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10 Attorneys for DIAMOND FARMING COMPANY,
11 a California corporation

COPY

12 SUPERIOR COURT OF THE STATE OF CALIFORNIA
13 IN AND FOR THE COUNTY OF LOS ANGELES

14 Coordination Proceeding Special Title
15 (Rule 1550 (b))

Judicial Council Coordination No. 4408

16 ANTELOPE VALLEY GROUNDWATER
17 CASES

Case No.: 1-05-CV-049053

18 Included actions:

DECLARATION OF STEVEN B.
BACHMAN, PH.D., IN SUPPORT OF
OPPOSITION TO PUBLIC WATER
SUPPLIERS' MOTION TO CERTIFY A
DEFENDANT CLASS

19 Los Angeles County Waterworks District No.
20 40 vs. Diamond Farming Company
21 Los Angeles Superior Court
22 Case No. BC 325201

Hearing:

23 Los Angeles County Waterworks District No.
24 40 vs. Diamond Farming Company
25 Kern County Superior Court
26 Case No. S-1500-CV 254348 NFT

Date: March 12, 2007
Time: 1:30 p.m.
Dept.: 1

27 Diamond Farming Company vs. City of
28 Lancaster
Riverside County Superior Court
Lead Case No. RIC 344436 [Consolidated
w/Case Nos. 344668 & 353840]

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1 I, STEVEN B. BACHMAN, Ph.D., declare as follows:

2 1. I have over 30 years of experience in water resources engineering, management, and
3 planning, including, but not limited to, surface and groundwater hydrology and hydraulics, water
4 resources planning and management, and water rights. I have been qualified and have provided expert
5 testimony in water rights groundwater litigation in the courts for the State of California. I received my
6 Ph.D. in Geological Sciences from the University of California, at Davis, in 1979. Attached hereto as
7 Exhibit "A," is a true and correct copy of my Curriculum Vitae which outlines therein my professional
8 and educational history and background.

9 2. I have been retained by Diamond Farming Company to provide technical support and
10 consulting services in connection with the surface and groundwater hydrology existent within the area
11 of the Antelope Valley Groundwater Adjudication. As part of my consulting and technical support, I
12 attend and participate in the Technical Expert Committee meetings held with most of the experts
13 retained to provide consulting services and technical assistance to their clients in connection with the
14 Antelope Valley Groundwater Adjudication.

15 3. In connection with my participation in the technical expert committee meetings, I have
16 and am currently working with Mark J. Wildermuth, and I have reviewed the Declaration of Mark J.
17 Wildermuth filed in support of Municipal Water Provider's Motion to Certify a Defendant Class.
18 Additionally, I understand the geographic parameters established by this court by its November 3, 2006
19 Order, as thereafter amended, which defines the jurisdictional area for the Antelope Valley Groundwater
20 Basin Adjudication.

21 4. Although at this time, incomplete, Mr. Wildermuth's estimate as to the total number of
22 parcels is, subject to further investigation, presently reasonable. Of significance is the fact that within
23 Los Angeles County alone, there appear to be approximately 7,000 improved parcels which are not
24 within the service areas of municipal water providers and therefore we assume that they rely upon well
25 water and thus groundwater for their source of water. As noted by Mr. Wildermuth, there are within the
26 Los Angeles County portion of the adjudication area alone, approximately 47,000 parcels that are
27 undeveloped. If the Kern County parcels are estimated and added, the number increases to 65,000
28 parcels, and therefore the overlying water right as to those parcels remains at this time unexercised.

5. It would be an error and an extreme over simplification to suggest that historically or currently, groundwater conditions within the adjudication area manifest themselves uniformly throughout the entire area embraced within the adjudication boundary. Although the work of the Technical Expert Committee is still in its early and formative stages, as are my own investigative efforts and are as yet incomplete, it is apparent, nonetheless, that available evidence demonstrates that historically, there have been periods wherein some localized areas within the boundaries of the adjudication area have experienced measurable declining well levels over an observable period of time and during that same time period, other areas within the larger adjudication area have experienced increasing groundwater levels and thus increasing well levels. Needless to say, as to those unimproved parcels, wherein no groundwater pumping has occurred, the owners of those parcels had neither declining nor increasing well levels to monitor or observe. As to the improved parcels within the adjudication area, it has been confirmed historically that there has been a noted pumping depression centered around the cities of Lancaster and Palmdale, wherein declining well levels on improved parcels have been chronicled and tracked over time. During the same time frame wherein declining well levels were noted within the area of the cities of Lancaster and Palmdale, some wells within other areas within the adjudication boundary experienced increasing well levels, notably within the western portion of the area and within the area north of the Neenach fault line. The foregoing circumstance is offered only by way of example and is not intended to be all inclusive nor all exclusive. Due to the complexity of the geology and hydrology of the entire area, evidence of adverse conditions did not and do not manifest themselves in the same way or uniformly, either temporally or through groundwater level measurements, throughout the area embraced within the adjudication boundaries.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 23 day of February 2007, at Santa Barbara, California.

Steven B. Bachman, Ph.D

EXHIBIT A

STEVEN B BACHMAN, PH.D.

ADDRESS 801 Oak Grove Dr.
Santa Barbara, CA 93108

PHONE (805) 218-8169
FAX (805) 565-4982
e-mail Steven.Bachman@verizon.net

EDUCATION

- 1971 BS, Aeronautical Engineering
University of Washington
- 1974 MS, Geological Sciences
University of California, Los Angeles
- 1979 PhD, Geological Sciences
University of California, Davis

EXPERIENCE

- 1996-present Steven Bachman, Ph.D., Consulting Groundwater Geologist
- 1993-present Consulting Groundwater Programs Manager, United Water Conservation District; retained consultant, Calleguas Municipal Water District, Ventura County
- 2000-2002 Elected Director, Montecito Water District
- 1990-1996 V Pres, President, Integrated Water Technologies, Inc.
- 1984-1990 Director, co-founder of Crouch, Bachman & Assoc., Inc.
- 1983-1984 Research Associate, Scripps Institute of Oceanography
- 1979-1983 Asst. Professor, Geological Sciences, Cornell University
- 1977-1979 Lecturer, Univ. Calif., Davis
- 1974-1979 Geologist/Geophysicist, Chevron USA
- 1966-1969 US Army Officer

SUMMARY Dr. Bachman has over 30 years of professional geological experience ranging from academic to consulting to public sector. He currently splits his time between consulting from his Santa Barbara office, his role as consulting Groundwater Programs Manager for United Water CD, and as a retained consultant to Calleguas Municipal Water District. His experience in water projects in California, Nevada, and Arizona includes artificial recharge planning and implementation, groundwater management, water transfers, timing of reservoir releases, groundwater quality studies, aquifer studies, groundwater modeling, groundwater recharge studies, fisheries issues, wetlands treatment, technical advice and testimony for State regulatory proceedings, and expert witness on groundwater and water availability. Dr. Bachman co-authored the book *California Groundwater Management*, recently released in its second edition by the Groundwater Resources Association. He was the Chair of the Groundwater Committee for ACWA (Association of California Water Agencies) from 2000 to 2006, and now serves as the Vice-Chair. Dr. Bachman lectures statewide on groundwater management and groundwater monitoring/modeling.

AREAS OF EXPERTISE

Groundwater Management:

- Manage all groundwater activities for United Water Conservation District (Ventura County), including optimizing reservoir releases for downstream river and spreading basin recharge, collecting and analyzing groundwater level and quality data, installing water wells and monitoring networks, monitoring and mitigating seawater intrusion and nitrate problems, determining pumping volumes and pump charges, groundwater modeling to determine overdraft and test efficacy of proposed groundwater management strategies, determining fate of pathogens through vadose zone and in areas of exposed groundwater, developing water conservation measures with farmers.
- Oversee continuing groundwater management activities for Calleguas Municipal Water District (Ventura County), particularly addressing Calleguas MWD / Metropolitan Water District of Southern California's 300,000 acre-foot Las Posas Basin Aquifer and Storage Project, including determining basin overdraft, determining water budget, basin monitoring for water levels and water quality, evaluating alternate sources of supplemental water to solve overdraft in basin, overseeing construction of and running groundwater model, technical facilitator for committee of basin pumpers and Calleguas MWD.
- Facilitated/wrote AB3030 groundwater management plans for Piru basin and Fillmore basins (Ventura County) and Santa Clarita basin (Los Angeles County).
- Technical advisor to Groundwater Management Plan for Fox Canyon Groundwater Management Agency (Ventura County), including overdraft calculations, management strategies to counter seawater intrusion. Author of new Groundwater Management Plan for the GMA.
- Technical panel for continuing management (under court jurisdiction) of a portion of the Santa Maria basin adjudication (Nipomo Mesa Management Area).
- Technical lead for Expert Panel on determining potential overdraft for Santa Paula Basin Adjudication, including water budget analysis, hydrograph and base period analysis for safe yield, and water quality analysis.
- Member of White Paper Committee for Monterey County Water Resources Agency to optimize releases and recharge from Nacimiento/San Antonio for groundwater recharge to prevent seawater intrusion.
- Co-technical lead on groundwater management for the Santa Clarita groundwater basin, including yield analysis and calibration of groundwater model.
- Technical advisor to City of Riverside on all groundwater issues and water-supply studies.
- Evaluation of groundwater model in determining groundwater impacts from increasing pumping of basin and seawater intrusion (Huntington Beach/Fountain Valley, Orange County Water District).
- Evaluation of planned in-river recharge and recharge basins from release of Colorado River water from canal into local river (Central Arizona Project).
- Water supply analyses for south coast Santa Barbara water districts, including banking of State Water.

- Emergency drought supplies from untapped groundwater resources including: bedrock wells, wells through dry Gibraltar Reservoir into underlying saturated gravels, enhanced bedrock groundwater inflow into Mission Tunnel, and artificial recharge through well injection (Santa Barbara); bedrock wells for municipal supply (Los Angeles, Kern, and San Diego counties); new groundwater supplies (Sierra Pacific, Reno).

Regulatory/Expert Testimony:

- Expert testimony on groundwater geology, overdraft, and physical solutions, Antelope Valley Adjudication (Los Angeles-Kern counties).
- Expert testimony on overdraft, seawater intrusion and groundwater quality, Santa Maria Basin Adjudication (Santa Barbara-San Luis Obispo counties).
- Expert on basin yield, overdraft, aquifer storage projects, Monterey Peninsula Adjudication.
- Expert testimony on groundwater supply, overdraft, and groundwater quality for Newhall Ranch project (Ventura County vs. Los Angeles County).
- Expert testimony in California Public Utilities Commission judicial hearings on groundwater quality and safe yield in Santa Clarita groundwater basin (Los Angeles County).
- Expert testimony in California State Water Resources Control Board hearings on the legal definition of groundwater. Devised technical tests to determine the presence/absence of subterranean stream flow.
- Expert testimony on groundwater causes for landslide of 18th hole of golf course into ocean (Trump National, Palos Verdes, Los Angeles County).
- Expert testimony on role of irrigation/natural groundwater in causing landslides that destroyed several houses (1995) and killed ten people (2004), (La Conchita, Ventura County).
- Expert testimony on role of broken municipal water mains/natural groundwater in causing a landslide that destroyed several houses (Santa Barbara).
- Expert testimony in oil/gas case against Exxon, Mobil, Amoco. Provided court with geologic education, key geologic issues to be considered (Alberta, Canada).
- Expert testimony for regional well users/farmers over impacts of bedrock groundwater pumping and irrigation use on spring water (Goleta, Santa Barbara County).
- Testimony on offshore geologic conditions and faults for the California Public Utilities Commission (Diablo Canyon Nuclear Plant rate case, San Luis Obispo County).
- Testimony before the Nevada Public Service Commission on groundwater supplies in northern Nevada.
- Lead expert to TAC for Santa Paula basin adjudication (Ventura County).

PROFESSIONAL ACTIVITIES

Author/Co-author of over 50 technical publications on groundwater, analysis of sedimentary patterns in basins, and structural control on formation of basins. Co-author of first and second editions of *California Groundwater Management*.

Chair, Groundwater Committee, Association of California Water Agencies (ACWA), 2000-present

Technical Advisory Committee, State Water Resources Control Board, legal definition of surface water and groundwater, 2001-2002

Advisory Panel, California Dept. Water Resources, Groundwater Management Grant Funding, 2000-present.

Technical Advisory Panel, California Dept. of Health Services, Drinking Water Source Assessment Program, 2001-present.

Past-President of Pacific Section, SEPM (Society of Sedimentary Geology).

Associate Editor, Geological Society of America's *GEOLOGY*, 1983-85.

Organizer and lead instructor, AAPG School on *Sedimentation, Tectonics, and Basin Analysis*, annual weeklong school in Banff, Alberta.

Technical Program Chairman, Coeditor/convener of several symposia, including *Tectonics and Sedimentation Along the California Margin*.

U.S. Environmental Protection Agency seminar speaker

HONORS AND AWARDS

Richard Laubacher Award for Water Conservation, annual award of United Water Conservation District (2006)

John Flynn Award for Groundwater Stewardship, annual award of Fox Canyon Groundwater Management Agency (2006)

AWA Water Leadership Award, annual award of Association of Water Agencies Ventura County

MEMBERSHIPS AND REGISTRATIONS

Professional Geologist #4060, CA

Groundwater Resources Association of California

Pacific Section, Society of Sedimentary Geologists (SEPM)

Association of Groundwater Scientists and Engineers

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5 THE SUPERIOR COURT OF THE STATE OF CALIFORNIA
IN AND FOR THE COUNTY OF SANTA CLARA

6 Antelope Valley Groundwater Cases (JCCP 4408)) Antelope Valley Groundwater Cases
Plaintiff,)
7 vs.) Lead Case No.1-05-CV-049053
Judge Jack Komar
8 Defendant.)
AND RELATED ACTIONS)
9)
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I am employed in the County of Alameda, State of California.

I am over the age of 18 and not a party to the within action; my business address is 2915 McClure Street, Oakland, CA 94609.

The documents described on page 2 of this Electronic Proof of Service were submitted via the worldwide web on Mon. February 26, 2007 at 4:43 PM PST and served by electronic mail notification.

I have reviewed the Court's Order Concerning Electronic Filing and Service of Pleading Documents and am readily familiar with the contents of said Order. Under the terms of said Order, I certify the above-described document's electronic service in the following manner:

The document was electronically filed on the Court's website, <http://www.scefilling.org>, on Mon. February 26, 2007 at 4:43 PM PST

Upon approval of the document by the Court, an electronic mail message was transmitted to all parties on the electronic service list maintained for this case. The message identified the document and provided instructions for accessing the document on the worldwide web.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on February 26, 2007 at Oakland, California.

Dated: February 26, 2007

For WWW.SCEFILING.ORG

Andy Jamieson

THE SUPERIOR COURT OF CALIFORNIA, COUNTY OF SANTA CLARA
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Electronic Proof of Service
Page 2

Document(s) submitted by Bob Joyce of LeBeau-Thelen, LLP on Mon. February 26, 2007 at 4:43 PM PST

1. Decl in Support: Declaration of Steven Bachman In Support of Diamond's Opposition to Public Water Suppliers' Motion to
Certify a Defendant Class