## Proposed Cease and Desist Order Hearing

Check one of the following:

|  | Gallo Vineyards, Inc. |
| :--- | :--- |
|  | Mark and Valla Dunkel |
|  | Mussi et al. |

scheduled to commence
May 5, 2010
Exhibit Identification Index
Modesto Irrigation District, State Water Contractors,
PARTICIPANT: and San Luis \& Delta-Mendota Water Authority

| Exhibit <br> Identification <br> Number | Exhibit Description | Status of Evidence |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Introduced | Accepted | By Official <br> Notice |
| MSS 1 | Testimony of Stephen R. Wee |  |  |  |
| MSS 1A | Wee Statement of Qualifications |  |  |  |
| MSS 1B | Chain of Title Summary |  |  |  |
| MSS 1C | Map \#131-170-03-C |  |  |  |
| MSS 1D | Map \#131-170-03-E |  |  |  |
| MSS 1E | Map \#131-170-03-F |  |  |  |
| MSS 1F | April 28, 1891, Deed |  |  |  |
| MSS 1G | Map \#131-170-03-G |  |  |  |
| MSS 1H | November 18, 1925, Agreement |  |  |  |
| MSS 1I | January 20, 1925, Deed |  |  |  |
| MSS 2A | Sequencing Map 1 |  |  |  |
| MSS 2B | Sequencing Map 2 |  |  |  |
| MSS 2C | Sequencing Map 3 |  |  |  |
| MSS 2D | Sequencing Map 4 |  |  |  |
| MSS 3 | Testimony of Philip Johnson |  |  |  |
| MSS 3A | Johnson Statement of Qualifications |  |  |  |
| MSS 3B | August 1937 aerial photograph |  |  |  |

## Proposed Cease and Desist Order Hearing

Check one of the following:

|  | Gallo Vineyards, Inc. |
| :--- | :--- |
|  | Mark and Valla Dunkel |
|  | Mussi et al. |
|  | Yong Pak and Sun Young |

## scheduled to commence <br> May 5, 2010

Exhibit Identification Index
Modesto Irrigation District, State Water Contractors,
PARTICIPANT: and San Luis \& Delta-Mendota Water Authority

| Exhibit <br> Identification <br> Number | Exhibit Description | Status of Evidence |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Introduced | Accepted | By Official <br> Notice |
| 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 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
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|  |  |  |  |  |

## PROOF OF SERVICE

I Gilberto J. Castro declare as follows:
I am over 18 years of age and not a party to the within action; my business address
is 400 Capitol Mall, Suite 1800, Sacramento, California, I am employed in Sacramento County, California.

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: RUDY MUSSI, TONI MUSSI AND LORY C. MUSSI INVESTMENT LP (MIDDLE RIVER) - 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.


## Service List

| RUDY MUSSI, TONI MUSSI AND LORY C. MUSSI <br> INVESTMENT LP <br> c/o John Herrick, Esq. <br> 4255 Pacific Avenue, Suite 2 <br> Stockton, CA 95207 <br> jherrlaw@aol.com <br> c/o Dean Ruiz, Esq. <br> Harris, Perisho \& Ruiz <br> 3439 Brookside Road, Suite 210 <br> Stockton, CA 95219 <br> dean@hpllp.com | DIVISION OF WATER RIGHTS PROSECUTION <br> TEAM <br> c/o David Rose <br> State Water Resources Control Board <br> 1001 I Street <br> Sacramento, CA 95814 <br> DRose@waterboards.ca.gov |
| :---: | :---: |
| CENTRAL DELTA WATER AGENCY <br> c/o Dean Ruiz, Esq. <br> Harris, Perisho \& Ruiz <br> 3439 Brookside Road, Suite 210 <br> Stockton, CA 95219 <br> dean@hpllp.com | SOUTH DELTA WATER AGENCY <br> c/o John Herrick <br> Attorney at Law <br> 4255 Pacific Avenue, Suite 2 <br> Stockton, CA 95207 <br> jherrlaw@aol.com <br> c/o Dean Ruiz, Esq. <br> Harris, Perisho \& Ruiz <br> 3439 Brookside Road, Suite 210 <br> Stockton, CA 95219 <br> dean@lhpllp.com |
| SAN JOAQUIN COUNTY AND THE SAN JOAQUIN COUNTY FLOOD CONTROL \& WATER <br> CONSERVATION DISTRICT <br> c/o DeeAnne M. Gillick <br> Neumiller \& Beardslee <br> P.O. Box 20 <br> Stockton, CA 95201-3020 <br> dgillick@neumiller.com <br> tshepard@neumiller.com | STATE WATER CONTRACTORS <br> c/o Stanley C. Powell <br> Kronick, Moskovitz, Tiedemann \& Girard 400 Capitol Mall, 27th Floor <br> Sacramento, CA 95814 <br> 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 |



## MSS Exhibit 1

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Kenneth Petruzzelli, State Bar No. 227192
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P.O. Box 9259

Chico, California 95927
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Facsimile: (916) 446-4535
Attorneys for SAN LUIS \& DELTA-MENDOTA
WATER AUTHORITY

BEFORE THE CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Draft Cease and Desist Order No. 2009-00XX-DWR Against Rudi Mussi, Toni Mussi and Lory C. Mussi Investment LP

My name is Stephen R. Wee and I am a principal with JRP Historical Consulting, LLC. In this position, I have served as a consulting historian for major historical research investigations covering a wide range of topics, including services as an expert historian in legal cases involving pre-1914 appropriative water rights, riparian water rights, historic inland navigation, and other
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) 131-170-03 (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 to G. D. Roberts Certificate of Purchase No. 2864 and that 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 in 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, including and all of the lands in Certificate of Purchase No. 2864 on Roberts Island, including the Parcel.

On January 15, 1877, J.P. Whitney transferred the Parcel to Morton C. Fisher as part of a tract of land in Upper and Middle Roberts Island ("1877 Tract"). See MSS Exhibit 1D. As a result of that transfer, the 1877 Tract remained contiguous to Burns Cutoff, the San Joaquin River, and the Middle River, but was no longer contiguous to Whiskey Slough.

On April 28, 1891, J.R. the Parcel was transferred to Joseph Vasquez as part of a 149.5 acre piece of land ("1891 Tract"). See MSS Exhibit 1E. As a result of that transfer, the 1891 Tract was no longer contiguous to Burns Cutoff, the San Joaquin River, and the Middle River. The deed for the transfer of the 1891 Tract contains no language that preserved riparian water -2-
rights. See SMS Exhibit 1F. The deed for the transfer of the 1891 Tract 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."

From about April 28, 1891, to March 16, 1916, the 1891 Tract changed ownership multiple times.

The Parcel's current boundaries result from a transaction dated November 6, 1930. MSS Exhibit 1G. The Parcel changed ownership multiple times between 1930 and 2010. According to records of the San Joaquin County Recorder, the current ownership of the Parcel is Rudy Mussi (22.5 percent), Toni Mussi (22.5 percent), Lory C. Mussi ( 22.5 percent), Victoria Mussi ( 22.5 percent), Ann Marie Lagno (3.33 percent), Wendy Lagno (3.33 percent), and Jessica Sandelius (3.33 percent).

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

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 or any evidence indicating the Parcel had been irrigated prior to 1914. The title chain includes a November 18, 1925, agreement between Alice M. Woods, I.N. Robinson, Josephine V. Jones, and John Vazquez (as owner of the 149.5 acre parcel). See MSS Exhibit 1H. On January 20, 1925, a deed was recorded for land that was the subject of that agreement. See MSS Exhibit 1I.


# 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 (19971999), 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, 1840s1920s (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,

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, 2008present.

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 pre1914 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, Pre1914 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.

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## MEMBERSHIPS

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| INSTRUMENT DATE | DATE RECORDED | GRANTOR | GRANTEE | DOCUMENT TYPE | DOCUMENT\# | MAP \# |
| 6/7/1999 | 6/16/1999 | Milton Joseph Welser Revocable Trust, Milton Joseph Welser, Trustee | Rudy M. Mussi and <br> Toni Mussi (husband and wife) and Lory C. Mussi and Victorian Mussi (husband and wife) | Grant Deed | 99078329 |  |
| 1/3/2001 | 1/19/2001 | John Phillip Lagno | Wendy Lagno | Court Order <br> Determining <br> Succession to <br> Real Propery | 2001-007744 |  |
| 4/2/2003 | 12/14/2005 | Paul Lagno | Jessica Sandelius | Order | 2005-311706 |  |

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 belchifife to John Vesquez and Josephine V. Jones, said 150 acres being situate in 3ecticn 27 .
 Land belonfing to I. I. Roulnson, seid 106 acres beiri situate in Secitons an and 34, Toinship 1 North, Range 5 East. $\therefore$, D. 3. \& $L$,

That in the construetion of suid irripation diteh unic the instailailon o: stic pump the parties hereto have paid for the same ir. the roliorine: proportions, to-ait: allee i., Focde 1000/1258ths; John Vasquez and Josuphine V. Joncs 150/1258tis; uni I. : i. iioisnson 10ejiesaths.
 or sold pioce of land so segizired from Christine Beiluomini, or suij putu ind of atid ditch in the proportions above set lorth, enc tilit as to the proporilons of the parias or tice seoond part, the seid party of the rizst purt holds the title thereto in trust for lina stid puities or the second pert in the scild proportions.

It 15 fusther agried betueen the po:ties ierete thut in orier tu jubjutt fite lancs or I.fi。 Robinson the said irrigation ditch hus been constricted over a portion or the lunas delonalug to the party or the first port uns that the seid $I$. $K$. Robinson, hiv heile, successors and assigns, shall forever have the right to use the suid diten so constructed over tise jand or the party of the illat part ros the purpose of irrigatine his sadd landa.

It is further understood and egreed thet in order to irricate ti:e lancs of John Vastuez and Josephine $V$. Jones the said irpigation ditch hus been constracted over a portion oi land belonge Ing to ilice H. Hoods and also over a portion on lend belonging to I. N. Noinison end it is ogreed betreen the purties hereto that the sadd John Veguer and Josephine V. Jones, their heira, auccessors and assi:ns. shall forever bave the right to use the aeid irrifation ditch so constructud ovar the lands of Alice K. Foods and I. N. Rovinson for the purpose of irriguting the gald lands of John Tarquez and Jos-phine V. Jonew

It is further understood and agreed that in order to irrigate the lands of the otrty of the rirst part the seid Irrigation ditch has been constructed over a portion of lana belonaing, to 1. K. Robinson end elso a portion thereor on land belonging to John Vesquez end Josephine V. Jones and that the soid party or the flpat part, her heirs, successors and essiens, shall farever have
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It is the intention of this agreomont that the aeid pumpif plont and irrieution syster ban been construsted ror the purpode of irrigating tre lends of the rcspective parties hereto in the mepective areage sove sot forth and ean of the parties hereto gerees with all of the other partioe that sald irmigation syaion shall forever be used by the respective partion hareto for the prrpoee of Irrigating the lands of acid parties in the amount as to acres above set forth.

It is furthor egread between the paruies hereto that ali or the partiaE to thic acrepangt

the eonstruation of auld irfigetion ditch una that the expeneas of maintaigine the ame shali in the future be burne by the parties hereto in the proportions hereinbefte etrorth; that 1s to my. Alioe li. Woods shail pay $2000 / 1858 t h$ of the cost or maintaname and operation of meid irrigation syetem; John Veaquez and Jowephin V. Jones shall gay 150/1258ths or maid oost of maintenance and oreration of stid impifation systom; and I N. Roíineon ahall pay 108/1258ths of said cost of maintenmece enti operetion of said irrigution system:

It is the intention of this afreenent thet ell or tio psities hereto shell have the opportunity of irripating their respective lands and. ir tise o:casion remires, 6 flooding or gait lands, and in vier of the large per centae of acreape belongine to the fert; of tic Idrat part es compered witithe acreage of the partles of tio scond part, it is antizifated between the parties heroto that the party of the rirst purt mill use suid irperation aitch and said puping plant to much greater oxtent than the partics o: the second part. and in order that the parties of the second part shall have tize opportunity of racodipe, their abid lands it is agreed that should I. N. ifobinson or Jotn Vasquez ani Josephine fig dones desire to ricod their reapective paroels of land, the gart; so desirir: to flood ins saif laci shell five notice to the party of the rirst part in writine at least twenty diys barore the time that said party
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 the right to use the entire flow of said irrifation ilteh ror a period of not to exceed tan days, for the purpose of rloodins seid lanas.

IN view of tile fact ti:at the parties hereto have not since tie inctillajion of saiu pump and said 1rrigation ditch attempted to irriçate said lands ciarini the seme zeasin, it cunnot now be forsean whether or not the flow iron said purpa so instelled will be surifleient to ifrifete the lands or the respective partios at tife sare ti:e and it in argeod between the perties heseto thet in the event said rlovago fron akid pumpe and suid diteh is not suefisient for all the perties to irrigete the's said lends at the sa:-e tine, then wif in such evcist the parties or the seoond part or any or them, s!:oulit they or any oi then desirc tue exclisive ise oí sald water for irrigating their seld lands at any time shall ive to tho party of the first part written notice at least ten days bafore the tire they so desire to irrigate their said lands. and, at the expiration of sula ten deys; the party so eiving suid nutice shall have the use or


It is the intention or this agraenent tinat sil of thr partien hereto shall at all timen comoperate with each and all of tie other parties. 1 n order the: the lands of oach oi the parties to this agreement may be irrigaied or rloodod, as roquired, in manner that will do no injustice and work no hardship to any of the partles beroto, and in the distribution of add water so used for irrisation of floodine, the parties hereto agree at all times to co-operate with each other, to the eno that each and all or the parties hereto may receive cs much benefiv from and irgigation oystem an is possibic.

It 1s further ugreed between all or the parties hereto that sald parties will oztoblish sueh drainege aystom as may be neoeseary to drain ceid lands and that they will bear gaid erpences of construating such cisuinege system in the following proportions: the party of the firet part shail pay 600/8s8the thereof: I. N. Robinson shall pay 10R/858the thereof; and John Vesquas and Josephine V. Jonea ghai pay $150 / 858$ ths thereot. It is further underatood and egrond that an to tho land orned by the party of the first part and lomoma as Honker Lake and agsogating apprcalmately 400 acrea, it will be meceasary for the party of the ilrat part $\$ 0$ entublish cone other Eystum of dyelning eaid property and that tho coat at ingtailing Arigimep on mad fomber Loky proyarty shell be borne by the party of the flret part eolely.

The party of the ifrst part iurthor agroes that in the drainage of the landa of the partien hereto it may be necessary to drain a pert or all of asid irrigation waters through what is known es the moods Irrigation Diatriot Syatom und in such ovent the party or the ilist part will arrasge so that the parties of the second part mey so drain their lands through sald woods Irrigation District System; the parties of the second nert agroeine to pay the proportionate sost that their lande may beif to the cost of drainage of tho ontire eareage af the vaode Irrigstion Systom: that $i s$ to sey. the oost ot drainage as to the parties of the eecond part throurh tie iuods lialgarion visirict s:iste: shall be the seme amount por acre as that peid by owners or property for drainage in said Toods Irrigation District System

It is agreed between the partie: hereta that the drainage diteh arid systam shall be conEtructed so soon as is practicable in criler that it :ag: be completed not tater than :'arch 1,1926 ; and it is further agreed by all the parties that cherles Nalsh shall act tar all the perties horeto in directing the construction or said diteh.

If \#ITE:SS mPREOF, the parties hereto have heranto set their haras and seals tie day and year sirst above miften.

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| :---: | :---: |
| John Vasquez | (SE.L) |
| Jompridne $\mathrm{V}^{\text {d }}$ Jones | (SEGL) |
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county of Sen Jobexin s各。
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 Fees: $\ddagger 3.80$ Jnh D. Finney, Recorder.


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\text { No. } 11,223
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Deceased.
jecree of simal cistrictition.

Nellie b . Cory, the duly appointed, qualiriad and acting execiatrix of the luzt $\operatorname{mill}$ and
 petitiona thercin rrayin: for the :inal aistribution of said eatate; and

Said mater coming on regularly for hearing on this cay, in open Superior Oourt, it havine Deen inpet proven to the catisraction or this court that the clerk of the court by virtue or the a: ;hority in him rosted, eppointed this day as the day pcr the hearing of gaid patition bnd gave due and logal notioe of the time and place of hearing thereot, tor the tim, in the marner, and in all respeats an required by law ond

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## MSS Exhibit 2A





## MSS Exhibit 2C



## MSS Exhibit 2D



## MSS Exhibit 3

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BEFORE THE CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Draft Cease and Desist
Order No. 2009-00XX-DWR Against Rudi
Mussi, Toni Mussi and Lory C. Mussi
Investment LP

## TESTIMONY OF PHILIP JOHNSON

My name is Philip Johnson, I am a supervising engineering geologist at Cotton, Shires and Associates. I have over 19 years experience in the field of engineering geology, working on projects throughout California, including geologic investigations involving slope stability,
seismic hazards, sea bluff retreat, groundwater, sedimentary geology, and other geotechnical 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. 131-170-03, on Roberts Island in San Joaquin County, California ("Parcel") taken from 1937 to 2000.

The August 1937 aerial photograph shows that, at that time, 98.7 percent of the Parcel was idle agricultural land that was not irrigated; the remainder was disturbed land that was not cultivated. MSS Exhibit 3B.

The May 1940 and July 1957 aerial photographs show that at those times, 98.7 percent of the Parcel was planted with row crops and irrigated; the remaining 1.3 percent was disturbed but not cultivated. MSS Exhibits 3C and 3D.

The June 1963 aerial photograph shows that, at that time, 98.7 percent of the parcel was fallow and not irrigated. MSS Exhibit 3E.

The August 1963 and May 1968 aerial photographs show that, at those times, 98.7 percent of the Parcel was planted with row crops and irrigated; the remaining 1.3 percent was disturbed but not cultivated. MSS Exhibits 3F and 3G.

The April 1985 aerial photograph shows that, at that time, 96.7 percent of the Parcel was idle agricultural land that was not irrigated; the remaining 3.3 percent was disturbed, but not cultivated. MSS Exhibit 3H.

The June 1987 aerial photograph shows that, at that time, 96.7 percent of the Parcel was planted with row crops and irrigated; the remaining 3.3 percent was disturbed, but not cultivated. MSS Exhibit 31.

The March 1993 aerial photograph shows that, at that time, 96.7 percent of the Parcel was idle agricultural land that was not irrigated; the remaining 3.3 percent was disturbed, but not cultivated. MSS Exhibit 3J.

The September 2000 aerial photograph shows that, at that time, 96.7 percent of the Parcel was planted with row crops which were recently harvested. 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

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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 46 st 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.

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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 42 nd 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


MSS Exhibit 3C


Mussi Investment
APN 131-170-03
May 1940

## MSS Exhibit 3D



Mussi Investment
APN 131-170-03
July 1957

## MSS Exhibit 3E




Mussi Investment
APN 131-170-03
August 1963


## MSS Exhibit 3H



## MSS Exhibit 3I



## MSS Exhibit 3J



Mussi Investment APN 131-170-03

March 1993

MSS Exhibit 3K


Mussi Investment
APN 131-170-03
September 2000

## MSS Exhibit 4

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BEFORE THE CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Draft Cease and Desist Order No. 2009-00XX-DWR Against Rudi Mussi, Toni Mussi and Lory C. Mussi Investment LP

TESTIMONY OF DAVID A. GOLDHAMER, Ph.D

My name is David Goldhamer, I am a retired Water Management Specialist and previously worked in the Department of Land, Air, and Water Resources at the University of California at Davis. I have over 30 years experience in the fields of soil and water science. My work includes investigating water management for crops, plant-water relations, regulated deficit
irrigation in California, water use requirements in response to sustained water deficits, and 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) - 2006 and 2007. My calculations are summarized in MSS Exhibit 4B.

I calculated the net irrigation requirements to be 187.2 acre-feet of water in 2006 and 2007 for corn and alfalfa.

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 corn and alfalfa in 2006 and 2007. I assumed the Parcel was planted in equal parts corn and alfalfa.

Total Crop Consumptive Uses: Total crop consumptive uses are based upon (1) the 10year mean reference crop water use values from the Manteca weather station available through the California Irrigation Management Information System ("CIMIS) program ${ }^{1}$, 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.

Perched Water: 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. ${ }^{3}$

Leaching Requirements: The leaching requirement was estimated assuming a desired leaching fraction of 20 percent, based on Salt Tolerance of Crops in the Southern Sacramento-
${ }^{1}$ CIMIS data is available online at: http://wwwcimis.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.

MSS Exhibit 4A

## Curriculum vitae

| Name: | David Goldhamer <br> Title: |
| :--- | :--- |
| Water Management Specialist <br> Department of Land, Air, and Water Resources <br> University of California, Davis |  |
| Contact Information: |  | Kearney Agricultural Center | 9240 South Riverbend Avenue |
| :--- |

## 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.
$19993^{\text {rd }}$ International Symposium on Irrigation of Horticultural Crops. Lisbon, Portugal
1999 International Olive Congress. Sevilla, Spain.
2003 Australia Fresh Fruit Growing Company Workshop, Melbourne, Australia
$20055^{\text {th }}$ 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 in UC Pistachio Production Manual. L. Ferguson (ed.). $5^{\text {th }}$ 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

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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 in Encyclopedia of Water Science. 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.

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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.

Goldhamer, D.A., M. Salinas, C. Crisosto, K.R. Day, M. Soler, and A. Moriana. 2002. Effects of regulated deficit irrigation and partial root zone drying on late harvest peach tree performance in Proceedings of the $5^{\text {th }}$ International Society on Peach. Acta Hort 592, p. 343-350.

Goldhamer, D. A., M. Salinas, M. S. Anaya, and A. M. Elvira. 2001. Peach trees perform similarly despite different irrigation scheduling methods. California Agriculture 55(1):25-29.

Doster, M. A. T. J. Michailides, D. A. Goldhamer, and D. P. Morgan. 2001. Insufficient spring irrigation increases abnormal splitting of pistachio nuts. California Agriculture 55(3): 28-31.

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Goldhamer, D. A. and M. Salinas. 2000. Evaluation of regulated deficit irrigation on mature orange trees grown under high evaporative demand. Proceedings of the International Society of Citriculture IX Congress. Orlando, FL. December 3-7, 2000: 227-231.

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Fereres, E., D. Goldhamer, M. Cohen, J. Girona, and M. Mata. 1999. Continuous trunk diameter recording can reveal water stress in peach trees. California Agriculture 53(4):21-25.
Goldhamer, D.A. and M. Salinas. 1999. Black Mission fig production responds favorably to relatively heavy irrigation. California Agriculture 53(6).

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MSS Exhibit 4B


* 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.
**Based on the 10 year mean ( $2000-2009$ ) of total seasorial rainfall provided by the Manteca (No. 70 ) automated CIMIS weather station and then assuming that effective rainfall is $50 \%$ of total. ****Estimated from published root zone depths for different crops and assuming perched water located at about 4 ft depth.
*****Sum of potential consumptive use minus effective rainfall minus the contribution of perched water plus the leaching requirement. $50 \%$ in each

