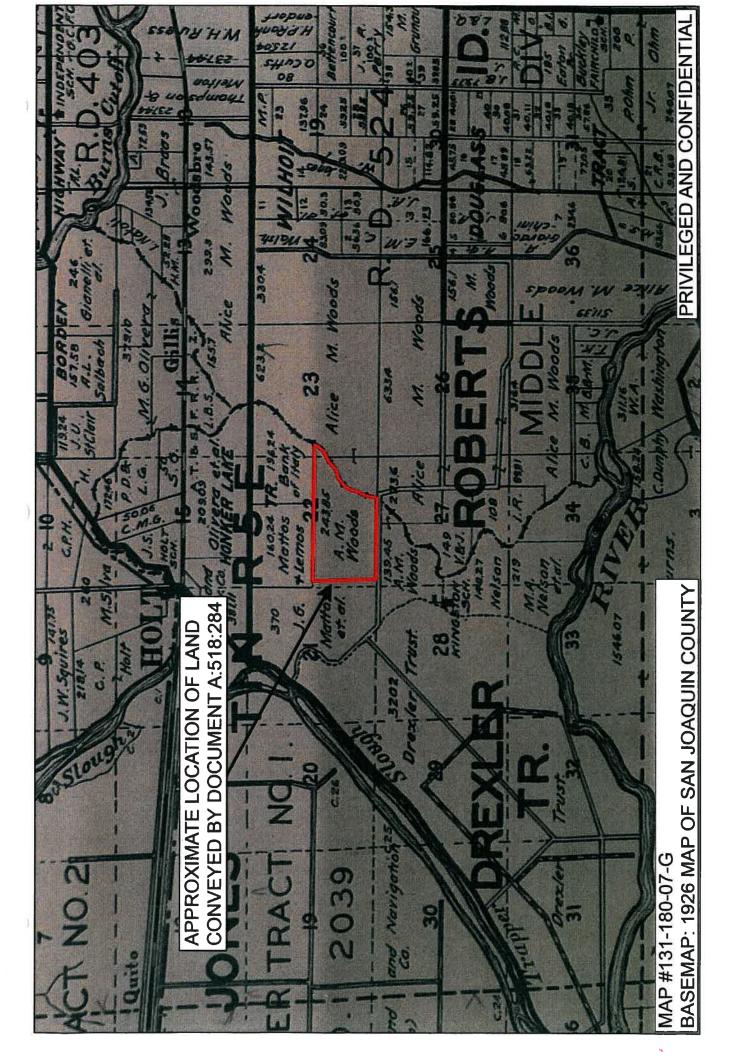
MSS Exhibit 1E



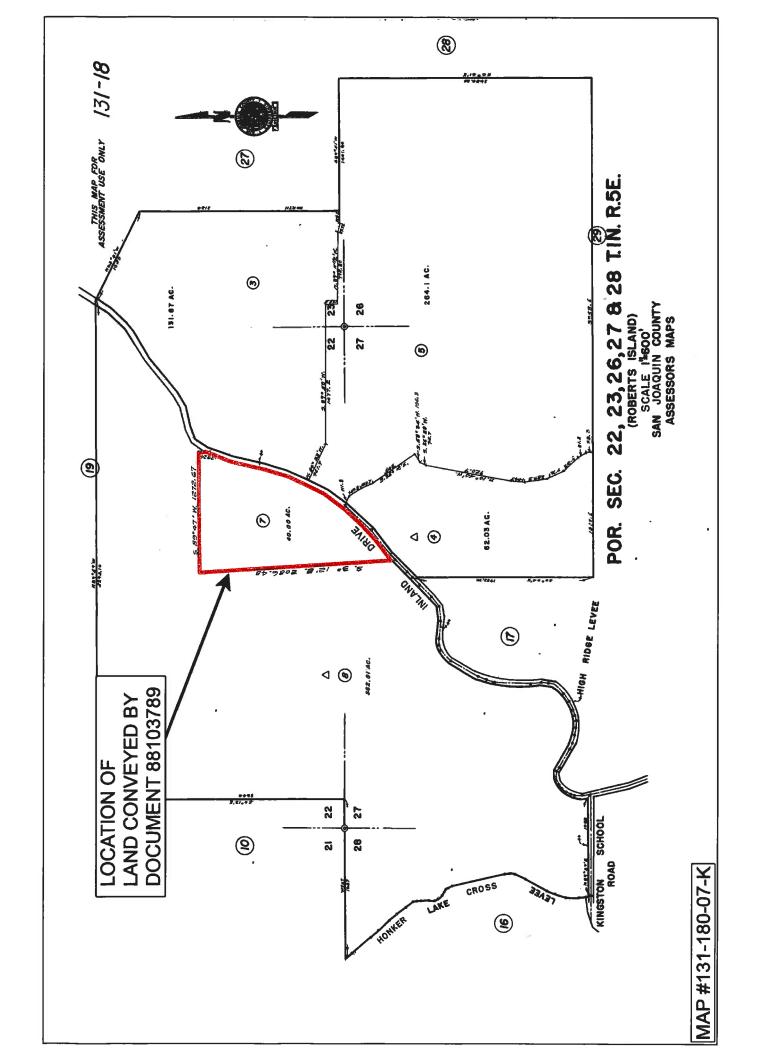
MSS Exhibit 1F

Voorde: John Pr. Worde, E. W.S. Witnesseth: That the said part of of the first part, for and in consideration of the sum of Dollars Gold Learn States of America, to in hand paid by the said part cose of the se berein acknowledged, here granted, largumed and cold, com and by these price to does grant, buyan and bills con unto the and particle of the second part, and to there heirs and assigns forever all piece a parell of land citicale, lying and brong on 222, Sin. Q. 58 M. W. In Shane Start 3102 7 Lake Lever theme along the center of a direction to its intersection with 6 TW before for Silv R. & Ethones West along and It love to its between 729 The and 22 SIN R. & Ethone herthalog an tenning 729 The ansa comments, heredisaments and appuressner and the reversion and reversions, remainder and remainders, rents, issues and profits thereof. To have and to hold, all and singular the said premises, together with the appurees the second part, and to their heirs and assigns forever. In witness whereat, the said party of the first part has becente set day and year first above written. Signed Seeded and Between in the American of Management and Property Comments of Bay of Street Street STATE OF CALIFORNIA. On this Eleverith raiding therein a

MSS Exhibit 1G



MSS Exhibit 1H



MSS Exhibit 1I

residing thorsin, duly commissioned and qualified, personally appeared. John Newton known to me to be the person described in, whose name is subscribed to, and who executed the annexed instrument, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand mand affixed my Official Seal at my office. in the City of Stockton, County of San Joaquin, the day and year in this certificate first above Avis G McCloud, Lotary Public in writton. (Notary Seal.)

and for the County of San Joaquin, State of California

Recorded at Request of Wilhoit & Douglass, Sep. 30 1911 at 26 min past 9 orclock A.M. in Book G.Vol 27 of Miscollaneous, page 35 San Joaquin County Records. Feen \$3.00 o John J. Andero, Deputy o Young E.W.B.
Till KORKENCHT, made und entered to

WOODS IRRIGATION CO. "Agreement."

A.D. 1911, between E.W.S. Woods, of the City of Stockton, County of San Joaquin, State of California, the party of the first part, and Woods Irrigation Co. a comporation organized and existing under

the laws of the State of California, with its primipal place of business in the City of Stockton, County of San Joaquin, State of California, the party of the second part;

WITHERERTH: That the said parties of the first and second part for their mutgol be effit and in considerat on of the covenants and agreements herein contained do hereby agree as follows:-

FIRST: That n consideration that the party of the second part will operate and maintain a canal system and a drailrage system through which the party of the first part may receive water for irrigat on and may dispose of drainage or waste water, the party of the first part does hereby grant in perpetuity the right to the purty of the second part to construct, maintain, police, patrol operate, extend, widen and repair a series of camals for the purpose of irrigation and drainage through, over and across that certain land situated in the County of Sun Joaquin, State of California, and described as follows, to-wit:=

All that portion of the Northeast quarter (N.E. !) of the Southeast quarter (S.E. !) or Section Fourteen (14) Tornship One (1) North Range Five (6) East, Mount Diable Base and Meridian, lying North of the center line of the levee known as "High Ridge Levee" and South of the line drawn parallel wit; and 100 feet Southerly at right angles from the located conter line of the Ran Francisco and an Jouquin Valley Enilway Company's Railroad said piece of land containing an area of 12.74 a res, more or less, as delineated upon that certain map entitled "jup of Woods Wilhoit & Douglass Lands on Middle Division of Robert's Island, in the County of San Joaquin, State of Californi , filed in the office of the County Recorder of the County of San Joaquin, State of Californi , on November 4th, 1909, at 3:15 o'clock P.M.

Also that cer did lot, piece or parcel of land situate, lying and being in the Count, of Ean Joaquin, State " California, and bounded and particularly described and follows, to-wit:-

Beginning c* he common comer of Sections Fifteen (15) Sixteen (16) Wenty-one (21) and naide One (1) North, Range Five (5) East, Mount Diable Twenty-two (22) West 3102.5 feet i the center of Honker Lake Lovee, themee along the center of said leves in a Southerly and Coutheasterly direction to its junction with the group laves between "The Pooket" and Honker ake Tract, thence along the center of said cross levee in an Easterly direction to its J lotion with Righ Ridge Leves, themse along the center of Righ Ridge Leves in a general Northern rly direction to its intersection with East and West one quarter (4) line peasing through b :tions Twenty-two (22) and Twenty-three (23) Township One (1) North Range Five (5) Bast, to se West along said one quarter (t) line to its intersection with the North and South line between Sections Twenty-one (21) and Twenty-two (22) Township One (1) North Range Five (5) East thence North along said line to place of beginning, containing 769.32 acres, as delineated up... that certain map entitled "Map of Woods, Wilhoit & Dour Ass' Lands on Fiddle Division of Roberd . Island in county of San Joaquin, State of Californias, filed in the office, of the County Recorder of the County of San Joaquin, State of California, November 4th, 1999, at

E 13:15 ship One 11 Thirteen 11 and Meridia eix (2396) said canda South 3005! four (24) 1 South 9014 Twonty-114 11 Bant 6. feet; thon 43º 59 1 of enid Hi South Rang One (1) 112 corner of Base and I Pange Fiv be tween 8 East, Mou mirty-fi Base and the me chains; t porth 160 oonveyed. da tod All Records; 0º15' Wes Section ! Meridian Jive (5) uenter o

directio Twenty-s to the o as locat 96 pages Woods, . Fout Alo Compar.y North Re line to One (1) beginnin East, Mc Thirteen

Trenty.

Range Fi

3:15 b'olcok P.M.

ALBO beginning at the common dermer of Sections Eighteen (18) and Minsteen (19) Township One (1) Horth, Range Six (6) Dast, Mount Diablo Base and Meridian, and Esotions Thirteen (13) and Twenty-four (34) Township One (1) North, Range Five (5) East, Mount Diable Base and Meridian, and running thence West along the Bestion line - twenty-three hundred and ninety six (2396) feat to the center of a main irrigation ca. thence along the cent-1 line of said canat, the following courses and distances, to-wit:- Gouth Co45! East 2631-8 feet; theree South 30°55' West 615 feet to the half section line North and South through Rection Twentyfour (24) Township One (1) North, Range Five (5) East, Mount Diable Base and Meridian; thence Bouth 9014.3 feet along the half section line North and South through Sections Twenty-four (24) Twenty-five (25) and Thirty-six (36) thence South 13° 41' East 78.2 feet; thence South 28° 11' East 61.1 fect, thence South 48° 15' East 1232.2 fect; thence South 32°20' Rast- 143.9 feet; thonce South 60 40' East 426.3 feet; thence South 13080' West 4861.8 fent; thence South 430 89 West 600.4 feet to the right bank of Middle Fiver; thence moundering the right bank of said Middle Fiver down stream to the section line between Section Two (2) Township Cne (1) . South Range Five (5) East, Mount Diablo Dase and Moridian, and Section Thirty-five (35) Township One (1) North, Range Five (5) East, Mount Diable Base and Meridian; thence East to the common corner of Sections One (1) and Two (2) Township One (1) South Range Five (5) East, Hount Diable Base and Meridian and Sections Thirty-five (25) and Thirty-six (36) Township One (1) Korth, Range Five (5) Eart, Mount Dioblo Base and Meridian; thence North to the quarter section corner between Sections Thirty-five (35) and Thirty-six (36) In Township One (1) North, Range Five (6) Enst, Nount Diable Dasu and Meridian; thence West along the half section line through Buctions Thirty-five (35) and Thirty-four (34) Township One (1) North Fange Five (5) East, Mour? piable Base and Peridian to the center of the Leves known as the "High Ridge Leves"; thence following the meanderings of said levee, North 17"24 West 4.10 chains; the me North 340 44! West 4.59

chains; thence North 53º 16! West 7.35 chains thence North 38º 18! West 3.54 chains; thomas North 16°41' West 5.20 chains to the South line of that certain 108.02 acre tract of land as conveyed by Jas. Rold. Stewart, Jas. Clark Bunton and Jan. King, to 7.11. Robinson, by deed dated August 30th, 1890 and recorded in Book "A" of Deeds Vol 69 page 432 San Joaquin County Records; thence East 11.84 chains to the Southeast corner of said tract of land; thence North 0º15' West 60 chains to the Northwest comor of the East half of the Southeast quarter of Scotion Twenty-seven (27) Township One (1) North, Range Five (5) East, Mount Disblo Ease and Meridian; thence West to the center of Section Twonty-seven (27) Township One (1) North, Range Five (5) East, Mount Diablo Base and Meridian; thence Morth along the half section line to the conter of Mich Ridge Levee; thence meandering the center of High Ridge Levee in a Northeasterly direction through Sections Thirteen (13) Fourteen (14) Twenty-two (82) Twenty-three (23) and Twenty-seven (27) Township One (1) North Range Five (5) East, Mount Fiable Base and Meridian, to the center line of the right of way of the Atchison, Topeka and Santa Fe Railway Company, an located by that certain Doed dated May 21st 1898, and recorded in Book "All of Deeds, vol-96 page 340 et seq. San Jouquin County Excords, made and executed by John N. Woods, and E. W. S. Woods, and E.W.B.Woods, to the San Francisco and San Joaquin Vailey Railway Company; thence East along the center line of said right of way of said Atchison, Topeka & Santa Fe Railway Company to the Kall section line North and South through Section Eighteen (18) Township One (1) Forth Range Six (6) East, Mount Diable Base and Meridian; thence South along the half section line to the quarter section corner between Sections Eighteen (18) and Mineteen (19) Township One (1) North Dange Six (6) East, Mount Diable Base and Meridian; thence West to the point of beginning, and being a portion of Section Eighteen (18) Township One (1) North, Range Six (6) East, Mount Diablo Base and Meridian; all of Section Twenty -six (26) and portions of Sections Thirteen (13), Fourteen (14) Twenty-two (22) Twenty-three (23) Twenty-four (24) Twenty-five (25) Twenty-seven (27) Thirty-four (34) Thirty-five (35) and Thirty-six (36) Township One (1) North Range Fire (5) East, Hount Diablo Base and Meridian, and portions of Sections One (1) and Trail(2)

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Thereining One (1) South Range Five (5) Rast, Mount Diable Hand and Meridian, as delineated upon that certain Map entitled "Map of Woods, Wilheit & Douglass' Londs on Middle Division of Robert's Island in the County of Can Joaquin, Chake of California, "Filed in the office of the County Recorder of the County of San Joaquin, State of California, November 4th, 1909, at 5:16 P.M. Containing 4480 acres, more or lass.

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CAVE AND EXCEPT that certain strip of land conveyed by Deed dated June 3rd, 1908, and, by R.P. S.Woods, Mary L. Maher and Jessie Lee Wilhelt to the Atchison Topica & Santa Fo Tailway Company, recorded in Book "A" of Deeds, Vol 173 page 299 Ean Josquin County Records;

ANNO SAVE AND EXCEPT the right of way conveyed by Deed from Juhn N. Woods and E. W. S. Woods to The San prancises and San Joaquin Valley Lailway Company and recorded in Book "A" of Deeds, Vol. 96 page 340 et seq. San Joaquin County Records.

ALTO SAVE AND EXCEPT the right of way sonveyed by Deed from John N. Woods and N. W. S. Woods to The San Francisco and San Jeaquin Valley Railway Company, and recorded in Book "A" of Deeds, Vol. 98 page 458 et seq. Can Joaquin County Records.

BECOME: The party of the second part does coverant and agree that the party of the first part may secure the delivery of water through the canals and ditches of the party of the second part, and that the party of the first part may drain the excess or wante-water created by irrigation waters from the canal system of the party of the second part into the drainage system of the party of the second part; by contrast, the cost and conditions to be set forth in the contract.

MIRDITH party of the first part further agrees that the party of the second part may have the right of ingress and egrees upon, over, and across the above described land for all purposes appurtenant to the management and care of its irrigation and drainage system.

IN WITHER WIREFOR, the said first party has hereunte set his land and seal, and the said second party has hereunte outseld its corporate name to be hereunte subscribed and its corporate seal to be hereunte affixed by its Vice President and Secretary thereunte duly authorized the day and year first above written.

13. W. J. Woods, Seal.

(Competent.)

Woods Irrigation Co. By Jessie Lee Wilhoit, Vice President. By Goo.E.Wilhoit, Gooretary.

State of California,)
County of San Jonquin,) SS:

On this 20th day of September, in the year one thousand nine bundred and eleven, before me, Avis G.MoCloud, a Motary Public in and for said County and State, residing therein, duly commissioned and qualified, personally appeared Jessie Lee Wilhoit, known to me to be the Vice President and Geo. E.Wilholt, known to me to be the Secretary of the Corporation that executed the within instrument, and acknowledged to me that such Corporation executed the same.

IN WITHESS WHEREOF, I have herein to set my hand and affixed my Official Seal at my office in the County of San Joaquin, State of Jalifornia, the day and year in this Cortificate first above written.

(Seal.) Avis 6 McCloud, Motary Public in

and for the said San Jacquin County, State of California.

Etate of California,)
County of San Joaquin,) 68:

On this 29th day of September, in the year one thousand nine hundred and eleven, before me, Avis G.McCloud, a Kotary Public in and for said County of Sen Joaquin, State of California, residing therein, duly commissioned and qualified, personally appeared E.W.S.Woods, known to me to be the person described in, whose same is subscribed to and who executed the annexed instrument, and acknowledged to me that he executed the same.

IN WITHESS WEEROF, I have hereunto set my hand and affixed my official Seal at my office in the City of Stockton, County of San Joaquin, the day and year in this cortificate first above written.

(Estary Seal.) Avis G. Nocloud, Notary Public in

and for the County of San Joaquin, State of California.

Records in Book

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Recorded at Request of Woods Irrigation Co. Bop. 30 1811 at 88 Min mast 8 5 61 88k A.M. in Book 6. Vol 27 of Miscellaneous, page 28 Can Jacquin County Records John J. Anabes, Inouty. Forn \$2,76.

WOODS IRIUGATION CO.

K.W.B.

MOODE

contract to furnish water.

Contract to furnish water

Between the Woods Irrigation Co.

E.W. S. Woods .

THIS ACCESSION. Made the 20th day of September, 1911, between the Woods Irrigation Co. a corporation, organized and existing under the laws of the State of California, the party of the first part and hereinafter termed the Company, and E.W. B.Woodn, of the County of San Jouquin, State of California, the second party, and hereinafter termed the consumer,

WITHESHETH: First: - That in consideration of the sum of \$10.00 Gold Coin of the United States paid by the second party to the first party, the receipt whereof is acknowledged and in ounsideration of further summ of money heminufter promised to be paid by the second party, and in consideration of the reciprocal covenants herein contained, the first party agrees under the terms, conditions, limitations, and restrictions herein stated, to furnish the second party water, not exceeding at any time 44.80 curls feet per second.

The quantity of water herein agreed to be furnished by the first party to the second party shall not excool such quantity of water as may be required, when commonically used for irrigating that cortain land vituated in the County of Dan Jouquin, Statu of California, and described an follows; and which is delimated upon a map hereunto attached. In map note forth said land enclosed with a group border and is marked ".E.W. B. Woods" upon the tract-

All that portion of the North East Warter (N.J.+) of the Bouth Mast quarter (B.E.+) of suction Fourteen (14) Township one (1) North, Mange Five (6) Rest, Mount Diable Base and Meridian, lying North of the center line of the leven known as "Nigh Ridge Levee" and Bouth of the line drawn parallel with and 100 feet double rly ut right angles from the located center line of the San Francisco, and San Jonquin Valley Railway Compuny's Railroad, said piece of land containing an area of 12.74 acres, more or land, an delineated upon that cortain map entitled "map of Woods, Wilhoit & Douglass Lauds on Middle Division of Robert's Island, the County of San Joaquin, State of California," filed in the office of the County Recorder of the County of San Joaquin, State of California, on Hovember 4th, 1909, at 3:25 o'clock P.H.

Also that certain lot, piece or parcel of land situate, lying and being in the County of San Jonquin, State of California, and bounded and particularly described as follows, to-wit:-

Beginning at the common corner of Sections Fifteen (15) Sixteen (16) Twenty-one (21) and Twenty-two (22) Township One (1) North, Range Five (5) East, Mount Diable Base and Meridian; thence West 3102-5/19 funt to the center of Honker Lake Levee; thence along the center of said Levee in a Southerly and Southeasterly direction to its junction with the cross levee between "The Pocket" and Honker Lake Trust; thence clong the center of said arosa leven in an easter-Ly direction to its junction with High Lid_{C^+} Levee; themse along the center of High Ridge Levee in a general Morthwasterly direction to its intersection with East and West one-quarter (1) line passing through Sections Twenty-two (22) and Twenty-three (23) Township One (1) North Range Five (5) East; thence West along said once parter (1) line to its intersection with the North and South line between Sections Twenty-one (21) and Twenty-two (22) Township One (1) North , Range Five (5) East; thence North along said line to place of beginning, containing 769-32/100 acree, as delinented upon that dertain May ontitled "Map of Woods, Wilhoit, & Douglass' Lands on Middle Division of Robert's Island in Count, of Ean Juquin, State of California, " filed in the office of the County Proorder of the County of San Josquin, State of California, Wovember 4th, 1909, at 3:15 o'clock P.M.

Also beginning at the common corner of Sections Eighteen (18) and Nineteen (19) Township One (1) North, Range Six (6) Bast, Mount Dicho Base exideria ann, and Sections Thirteen (13) and Twenty-four (24) Township One (1) North, Range Five (5) East, Mount Diable Dass and Meridian,

MSS Exhibit 1J

Recorded at Request of Woods Trugstien Co. Rep. 30 1811 at RO Min past Defalock A.M.
in Dook R.Vol 27 of Riscollancous, page 38 San Jacquin County Records.
Japan H. Kroh, Recorder.
Japan H. Kroh, Recorder.
John J. Anates, Recursive.

ACODE THE OVITOR

WOODB E.W.B.

Contract to furnish water.

Contract to furnish water

Woode Irrigation Co.

E. W. B. Woods .

THIS AGREEMENT, Made the 20th day of Beptomber, 1911, between the Voods Irrigation Coa corporation, organized and existing under the laws of the State of California, the party of the first part and hereinafter termed the Company, and E.V. S.Woods, of the County of San Joaquin, state of California, the second party, and hereinafter termed the consumer,

WITNESETH: First: That in consideration of the sum of \$10.00 dold Coin of the United States paid by the second party to the first party, the receipt whereof is acknowledged and in consideration of further sums of money herminafter promined to be paid by the second party, and in consideration of the reciprocal covenants herein contained, the first party agrees under the terms, conditions, limitations, and restrictions herein stated, to furnish the second party water, not exceeding at any time 44.80 outles feet per second.

The quantity of water herein agreed to be furnished by the first party to the second party shall not exceed such quantity of water as may be regained, when commissally used for irrigating that certain land elitated in the County of Can Jouquin, Statu of California, and described as follows; and which is delimated upon a map thereunto attached. The map each forth said land enclosed with a green border and is marked ".B.W.B.Wooda" upon the tract.

All that portion of the North East quarter (N. N. t) of the South East quarter (S.E. t) of section Fourteen (14) Township one (1) North, Range Five (6) Kant, Mount Diable Base and Meridian, lying North of the center line of the leves known as "Nigh Ridge Leves" and South of the line drawn parallel with and 100 feet Noutherly at right angles from the located center line of the San Francisco, and San Jonquin Valley Mailway Company's Railroad, said piece of land containing an area of 12.74 acres, more or least, as delineated upon that certain map land containing an area of 12.74 acres, more or least on Middle Division of Robert's Island, in entitled "Map of Vocada, Wilhoit & Douglass Leasts on Middle Division of Robert's Island, in the County of San Joaquin, State of California," filed in the office of the County Recorder of the County of San Joaquin, State of California, on November 4th, 1909, at 3:15 o'clock P.H.

Also that certain lot, piece or parcel of land situate, lying and being in the County of Ban Jonquin, State of California, and bounded and particularly described as follows, to-wit:-

Beginning at the common corner of Sections Fifteen (15) Sixteen (16) Twenty-one (21) and Twenty-two (22) Township One (1) North, Range Five (5) East, Nount Diable Base and Heridian; thence West 3102-5/10 feet to the center of Honker Lake Levee; thence along the center of said levee in a Southersterly direction to its junction with the cross levee between The Pockets and Honker Lake Trust; thence clong the center of acid order leven in an easter—"The Pockets and Honker Lake Trust; thence clong the center of acid order leven in an easter—ly direction to its junction with High Lide; Levee; themse along the center of High Ridge Levee ly direction to its intersection with East and West one-quarter (†) in a general Morthogotorly direction to its intersection with East and West one-quarter (†) line passing through Sections Twenty-two (22) and Twenty-three (23) Township One (1) North Range Five (5) East; thence West along said one-center (†) line to its intersection with the North and South line between Sections Twenty-one (21) and Twenty-two (22) Township One (1) North, Range Five (5) East; thence North along said line to place of beginning, containing 769-32/100 acres, and delineated upon that certain Dup entitled "Map of Woods, Wilhoit, & Douglass' Lands on Middle Division of Robert's Island in County of Ean Joaquin, State of California, filled in the office of the County Preceder of the County of San Joaquin, State of California, Kovember 4th, 1909, at 3:15 o'clock P.M.

Also beginning at the common corner of Sections Eighteen (18) and Mineteen (19) Township
One (1) North, Rango Six (5) Fast, Mount Dieblo Base on Moridian, and Sections Thirteen (13)
and Twenty-four (24) Township One (1) North, Range Five (5) East, Mount Diablo Base and Meridian;

and running thence West along the Section line twenty-three hundred and ninety-six feet to the center of a main irrigation canal, thence along the center line of ${f s}$ and ${f c}$ and, the foll= owing courses and distances, to-wit:~ South 0* 46' East 2631.8 feet; themse South 30° 55' West 615 feet to the half section line North and South through Bection Twenty-four (24) Township One (1) North, Range Five (5) East, Mount Diable Base and Meridian; the me South 9014.3 feet along the half section line North and South through Sections Twenty-four (24) Twenty-five (25) and Thirty-six (36) thence South 13º41' Bast 78.2 feet; thence South 25º11' Eact 61.1 feet; thence South 48° 15' East 1232-2 feet; thence South 32°20' East 143-0 feet; thence South 13°50' West 4661.8 feet; thence South 43°59' West 600.4 fent to the right bank or Middle River; thence meandering the right bank of eaid Middle River, down stream, to the section line between Section Two (2) Township One (1) South, Range Five (5) East, Mount Dinblo Base and Meridian, and Section Thirty-five (36) Township One (1) North, Range Five (5) East, Wount Diable Dass and Meridian; thence East to the common corner of Sections One (1) and Two (2) Township One (1) South Range Five (5) East, Mount Diable Base and Meridian, and Sections Thirty-Five (35) and Thirty-six (36) Township One (1) North Range Five (5) East, Mount Diable Base and Meridian; thence North to the quarter section corner between Sections Thirty-five (35) and "Mirty-six (36) in Township One (1) North, Range Five (5) Kaut, Mount Diable Bace and Meridian; thence West along the half section line through Sections Thirty-fife (30) and Thirty-four (34) Township One (1) North, Range Five (5) East Mount Diable Base and Meridian, to the center of the lavee known as the "High Ridge Levee" thence following the meanierings of said levee, North 17º24! Went 4.10 chains; thence North 34°44' West 4.59 chains; thence North 53°10' Wes: 7.35 chaine; thence North 38° 18 West 3.54 chains; thence North 16º41 West 5.20 chains to the Couth line of that certain 108.02 acre tract of land as conveyed by Jas. Reid Stewart , Jas. Clark Bunton and Jas, King to I. M. Robinson by Deed dated August 30th, 1890, and recorded in Book "A"of Demis, Vol 39, page 432 Ban Josquin County Records; thence Rost 11.84 chains to the Couth East corner of said tract of land; thence North 00 15' West 60 chains to the North West corner of the Mant half of the South East quarter of Section Twenty-buyen (27) Township One (1) North, Range Five (5) Mast, Mount Diable Base and Meridian; themes West to the senter of Section Twenty-seven (27), Township One (1) North, Range Five (5) Rant, Wount Diable Boss and Meridian; thence North along the half section line to the center of High Ridge Levee; thence meandering the center of High Ridge Levee in a North Easterly direction through Sections Thirteen (13) Fourteen (14) Twenty-two (22) Twenty-three (23) and Twenty-seven (27) Township One (1) North, Pange Five (5) East, Mount Diable Base and Meridian, to the center line of the right of way of the Atchison, Topeka and Santa Pe Railway Company, as located by that certain deed dated May 21st, 1898 and recorded in Book "A" of Deeds Vol 96 page 340 et seq. San Joaquin County Records, made and executed by John N. Woods, and E.W. S. Woods, to San Francisco and San Josquin Valley Pailway Company; thence East along the centur line of said right of way of said Atchison, Topska and Santa Fe Railway Company to the half section line Morth and South through Section Eighteen (18) Township One (1) North, Range Bix (6) East, Mount Dinhlo Base and Meridian; thence South along the half section line to the quarter section corner between Sections Eighteen (18) and Mineteen (19) Township One (1) North, Range Six (6) East, Mount Diable Rase and Meridian; thence West to the point of beginning, and being a portion of Section Eighteen (18) Township One (1) North Pange Six (6) East, Mount Diablo Base and Meridian; all of Section Twenty-six (26) and portions of Sections Thirteen (13), Fourteen (14) Twenty-two (22) Tweinty-three (23) Twenty-four (24) Twenty-five (25) Twenty-seven (27) Thirty-four (34) Thirty-five (35) and Thirty-six (36) Township One (1) North Range Five (5) Bast, Wount Diablo Base and Meridian, and portions of Sections One (1) and Two (2) Township One (1) South, Range Five (5) East, Mount Diablo Base and Meridian, as delineated upon that certain Map entitled "Map of Woods, Wilhoit & Douglass! Lunds on Middle Division of Robert's Island in the County of San Joaquin, State of California, " filed in the office of the County Recorder of the County of San Joaquin, State of California, November, 4th, 1909, at 3:15 P.M. and containing 4480 acres, more or less.

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EAVE AND EXCEPT, that certain strip of land conveyed by Deed dated June 3rd, 1908, made by F.W. S. Woods, Mary L. Maher and Jesnie Lee Wilhoit, to the Atchison Topeka and Santa Fe Railway Company, Fescredad in Book WAS of Beeds, Val. 173 page 200, Ban Joaquin County Records.

ALGO DAVE AND EXCEPT, the right of way conveyed by Daud from John N. Woods, and E.W. E. Woods, to The San Francisco and San Joaquin Valley Railway Campany, and recorded in Book TAT of Doods, vol 96 page 340 et ang. San Joaquin County Records.

ALEO SAVE AND EXCEPT the right of way conveyed by Deed from John N. Woods, and E.W. S. Woods, to The San Francisco and San Joaquin Valley Railway Company and recorded in Ecok "Am of Deeda, Vol. 98 page 458 et seq. San Joaquin County pecond".

The agreement of the first party to furnish water to the second party is hereby expressly limited to such water as may be used to irrigate the said lands above described, or any subidivision thereof. The said water shall be so furnished by the first party to the second party from the 29th day of September, 1911, until the 14th day of Descember, 1959 and thereafter in perpetuity.

It is understood and agreed between the parties hereto that this contract is not intended to and does not create or convey any lien, estate, easement, or convitude, legal or equitable, in any manner upon or in the canal or ditch of the first party, or in or to the water flowing therein or which may hereafter flow therein, nor does this contract create any equitable covenant encumbering the said canals, and disposition thereof by the first party.

The rights of the second party herein contracted for are to have the water furnished in perpetuity as provided in this contract by the first party, and in case of default of the Company to furnish water as herein agreed, where the same is caused by accident, hostile diversion, legal interference, or any act of God, the Company shall not in any way be held responsible for the damage caused by such default.

SECOID: For the water herein agreed to be furnished, the consumer in consideration of the premises, hereby premised, problems and coverants to pay in gold coin of the United States to the Company or its agents as may hereafter be provided, at its or their office as follows:

On the first Monday in each September, after the first Monday in September, 1911, until the year 1959, and on the first monday of each September, thereafter, so long as said water shall be furnished under contract, the sum of \$1.00 together with that sum of money, the amount of which shall be determined as follows:-

The total expense for the maintenance and replacement of the canal and structures, and the expense of the delivery of water, and of extension, and of the removal of seepage waters, after the same has reached the common out-let, or out-lets, as may be provided by the Company, and of the operation of the Company's affairs, all cost of litigation, and all other expense incidental to the operation of the canal system shall be pro-rated according to the acreage served with water by said Company and each and every more herein above described shall contribute and pay that smount to the Company on the day as hereinabove set forth. The item of replacement shall be fixed by the Company, based upon the depreciation of the structures, and shall be kept by the Company and used for that purpose only. Should the fund created thereby, at any time, exceed the sum of the probable cost of the replacement, that particular part of the at any time, exceed the sum of the probable cost of the replacement, that particular part of the

sum of money to be be paid the Company shall be emitted until such time as it would become sum of money to be be paid the Company shall be emitted until such time as it would become necessary to replenish the fund. The net revenue derived from the sale of water to any other lands not described in this agreement shall be applied to the maintenance of the canal system and each and every acre shall receive its proportional decease on account of such revenue.

THIRD: Should the Consumer default in the payment of any sum or sums herein promised to be paid at the time and in the manner as above specified, a suit may be commenced to enforce collection of the same by foreclosure and sale of the promises described above, or any sub-division thereof that may become delinquent.

The Company and the Consumer do hereby agree that the delivery of water and the mainMANUAL and operation of the canal system shall be conducted according to a certain set of
rules and regulations, as adopted by the Company on the 29th day of September, 1911, and
for a greater certainty a copy of them are herein inserted and made a part of this agreement
and are as follows:-

There shall be an office of superintendent of canals and the holder shall serve at the pleasure of the Board of Directors and shall receive such compensation as they may fix for his services. A part of the dilies of the superintendent of canals shall be an follows:-

The duties of the superintendent of canals shall be to maintain the canal system; to supervise the delivery of the water in accordance with the Company's rules and regulations; to make such replacements and extensions, which may include plans and specifications, as furniced by the Board of Directors. He shall furnish and deliver monthly to the secretary of of the Company, a full statement of all expenditures which shall include all labor and material used. He shall report monthly to the Company the delivery of water to the several Consumers, giving date and place of consumption, He shall report the necessity of drainage, repair and replacement to the Board of Directors whenever it becomes evident of the necessity.

There shall be an office, of ongineer, who shall serve at the pleasure of the Board of Directors and shall receive such compensation as the Board of Directors may agree upon.

The duties of the engineer shall be to plan the construction of diches, gates, etc.

To report upon all engineering matters as the Board of cannot in provide work as the Board of Cannot in prov

GENERAL CONSTRUCTION:

The Company shall construct, maintain and replace all main canals, lateruls, stream diversion gates, checks, drops and the side-gates as hereinafter provided, and all

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drainage gates, siphone, and structures necessary to suffice the samplete drainage of the lands, after the water has been, conveyed to the banks of therecanals constructed by the Company for that purpose.

The main sanal and laterals, as constructed by the Company shall be such as to furnish water to all of the land at such places as may be necessary to allow the subdivision of the land in tracts of 40 acres, being of the general dimensions of 10 by 20 chains, the lessor dimension bordering along the canal.

GATEB, CHECKS AND STRUCTURES:

The Company shall construct all structures necessary to convey the waters through its canals and laterals and to maintain the water at such reasonable levels as to supply the land as hereinabove described, excepting therefrom such acres as are hereafter provided for, and all other tracts so situated as not to allow the placing of water upon thom.

The side-gates shall be constructed by the Company and Taid for by the Consumer in the manner, and at the time and place as hereinabove provided for the payment for the delivery of water. The Company shall have full charge and control of all side-gates and shall maintain them thereafter.

DRA INA GE.

The Company shall construct and maintain drainage canals, pumps and appliant cos, sufficient to relieve the irrigated land of waste or surplus waters.

The cost of the construction of any drainage system which suffices the drainage of any certain tract, under contract, chall be borne by that tract. The cost shall be pro-rated according to the acreage, and the payment for such drainage systems shall become due and payable as provided above for the payment of the delivery of water, and shall be subject to all of the terms and conditions thereof.

The Company shall construct that part, or parts of the drainage system in which more than one tract participates and the cost shall be charged to the drainage account and shall be borne proportionately by all land under this contract and all other lands coming under subsequent contracts. The Company shall have full charge of such drainage statem and its maintenance thereafter shall be borne by the Company.

The Consumer shall convey the water to the drainage canal as constructed by the Company. Should it become evident that a Consumer should be neglectful of the use of the water, and create unnecessary seepage, the Company, at its election, may direct his method of irrigation and fix the amount of water he shall receive.

Suprenterda

APPLICATION FOR WATER.

The Consumor shall make a written application for the delivery of water; said application shall be made at least five days prior to the time set forth in the application as the date of delivery.

Should it be impossible or unreasonable for the Company to deliver the water in accordance with the application, it will deliver the water as soon thereafter as it is practical for the Company so to do. The Consumer must receive the water in rotation with other Consumers, should it be deemed the most practical method by the Company.

HANDS, ING THE GATES:

The Consumer shall not open the side-gates which furnishes water upon his or any other land or in any manner interfere or adjust the gates in the main canal or brances thereof, unless he be given written permission by the Company's superintendent to do so. Should the Consumer violate this rule the Company shall have the right to charge him for all trouble and expense incurred, and that sharge shall become a part of the charge for water and collectable at the date and in the manner as specified in the contracts for water. The Company shall be the sole judge of such trouble and expense.

USE OF WATER:

The Consumer shall use the water in a most sconomical manner and shall not waste the water either by neglest or excessive use. Should the Consumer allow the water to damage any other property he shall be responsible for such damages and in no case shall the Company be held for such neglect.

The Consumer shall not sell or dispose of any of the water, furnished under this contract, to any other land or person, or allow the water to flow off his land upon the lands of others.

Should the supply of water be diminished so that the quantity available would not furnish all of the lands with the amount desired, then in that event the quantity available shall be pro-rated according to the acreage of each Consumer.

INGRESS AND EGRESS.

The authorized agent of the Company and his employess shall have free access at all times to the lands irrigated from the Company's canal, to make surveys and measurements as deemed necessary, to examine the flow of water, to patrol, police, repair, maintain and replace all canals and structures appurtenant thereto, both for the supply of irrigating waters and drainage and to use necessary earth to make such repairs.

* * 72 171 114

Fourth:- That the Consumer agrees that the Company may have the right to take charge of any canal which has been constructed by the Consumer for the purpose of supplying water to a north of the product, provided that the said premises have been so subdivided as to leave a tract of land not adjacent to any canal. Then in the case of subdivision of a tract and

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neme and the dale of a part thereof, the grantor shall provide means for the supplying of irrigating waters and the drainage of the tract so subdivided. The Company may at its election take possession of said supply branch and drainage way as hereinabove provided.

Fifth: Included in the description of the land hereinabove described are 1300 dares of land situated in the tracto colored rad as delineated upon the map hereinabove included which are described as follows, to-wit:-

The Honker Take Tract and a tract of fifty-one (51) agrees in Section 23, T. 1/N.R. 5 (E. and also the following described tracts; to witt:-

A trizagular piace of land in the North Wort corner of the Bouth half of grotion Thirteen (15) whose Northern and Western boundaries are 20 chains in extent; also all of the Western part of the Southern half of Section Fourteen (14), save a triangular piece of land in the South Eastern corner whose Bouthern boundary is 26 chains and its Eastern boundary is 20 chains in extent; Also a triangular piece of land situated in the North Western part of Section Twenty-three (23) whose Morthern boundary is 52 chairs and its Western boundary is 80 chains; also that part of Section Twenty-seven (27) lying in the Northeast quarter which is situated West of a line which commences at a point 10 chains West of the North Eastern corner, running thence South Westerly to the Southeast corner of the Bouthwest quarter of the Northeast quarter of said section; also all that part of Baction Thirty-four (34) as described in the tract under contract; also the Southern part of the Northern half of section Thirty-five (35) whose Western boundary is 30 chains and whose Enstern boundary is 10 chains; also the western half of the Bouth West quarter of Bestion Thirty-six (36) all in T. 1 N.R. 5 E. also fractional part of the Western half of the Morthwest quarter of Section One (1) and the fractional part of the Northeast quarter of Section Two (2) in T. 1. S.R. 5 E. which are now within the reasonable possibilities or irrigation of the Company's canals and which are hereinafter termed "dry lands."

It is mutually understood athat the waters cannot, under the present extent of the canal system, be spread upon the surface of end 1300 acres of land, but can be from a contemplated extension of the Company's canals. This extension may include a charge in the point of diversion from the river so that a ditch line may be carried along the high reaches of the "dry tract". It is hereby understood and agreed by the consumer and the Company that the Consumer may place water upon this "dry tract" at his election, conditioned that should the Consumer avail himself of this privilego he shall give written notice to the Company of his wishes. The Company will as seen as practicable the reafter construct such extensions, or diversions, which are and shall be considered a part of the present system of canals, and upon the completion of said canals the land as applied for by the Consumer, to be irrigated, when shall become a consumer in perpetuity and shall be subject to all the conditions of this contract. Should it become evident to the Company that said "dry lands" or any part thereof, were sub-irrigated regardless of any act of the Consumer, the Company may, at its election, were sub-irrigated regardless of any act of the Consumer, the Company may, at its election, where sub-irrigated regardless of any act of the Consumer, the Company may, at its election, because this land so sub-irrigated under the full conditions of this contract, by serving written notice upon the owner of the tract.

notice upon the swife of an array authorized the land and become a part thereof, and shall be sixth:— This agreement is to run with the land and become a part thereof, and shall be a lien upon the tract or any sub-division thereof; which lien may be foreclosed to secure the payments as provided for in the agreement, and the sub-division and sale of any or all of the payments as provided for in the agreement, and the sub-division and the agreement shall hereinabove described tract shall in no way effect this agreement, and the agreement shall hereinabove described tract shall in no way effect this agreement, and the agreement shall hereinabove described tract shall in no way effect the agreement, and the agreement shall hereinabove described tract shall in no way effect the same the whole.

IN WITHESS WIEREOF, the said first party, termed the "company" has caused the corporate name to be herein subscribed and its corporate seal to be hereunto affixed by its President and Secretary thereunto duly authorized, and the second party has hereunto sot his hand

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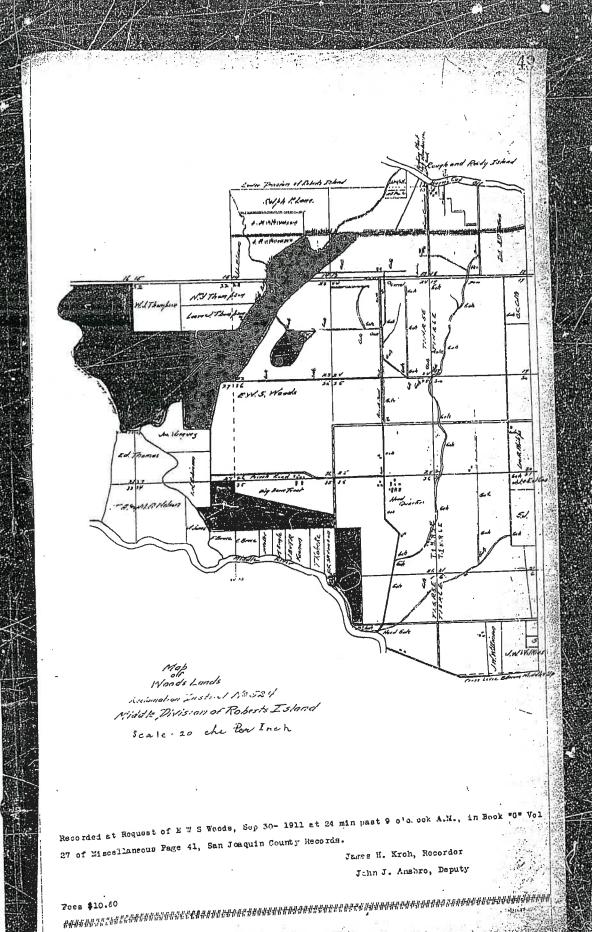
Corp. Seal.) WOODS IRRIGATION On. My Jospie Lee Wilhoit, Beal. Vice President. And Geo. E. Wilhoit, Benl -Georgitary. Seal. E.W.B Woods, ntate of California, 86: County of Ban Joaquin, On this 89th day of deptember, in the year one thousand nine hundred and eleven, before me, Avis C McCloud, a Notary Public in and for said County and State, readding therein, duly commissioned and qualified, personally appeared Jessie Lee Wilheit, known to me to be the Vice President and Coo.F. Wilhoit, known to me to be the Ecoretary of the Comporation that executed the within instrument, and acknowledged to me that such Corporation executed the same. IN WITHER WEEREOF, I have hereunto set my hand and affixed my Official geal, at my office in the County of San Joaquin, State of California, the day and year in this Certificate first above written. Avia G McCloud, Notary Public in and for said San Joaquin County, State of Cali fornia. State of California, County of San Je quin, On this 29th day of September, in the year one thousand nine hundred and eleven, before

on this 29th day of September, in the year one thousand nine hundred and eleven, before me, Avis G.McCloud, Motary Public in and for said County or San Joaquin, State of California, residing therein, do a commissioned and qualified, personally appeared, F.W.s. woods, known to me to be the person analysed in, whose name is subscribed to, and who executed the annexed instrument, and acknowled to me that he executed the same.

IN WITHESS WHE FOF, I have hereunto set my hand and affixed my Official Seal at my office in the City of Stock on, County of Son Joaquin, the day and year in this certificate first above written.

(Notary Seal.) Avis C.McCloud, Rotary Public in and

for the County of Ba Joaquin, State of California.



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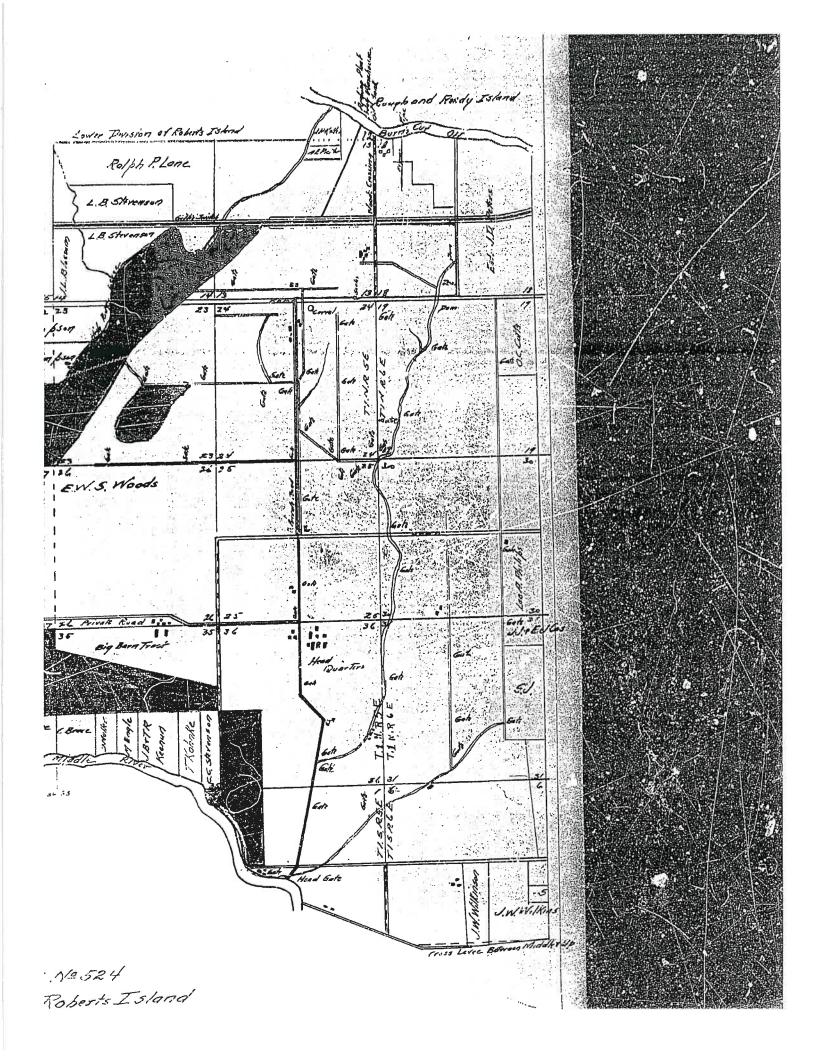
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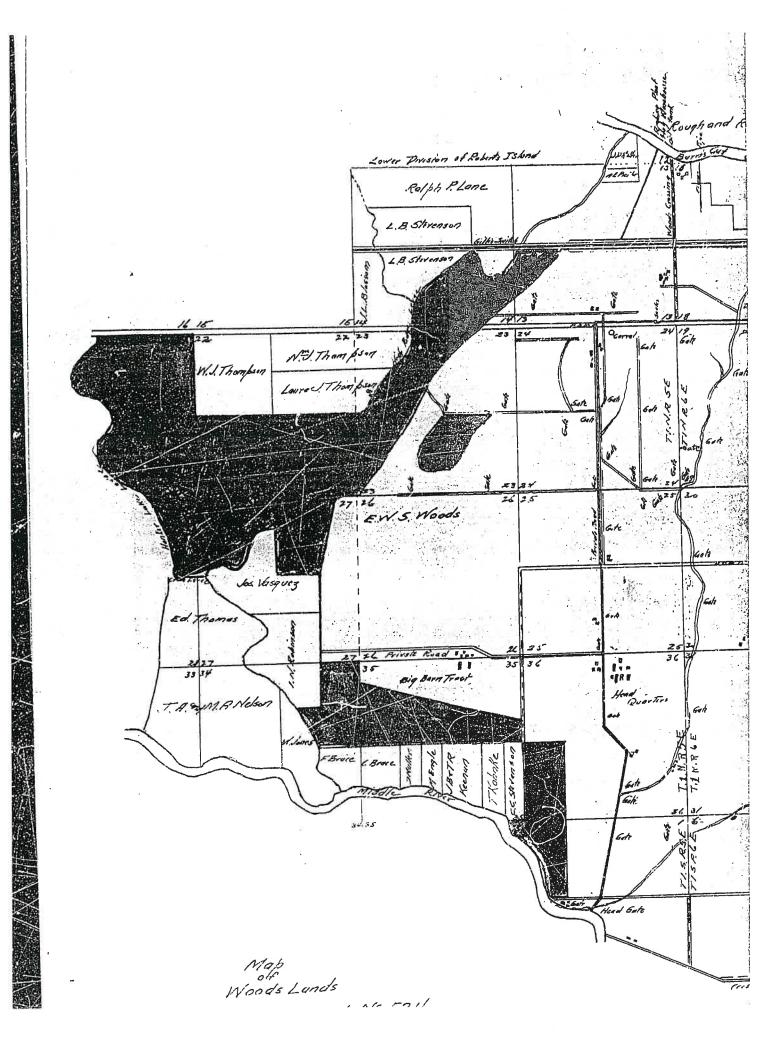
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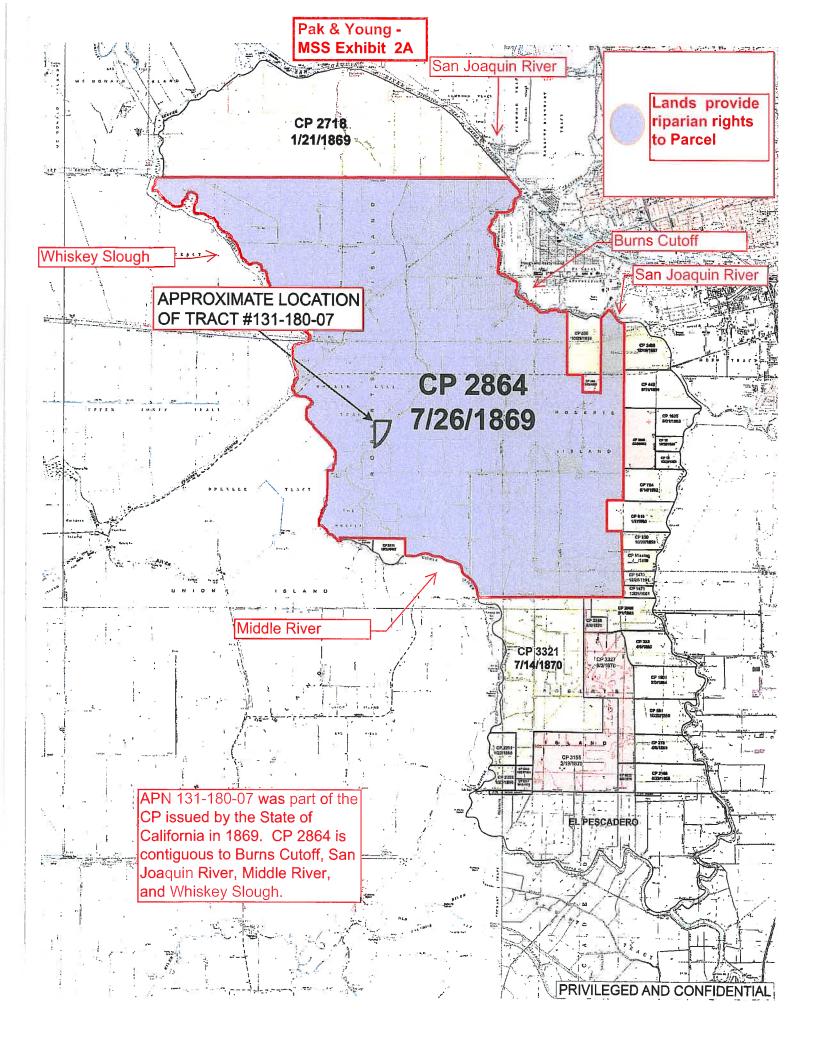
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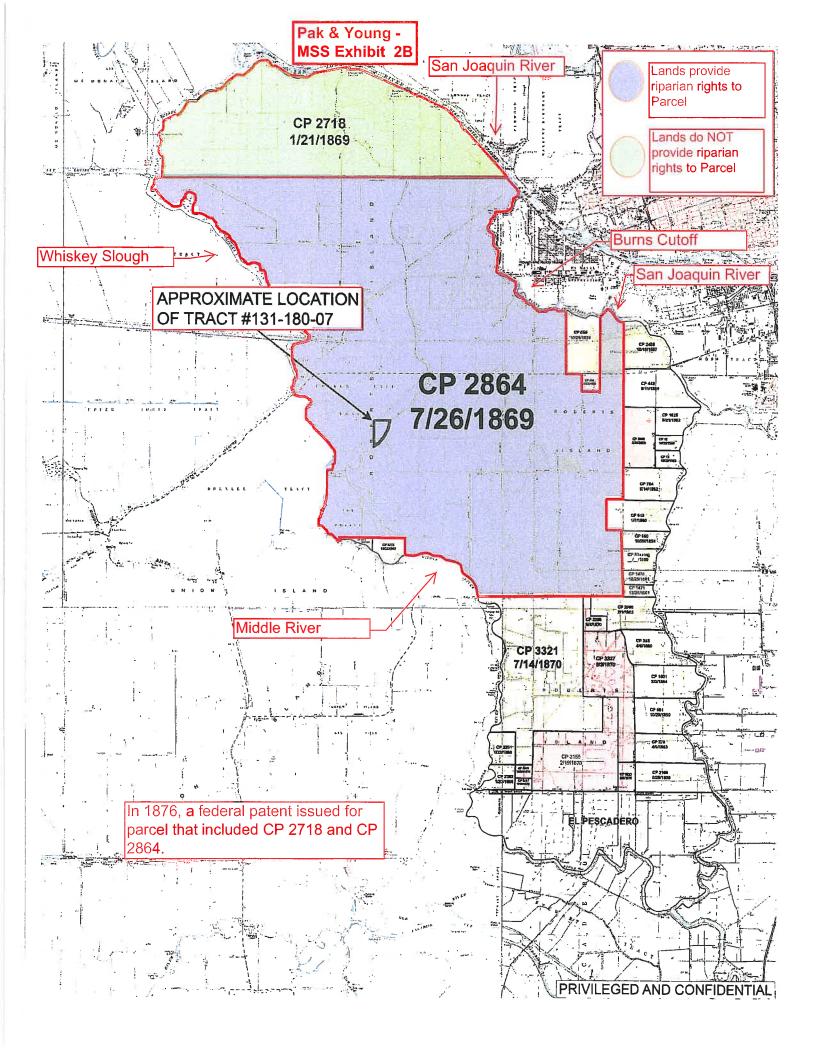




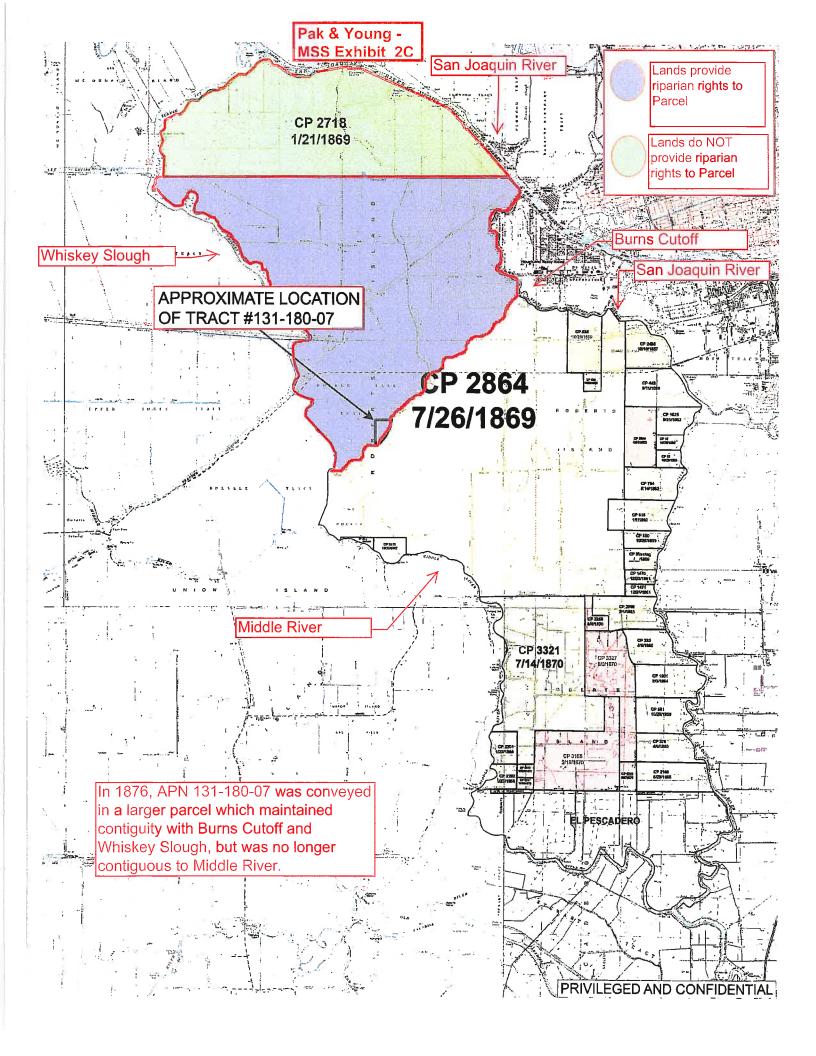
MSS Exhibit 2A



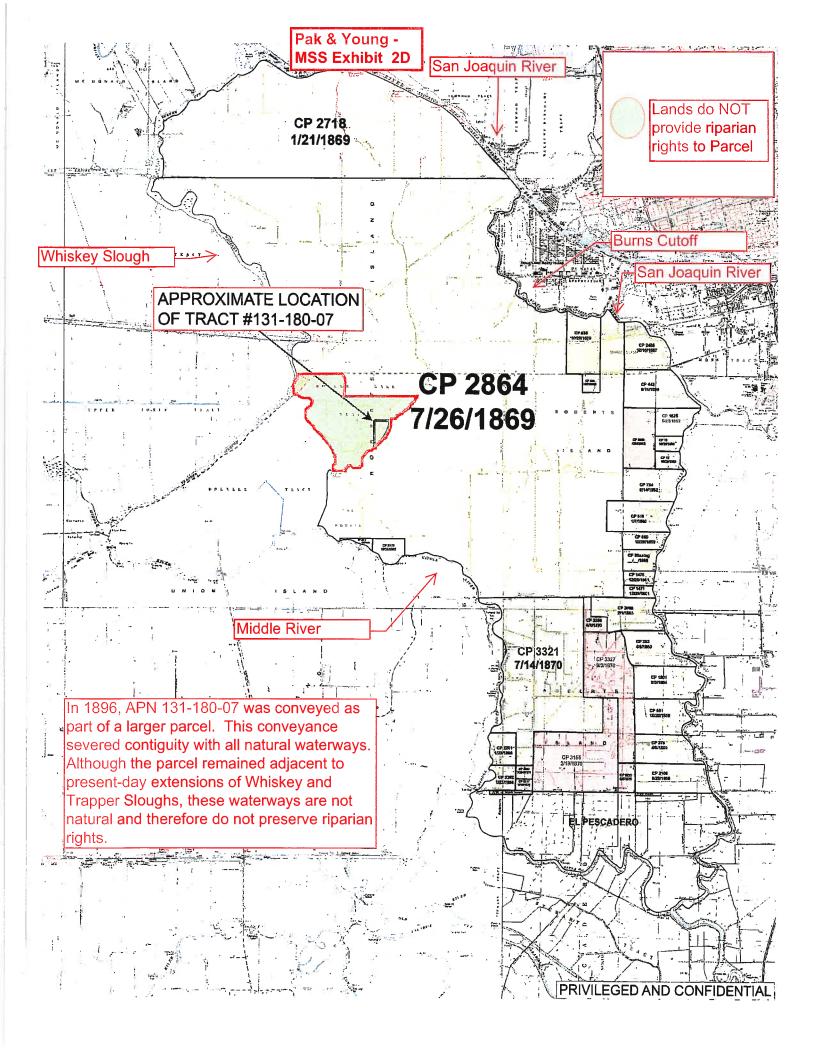
MSS Exhibit 2B



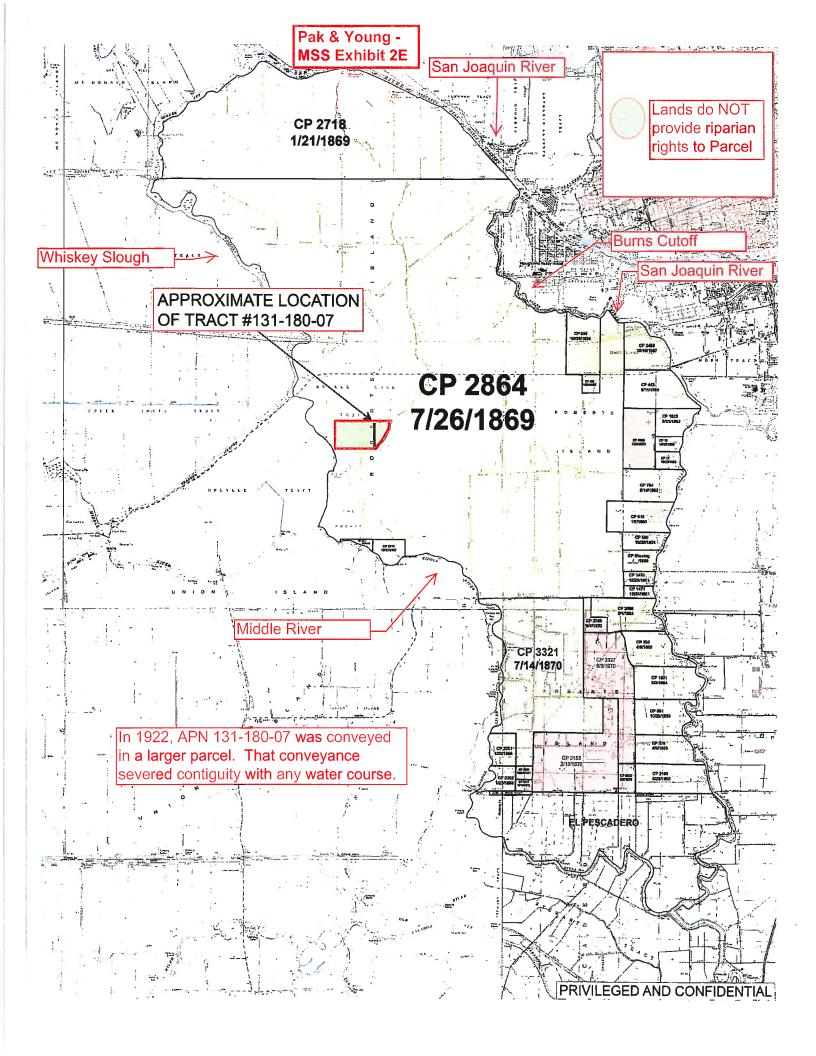
MSS Exhibit 2C



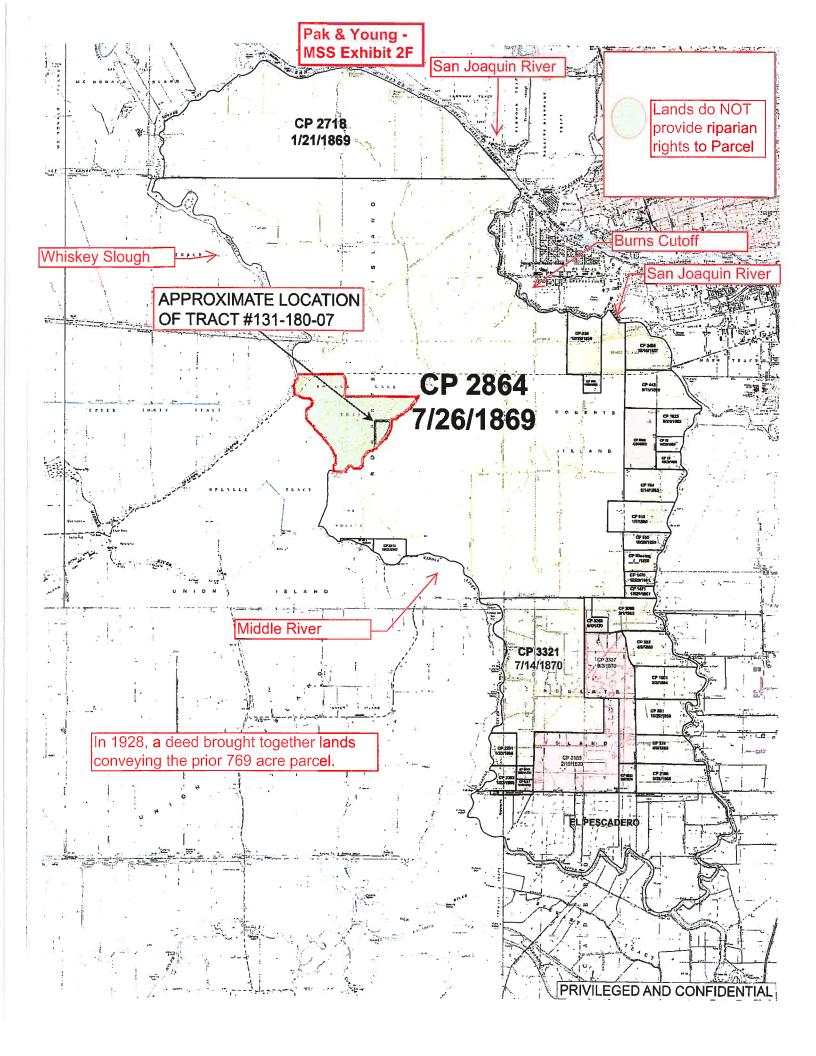
MSS Exhibit 2D



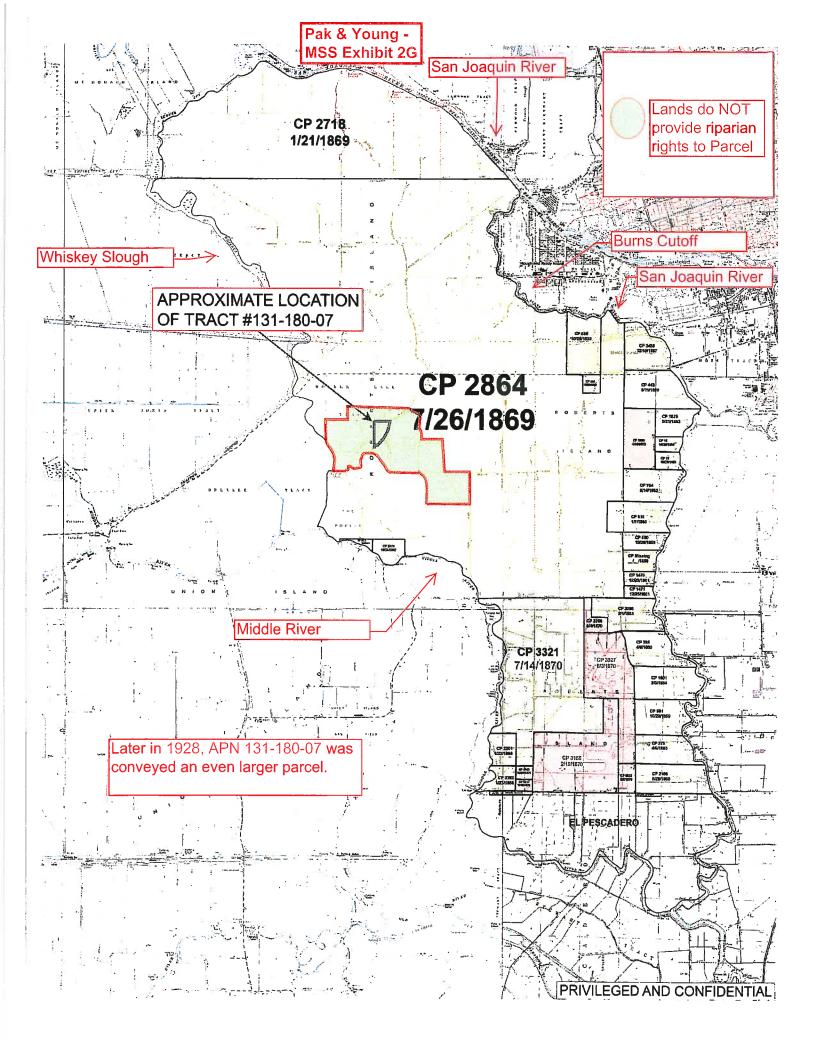
MSS Exhibit 2E



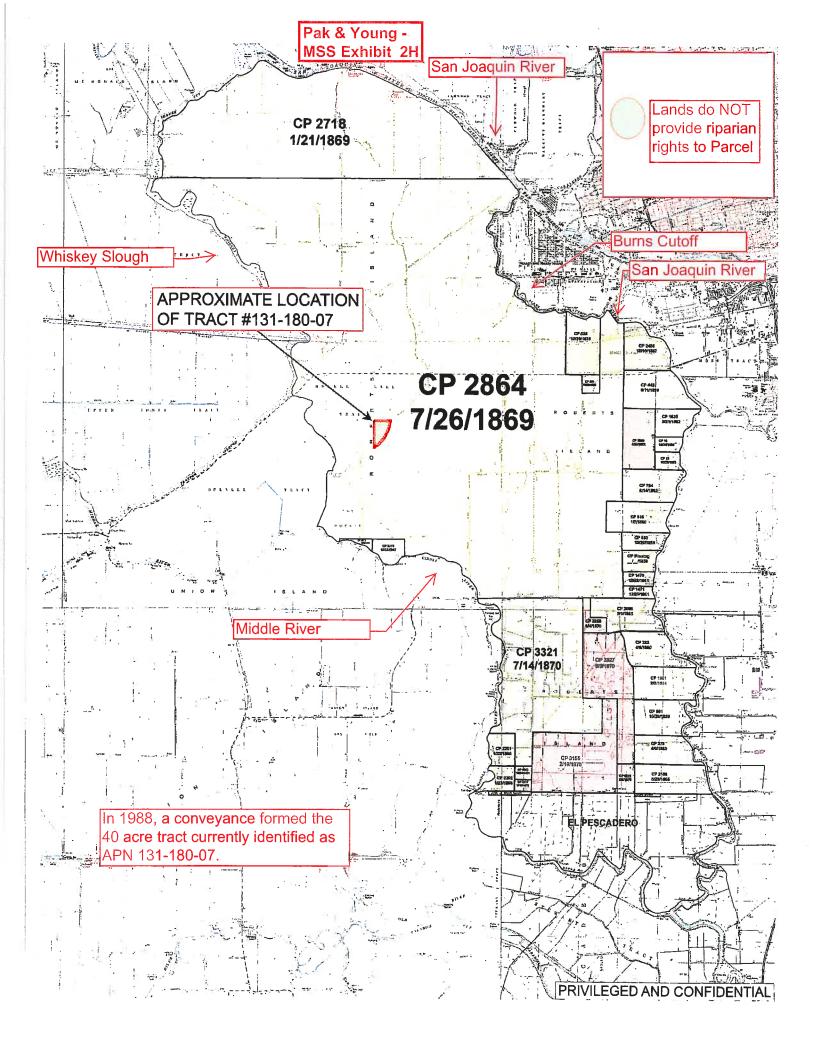
MSS Exhibit 2F



MSS Exhibit 2G



MSS Exhibit 2H



MSS Exhibit 3

1 2 3	Timothy O'Laughlin, State Bar No. 116807 Kenneth Petruzzelli, State Bar No. 227192 O'LAUGHLIN & PARIS LLP P.O. Box 9259 Chico, California 95927 Telephone: (530) 899-9755
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7	KRONICK, MOSKOVITZ, TIEDEMANN & GIRARD A Professional Corporation
9	400 Capitol Mall, 27th Floor Sacramento, California 95814 Telephone: (916) 321-4500
10	Facsimile: (916) 321-4555
11	Attorneys for STATE WATER CONTRACTORS
12	Jon D. Rubin, State Bar No. 196944 Valerie C. Kincaid, State Bar No. 231815
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15	Telephone: (916) 492-5000 Facsimile: (916) 446-4535
16 17	Attorneys for SAN LUIS & DELTA-MENDOTA WATER AUTHORITY
18	BEFORE THE CALIFORNIA
19	STATE WATER RESOURCES CONTROL BOARD
20	
21	
22	In the Matter of Draft Cease and Desist Order No. 2009-00XX-DWR Against TESTIMONY OF PHILIP JOHNSON
23	Yong Pak and Sun Young
24	
25	My name is Philip Johnson, I am a supervising engineering geologist at Cotton, Shires and
26	Associates. I have over 19 years experience in the field of engineering geology, working on
27	projects throughout California, including geologic investigations involving slope stability,
28	seismic hazards, sea bluff retreat, groundwater, sedimentary geology, and other geotechnical
	-1-

issues. A component of this work includes field mapping and aerial photograph interpretation. My statement of qualifications is marked as MSS Exhibit 3A.

I reviewed ten historical, single-framed aerial photographs of APN No. 131-180-07, on Roberts Island in San Joaquin County, California ("Parcel") taken from 1937 to 2000.

The August 1937 and May 1940 aerial photographs show that, at those times, the entire Parcel contained irrigated row crops. MSS Exhibits 3B and 3C.

The July 1957 aerial photograph shows that, at that time, 94.2 percent of the Parcel was under cultivation as row crops and irrigated; the remaining 5.8 percent was disturbed but not planted. MSS Exhibit 3D.

The June 1963 and August 1963 aerial photographs show that, at those times, 94.2 percent of the Parcel was idle agricultural land that was not being irrigated. MSS Exhibits 3E and 3F.

The May 1968, April 1985, June 1987, and March 1993 aerial photographs show that, at those times, 94.2 percent of the Parcel contained irrigated row crops, and the remaining 5.8 percent consisted of disturbed land that was not under cultivation. MSS Exhibits 3G, 3H, 3I, and 3J.

The September 2000 aerial photograph shows that, at that time, 68.2 percent of the Parcel had been planted with row crops and then harvested, and 25.7 percent of the Parcel contained irrigated row crops that had not yet been harvested; 6.1 percent of the Parcel consisted of disturbed land that was not planted. MSS Exhibit 3K.

MSS Exhibit 3A

Philip L. Johnson

Supervising Engineering Geologist

Registration

Registered Geologist in California, RG 6196 Certified Engineering Geologist in California, CEG 2019

Education

M.S., Geology: San Jose State University, San Jose, California, 1990 B.A., Geology: San Francisco State University, San Francisco, California, 1987

Areas of Specialty

Investigation and repair of landslides; landslide mapping and aerial photograph interpretation; subsurface investigation of landslides; geotechnical construction defect litigation support; dam site investigations; seismic hazard assessment; and sedimentary geology

Representative Experience

Mr. Johnson has over 19 years of experience in the field of engineering geology, working on projects throughout California. He has been involved with numerous geologic investigations involving slope stability, seismic hazards, sea bluff retreat, groundwater, and other geotechnical issues. He also regularly participates in peer review for communities in the San Francisco bay area. He has a variety of areas of expertise including:

- Geologic characterization of landslides for design of mitigation measures. He has investigated numerous landslides ranging from large, deep-seated landslide complexes to shallow colluvial landslides and debris flows.
- Landslide mapping and aerial photograph interpretation. He has mapped landslides in a wide variety of terrain utilizing both field mapping and aerial photograph interpretation.
- Subsurface investigation utilizing downhole logging of large-diameter boreholes, core logging, and trench logging methods.
- Engineering geologic aspects of surface mine reclamation with emphasis on stability of former mine slopes.
- Assessment of seismic ground shaking and fault rupture hazards for large engineered structures as well as light construction. Projects include fault rupture hazard and paleoseismic investigations on the San Andreas, Las Positas, and Valley Side faults.
- Investigation of geotechnical construction defect and building distress related to expansive soils, fill settlement, incipient slope deformation, and landsliding.
- Engineering geologic investigation of dam sites. He was Project Geologist for two potential dam sites for East Bay Municipal Utility District. He also participated in a seismic hazard investigation of

the Foothills fault system for the New Hogan Dam in the Sierra Nevada foothills. He also mapped the geology exposed during construction of a soft ground tunnel at Crystal Springs Reservoir. Recently, he conducted subsurface investigation, field mapping, and permeability testing at an existing dam on the Stanislaus River.

- Fluvial sedimentology with particular emphasis on the use of detailed fluvial architecture to evaluate tectonic basin subsidence and basin history.
- Hydrostratigraphic investigations utilizing core samples, borehole geophysical, and hydrogeologic data.

Recent projects include photogeologic and field mapping of landslides in the Ridge Basin in Los Angeles County; photogeologic mapping of fluvial geomorphic features in the San Joaquin River delta; downhole logging of large-diameter borings during investigation of landslides in the City of Richmond; inspection and evaluation of quarry slopes in Santa Clara County; investigation of an incipient landslide in Clayton; evaluation of fault rupture hazards on the east side of the Coast Ranges; investigation of debris flows in Pacifica, Lafayette, and Orinda; photogeologic evaluation of landslide and fault rupture hazards in Santa Rosa; subsurface investigation of a large, deep-seated landslide in Santa Barbara; a fault rupture hazard investigation along the San Andreas fault in Pacifica; investigation of a large, deep-seated coastal bluff failure in Daly City; subsurface investigation of a gravel quarry slope failure in alluvial and lacustrine sediments in Livermore; photogeologic and field mapping to evaluate geologic constraints to a proposed bicycle trail alignment adjacent to a large landslide complex in San Jose.

As a graduate student, Mr. Johnson studied Tertiary fluvial rocks exposed on the flanks of the Rock Springs Uplift in southwest Wyoming. Based on the spacing of fluvial channels within overbank deposits and thickening of synorogenic sedimentary packages, he was able to evaluate the timing and pattern of Paleocene to early Eocene subsidence across the southern Greater Green River Basin and relate this to thrust faulting within the Uinta and Rock Springs uplifts.

Professional History

Supervising Engineering Geologist, 1995-Present; Cotton, Shires and Associates, Los Gatos, California Staff Geologist, 1992-1995; Dames & Moore, San Francisco, California Staff Geologist, 1990-1992; Earth Sciences Associates, Palo Alto, California

Professional Affiliations

American Geophysical Union Association of Engineering Geologists Geological Society of America International Association of Sedimentologists Society for Sedimentary Geology (SEPM)

Publications

Johnson, Philip L. 2009, Landslides and geomorphic mapping along the Rodgers Creek - Healdsburg fault, Sonoma County, California: in *Proceedings of the 52nd Annual Meeting of the Association of Engineering and Environmental Geologists*, Lake Tahoe, California, p. 81

Johnson, Philip L. and David W. Andersen, 2009, Concurrent growth of uplifts with dissimilar orientations in the southern Green River Basin, Wyoming: implications for Paleocene-Eocene patterns of foreland shortening: *Rocky Mountain Geology*, v. 44, p. 1-16

Johnson, Philip L., Marcum, Dale R. 2007, The Northridge Bluff Landslide: rapid bluff retreat associated with a major coastal landslide in Daly City, California: in Schaefer, V. R., Schuster, R. L., and Turner, A. K., eds., Conference *Presentations, First North American Landslide Conference*, Association of Environmental and Engineering Geologists Special Publication No. 23, p. 1694-1706

Johnson, Philip L., Shires, Patrick, O., 2007, Engineering geologic evaluation of quarry slopes and compliance with California's Surface Mining and Reclamation Act: in *Proceedings of the 50th Annual Meeting of the Association of Engineering Geologists*, Los Angeles, California p. 94

Johnson, Philip L., 2005, The Glen Creek Landslide: a case study in the misuse of the Jahnsian steps during hillslope development: in Ehlen, J., Haneberg, W.C., and Larson, R. (eds.) *Humans as Geologic Agents*, Geological Society of America, Reviews in Engineering Geology, v.11, no. 1, p. 111-121.

Johnson, Philip L., and Cotton, William L., 2005, The Santiago landslide and associated ridge-top graben: implications for paleoseismic landslide studies: *Environmental and Engineering Geoscience* v. 11, no. 1, p. 5-16

Johnson, Philip L. and Cotton, William R., 2003, An alluvium-buttressed landslide complex and the impact of late Quaternary sea level change on landslide topography [abs.]: in *Proceedings of the 46st Annual Meeting of the Association of Engineering Geologists*, Vail, Colorado, p. 62.

Johnson, Philip L. and Cotton, William R., 2002, The Santiago Landslide and associated ridge-top graben: implications for paleoseismic landslide studies [abs.]: in *Proceedings of the 45nd Annual Meeting of the Association of Engineering Geologists*, Reno, Nevada, p. 70-71.

Johnson, Philip L. and Cole, William F., 2001, The use of large-diameter boreholes and downhole logging in landslide investigations: in Horacio Ferriz (ed.) *Engineering Geology in Northern California*, California Department of Conservation, Division of Mines and Geology, Bulletin 210, p. 95-106.

Wallace, J.M. and Johnson, Philip L., 1999, The use of large-diameter boreholes and downhole logging techniques in landslide investigations [abs.]: in *Proceedings of the 42nd Annual Meeting of the Association of Engineering Geologists*, Salt Lake City, Utah, p. 88.

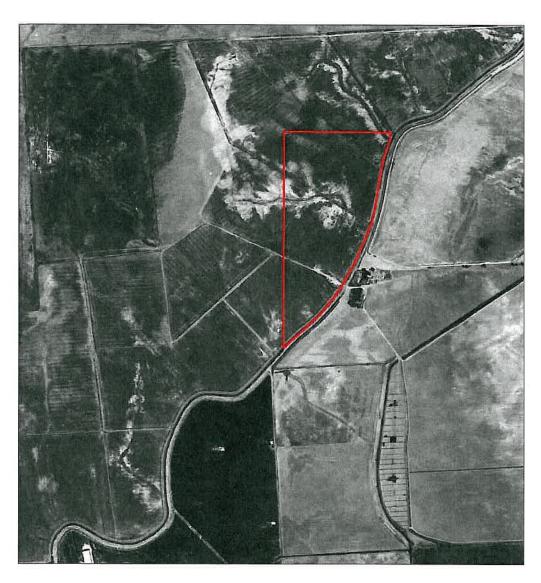
Johnson, P.L., 1990, Laramide basin subsidence and fluvial architecture of the Fort Union and Wasatch Formations in the southern greater Green River basin [abs.]: *American Association of Petroleum Geologists Bulletin*, v. 74, p. 687.

MSS Exhibit 3B



Pak and Young APN 131-180-07 August 1937

MSS Exhibit 3C



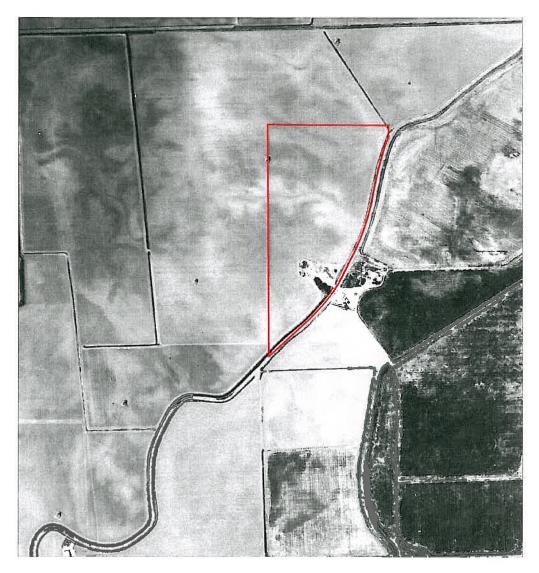
Pak and Young APN 131-180-07 May 1940

MSS Exhibit 3D



Pak and Young APN 131-180-07 July 1957

MSS Exhibit 3E



Pak and Young APN 131-180-07 June 1963

MSS Exhibit 3F



Pak and Young APN 131-180-07 August 1963

MSS Exhibit 3G



Pak and Young APN 131-180-07 May 1968

MSS Exhibit 3H



Pak and Young APN 131-180-07 April 1985

MSS Exhibit 3I



Pak and Young APN 131-180-07 June 1987

MSS Exhibit 3J



Pak and Young APN 131-180-07 March 1993

MSS Exhibit 3K



Pak and Young APN 131-180-07 September 2000

MSS Exhibit 4

1 2 3 4	Kenneth Petruzzelli, State Bar No. 227192 O'LAUGHLIN & PARIS LLP P.O. Box 9259 Chico, California 95927 Telephone: (530) 899-9755	
5	Attorneys for MODESTO IRRIGATION DISTRI	CT
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15	Telephone: (916) 492-5000 Facsimile: (916) 446-4535	
16 17	WATEŘ AUTHORITY	
18		CALIFORNIA
19		CES CONTROL BOARD
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22		ESTIMONY OF DAVID A. COLDHAMER, PhD
23	Yong Pak and Sun Young	
24		
25	My name is David Goldhamer, I am a retin	
26	previously worked at the Department of Land, An	•
27	Camolina at Davis. I have over 30 years experien	•
28		
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TESTIMONY OF DAVID A. GOLDHAMER, PH.D

irrigation scheduling. My curriculum vitae is marked as MSS Exhibit 4A.

My testimony calculates the net irrigation requirements for Assessor Parcel Number 131-180-07, in San Joaquin County, California (Parcel) in the three years for which crop information was provided in the December 14, 2009, Draft Cease and Desist Order No. 2009-00XX-DWR Against Yong Pak and Sun Young (Draft CDO) – 2001, 2006 and 2007. My calculations are summarized in MSS Exhibit 4B.

I calculated the net irrigation requirements to be 58.4 acre-feet of water in 2001 for 30 acres of corn and tomatoes, 104.5 acre-feet of water in 2006 for 25 acres of alfalfa, and 34.6 acrefeet of water in 2007 for 25 acres of safflower.

The net irrigation requirements are based on estimates of total crop consumptive uses plus the leaching requirements, minus the total contribution of perched water and effective rainfall.

My calculation of net irrigation requirements are based on the following:

The Crops: In the Draft CDO, it states the Parcel was planted with "30 acres of corn and tomatoes" in 2001, 25 acres of alfalfa in 2006 and 25 acres of safflower in 2007. I assumed in 2001, the Parcel was planted with 15 acres of corn and 15 acres of tomatoes.

Total Crop Consumptive Uses: Total crop consumptive uses are based upon (1) the 10-year mean reference crop water use values from the Manteca weather station available through the California Irrigation Management Information System ("CIMIS) program¹, and (2) crop coefficient values.

Effective Rainfall: Effective rainfall is 50 percent of the 10 year mean (2000-2009) of total seasonal rainfall provided by the Manteca CIMIS weather station.

<u>Perched Water</u>: Contribution of perched water is based upon an assumed depth of 4 feet and root zones depths published by the United States Bureau of Reclamation's Pacific Northwest Cooperative Agricultural Weather Network,² and information on root zone depth published by the University of Tennessee Agricultural Extension Service.³

<u>Leaching Requirements</u>: The leaching requirement was estimated assuming a desired leaching fraction of 20 percent, based on *Salt Tolerance of Crops in the Southern Sacramento-*

¹CIMIS data is available online at: http://www.cimis.water.ca.gov/cimis/welcome.jsp.

² Data available from the United States Bureau of Reclamation, Pacific Northwest Cooperative Agricultural Weather Network, at http://www.usbr.gov/pn/agrimet/irrigation.html#Root.

³ Rutledge, Alvin D., James B. Will, Steve Bost. *Commercial Tomato Production*. Agricultural Production Service, University of Tennessee PB737 (available at http://www.utextension.utk.edu/publications/pbfiles/pb737.pdf).

San Joaquin Delta, by Glenn Hoffman.⁴ ⁴ Hoffman, Glenn. J. 2010. Salt Tolerance of Crops in the Southern Sacramento-San Joaquin Delta. Pp. 51-56. -3-

TESTIMONY OF DAVID A. GOLDHAMER, PH.D

MSS Exhibit 4A

Curriculum vitae

Name:

David Goldhamer

Title:

Water Management Specialist

Department of Land, Air, and Water Resources

University of California, Davis

Contact Information: Kearney Agricultural Center

9240 South Riverbend Avenue

Parlier, CA 93648 Phone: 559-903-3355 Fax 559-646-6593

Email: dagoldhamer@ucdavis.edu

Degrees:

B.S., Soil and Water Science, UC Davis, 1971

M.S., Water Science, UC Davis, 1974 Ph.D., Soil Science, UC Davis, 1980

Institution/Location: Kearney Ag. Center, 9240 S. Riverbend Ave. Parlier, CA 93648

Research Statement:

There continues to be high demand for information on optimizing irrigation for California's horticultural and agronomic crops. It's clear that while weather-induced droughts will continue to be a periodic problem, institutional-related restrictions in water supply due to demand from municipal and environmental interests must also be addressed. My applied research program deals with developing information on regulated deficit irrigation (RDI). This technique purposely stresses plants at stress-tolerant periods of the season in order to both reduce the consumptive use of water and not lessen but rather possibly enhance grower profit by improved fruit quality. It is a true savings of water. Additionally, I've developed information on using plant-based electronic sensors and thermal data from aerial images to detect water stress in order that RDI be more precisely imposed.

International Experience:

TURKMENISTAN

1998 Flood Irrigation/Water Control/Water Users Groups. Charchow, Turkmenistan, USAID/ACDI.

MACEDONIA

1994 Potential of Drip Irrigation in Macedonia. Skopje, Macedonia, USAID/ACDI. 1996 Adoption of Drip Irrigation in Macedonia. Bitola, Macedonia, USAID/ACDI.

International Invited Presentations

- 1995 Curso International de Riego. Chillan, Chile.
- 1995 Curso International de Suelo, Riego, y Nutricion. General Roca, Argentina.
- 1996 Agritech. Tel Aviv, Israel
- 1997 El Gran Debat de L'Augua. Lleida, Spain
- 1998 Olives Australia Expo. Hunter Valley, NSW, Australia.
- 1999 El Cultivo del Olivo in el Norte de Mexico. Caborca, Mexico.
- 1999 3rd International Symposium on Irrigation of Horticultural Crops. Lisbon, Portugal
- 1999 International Olive Congress. Sevilla, Spain.
- 2003 Australia Fresh Fruit Growing Company Workshop, Melbourne, Australia
- 2005 5th International Symposium on Irrigation of Horticultural Crops. Mildura, Australia

PUBLICATIONS RELEVANT TO IRRIGATION AND WATER MANAGEMENT

- Goldhamer, D.A. and B. Faber. Irrigation in UC Citrus Production Manual. L. Ferguson (ed.). (In Press)
- Goldhamer, D.A. 2008. Irrigation management <u>in</u> UC Pistachio Production Manual. L. Ferguson (ed.). 5th edition. Chapter 13 pages 108-123.
- Iniesta, F., L. Testi, D.A. Goldhamer and E. Fereres. 2008. Quantifying reductions in consumptive water use under regulated deficit irrigation in pistachio (Pistacia vera L.). Agricultural Water Management 95(7): 877-886
- Testi, L., D. A. Goldhamer, F. Iniesta and M. Salinas. 2008. Crop water stress index is a sensitive water stress indicator in pistachio trees. Irrigation Science 26(5): 395-405.
- Goldhamer, D.A., M. Viveros, and M. Salinas. 2006. Regulated deficit irrigation in almonds: effects of variations in applied water and stress timing on yield and yield components. Irrigation Science 24:101-114.
- Goldhamer, D.A. and Beede, R.H. 2005. Effects of water stress on olive tree performance in Olive Production Manual. (2nd edition). S. Sibbett and L. Ferguson (eds.). UC-DANR Publication 3353, pp. 71-74.
- Beede, R.H. and D.A. Goldhamer. 2005. Olive Irrigation Management in Olive Production Manual (2nd edition). S. Sibbett and L. Ferguson (eds.). UC-DANR Publication 3353, pp. 61-69.
- Goldhamer, D.A. 2005. Irrigation management <u>in</u> Pistachio Production Manual. L. Ferguson (ed.). 4th edition. Pages 103-128.
- Goldhamer, D.A. and E. Fereres. 2004. Irrigation scheduling of almond trees with trunk diameter sensors. Irrigation Science 23:11-19.

- Goldhamer, D. A. and R.H. Beede. 2004. Regulated deficit irrigation effects on yield, nut quality and water-use efficiency of mature pistachio trees. J. Hort. Sci. and Biotech. 79(4):538-545.
- Fereres, E. and D.A. Goldhamer, D. A. 2003. Suitability of stem diameter variations and water potential as indicators for irrigation scheduling of almond trees. J. Hort Sci and Biotech. 78(2):139-144.
- Goldhamer, D.A., E. Fereres, and M. Salinas. 2003. Can almond trees directly dictate their irrigation needs? California Agriculture 57(4):138-144.
- Goldhamer, D.A. 2003. Irrigation Scheduling with Plant Indicators: Field Applications in Encyclopedia of Water Science. Marcel Dekker, Inc. pp. 512-518.
- Goldhamer, D.A. 2003. Irrigation Scheduling with Plant Indicators: Measurement <u>in Encyclopedia of Water Science</u>. Marcel Dekker, Inc. pp. 519-522.
- Fereres, E., D. A. Goldhamer, L. R. Parsons. 2003. Irrigation water management of horticultural crops. HortSci. 38(5): 1036-1042.
- Girona, J, M. Mata, E. Fereres, D. A. Goldhamer, and M. Cohen. 2002. Evapotranspiration and soil water dynamics of peach trees under water deficits. Agricultural Water Management 54:107-122.
- Goldhamer, D.A., T.J. Michailides, and D.P. Morgan. 2002. Buried drip irrigation reduces fungal disease in pistachio orchards. California Agriculture 56(4):133-138.
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MSS Exhibit 4B

												Assuming		Assuming
												May 1 to		May 1 to
				Seasonal	Yearly	Contribution		Net	Ac		Seasonal	Sep 2 Silage	Net	Sep 2 Silage
Grower; Parcel Crop	Crop	Planting	Harvest	Potential	Effective	oľ	Leaching	Irrigation				Total	Irrigation	Total
Acreage SJC		Date	Date	Consumptive	Rainfall	Perched	Requirement	. Requirement**			ive		Requirement****	* Irrigation
				Use*	Corn**	Water***	Corn***	Corn***		from DWR	Use*	3		Requirement
				(inches)	(inches)	(Inches)	(inches)	(inches)		acres)	(acre ft)	(acre ft)	(acre ft)	(acre ft)
Pak and Young Silage Com	Silage Com	Apr 15	5 Jul 13			0 1.7			12.3	15			15.	4.
40 acres	Silage Com				2 6.0	0 2.3	3 4.6		19.5	15	29.0		24.	4.
	Silage Com		l Sep 2			0 2.3			19.2	15	28.6		24	0.
	Grain Corn	May 1		10 25.5	5 6.0	0 2.6	5 5.1		22.1	15	31.9	63.5	27.6	.6 58,4
30 acres	Tomatoes		L Aug 31			0) 5.6		27.5	15	34.9		34	4.
Pak and Young Alfalfa Scenario 2 25 acres	Alfalfa	Jan 1	l Dec 31	11 53.5	6.0	0 8.0	0 10.7		50.1	25	111.4	111.4	104.5	.5 104.5
Pak and Young Safflower Scenario 3 25 acres	Safflower	Apr 1	1 Jul 31	31 20.5		6.0 2.1	1 4.1		16.6	25	42.8	42.8	34.6	.6 34.6

* Based on the daily 10 year mean (2000-2009) of reference crop water use (ETo) provided by the Manteca (No. 70) automated CIMIS weather station and published crop coefficient values (Kc). See individual crop sheets.

***Estimated from published rock zone depths for different crops and assuming perched water located at about 4 ft depth.

***Estimated assuming a desired leaching fraction of 20%.

***Estimated assuming a desired leaching fraction of 20%.

***Estimated assuming a desired leaching fraction of 20%.