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2 BEST BEST & KRIEGER LLP
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3 San Diego, CA 92101
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5 Attorneys for Defendant
RANCHO CALIFORNIA WATER
6 DISTRICT

7
8 UNITED STATES DISTRICT COURT
9 SOUTHERN DISTRICT OF CALIFORNIA

10
11 UNITED STATES OF AMERICA,
12 Plaintiff,
13 v.
14 FALLBROOK PUBLIC UTILITY
DISTRICT, et al.,
15 Defendants.

Case No. 51-cv-01247-GPC-RBB
Judge: Hon. Gonzalo P. Curiel

NOTICE OF MOTION AND MOTION
TO APPOINT REPLACEMENT
WATERMASTER FOR SANTA
MARGARITA RIVER WATERSHED

Date: November 18, 2016
Time: 1:30 p.m.
Dept.: 2D

1 TO ALL PARTIES AND INTERESTED PERSONS:

2 PLEASE TAKE NOTICE that on November 18, 2016, at 1:30 p.m., or as
3 soon thereafter as the matter may be heard in the above-entitled Court, located in
4 Courtroom 2D (2nd Floor – Schwartz), Suite 2190, 221 West Broadway, San
5 Diego, California, 92101, Defendant Rancho California Water District, on behalf of
6 the Santa Margarita River Watershed Watermaster Steering Committee (“Steering
7 Committee”), which is made up of the United States of America, Fallbrook Public
8 Utility District, Rancho California Water District, Eastern Municipal Water
9 District, Metropolitan Water District of Southern California, Pechanga Band of
10 Luiseño Mission Indians, and Western Municipal Water District, will move the
11 Court for an order (1) appointing Brian J. Brady of Brian J. Brady and Associates,
12 or alternatively Michael J. Preszler of ECORP, or alternatively Robert C.
13 Wagner/David Shaw of Wagner & Bonsignore & Balance Hydrologics, Inc., as the
14 Watermaster for the Santa Margarita River Watershed (“Watermaster”) to fulfill the
15 roles and responsibilities set forth in the Order for the Appointment of a
16 Watermaster; Powers and Duties [Doc. No. 4809], and as specified in subsequent
17 instructions and orders of the Court, upon the retirement of the current Watermaster
18 Charles W. Binder, and (2) directing the Steering Committee to complete
19 negotiations of an agreement with the new Watermaster.

20 This motion will be made on the grounds that the Steering Committee was
21 appointed by the Court in 1989 as set forth in the Order for the Appointment of a
22 Steering Committee [Doc. No. 4805], and its duties and responsibilities include, but
23 are not limited to, recommending to the Court a candidate for the position of
24 Watermaster. The Steering Committee has appointed a Watermaster Selection
25 Committee, which conducted the selection process and which has designated three
26 candidates to be considered for the appointment as the new Watermaster upon the
27 retirement of the current Watermaster Mr. Binder. The three finalists, in order of
28

1 preference, whose resumes are attached hereto collectively as Exhibit "A," are as
2 follows:

- 3 1. Brian J. Brady of Brian J. Brady and Associates
- 4 2. Michael J. Preszler of ECORP
- 5 3. Robert C. Wagner/David Shaw of Wagner & Bonsignore &
6 Balance Hydrologics, Inc.

7 Defendant Rancho California Water District, on behalf of the Steering
8 Committee, respectfully requests that Court enter the proposed order attached
9 hereto as Exhibit "B," selecting Mr. Brady as the next Watermaster and authorizing
10 the Steering Committee to complete negotiations of an agreement with him. The
11 appointment of the current Watermaster Mr. Binder shall cease upon the effective
12 date for Mr. Brady to commence serving as the new Watermaster.

13 **PLEASE TAKE FURTHER NOTICE that pursuant to Civil Rule**
14 **7.1.e.2, any opposition to this motion must be filed and served no later than**
15 **November 4, 2016.**

16 This motion will be based on this Notice of Motion and Motion, the exhibits
17 thereto, the Memorandum of Points and Authorities, served and filed herewith, and
18 the pleadings and papers filed herein.

19
20 Dated: September 30, 2016

BEST BEST & KRIEGER LLP

21
22 By: /s/ James B. Gilpin
23 JAMES B. GILPIN
24 Attorneys for Defendant
25 RANCHO CALIFORNIA WATER
26 DISTRICT

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EXHIBIT A

EXHIBIT A-1

Brian Brady

EDUCATIONAL BACKGROUND

Doctor of Education - Organizational Leadership - 2004
Pepperdine University's Graduate School of Education & Psychology; Los Angeles, CA

Master - Business Administration - 1976
University of Southern California's Marshall School of Business; Los Angeles, CA

Bachelor of Science - Engineering - Water Resource Management - 1971
Loyola Marymount University; Los Angeles, CA

CERTIFICATION

Registered Professional Civil Engineer - CA

SUMMARY OF EXPERIENCE

2011 to Present **Fallbrook Public Utility District** (San Diego, CA)
General Manager

Reporting to a five-member Board of Directors, responsible for operations of the Fallbrook Public Utility District (FPUD), which provides water, wastewater and reclamation services to north San Diego County. Partnering with Camp Pendleton Marine Base to develop critically needed local water supplies. Represent FPUD on the Board of Directors of the San Diego County Water Authority. Also serving as the Governor's appointee to the Colorado River Board of California.

2008 to 2011 **Imperial Irrigation District** (Imperial, CA)
General Manager

As the CEO appointed by a five-member elected board of directors, provided executive leadership to the IID electric and water operations within southern California's Imperial and Coachella Valleys. Annual operating and capital budgets exceed \$850 million, with a staff of 1,400. Responsible for implementing the landmark Qualification Settlement Agreement (QSA) among the IID, Metropolitan Water District

and the San Diego Water Authority. Within energy operations, positioned the IID to support and promote the Imperial Valley as the center of renewable energy development in California through transmission expansion, project partnerships and new technology development.

2003 to 2008

Rancho California Water District (RCWD) (Temecula, CA)
General Manager

Reporting to a seven-member Board of Directors, was responsible for operations of the Temecula-based district's water, wastewater and reclamation divisions. Continued rapid expansion in the municipal, industrial and agricultural business segments during 2003-2004 fiscal year resulted in a nearly 14 percent increase in overall system demands. In the spring of 2004, in conjunction with major new and refunding bond issues, directed the presentations to the key bond rating agencies, with a resulting district upgrade from A- to AA. Lead an aggressive integrated water resources strategy to meet system build out forecasts.

2000 to Present

Brian J. Brady & Associates (Temecula, CA)
Principal

Independent management consulting practice, specializing in the asset valuation (including water rights) and strategic positioning of both public and private water utilities. Clients have included the Water Replenishment District of Southern California (WRD), the Inland Empire Utilities Agency, the Horizon Energy Group, Chevron Texaco, Atlantic Richfield, California Portland Cement, Vulcan Materials, Exxon Mobil, Municipal Water District of Orange County, the Central and West Basin Municipal Water Districts, and several venture capital investors.

1995 to 2000

Dominguez Services Corporation (Dominguez, CA)
Chairman, CEO

As authorized by the Company's Board of Directors, was responsible for overall corporate policy, strategy and operations of Dominguez Services Corporation's utility and non-utility business units. In the first thirty-six months with the Company, expanded water utility operations into northern California and increased unregulated water brokering and subsidiary operations. In the same period, the Company's market capitalization rose by more than 250%, and annual shareholder returns averaged 33%. In November of 1998, completed merger negotiations with California Water Service,

- attaining the highest asset valuation of any U.S. investor-owned water or gas utility at that time.
- 1992 to 1995** **City of Anaheim, CA** (Population: 328,000)
Public Utilities Department
Assistant General Manager
- Directed the operation of the City's electric utility, with gross annual revenues of \$250 million. Responsible for electric integrated resource planning, acquisition and scheduling; demand side management; engineering functions; electric field construction; environmental services; commercial and industrial business development; and both electric and water system dispatch operations.
- 1983 to 1988** **Southern California Edison Company** (Southern California Cities, CA)
Manager, Energy Management
- Developed and marketed new electric load management programs and electric rate options to industrial and commercial customers. Assisted local governmental agencies in analyzing and economizing energy use. Responsible for developing and marketing end-use electro-technologies (the forerunner to Edison's "CTAC") to assist industrial and commercial customers in becoming more competitive in the marketplace.
- 1980 to 1983** **Southern California Edison Company** (Southern California Cities, CA)
Manager of Valuation
- Manager of department of engineers, accountants, and other technical staff providing economic, depreciation and cost of service studies; valuations and base data for rate cases. Served as expert rate case witness before federal and state regulatory commissions. As the company's Chief Valuation Engineer, certified to financial institutions the fair value of company operating assets and real estate for trust indenture purposes.

OTHER QUALIFICATIONS

ADDITIONAL GRADUATE LEVEL STUDIES: Massachusetts Institute of Technology, Stanford University, Western Michigan University, United States International University

ELECTED AND APPOINTED OFFICES:

Alternate, Board of Directors Colorado River Board of California (2015- present)
Member, Board of Directors Park Water Company (The Carlyle Group) (2013-present)
Member, Board of Directors San Diego County Water Authority (2011- present)
Member, Executive Committee California Transmission Planning Group (2009-2011)
Member, Board of Governors California Municipal Utilities Association (2009-2011)
Member, Board of Directors Large Public Power Council (2008-2011)
Member, Board of Directors Association of California Water Agencies (2010-2011)
Member, State Legislative Committee Association of California Water Agencies (2013- present)
Member, Federal Affairs Committee Association of California Water Agencies (2013- present)
Member, Board of Directors Southern California Public Power Authority (1992-1995; 2008-2011)
Member, Board of Directors Irvine Ranch Water District (1998-2004)
Member, Board of Directors Orange County Sanitation District (2001-2004)
Member, Board of Directors National Public Projects Coalition (2004-2008)
Member, Board of Directors Association of Groundwater Agencies (2000-2001)
Member, Board of Directors National Association of Water Companies (1997-2000)
Member, Executive Council California Water Association (1995-2000)
Member, Executive Committee Western Systems Power Pool (1992-1995)
Member, Executive Committee Western Systems Coordinating Council (1992-1995)
Member, Board of Directors National Fuel Cell Commercialization Group (1992-1995)

OTHER CREDENTIALS:

- Member, Phi Delta Kappa (international honor society in education)
- Instructor, Economics and Ethics, Graduate Business Program - University of La Verne (1986-1991)
- Demand-side Management Planning Advisor - Electric Power Research Institute (1987-1989)
- Lecturer - California Institute of Technology, Industrial Relations Center (1978-1982)

Current and Past Consulting Clients:

- Atlantic Richfield
- Borrego Water District
- California Portland Cement
- California Strategies, LLC
- Capistrano Acres Mutual Water Company
- Catalina Island Company
- Catalina Island Conservancy
- Central and West Basin Municipal Water Districts

- Chevron Texaco
- City of Avalon
- Conaway Preservation Group
- Empire Water Corporation
- Exxon Mobil
- Horizon Energy Group
- Inland Empire Utilities Agency
- Inland Valley Pipeline, LLC
- Integrated Resource Management, Inc.
- Irvine Ranch Water District
- Lehman Brothers Holdings, LLC
- Lewis Operating Corporation (Lewis Homes, Inc.)
- Morgan, Lewis & Bockius LLP
- Municipal Water District of Orange County
- National Water Research Institute
- ProLogis
- Rose Investments
- San Louis Rey Municipal Water District
- Sheppard, Mullin, Richter & Hampton LLP
- The Carlyle Group
- University of Southern California
- Upper San Gabriel Valley Municipal Water District
- Vulcan Materials Company
- Water Replenishment District of Southern California

Address: 37850 De Portola Road
Temecula, CA 92592

Telephone: **Home:** (951) 699-6636
Work: (760) 728-1125
Cellular: (951) 551-8933

Email: bjbassociates@aol.com

EXHIBIT A-2



July 11, 2016

ALLIANCE RESOURCE CONSULTING LLC
400 Oceangate, Suite 480
Long Beach, CA 90802
Attn: Sherrill A. Uyeda

VIA: EMAIL

RE: Santa Margarita River Watershed Watermaster

Dear Ms. Uyeda,

ECORP Consulting, Inc. (ECORP) is pleased to express interest in serving as the Santa Margarita River Watershed Watermaster. I will lead this effort and hold primary responsibility as the Watermaster and oversee all hydrologic/modeling/reporting technical work that could be carried out by other ECORP staff allowing for increased efficiency and cost effectiveness. The significant, complex and variable nature of the proposed undertaking caused me to carefully consider the comprehensive and multi-faceted nature of the Watermaster position. I contemplated if my interests, skills, and experience would be a proper fit for the position. I absolutely possess the leadership, impeccable integrity, and legal and technical experience, that would allow me to serve the interests of the Court and the Steering Committee as the Santa Margaria River Watershed Watermaster.

As shown in my attached resume, I have a long and proven track record as an advisor to complex water resources projects. My professional background has prepared me to serve as Watermaster to administer and enforce the provisions of the Modified Final Judgement and Decree and subsequent orders of the Court. Specifically, I provide the following strengths:

- ◆ **Technical Excellence.** I bring over 25 years of experience managing, evaluating and providing strategic advisory on water rights and water resources projects in California. I have directed and/or carried out technical aspects of major water right projects including hydrology, streamflow and watershed simulation modeling for many water projects and Water Availability Analyses. I have a deep appreciation and understanding of watershed management, watershed modeling, water rights, state and Federal legislation, and regulation concerning water rights and water quality.
- ◆ **High Consciousness.** I bring authentic and high minded leadership. My personal passion is to serve and lead diverse groups with divergent thinking to reach agreeable outcome in a harmonious manner. I am an intent listener, welcome and appreciate the value of competing stakeholders, possess strong leadership with intellectual humility allowing people to come together under authentic fearless leadership.

I encourage you to look carefully and thoroughly at my attached resume. I have been fortunate over my professional career to be able to lead complex and technically challenging water projects with competing stakeholders preparing me for the role of Watermaster. From a legal, technical, and leadership perspective, I cover all requisite areas without gaps.

Ms. Sherrill A. Uyeda

July 11, 2016

Page 2

Thank you for the opportunity to extend my interest and provide my resume. I am excited at the opportunity of supporting this very important undertaking and to hear your thoughts if this position might be a good fit. If you have questions or would like to discuss my interest and experience, please feel free to contact. I may be reached at the following: Michael Preszler, P.E., Strategic Water Advisor, ECORP Consulting, Inc., 2525 Warren Drive, Rocklin, California 95677, Phone: (916) 782-9100, Fax: (916) 782-9134, and Email: mpreszler@ecorpconsulting.com.

Sincerely yours,

A handwritten signature in black ink that reads "Michael J. Preszler". The signature is written in a cursive style with a large, stylized initial "M".

Michael J. Preszler, P.E.,
Strategic Water Advisor

Attachment(s)

Michael J. Preszler, P.E.

Strategic Water Advisor

Mr. Preszler is a Strategic Water Advisor with 25 years of California water resources consulting experience. He is a registered civil engineer with extensive experience with water rights investigations, water supply planning, water use and quality, regulatory compliance and preparation of water project CEQA/NEPA environmental documentation. He has led and participated in many comprehensive strategic water resources planning and analysis efforts covering a wide variety of water resource projects including surface and groundwater supply, water facilities, hydropower, and conjunctive use. He is skilled in all phases of planning and management of multi-disciplinary projects including economic, natural resources, water rights, regulatory compliance, permitting, litigation technical support, settlement negotiations, water accounting, political, social, and administrative concerns relating to the use and conservation of water. He is also experienced in water project simulation modeling, watershed hydrology, water rights determination and accounting, water and hydropower project economics and operation, water supply determination, runoff forecasting, and engineering feasibility investigations.

Education

B.S., Civil Engineering, California State University, Chico

Registrations, Certifications, and Affiliations

- Registered Professional Engineer, No. C55133
- California OES, Disaster Service Worker (SAP No. 63428)
- Mountain Counties Water Resources Association – Technical Advisory Committee
- American Society of Civil Engineers
- Association of California Water Agencies
- Western Snow Conference

Recent Presentations

- Association of Environmental Professionals (AEP), *“The Governor Speaks...and then what? Figuring out the role of Executive Orders for development and in CEQA documents”*, April 4, 2016.
- *“Upper Feather River Watershed Climate Change Workshop”*, August 21, 2015.
- El Dorado County Water Agency, *“Water Transfers and Opportunities”*, February 3, 2015.
- Sacramento Regional Water-Storage Forum, *“California’s Gold – Managing Our Most Valuable Resource”*, June 13, 2014.

Personal Information

- Self-aware, effective communicator, open, creative, authentic, respectful, positive, committed, enthusiastic, impeccable ethics and integrity, energetic and enjoy working with people on challenging issues.
-

Representative Water Rights Experience:

- **Water Rights Optimization Study.** Program Manager for the identification of options to increase water supply and power production and reduce operational costs through water rights amendments.
 - **Supplemental Water Rights Project.** Project Director and Engineering Lead carrying out the technical project development and CEQA Environmental Impact Report (EIR) for 40,000 acre-feet new water right application of water to meet projected population growth.
 - **Long-Term Warren Act Contract.** Project Director in processing Long-Term Warren Act Contract with the U.S. Bureau of Reclamation for 29,000 AF of transferred water rights.
 - **New CVP Water Service Contract.** Program Director in processing a new Central Valley Project (CVP) water service contract for diversion of up to 15,000 acre-feet of water annually.
 - **Tunnel and Spillway Modification.** Technical lead on development of proposed tunnel conveying water from Nacimiento Reservoir to San Antonio Reservoir to provide supplemental water.
 - **Joint Benefit Investigation Plan.** Project Manager of multi-agency and public process to explore potential ways to increase water supply and power generation (34 water rights options).
 - **Borel Hydroelectric Project.** Project Manager and Project Engineer for the water rights evaluation and preparation of the FERC Application for License Exhibit E Environmental Report.
 - **Permit 21112 Water Rights Application.** Project Engineer developing technical project alternative analyses and engineering studies of application for 17,000 acre-feet new water right.
 - **Pre-1914 Water Rights.** Assembled and compiled Pre-1914 water rights including water availability analysis submitted as evidence to the State Water Resources Control Board.
 - **Cosumnes River Environmental Water Rights Project.** Project Manager and Technical Lead performing water right feasibility analysis of project to provide supplemental water supply.
 - **Possible Reservoir Sites in the Crystal Basin.** Project Manager and Technical Lead for preliminary feasibility of water rights opportunities for possible reservoir sites in the Crystal Basin.
 - **Options to Increase Water Supply.** Project Manager and Technical Lead investigating range of potential options to increase water supply yield including new and amended water rights.
 - **Environmental Caucus/Mini-Water Forum.** Project Engineer collaboration with ad hoc group of environmental, political, and community representatives, on water right options to meet demands.
 - **Term 91 Impact on Water Supply Availability.** Project Engineer examining impact of inclusion of State Water Resources Control Board's standard permit Term 91 water supply availability.
 - **Long-Term Strategic and Short-Term Tactical Plan.** Project Manager for strategic planning effort considering short- and long-term water resource solutions to meet existing and future water demands including new water rights.
 - **Water Project Habitat Conservation Plan.** Project Manager carrying out hydrogeologic analysis and surface/groundwater simulation modeling to support the Habitat Conservation Plan.
 - **Water Right Change Petition.** Project Manager preparing water rights time extending and change petition to "true up" of water rights and existing project operations.
 - **Water Availability Analysis.** Project Manager developing a Water Availability Analysis to support new water right application.
-

Representative Water Planning/Permitting/Licensing/Environmental Review:

- **County-Wide Water Use Efficiency Strategic Plan.** Program Manager supporting Plan to ensure efficient use of water including programs and projects targeting reduction of agricultural irrigation and per capita water use in accordance with current law (SBX7-7) and beyond and create a coordinated approach to water conservation planning to facilitate securing additional supplies.
- **Integrated Regional Water Management Plan.** Project Manager for preparation of Climate Change Chapter of the IRWMP including Vulnerability Assessment Checklist.
- **Raley's Dock and Rice Mill Pier CEQA EIR.** Technical lead for environmental review and lead author for preparation of joint CEQA/NEPA document.
- **Hydroelectric Project Environmental Review.** Project Manager for agency and stakeholder consultation for a new hydroelectric project development on the Yuba River.
- **Hydroelectric Development Options Study.** Project Manager considering potential hydroelectric opportunities employing economic and financial analyses to identify viable projects.
- **Dam Outlet Emergency Repairs.** Project Manager and technical lead investigating operation of Caples Lake during and after the outlet emergency repairs.
- **Headwater Benefits.** Project Manager investigating the FERC headwater benefits associated with upstream project.
- **Water Supply Forecast Procedure.** Project manager for hydroelectric project water supply forecast procedure development.
- **Impacts on Water Supply and Socioeconomic Resources.** Project Director for quantitative socioeconomic impact evaluation of probable future impacts of a lacking water supply.
- **Hydroelectric Divestiture.** Manager of the hydrology and project operational constraints evaluation on the Divestiture of Pacific Gas & Electric Company's Hydroelectric Assets.
- **Real-Time Water Supply Forecasting.** Project Manager for real-time water supply forecasting for the California State Water Project and Department of Water Resources.
- **Hydroelectric FERC Relicensing.** Engineering and Operations team providing support for the ERC Alternative License Process for the Oroville – Thermalito Complex.
- **Emergency Temporary Water Supply Project.** Project Manager for design and implementation of a temporary water supply project to serve City of Banning and mutual water company.
- **Reservoir Expansion.** Technical lead determining water stage impact of raising the dam on Pardee Reservoir on Pacific Gas & Electric Companies upstream Electra Powerhouse and Highway 49 crossing.

Employment History

- 2012 to present ECORP Consulting, Inc., Strategic Water Advisor
 - 2006 to 2012 California Water Consulting, Inc., Founding Owner and President
 - 2002 to 2006 Mead & Hunt, Water Resources Department Manager
 - 1998 to 2002 MWH, Senior Water Resources Engineer
 - 1993 to 1998 Sierra Hydrotech, Water Resources Civil Engineer
-

EXHIBIT A-3

Wagner & Bonsignore

Consulting Civil Engineers, A Corporation

Nicholas F. Bonsignore, P.E.
Robert C. Wagner, P.E.
Paula J. Whealen
Henry S. Matsunaga

James C. Hanson
Consulting Civil Engineer
A Corporation

June 29, 2016

David H. Peterson, CEG, CHG
David P. Lounsbury, P.E.
David Houston, P.E.
Vincent Maples, P.E.
Patrick W. Ervin, P.E.
Ryan E. Stolfus

Ms. Sherrill A. Uyeda, *Founding Partner*
Alliance Resource Consulting LLC
400 Oceangate, Suite 480
Long Beach, CA 90802

RE: Watermaster, Santa Margarita River Watershed

Dear Ms. Uyeda:

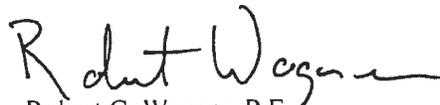
This letter serves as an introduction to the Engineering Firms of Wagner & Bonsignore, Consulting Civil Engineers, A Corporation and Balance Hydrologics Inc. The two firms, jointly, would appreciate your consideration for the Santa Margarita River Watershed Watermaster. Robert C. Wagner, P.E. of Wagner & Bonsignore, and David Shaw, P.G. of Balance Hydrologics propose to jointly provide Watermaster services for the Watershed.

Both firms, their principals, their extensive professional and support staff, are uniquely qualified to carry out the duties as described in the job announcement. Specifically, we have extensive experience in water right matters, watershed management, hydrologic investigation, watershed modeling, climate modeling, remote sensing for data collection and analysis and the compilation and reporting of the same. We have qualified to provide expert witness testimony on these matters in court and before administrative boards in evidentiary hearings. Our in-depth experience providing consulting services to public agencies, rural and agricultural water users and Native American Tribes, makes us uniquely qualified for this assignment.

Please find a brief company profile for each firm, as well as biographies and current resumes for Mr. Wagner and Mr. Shaw. We thank you for your consideration, and look forward to the opportunity to discuss our proposal with you and the Steering Committee.

Very truly yours,

WAGNER & BONSIGNORE
CONSULTING CIVIL ENGINEERS


Robert C. Wagner, P.E.

COMPANY PROFILE

Wagner & Bonsignore, Consulting Civil Engineers, A Corporation, was established in 1998 and is the successor to the firm James C. Hanson, Consulting Civil Engineer, established in 1971 (Hanson). Wagner & Bonsignore is a multi-discipline Civil Engineering firm with six Registered Civil Engineers, one Engineering Geologist, and support staff including GIS and CAD technicians, soils technicians, and permit specialists.

The firm's expertise includes water resources engineering, geology, hydrology and regulatory permit acquisition. Wagner & Bonsignore provides consulting services to numerous water service agencies throughout California and serves as District Engineer responsible for drainage, levee maintenance and flood control for four Reclamations Districts in the Sacramento-San Joaquin River Delta. Wagner & Bonsignore's scientific expertise is applied across a wide range of permitting authorities which include CEQA support, water supply assessments, Urban Water Management Plans, State Water Resources Control Board water right permits, U.S. Army Corps of Engineers 404 permits, and California Department of Fish & Wildlife Streambed Alteration Agreements.

The firm is noted in the field of water right acquisition, administration, and protection, and for technical assistance in resolving long standing disputes over the allocation of surface water and groundwater supplies, and the determination of water right allocation. Wagner & Bonsignore has extensive experience in water right adjudications and Watermaster services. Robert C. Wagner, President of Wagner & Bonsignore, currently serves as Engineer for the Mojave Basin Area Watermaster in connection with the Mojave River Judgment; and formerly served as a member of the Santa Ana River Watermaster Committee, and Engineer for the Warren Valley Basin Watermaster. Mr. Wagner also provides consulting to parties in the Antelope Valley Groundwater Adjudication.

Wagner & Bonsignore serves a large number of private clients including individual farmers and ranchers, vineyard and winery owners, and others with private water supply and drainage systems. The firm is also known for its expertise in dam and levee design, construction and rehabilitation. Together with projects under its predecessor firm, Hanson, Wagner & Bonsignore is the Engineer of Record for about 100 dam projects under jurisdiction of the California Division of Safety of Dams.



Balance Hydrologics, Inc. (Balance) is a full-service hydrology firm, founded in 1988, with extensive experience in groundwater supply development, watershed management, and wetland dynamics. Our staff consists of 30 field-oriented hydrologic professionals with diverse backgrounds in engineering, hydraulics, geomorphology, hydrogeology, geochemistry, and water resources management. Balance's diverse clientele includes managers of large land holdings, agency staff, and engineering and environmental consultants seeking specialized applications. Our staff are primarily senior professionals with expertise in both groundwater and surface water hydrology and familiar with the key regulations which guide their management.

Hydrogeologic Studies and Groundwater Supply

Balance Hydrologics' groundwater practice emphasizes development of groundwater supply, watershed and aquifer management that includes a particular sensitivity to surface-water and riparian habitats. The company has built a reputation on a solid base of professionals with particular expertise in:

- Groundwater basin management and 'safe-yield' supply
- Groundwater recharge management, including aquifer storage and recovery
- Surface and groundwater hydrology, and their interaction
- Managing groundwater near sensitive habitat areas
- Aquifer simulation and monitoring
- Hydrogeologic support for water-well drilling, testing, and water system design
- Fracture flow and management of bedrock aquifers
- Conjunctive use of surface and groundwaters
- Protection of water quality, and its enhancement through recharge and watershed management
- Effects of treated effluent storage and application
- Migration of nitrates and other nutrients in shallow groundwater
- Wetland protection and restoration: seasonal, riparian, and tidal/coastal systems
- Development and management of brackish aquifers
- Design of de-watering arrays
- Technical support for preparing grant applications

Several members of our team have expertise in working with downscaled climate change projections to assess potential impacts to water resources and habitat conditions. We utilize data provided through the CalAdapt website to build watershed-specific projection analyses based on historical streamflow data sourced from the USGS, our own in-house databases, or synthetic records developed using standard approaches. We have conducted long-term water resources risk assessments, identifying potential impacts of climate change on water supplies throughout California. We select climate change scenarios using available data through CalAdapt and other sources such as SimCLIM. We have developed methodologies for several varying geographic areas that specifically address potential changes in climate parameters and impacts on water supplies that were unique for the specific region. Using the *Confluence*® model we analyzed water supply reliability impacts. *Confluence*® simulates current and future water supply system operation against user-specified weather and hydrologic conditions, and subject to user-defined operating constraints.

Field and Modeling Capabilities

Balance Hydrologics owns a complete array of surface- and groundwater monitoring equipment, including real-time automated stations, and we provide year-round storm monitoring – streamflow and bedload sediment measurements – weekend and holidays included. Staff hydrologists can provide immediate access to all of



Balance's real-time internet-based stream and weather stations as well as those of other agencies and or flood-warning networks. Data exchange occurs regularly with several water-related agencies in California and Oregon, including the USGS and California Department of Water Resources.

Regulatory Expertise and Clientele

Balance regularly works with a wide range of environmental regulations including environmental impact analyses (NEPA and CEQA), NOAA Fisheries, US Army Corp wetlands, water rights, tribal fisheries, FEMA and FIA regulations, California Department of Fish and Wildlife, Regional Water Quality Control Board, FERC licensing assistance – including large wood assessment and management in reservoirs, and Clean Water Act and/or Porter-Cologne (California) standards. Our clientele is drawn in roughly equal proportions from managers of large land holdings (including water districts, land trusts, and tribes or native corporations), agency staff, and engineering and environmental firms seeking our specialized applications. An expanded list of clients is available upon request.

Corporate Information

Date of Incorporation California, June 16, 1988
DUNS Number: 607962149
CAGE Code: 35PM1
Federal Small Business (SB)
California Small Business Enterprise (SBE) #1562
Alameda Co SLEB 05-90761

Biography

Robert C. Wagner is President of Wagner & Bonsignore Engineers and is a California and Nevada Registered Civil Engineer who represents various public agencies and private clients in northern and southern California in matters related to surface and subsurface hydrology for water supply and the determination of water right allocation. Mr. Wagner has served as Engineer for the Mojave Basin Area Watermaster in connection with the administration of the Judgment serving 500 parties and 1500 wells, for almost 25 years.

Under the direct supervision of Mr. Wagner, Wagner & Bonsignore has built a reputation as experts in the field of water right acquisition, administration, and protection, and for technical assistance in resolving long standing disputes over the allocation of surface water and groundwater supplies, and the determination of water right allocation. Mr. Wagner specializes in the following areas:

- Water resources management,
- Water right analysis,
- Watermaster services,
- Administration of court judgments,
- Litigation consultation,
- Hydrologic analysis,
- General civil engineering services.

Mr. Wagner represents various public agencies and private clients in northern and southern California in matters related to surface and subsurface hydrology for water supply and the determination of water right allocation. Mr. Wagner has served as Engineer for the Mojave Basin Area Watermaster in connection with the administration of the Judgment serving 500 parties and 1500 wells, for almost 25 years.

Mr. Wagner served as a member of the Santa Ana River Watermaster Committee, the Warren Valley Basin and was also involved in the Santa Maria Groundwater adjudication and represents clients involved in the Putah Creek adjudication in Lake County.



David Shaw, P.G., CEO and Principal Hydrologist/Geologist has over 18 years' experience. Mr. Shaw provides senior oversight for water resources projects such as groundwater management planning, surface and groundwater monitoring, and water rights. Mr. Shaw has directed a number of surface-ground water interaction projects for Balance, mainly involving natural and managed recharge of sensitive habitat areas, assessing the effects of large wells or wellfields on streamflow, and developing watershed management strategies to meet multiple objectives. Mr. Shaw co-developed Balance's trademarked web-accessible streamflow and rain gage program, allowing clients, staff, and in some cases, the public, 24/7 access to hydrologic data. This program has proven useful for real-time decision-making by clients, and was developed in part for clients needing real-time data and documentation of water rights diversions and bypass flows. Mr. Shaw has served as project geologist for development of the publicly-vetted and AB3030-compliant Martis Basin Groundwater Management Plan, a joint effort of the Placer County Water Agency, Truckee Donner Public Utility District, Northstar Community Services District, with input from other stakeholders including the U.S. Bureau of Reclamation and the Pyramid Lake Paiute Tribe. This work included development of the hydrogeologic framework, an evaluation of groundwater recharge areas, and development of a geospatial database showing the locations of springs in the area.

**ROBERT C. WAGNER
PROFESSIONAL RESUME**

REGISTRATION:

Civil Engineer, California (License No. 52903)
Civil Engineer, Nevada (License No. 021017)

EDUCATION:

B.S. Civil Engineering - California State University, Sacramento, CA - 1988

EXPERIENCE:

Mr. Wagner is the president of Wagner & Bonsignore Engineers and is a Registered Civil Engineer in California and Nevada with 27 years' experience in water resources management, water right analysis, surface and groundwater hydrology and land use evaluations for municipal and agricultural projects.

Mr. Wagner has been the court appointed engineer for the Mojave Watermaster for over 19 years and has provided expert witness testimony on various matters related to water resources and water rights in court and before the State Water Resources Control Board. Mr. Wagner has demonstrated expertise in areas of consumptive use analysis, watershed hydrology, facility design for storm water capture and analysis of return flow to support water transfers, administration of court ordered judgments and water supply sustainability.

Mr. Wagner serves a wide variety of private and public clients throughout California, managing projects from concept to implementation. Mr. Wagner's work includes pre-1914 appropriative water right investigation, analysis of riparian and overlying water rights and appropriative rights administered by the State Water Resources Control Board.

Mr. Wagner has demonstrated communication skills to work with a wide range of legal and technical professional and stakeholder groups. He has strong organizational and analytical skills and a recognized ability to provide cost effective solutions to difficult water resource problems.

RECENT EXPERIENCE INCLUDES THE FOLLOWING:

District Engineer for Reclamation District 341 Sherman Island, Sacramento County.

District Engineer for Reclamation District 348 New Hope Tract, San Joaquin County.

Provide engineering consulting services on behalf of Antelope Valley East Kern Water Agency in connection with quantification of return flow from water used for irrigation and other uses, and in connection with reasonable and beneficial use determination.

Provide engineering consulting services on behalf of Los Angeles World Airports in connection with quantifying water use from various sources for irrigation and investigation of overlying water right entitlement and reasonable and beneficial use determination.

Provide engineering consulting services on behalf of San Joaquin County in connection with water right applications and water resources management within San Joaquin County.

Provide engineering services for Chino Basin Water Conservation District, San Bernardino County in connection with storm water recharge in Chino Basin.

Provide engineering services to Graton Rancheria in connection with the impacts surrounding landowners due to construction of Graton's casino resort in Rohnert Park, CA.

Watermaster Engineer for Orange County Water District; perform analysis of hydrologic and water quality data for the Santa Ana River Watershed for Water Year 2009-10; distinguish storm flow and base flow at Prado Dam and at Riverside Narrows, preparation of portions of the Watermaster's annual report to the Court.

Provide engineering services for Lake Alpine Water Company / Alpine County in connection with the State Water Resources Control Board water right hearing and hydrology of South Fork Stanislaus River for State Filed Application 5648.

Provide Engineering services for Natomas Mutual Water Company, in connection with the water rights. Evaluation of water rights for 51,000 acres of agricultural operation, water right analysis and water transfers.

Provide engineering services on behalf of City of Sacramento in connection with the Water Resources of the American River.

Provide engineering services on behalf of City of Ukiah in connection with water rights and hydrology of the Russian River, Mendocino County.

Provide engineering services on behalf of Sonoma County Water Agency in connection with development of agricultural reuse project for use of treated wastewater for vineyard irrigation.

Provide engineering services in connection with analysis of water production and hydrologic data for development of water use agreements for over 100 growers in the Dry Creek Valley in Sonoma County.

Provide engineering services for City of Santa Maria in connection with the hydrologic resources of the Santa Maria Groundwater Basin.

Engineering expert in the matter of Bonadiman v. Evans in San Bernardino Superior Court on behalf of prevailing party Evans. Research and documentation of water development and water right acquisition dating to 1883.

Provide engineering services for The Wildlands Conservancy in connection with water resource matters for extensive land holdings in San Bernardino and Kern Counties.

Provide engineering services for Wells Fargo Bank in connection with the analysis of water rights and water availability on the Kern River.

Watermaster Engineer for the Mojave Basin Area Watermaster in the matter of the Mojave River Adjudication, City of Barstow, et al, vs. City of Adelanto, et al. Collection and analysis of data for preparation of Annual Watermaster Report, including groundwater production and hydrology studies of the Mojave River System and groundwater basin in connection with storm flow base flow separation determination and the analysis of water transfers and land use changes. Preparation of Annual Watermaster reports.

Provide engineering services on behalf of the Mojave Water Agency in connection with Mojave Basin Area Adjudication. Participate in meetings of the Joint Engineer-Attorney Drafting Committee formed to negotiate and draft the Stipulated Judgment. Participation in the drafting and ongoing revisions of the Watermaster Rules and Regulations.

Provide engineering services in connection with for the Warren Valley Basin Watermaster, San Bernardino County. Analysis of groundwater production records and basin hydrology for preparation of Annual Watermaster Report.

Provide engineering services in connection with work for East Valley Water District, San Bernardino County, regarding the analysis of surface and subsurface hydrology of the Santa Ana River and the availability of water for the Seven Oaks Dam Project and fully appropriated listing of the Santa Ana River.

Provide engineering services on behalf of Kirkwood Associates before the State Water Resources Control Board in the matter of South Fork American River Hearings, October 1995. Analysis of the South Fork American River and Caples Creek hydrology in connection with same.

Provide engineering services in connection with work for High Desert Water District, San Bernardino County, regarding the analysis of water quality and ground water elevation data for monitoring the potential impacts of ground water extractions from the Ames Valley Basin.

Provide engineering services in connection with work for Hidden Valley Lake Community Services District, Lake County, regarding the hydrologic analysis of Upper Putah Creek Watershed and the Coyote Valley groundwater basin in support of amendments to fully appropriated stream status and applications to appropriate surface and subsurface water from Putah Creek; continued monitoring of the Coyote Valley groundwater basin in connection with administration of water rights.

CONTINUING EDUCATION

“California Environmental Quality Act Update”, University of California, Davis - February 1992

“California Water Law”, University of California, Davis - November 1989 to January 1990

Wagner & Bonsignore

Consulting Civil Engineers, A Corporation

“Understanding Wetlands and 404 Permitting”, ASCE July 1997

“Fundamentals of Water Rights and Colorado River Issues”, University of Nevada, Las Vegas
January 1998

“Fundamentals of Groundwater Hydrology”, UC Berkeley



Summary of Experience

Mr. Shaw is President and CEO of Balance Hydrologics, Inc., and Principal-in-Charge of the Balance Truckee Office, overseeing all work in the Sierra Nevada and Great Basin Geomorphic Provinces, while still playing a role on projects located throughout California. He applies his expertise in the investigation of wetlands, groundwater and stream systems through field monitoring, numeric modeling, and watershed analysis. He also develops and implements basin-wide studies to evaluate and characterize surface and groundwater interactions, water quality trends, channel morphology, and water budgets to aid in water supply planning, habitat conservation, and watershed management. Through comprehensive landscape analyses, he links management and policy actions to wetland and channel habitat conditions and uses findings to assist planners and land managers in adapting strategies to meet site and watershed-specific conditions. With his broad range of experience, Mr. Shaw develops practical and effective conceptual restoration designs, grading plans, and construction documents for a variety of planning and restoration applications and works successfully with communities and multi-disciplinary stakeholders.

Relevant Experience

Martis Valley Groundwater Management Plan, Placer County Water Agency, Placer and Nevada Counties, California. As Project Manager and Geologist, Mr. Shaw developed the hydrogeologic setting and geology database and aquifer information to a nationwide engineering firm and modelers at the Desert Research Institute to assist with preparation of a groundwater management plan for the three local agencies that draw on the Martis Valley Aquifer. As an active member of the local community, Mr. Shaw also assisted in developing and carrying out the public outreach component of the management plan, drawing on the professional relationships that he maintains with various stakeholders in the basin.

Truckee River Water Quality Monitoring Program, Town of Truckee and Placer County, Nevada and Placer Counties, California. Mr. Shaw is Project Manager and Technical Lead, assisting with implementation and adaptive management of the Truckee River Water Quality Monitoring Program to address the effectiveness of the Middle Truckee River sediment TMDL. The modifications are intended to be more consistent and comparable with: 1) Methods developed and implemented by the Truckee River Watershed Council; 2) Analyses used by the Desert Research Institute and the Lahontan Regional Water Quality Control Board to develop the TMDL; and 3) Accepted practices developed by the U.S. Geological Survey for developing sediment loading estimates using near-continuous turbidity monitoring equipment. Work on this project is being carried out as subcontracted to CDM-Smith.

DAVID SHAW, P.G., A.S.L.A.

Principal Hydrologist/Geologist



Education:

M.L.A., Environmental Planning,
University of California, Berkeley,
2005

B.S., Geology (Concentration in
Water Resources), University of
Vermont

Licensed Professional Geologist:
California #8210

Professional Affiliations:

Society of Wetland Scientists
California Society for Ecological
Restoration (Past President, Board of
Directors)



Martis Watershed Assessment, Truckee River Watershed Council, Placer and Nevada Counties, California. Mr. Shaw led a multi-disciplinary team in assessing watershed conditions, historical and present-day disturbances, and wetland and stream restoration opportunities in the Martis Watershed. The project approach took advantage of the many environmental and related studies that have already been carried out in the watershed, and supplements those studies with a comprehensive field investigation to verify and relate those studies to watershed-wide disturbance trends. The project team then collaboratively developed a watershed-wide list of potential treatments, forest management approaches, and restoration strategies to restore water quality controls, water storage capacity, flood control benefits, and habitat benefits associated with undisturbed wetlands and streams.

Canyon Hills Riparian Mitigation Plan, Hydrology and Sedimentology, City of Lake Elsinore, Riverside County, California. Mr. Shaw assessed the viability of creating 18 acres of riparian woodland in Cottonwood Canyon, a major tributary of the San Jacinto River upstream of Lake Elsinore. Work included water budgets for existing and post-project conditions and development of a linked surface- groundwater numerical model. Monitoring wells were installed in concert with continuous-record stream gages for model calibration. Concurrently, the quality of return flows and stormwater runoff were evaluated for both surface water and shallow groundwater entering and leaving the project reach. Long-term monitoring programs were recommended for the two recommended sites and implementation of the monitoring plan was completed in the early 2000s.

Perazzo Meadows Restoration Hydrology Evaluations, USFS Tahoe National Forest and Truckee River Watershed Council, Sierra County, California. Mr. Shaw developed and is implementing a comprehensive monitoring program in the Upper Little Truckee Watershed to quantify the beneficial effects of meadow restoration on habitat, water quality, and water supply. The impetus of this project was a water rights dispute; data collection and reporting are used to document the availability of streamflow to downstream water users. The program includes point piezometers equipped with continuous water-level recorders, stream stage-monitoring stations, and six streamflow gaging stations. The program is designed to document and compare pre- and post-restoration groundwater-stream interactions, water table fluctuations, and water storage response to 'plug and pond' restoration activities implemented by the Tahoe National Forest. Results have been presented at several conferences and are contributing to Sierra-wide assessments of the potential changes in water storage, groundwater recharge, and late summer baseflow that may be achieved through subalpine and alpine meadow restoration.

Rancho Mission Viejo Hydrologic Investigations and Special Area Management Plan, City of San Juan Capistrano, Orange County, California. Mr. Shaw supported several aspects of this study which measured runoff and sedimentation potential from various terrains in this 120,000-acre area; rainfall/runoff and sediment-yield modeling; sediment yield variability and susceptibility to channel incision; surface/ground water exchange; and, water quality loads to shallow ground water. This work was completed in parallel with development of a National Communities Conservation Plan (NCCP) and a Special Area Management Plan (SAMP) under the direction of the LA District of the Corps of Engineers, plus habitat specialists at the Corps' Waterways Experiment station in Vicksburg.

Dry Creek Rancheria Water Supply and Hydrogeologic Assessment, Sonoma County, California. Mr. Shaw carried out a geologic and water supply assessment for The Dry Creek Band of Pomo Indians, who were relocated to this reservation supporting 42 homes. The reservation previously had a summer firm yield of 2.2 gallons per minute from a total of four wells. Mr. Shaw and other staff developed a three-well exploratory program using a combination of geologic mapping, interpretation of false-color infrared aerial photography, analysis of LANDSAT imagery, and systematic evaluation of publicly-available well logs and well yield data, and targeted three separate aquifers for exploration. After supervising drilling of the wells, Mr. Shaw oversaw aquifer pumping



tests and calculated yields of 400, 27, and 250 gallons per minute during a late-summer dry period. The Dry Creek Band of Pomo Indians have used these supplies to support substantial development and improvements in tribal members' standard of living.

Boca Quarry Water Supply Assessment, Nevada County, California. Mr. Shaw completed a water supply assessment consistent with the requirements of SB610 and the California Water Code, as part of environmental documentation required for re-initiation of operations at the Boca Quarry, located east of the Town of Truckee and north of the Truckee River. The new operator proposed to expand the aggregate-mining area from about 40 acres to over 150 acres in three phases over a 30-year period. The assumed recharge area was conservatively delineated based on topography and geology. Historical rainfall data and baseline flow measurements from an on-site spring were then used to predict recharge and develop a synthetic spring flow record for a range of water years, including a critically-dry year scenario. Estimated supplies met project demand during normal and dry years but during the critically-dry year scenario, the anticipated supply of 47 acre-feet met the lower estimate of annual project demand.

Magee Creek Restoration and Reclamation Plan, Pala Tribal Lands, San Diego County, California. Mr. Shaw served as staff geologist for this project with the Pala Band of Mission Indians, who sought to restore a large aggregate mining facility being closed by Vulcan Materials. The Band chose to restore the mining operation as an alluvial fan, with an entrenched fan head. The Band's lands extend to the mountain front, where an ancient landslide with numerous house-sized boulders already creates a channel profile, which steepens downstream from the mouth of the canyon. In conjunction with engineers from Vulcan, Balance staff planned and cooperated in design of a large boulder cascade with 65 feet of fall. The cascade provided grade control allowing full ecological development of the future channel entrenched into the fan, while controlling headward migration of the channel into the broad canyon upstream of the mountain front, where lemons and avocados are grown on a number of private ranches adjoining the tribal lands. The project successfully completed review and approval by the Pala Band, USEPA, the Bureau of Land Management, the Corps of Engineers and other permitting and jurisdictional agencies.

Truckee Wetlands Restoration Partnership, Town of Truckee, Nevada County, California. As Project Manager and Technical Lead working with a stakeholder group, Mr. Shaw carried out a preliminary assessment of wetland restoration opportunities and constraints across multiple parcels with various owners in central Truckee, California. Work consisted of reviewing past wetland delineations and geotechnical investigations, reconnaissance-level site analysis through field observations and aerial photograph interpretation, and presenting findings to the stakeholder group. Results of the preliminary analysis are being used to seek funding for conceptual design development and continued stakeholder engagement.

Middle Truckee River TMDL Monitoring, Truckee River Watershed Council, Nevada County, California. At the request of the Truckee River Watershed Council (TRWC), Mr. Shaw reviewed documents and studies related to the Total Maximum Daily Load (TMDL) for suspended sediment in the Middle Truckee River, and developed a multi-year monitoring approach to address identified data gaps. Based on this review and discussions with TRWC staff regarding proposed projects in the watershed, Mr. Shaw recommended that in-stream geomorphic conditions be monitored and suspended sediment transport be measured at additional strategic locations. Through a state-funded grant, TRWC contracted with Balance Hydrologics to carry out a 3-year monitoring program based on this approach, beginning in Fall 2010. Monitoring data and analysis allowed the Regional Water Quality Control Board to: a) better extrapolate previous analyses to tributary watersheds, and b) link fine sediment transport data to in-channel aquatic habitat conditions. Over the duration of the study, streamflow and turbidity were provided to the public on Balance's real-time water data website.



Little Truckee River Forest Health and Habitat Enhancement, Trout Unlimited, Nevada County, California. Mr. Shaw serves as Project Lead and Geologist to evaluate enhancement opportunities and provide design parameters to improve wild trout habitat within a regulated reach, below Stampede Dam. Specific work includes: 1) Evaluating post-dam channel dynamics through historical aerial photograph analysis, 2) Characterizing existing hydrology, geomorphology, and channel conditions to evaluate limiting factors and constraints on enhancement measures, 3) Developing conceptual habitat enhancement design documents, and 4) Working with the selected contractor on a design-build basis to implement the habitat enhancement design.

Water System and Hydrogeology Assessment for the Lake Alpine Recreation Area, Stanislaus National Forest, Alpine County, California. Mr. Shaw carried out a watershed hydrogeologic assessment, developed a number of water system upgrade alternatives, and carried out a cost-benefit analysis for the various alternatives. The assessment included a review of water supply development history, aerial photograph review, field-mapping of geology, springs, and fractures, and review of driller's well-logs for nearby areas. Findings and recommendations provided in the assessment are were used to develop a well-drilling program targeting deep fractures in granitic rocks, and culminated in the drilling and development of a successful fractured bedrock well

Van Norden Dam and Meadow Watershed Assessment and CEQA Assistance, Placer and Nevada Counties, California. Principal-in-Charge and Lead Geomorphologist. Mr. Shaw is assisting the Truckee Donner Land Trust with technical evaluations in support of planning and environmental documentation for Van Norden Dam modifications. The dam is out of compliance with state standards, and must therefore be lowered or removed. Mr. Shaw has led a number of technical studies to help the Land Trust evaluate the most appropriate alternative for achieving compliance, and developed dam removal alternatives that maintain compliance with state standards and provide naturalized channel dynamics at the location of the existing dam.

Truckee River First Four Mile Project, Placer County, California. Principal-in-Charge and Design Geomorphologist. Mr. Shaw provided geomorphic design guidance for bank stabilization and floodplain restoration elements along the Truckee River between Tahoe City and Alpine Meadows. The projects were initially conceived as part of the Placer Counties Truckee River Corridor Access Plan, and are associated with trail and highway access improvements being implemented by the Tahoe City Public Utility District (TCPUD). Development of Plans, Specifications, and Cost Estimates has required close collaboration with the TCPUD and its engineers, and includes use of bio-engineered structures for bank stability, river access points, and aesthetics.

Alpine Sierra EIR, Placer County, California. Project Manager and Principal in Charge. Mr. Shaw is reviewing and providing text for the hydrology and water quality portions of an EIR for a proposed residential development near Alpine Meadows, part of unincorporated Placer County. The project is located within the Truckee River watershed, which is listed as impaired due to excessive suspended sediment concentrations. Mr. Shaw was added to the project team to provide expertise related to sediment transport dynamics and regulatory framework within the watershed, as well as his knowledge of snowmelt hydrology dynamics in the alpine setting.

Middle Martis Creek Alluvial Fan Restoration, Placer County, California. Mr. Shaw led the development of a number of restoration alternatives for the Middle Martis Creek alluvial fan, where stream channel migration and groundwater seepage have caused problems along State Highway 267 near the Northstar Golf Course. Project partners including CalTrans, Northstar California, Northstar Community Services District, the U.S. Army Corps of Engineers, and the Truckee River Watershed Council, met several times to review project plans and associated hydrologic and hydraulic analyses, and select a preferred design to move forward with final design and permitting. Mr. Shaw oversaw the development of restoration plans, specifications, and cost estimates, assisted the stakeholders in selecting a contract



Rollins Reservoir Maintenance and Sediment Removal Project EIR, Nevada Irrigation District, Nevada and Placer Counties, California. Mr. Shaw served as Project Manager and Geomorphologist for this project to remove sediment from the Bear River Arm of Rollins Reservoir, just downstream from NID's Chicago Park Power House. Mr. Shaw led Balance's efforts in evaluating potential impacts associated with project, including potential disturbance to the geomorphic and ecologic functioning of the system, and potential water quality impacts of mining associated with legacy mercury residuals. Topographic analyses, geomorphic mapping, hydraulic modeling, 100-year floodplain mapping were carried out and used to develop site-specific mitigation measures and alternative project approaches.

Squaw Valley Village Specific Plan Stormwater Management and Creek Corridor Planning, Squaw Valley Ski Corporation, Placer County, California. As Project Manager and Technical Lead, Mr. Shaw led an interdisciplinary team, working with Squaw Valley as they plan for upgrades to the mountain resort base area. Mr. Shaw is providing project planners and engineers with innovative water quality and site-specific sediment management approaches that meet or exceed the requirements of the Placer County Stormwater Management Program, Squaw Creek sediment TMDL, and the Middle Truckee River TMDL. In addition to traditional stormwater BMPs, Mr. Shaw developed conceptual plans for in-channel and floodplain-based sediment management strategies.

Saxon Creek Aquatic Organism Passage Project, USFS Lake Tahoe Basin Management Unit, El Dorado County, California. This project includes culvert replacement with a free-span bridge and reconstruction of a restored channel that facilitates fish passage for Paiute sculpin and juvenile salmonids. Mr. Shaw worked with the project team, overseeing development of a channel design that focuses on existing watershed functions and processes while enhancing instream habitat and passage. Project challenges include historical land-use impacts, erosive soils, and efforts to minimize disturbance and downstream turbidity to Lake Tahoe. The project is currently in design and review with anticipated construction fall 2012.

Tahoe City Hatchery Field Lab Stream and Wetland Restoration Design, UC Davis Tahoe Environmental Research Center, Placer County, California. Polaris Creek and its adjacent wetlands, including an abandoned spring-fed hatchery pond once used by the California Department of Fish and Game, were restored and used to study the effectiveness of wetlands in removing pollutants from urban storm runoff. Mr. Shaw provided construction-level channel and wetland restoration designs, coordinated project review and permitting with TRPA, the Army Corps of Engineers, and the Lahontan Regional Water Quality Control Board, and provided construction administration and oversight services during project implementation.

Meyers Rebuild Wetland Mitigation, Liberty Energy, South Lake Tahoe, El Dorado County, California. Mr. Shaw assisted the project engineering team and permitting biologists with the design of channel enhancements as off-site mitigation for wetland impacts associated with utility line replacements.

Wetland and Stream Habitat Restoration Design Services for EBMUD's San Pablo Dam Seismic Upgrades Project, Contra Costa County, California. Mr. Shaw served as Project Manager on work consisting of: 1) Field assessment and aerial photograph interpretation; 2) Assistance developing a conceptual plan to restore channels and wetlands to reduce sediment delivery to Pinole Creek; 3) Baseline hydrologic and geomorphic monitoring, including streamflow and sediment gaging, well installation and monitoring, and observations of channel evolution during storm periods; 4) Soils investigations; 5) Hydrologic and hydraulic modeling to guide restoration designs; and 6) Development of construction documents and consultation during implementation.

Seasonal Wetland and Vernal Pool Hydrology for the Hawthorne Mill/McCoy Transit Village Property, City of Fairfield, Solano County, California. Mr. Shaw was the Project Manager for this multi-year assessment



of wetland hydrology at the proposed Transit Village project site in the City of Fairfield. The approximately 400-acre property, which surrounds McCoy Creek and McCoy Basin, contains about 48 acres of wetland habitat including vernal pools and seasonal wetlands and swales. The results of this assessment, in combination with rapidly-evolving vernal pool hydrologic science literature and regulatory guidance, assisted the project permitting team in developing wetland management, avoidance, and mitigation and monitoring approaches for the site.

Pismo Creek Watershed Assessment, San Luis Obispo County, California. As Project Geomorphologist for this watershed-scale assessment and planning project, Mr. Shaw completed the geomorphology and hydrology assessment for Pismo Creek and its major tributaries. The work was supported and confirmed by concurrent channel and floodplain assessments implemented to identify key hydrologic and geomorphic factors impacting anadromous fish enhancements throughout the watershed.

East Cypress Water Quality Monitoring, KB Homes, City of Oakley, Contra Costa County, California. As Project and Field Task Manager, Mr. Shaw assisted in carrying out a 7-node baseline water-quality monitoring program to document water quality conditions associated with existing grazing and agricultural land uses on this 1200-acre property of sandy dune soils bordering the Delta. Sampling data provided basis for comparison with post-construction conditions and established a set of sampling points and protocols for water-quality monitoring in future years. Balance staff prepared a sampling and analysis plan (SAP) and conducted two dry-season samplings of the flood-irrigated fields, and one wet-season sampling following a 50-year, 12-hour rainfall event. Grab samples were collected and analyzed for selected nutrients, trace elements, hydrocarbons, pesticides and bacteria.

Lacey Meadows Watershed Assessment, Sierra County, California. Mr. Shaw was the Project Manager for this effort to characterize watershed conditions identifying restoration and land management objectives for the Lacey Meadows watershed. The study identified areas that are functioning well, as well as inventory areas that are degraded or impaired. Using a combination of GIS-based analysis and field reconnaissance, sensitive resources and the physical and biological processes that support them were identified, along with disturbances and impacts to these processes. From this assessment a catalog of restoration and management actions to address disturbances was developed.

Upper Hess Creek Wetland Creation, Contra Costa County, California. Mr. Shaw led the design team to convert a valley tributary to Hess and Kirker Creeks, once planned for a landfill, to a wetland preserve. Mr. Shaw worked closely with a well-known ecological restoration firm, evaluated alternative restoration concepts for a steep-sloped valley near the pass. One concept chosen for finalization was a series of ponded seasonal wetlands separated by a channel.

San Diego Vernal Pool HGM Guidebook: Hydrology and Morphology Functions, City and County of San Diego, California. As Project Manager, Mr. Shaw assisted San Diego State University and University of San Diego researchers under a grant from EPA Region IX to develop a guidebook for assessment of Southern California's vernal pools and for developing related approaches for their protection. The project included hydrology, geomorphology, sedimentation, hydrogeology, soils analysis, and (with Marie Simovich of UCSD) water quality.

Lennar Vernal Pool Protection Plan, Carlsberg Ranch, City of Moorpark, Ventura County, California. Mr. Shaw was a team member for this effort to develop a comprehensive management, mitigation, and monitoring program for a 4.6-acre vernal pool in Ventura County. The end Efforts included detailed analysis of historical records; watershed monitoring using continuous-recording gages, piezometers, and evaporation pans, plus measurements of flow and infiltration rates during storms; and development of a digital model of each significant



component in the 40-acre watershed; the model was capable of ‘blindly’ predicting water-level and salinities within very narrow tolerances.

Seasonal Wetland and Vernal Pool Hydrology for the Hawthorne Mill/McCoy Transit Village Property, City of Fairfield, Solano County, California. Mr. Shaw was the Project Manager for this multi-year assessment of wetland hydrology at the proposed Transit Village project site in the City of Fairfield. The approximately 400-acre property, which surrounds McCoy Creek and McCoy Basin, contains about 48 acres of wetland habitat including vernal pools and seasonal wetlands and swales. The results of this assessment, in combination with rapidly-evolving vernal pool hydrologic science literature and regulatory guidance, to assist the project permitting team in developing wetland management, avoidance, and mitigation and monitoring approaches for the site.

LTMAP Water Quality Monitoring Program, San Francisquito and Los Trancos Creeks, San Mateo and Santa Clara Counties, California. Mr. Shaw was the Field Lead for this ongoing streamflow gaging and water quality sampling project, which is part of the Long-Term Monitoring and Assessment Plan (LTMAP) to assess current (i.e., baseline) conditions, analyze trends, and evaluate watershed management. Field efforts include sample collection during storm events using automated samplers. To date, analyses show no impairment by organophosphate pesticides, and moderate nitrate-nitrogen and phosphorus concentrations typical of levels observed in other local streams. Concentrations of total recoverable trace metals (aluminum, copper, lead, mercury, nickel, selenium, silver and zinc) occasionally exceed Regional Board or U.S. EPA acute and/or chronic toxicity levels but dissolved metals concentrations have been well below levels of regulatory concern.

CEQA-level Planning and Design Assistance, Royal Gorge, Placer County, California. As Project Manager and Geomorphic Design Lead, Mr. Shaw evaluated the post-glacial geomorphic history of a proposed lake site and provided design parameters to avoid impacts to wet meadow and fen hydrology and water quality in adjacent and downstream areas. Specific work included field analysis of landscape evolution using aerial photographs, geology mapping, sediment source tracing, and excavation of borings and trenches to characterize the extent and age of a pre-settlement lake which once occupied the meadow; baseline monitoring to characterize existing hydrology through monitoring well network installation, stream gaging, and aquifer testing; developing a monthly water balance model to estimate water-level fluctuations under a range of scenarios; and soil suitability analysis for treated effluent disposal, including soils mapping, test pit logging and infiltration testing.

Stanford SHEP/Rosewood Mitigation Wetland Design, San Mateo County, California. As Project Manager and Hydrologic Design Lead, Mr. Shaw led soils investigations, ground water monitoring, and stream gaging to develop preliminary grading plans for use in permitting documents. The team developed and calibrated a site-specific daily water balance model to predict water-surface fluctuations in a network of three wetland basins. The end deliverable was a construction bid package, including construction administration and oversight.

Stanford Los Trancos C-1 Trail Bank Stabilization and Construction Administration, San Mateo County, California. Mr. Shaw served as Project Manager and Design Geomorphologist for Balance’s work on Stanford’s C-1 Trail. The primary goal of the project was to develop alternative bank stabilization designs using habitat-enhancing biostabilization techniques, in place of conventional slope-stabilizing approaches. Following site-specific evaluations of channel conditions, topographic surveys, review of historical streamflow data, and 1- and 2-dimensional hydraulic modeling, conceptual alternative designs were presented to the project design team. After selecting a log-cribwall approach as the preferred approach, Mr. Shaw worked with other Balance staff to develop plans, specifications, and cost estimates. The project was constructed in September 2011.

Pinole Valley Mitigation Bank Hydrology and Geomorphology, East Bay Municipal Utility District, Contra Costa County, California. Mr. Shaw was the Project Manager for this effort in converting a 3800-acre watershed



once intended for a surface impoundment into a mitigation bank for wetlands and habitat for special-status species. He led the effort for providing the hydrologic, geomorphic, and hydrogeologic studies for design and permitting of the mitigation bank. Work consisted of a variety of studies; for instance, measuring the wetland responses to episodic events to steelhead passage through critical culverts, and proposing short- and long-term monitoring programs to evaluate the relative successes of various mitigation wetlands and their effects on existing wetlands or species use.

Soquel Creek Geomorphic and Hydrologic Watershed Assessment, Santa Cruz County, California. Mr. Shaw was the Lead Geomorphologist and Hydrologist for this geomorphic and hydrologic assessment. The project goal was to evaluate current and historic channel and habitat conditions in the Soquel Creek watershed, which was strongly affected by major floods in 1982, 1983, 1995, and 1996. Results of these assessments were then used by the project team to identify meaningful habitat enhancement projects. Proposed habitat enhancement projects ranged from conservation easements to re-connecting segments of the channel and adjacent floodplain, to identification of education projects for private streamside landowners about the benefits of a healthy and functioning riparian corridor, including debris-dam management. In an effort to include community and private concerns in the restoration and enhancement process, potential habitat enhancement projects were commented on and rated from most important to less important by a community advisory group. Streamflow gaging and was conducted at several points in the watershed in an effort to understand the interaction between surface water and groundwater levels, and potential effects associated with groundwater production from different geologic units.

Groundwater Monitoring of Treated-Effluent Irrigation Areas at Cascade Ranch, San Mateo County, California. Mr. Shaw served as Field Manager for design and implementation of a groundwater monitoring program for a private campground where treated effluent is being applied to the surrounding landscape. The program, which consisted of locating and installing several monitoring wells in and around the application area(s), was developed in response to a Regional Water Quality Control Board order outlining waste discharge requirements. Additional related tasks included characterizing baseline (pre-application) groundwater quality for the site; design and implementation of a long-term monitoring program to identify changes in surface and groundwater quality due to effluent application; obtaining the appropriate permits and authorizations; and leading project interactions with involved state, county and local agency personnel.

Kings River Experimental Watershed (KREW) Prescribed Burn EIS, Sierra National Forest, Fresno County, California. Mr. Shaw along with other Balance staff assisted the Pacific Southwest Research Station (PSW) and Sierra National Forest to assess the soils and hydrologic responses to forest-management practices in headwater streams of the Sierra. The scope of services encompassed preparing the soils and hydrology specialist reports for documentation under NEPA in the Kings River Experimental Watershed (KREW). The forest management practices were designed as 1) Treatment for ecological restoration and 2) Research to examine the ecosystem response to those treatments. Treatments consisted of mechanical tree thinning, commercial tree harvest, underburning, reforestation, plantation maintenance, fuels treatment, and herbicide treatments to plantations and noxious weeds. The EIS also evaluated ecosystem responses in comparison to no treatment and severe wildfire. Work is being conducted in the KREW Providence and Bull units near Shaver Lake, encompassing analysis of baseline data collected by PSW field scientists over the prior six years, as well as development of post-project monitoring, adaptive management, and mitigation strategies.

San Geronimo and Lagunitas Creeks Stream-Monitoring Programs, Western Marin County, California. Mr. Shaw assisted in this long-term water quality monitoring of sediment transport, bed sedimentation and streamflow in San Geronimo and Lagunitas Creeks on behalf of the Marin Municipal Water District (MMWD) and the Marin County Resources Conservation District. Balance provided various services including standard stream gaging stations on San Geronimo Creek and other tributaries; measured suspended and bedload sediment



transport in tributaries; monitored changes in cobble-embeddedness in reaches supporting salmon and steelhead; measured changes in the size composition of bed material in riffles and pools; and established the depth of scour at standard locations during major storms using scour chains.

Wetland Processes and Restoration Opportunities in the Rodeo Lagoon Watershed, Golden Gate National Recreation Area, Marin County, California. Mr. Shaw conducted a watershed assessment to characterize hydrologic and geomorphic processes that support wetlands in the Rodeo Lagoon Watershed. The assessment was used to develop wetland restoration approaches for 12 impacted areas in the watershed and work with stakeholders to prioritize restoration opportunities. Site-specific soils and hydrologic investigations were conducted to inform a conceptual site design for the highest priority site. The restoration design was implemented in Summer 2013.

Holland Tract Mitigation Bank Wetland Hydrology and Design Assistance, Holland Tract, Contra Costa County, California. Mr. Shaw assisted Wildlands, Inc. with the development of seasonal and perennial wetlands on a 260-acre parcel in the Sacramento-San Joaquin Delta as mitigation for impacts to wetlands in the region. The Balance team provided surface and groundwater hydrology analysis, soils mapping, land use history and aerial photo interpretation. These tasks were assisted with the use of GIS technology. Recommended grading and construction parameters for perennial and seasonal wetlands, and identified appropriate reference wetlands for evaluation of wetland success and adaptive management strategies.

Bernal Creeks Restoration Design, City of Pleasanton, California. Mr. Shaw led the hydrologic, hydrogeologic, and geomorphic investigations relating to a wide range of issues related to restoring and renaturalizing flood control channels and creating mitigation habitat at the City of Pleasanton's 680-acre Bernal Property. Working as part of multi-disciplinary team, Mr. Shaw prepared the initial channel restoration plan, which required close coordination with regulatory staff from agencies including the California Department of Fish and Game, San Francisco Bay Regional Water Quality Control Board, U.S. Army Corps of Engineers and Alameda County Zone 7 Flood Control. Mr. Shaw then worked with others to prepare preliminary construction documents and cost estimates as part of the CEQA process.

Mission Creek Wetland Design and Post-project monitoring, City of Pleasanton, Alameda County, California. Mr. Shaw worked on a team with consulting biologists, civil engineers, and City of Pleasanton staff to evaluate wetland restoration feasibility, establish design parameters, and complete wetland restoration designs for the Mission Creek Wetland in the City of Pleasanton. Consideration of groundwater levels and anticipated streamflow regimes required close consultation with Zone 7 hydrogeologists and independent review of local groundwater data, and allowed for development of a monthly water balance model to predict wetland hydrology and develop appropriate wetland designs.

Schaefer Ranch Hydrologic Assessment, City of Dublin, Alameda County, California. Mr. Shaw carried out a number of hydrologic investigations to aid in understanding the impacts of a proposed 500-acre residential development project in Dublin, California. Mr. Shaw led a field-based monitoring program that included water level monitoring in stockponds and streamflow gaging and water quality sampling in the largest stream on site, Marshall Creek. Based on the collected data, the project team was able to work together to discern areas supported by shallow groundwater and surface water from those supported by deeper groundwater sources.

Gale Ranch Water Quality and Mitigation Planning, City of San Ramon, Contra Costa County, California. Mr. Shaw developed a numeric model to predict water surface elevations in proposed mitigation wetlands to support development of a comprehensive mitigation and monitoring plan for a large residential and commercial



development near the City of San Ramon in Contra Costa County, California. The model was based primarily on interpretation of historical rainfall-runoff relationships and regional evapotranspiration data for upland watersheds. To calibrate the model, Mr. Shaw developed and implemented a field-based data collection program, which included measurement of groundwater elevations, water surface elevations in three different types of wetlands, and potential evapotranspiration. A detailed record of groundwater flow into and out of each pond was developed and incorporated into the model.

Burke Creek Highway 50 Crossing and Realignment Project, Nevada Tahoe Conservation District, Douglas County, Nevada. Mr. Shaw is serving as Project Manager and Lead Geomorphologist as part of a multi-disciplinary team tasked with reduction of flooding and restoration of a portion of Burke Creek, a tributary to Lake Tahoe in Stateline, Nevada. Mr. Shaw's role is to provide the project team with channel geometry and alignment alternatives that are appropriate for the site—a dynamic alluvial fan surrounded by a built environment. Project partners include the USFS Lake Tahoe Basin Management Unit, Nevada Department of Transportation, Douglas County, the Tahoe Regional Planning Agency, and Kingsbury Grade Improvement District, among others.

East Fork Carson River at Virginia Rocky Diversion Dam Bank Stabilization, Douglas County, Nevada. Mr. Shaw served as Principal in Charge and Lead Geomorphologist, as Douglas County Public Works contracted with Balance Hydrologics to characterize hydrology, hydraulics, and geomorphic processes immediately upstream of the Virginia Rocky Diversion, where channel widening was causing severe bank instability and retreat. Mr. Shaw mapped site geomorphic features and outlined the causes of bank instability. Based on the assessment, Mr. Shaw led the development of and presented a number of design alternatives that are anticipated to be sustainable over the long-term, while sustaining the diversion structure and natural channel processes.

Truckee Meadows Regional Stormwater Quality Management Program, Cities of Reno and Sparks, Washoe County, Nevada. Mr. Shaw is the principal-in-charge for on-going water quality monitoring and data management effort in the Lower Truckee River, which is currently listed by the Nevada Division of Environmental Protection as being impaired by nutrients - total dissolved solids, total nitrogen, and total phosphorus. He was the lead reviewer for the development and implementation of the Stormwater Monitoring and Sample Analysis Plan (SAP) for the Municipal Regional MS4 permit, which includes the Cities of Reno and Sparks and Washoe County, Nevada. The program includes water quality monitoring stations at 8 urban outfalls and 12 locations on six tributaries to the Truckee River, which drain areas of the Truckee Meadows Region. This is a multiple stakeholder project, Balance staff are working with Committee members from both municipalities and the County to modify existing monitoring elements in an effort to better characterize current conditions, analyze trends, and identify improvements to the monitoring program and that will eventually lead to implementation of new stormwater management strategies for selected areas.

Virginia Lake Stormwater Quality Assessment, City of Reno, Washoe County, Nevada. Mr. Shaw is principal-in-charge for this effort to evaluate stormwater constituent loading to the lake. Results will be used to identify limiting factors to lake water quality and facilitate mitigation measures in the contributing watersheds. Virginia Lake is a constructed urban lake fed by irrigation ditches and stormwater. The lake is suffering poor water quality due to high nutrient enrichment and poor circulation. Blue green algal blooms result from very high phosphorus and nitrogen loads in the water, coupled with low or no flow through the lake, causing extremely low oxygen levels in the water. Blue green algae can create natural toxins, dangerous to birds, fish, and animals. This is detrimental to the whole watershed, as Virginia Lake drain to the Truckee River via Steamboat Creek. The City of Reno and a Scientific Panel embarked on a water quality study at Virginia Lake to identify contributing factors to the declined water quality and potential steps to mitigate those factors.



San Francisquito Creek Watershed Long-Term Water Quality Monitoring and Assessment Program, 1999–Present, San Mateo and Santa Clara Counties, California. Early in the program Mr. Shaw participated in this ongoing project for Stanford University, which entails monitoring flows and water quality in the San Francisquito Creek watershed, key habitat for federally-listed steelhead trout. From 1999-2002, eight sites on three headwaters streams were monitored for flow and water samples were collected under a full range of storm runoff and low-flow conditions for analysis of nutrients, trace metals, pesticides, salinity, and suspended sediment. From 2001 to 2007, Balance managed automated (Isco) sampling stations at three lower watershed sites and collected composite water quality samples for these same pollutants. Since 2008, monitoring has focused on gaging flows, measuring salinity and characterizing suspended sediment transport.

Fern Creek Diversion, Bypass Streamflow Monitoring, June Lake, Mono County, California. Mr. Shaw is serving as principal-in-charge working with Dr. David Herbst of UC Santa Barbara and Stevens Consulting to assist the June Lake Public Utilities District (JLPUD) to provide hydrologic and habitat analysis in support of both temporary and permanent changes to their water rights permit. Balance is monitoring low flows bypassing the June Lake Public Utilities District diversion on Fern Creek, tributary to Rush Creek and evaluating its impacts on aquatic life and habitat in downstream reaches. The team developed a study using continuous streamflow gaging, water geochemistry analysis, groundwater monitoring, and biological sampling to evaluate the primary and secondary hydrologic support for downstream habitat. Results from these studies will help inform and frame management actions by the JLPUD and a long-term monitoring plan. The plan, once approved and implemented, can be used to seek SWRCB approval for the permanent change to the water rights and manage diversion activity in a manner that minimizes or avoids impacts to downstream aquatic habitat.

Mountain Lake Remediation Alternatives Feasibility Study, San Francisco Presidio, San Francisco County, California. Mr. Shaw was the Principal-in-Charge for Balance's role in supporting a large consulting firm in the first steps of restoring Mountain Lake, one of the few remaining natural lakes in San Francisco. Balance staff conducted a hydrology study, which was used in the remediation design and provided field guidance for the construction crews for restoration of the north-arm wetland.

Napa Logistics Park and Napa Airport Corporate Center Water Supply Assessments, City of American Canyon, Napa County, California. Mr. Shaw was the principal-in-charge for water supply assessments for two separate industrial parks in the City of American Canyon. Balance compared the proposed water use at the sites relative to citywide supply and demand to assess whether adequate water would be available to the project over a 30-year planning period. Balance incorporated recent trends in citywide supply and demand, accounting for recent severe drought conditions that had not been included in prior supply/demand analysis.

California Tiger Salamander breeding habitat enhancement as mitigation for the proposed Madera Quarry, Madera County, California. Mr. Shaw served as project manager in evaluating hydrologic feasibility for creation and enhancement of breeding habitat for the endangered California Tiger Salamander (CTS) as mitigation for a proposed hard-rock quarry in Madera County, California. The study included field reconnaissance, topographic surveys, and hydrologic analyses to identify potential sites and develop conceptual designs for the highest quality site. Hydrologic analyses included development of a volumetric monthly water budget as well as instrumentation of potential sites for near-continuous water-level data collection. The conclusions of our investigation were used together with habitat criteria identified by project biologists as a basis for site selection, design and mitigation.

Pilarcitos Quarry EIR, Half Moon Bay, San Mateo County, California. Mr. Shaw participated in this environmental review of the proposed expansion of Pilarcitos Quarry, located in the Nuff Creek subwatershed of Pilarcitos Creek. As part of the CEQA team, Balance staff provided hydrologic and hydrogeologic expertise to



develop potential mining alternatives and recommend a viable mine reclamation plan. Channel restoration of the lower reach of Nuff Creek, which is currently culverted through the existing mining area, is an important element of the plan, as are sediment control and assessment of potential opportunities to store additional water in the watershed to augment baseflow in Pescadero Creek.

EXHIBIT B

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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA

UNITED STATES OF AMERICA,
Plaintiff,
v.
FALLBROOK PUBLIC UTILITY
DISTRICT, et al.,
Defendants.

Case No. 51-cv-01247-GPC-RBB
Judge: Hon. Gonzalo P. Curiel

ORDER APPOINTING
REPLACEMENT WATERMASTER
FOR SANTA MARGARITA RIVER
WATERSHED

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Defendant Rancho California Water District, on behalf of the Santa Margarita River Watershed Watermaster Steering Committee, having submitted to this Court a proposed order appointing a replacement watermaster for the Santa Margarita River Watershed, and no objections having been filed within the filing period,

IT IS HEREBY ORDERED that Brian J. Brady of Brian J. Brady and Associates is hereby selected as the next Watermaster for the Santa Margarita River Watershed, that the Santa Margarita River Watershed Watermaster Steering Committee is hereby authorized to complete negotiations of an agreement with Mr. Brady, and that upon the effective date of the executed contract, Mr. Brady shall serve as the Watermaster for the Santa Margarita River Watershed.

Dated: _____

UNITED STATES DISTRICT JUDGE