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10 Attorneys for DIAMOND FARMING COMPANY,
11 a California corporation, CRYSTAL ORGANIC
12 FARMS, a limited liability company, GRIMMWAY
13 ENTERPRISES, INC., and LAPIS LAND COMPANY, LLC

14 **SUPERIOR COURT OF THE STATE OF CALIFORNIA**

15 **IN AND FOR THE COUNTY OF LOS ANGELES**

16 Coordination Proceeding Special Title
17 (Rule 1550 (b))

Judicial Council Coordination No. 4408

18 ANTELOPE VALLEY GROUNDWATER
19 CASES

Case No.: 1-05-CV-049053

20 Included actions:

**DESIGNATION OF EXPERT
WITNESSES BY DIAMOND FARMING
COMPANY, CRYSTAL ORGANIC
FARMS, LLC, GRIMMWAY
ENTERPRISES, INC. AND LAPIS
LAND COMPANY, LLC**

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

[C.C.P. §2034.210 et seq.]

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

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

AND RELATED CROSS-ACTIONS.

COMES NOW DIAMOND FARMING COMPANY, CRYSTAL ORGANIC FARMS, LLC,
GRIMMWAY ENTERPRISES, INC., and LAPIS LAND COMPANY, LLC, by and through their

1 attorneys of record, Bob H. Joyce, who declares under penalty of perjury that the foregoing individuals
2 may be called to testify at time of trial as expert witnesses:

3 **NON-RETAINED EXPERTS**

4 1. Plaintiff and Cross-Defendants hereby designate each expert of each party participating
5 in this expert designation. Further, plaintiff and cross-defendants reserve their right to supplement this
6 designation pursuant to Code of Civil Procedure section 2034.280.

7 **RETAINED EXPERTS**

8 2. Steven B. Bachman, Ph.D., 801 Oak Grove Dr. Santa Barbara, CA 93108 (805) 218-
9 8169.

10 3. Mark E. Grismer, Ph.D., 7311 Occidental Road, Sebastopol, CA 95472 (530) 752-3243.

11 **EXPERT WITNESS DECLARATION**

12 I, BOB H. JOYCE, declare as follows:

13 1. I am the attorney of record for DIAMOND FARMING COMPANY, CRYSTAL
14 ORGANIC FARMS, LLC, GRIMMWAY ENTERPRISES, INC., and LAPIS LAND COMPANY, LLC
15 I make this expert witness declaration as required by C.C.P. §2034.260.

16 2. Dr. Steven Bachman has agreed to testify at the trial, and, will be sufficiently familiar
17 with the pending action to submit to a meaningful oral deposition concerning his specific testimony,
18 including any opinion and its basis, that Dr. Bachman is expected to give at trial.

19 3. As for Steven Bachman, I am informed and believe that the following is true and correct:

20 a. Dr. Bachman holds a Ph.D. in Geological Sciences. Attached hereto is a true and
21 correct copy of Dr. Bachman's C.V.

22 b. Dr. Bachman has agreed to testify at the time of trial and will be sufficiently
23 familiar with the facts giving rise to the within litigation so as to provide meaningful deposition
24 testimony upon the reasonable request and proper notice of any party. Dr. Bachman is prepared to testify
25 on historical changes in storage of groundwater within the Antelope Valley area of adjudication,
26 historical water balances within that area, base periods for calculating the yield of that area, the yield of
27 that area, and the uncertainties in the calculations of the water balance and yield of the area of
28 adjudication. Additionally, Dr. Bachman is prepared to testify on the hydrologic connection of the

1 Willow Springs subarea to the main Antelope Valley subarea and the extent to which pumping in the
2 Willow Springs subarea affects groundwater elevations in the main area of adjudication. Additionally,
3 Dr. Bachman may be asked to review and prepare comments and proposed testimony concerning specific
4 issues testified to by other experts designated by other parties, including the assessment and evaluation
5 of the validity of the factual and hypothetical assumptions, data, and conclusions offered by those other
6 experts, as well as the ultimate opinions and evaluations that are based upon that data and/or those
7 assumptions.

8 c. Dr. Bachman's fee for deposition and trial testimony is \$325.00 per hour.

9 4. Dr. Mark Grismer has agreed to testify at the trial, and, will be sufficiently familiar with
10 the pending action to submit to a meaningful oral deposition concerning his specific testimony, including
11 any opinion and its basis, that Dr. Grismer is expected to give at trial.

12 5. As for Mark Grismer, I am informed and believe that the following is true and correct:

13 a. Dr. Grismer holds a Ph.D. in Agricultural Engineering and an M.S. in
14 Environmental Engineering. Attached hereto is a true and correct copy of Dr. Grismer's C.V.

15 b. Dr. Grismer has agreed to testify at the time of trial and will be sufficiently
16 familiar with the facts giving rise to the within litigation so as to provide meaningful deposition
17 testimony upon the reasonable request and proper notice of any party. Dr. Grismer is prepared to testify
18 to the lag time from agricultural irrigation for recharge to the water supply. Additionally, Dr. Grismer
19 may be asked to review and prepare comments and proposed testimony concerning specific issues
20 testified to by other experts designated by other parties, including the assessment and evaluation of the
21 validity of the factual and hypothetical assumptions, data, and conclusions offered by those other experts,
22 as well as the ultimate opinions and evaluations that are based upon that data and/or those assumptions.

23 c. Dr. Grismer's fee for deposition and trial testimony is \$300.00 per hour.

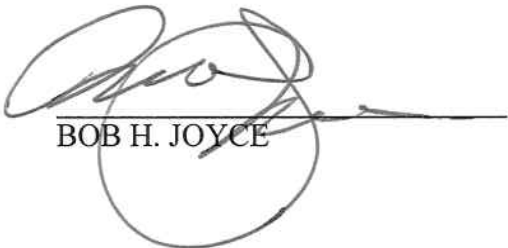
24 6. Plaintiff and cross-defendants reserve their right, pursuant to CCP §2034.210 et seq., and
25 other statutory and case law, to call upon cross-complainants'/defendants' designated experts, both
26 retained and non-retained, to testify at the time of trial with reference to the issues contained in
27 plaintiff's pleadings, and/or with reference to any of this issues raised by the pleadings in this matter.
28 The identities and fields of expertise of these experts are well-known to the designating parties.

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7. Further, plaintiff and cross-defendants herein reserve their right to call any and all rebuttal witnesses as may be necessary and otherwise permitted under California law, including the provisions of C.C.P. §2034.210 et seq. and related California case law.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct of my own personal knowledge, except as to those matters stated to be based upon information and belief, and as to such matters, I am informed and believe that they are true and correct.

EXECUTED this 15th day of July, 2010, at Bakersfield, California.



BOB H. JOYCE

STEVEN B BACHMAN, PH.D.

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Santa Barbara, CA 93108

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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 Policy 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 and Vice-Chair of the Groundwater Committee for ACWA (Association of California Water Agencies) from 2000 to 2008. 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. Devised and modeled strategies, ran public outreach program, and prepared Groundwater Management Plan for Fox Canyon Groundwater Management Agency (2007).
- 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.
- Co-authored Monitoring Program, Groundwater Triggers and Response Plan, and first Annual Report (2008) for Nipomo Mesa Management Area as part of continuing jurisdiction by Court in Santa Maria basin groundwater adjudication (Santa Barbara-San Luis Obispo counties).
- 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.
- Prepared Water Supply Optimization Study for Montecito Water District (Santa Barbara County) to formalize operating criteria for combined use of local surface water from two reservoirs, State Project Water, and groundwater.
- Groundwater Management Plan, Water Supply Management Plan for Goleta Groundwater Basin (Santa Barbara County).
- Co-technical lead on groundwater management for the Santa Clarita groundwater basin (Los Angeles County), 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 CAP canal into local drainages (Central Arizona Project).
- 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 in California State Water Resources Control Board hearings on the legal definitions of surface water and groundwater. Devised technical tests to determine the presence/absence of subterranean stream flow.
- Expert 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 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 (2005), (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

Engineer of the Year Award, Santa Barbara County Special Districts Association (2009)

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 (2006)

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

Mark E. Grismer PhD PE

Professor of Hydrology and Agricultural Engineering
Departments of Land, Air and Water Resources and
Biological and Agricultural Engineering
University of California
Davis, CA 95616
(530) 304-5797

EDUCATION

- Ph.D. – Agricultural Engineering, Colorado State University (1984)
Study Emphasis: Groundwater Hydrology
- M.S. – Environmental Engineering, Oregon State University (1981)
Study Emphasis: Hydrology and Water Quality
- B.S. – Agricultural Engineering, Oregon State University (1980)
Study Emphasis: Soil and Water Science
- EIT Engineer-in-Training Registration, Oregon (1980)
- PE Civil Engineering, California (#72703)

HONORS

- Outstanding Teamwork Award & Prize – Water Conservation in Agriculture, UC Division of Agriculture & Natural Resources (2003)
- Outstanding Teacher Award, Environmental Resource Sciences Major, UC Davis (1992)
- Mined Land Reclamation Group Graduate Fellowship, CSU Environmental Resources Center (1983)
- ASAE Student Honor Award, Oregon State University (1980)
Honors Program, Oregon State University (1980)
- High Scholarship Graduate, Oregon State University (1980)
- Presidential Scholarship, Hamline University, MN (1976)

UNIVERSITY EXPERIENCE

Chair, Hydrologic Sciences Graduate Group, UC-Davis; 7/90-7/93 and 7/2002-2006.

Professor, Depts. of LAWR and Biological and Agricultural Engineering, UC-Davis; 7/95-present.

Associate Editor, ASABE Transactions; 7/2002-present.

Associate Editor, California Agriculture, Land & Water Resources; 10/99-present.

Associate Editor, ASCE Journal of Irrigation & Drainage Engineering; 7/94-12/96.

Master Advisor, Hydrology; 7/94-7/98

Master Advisor, Environmental & Resource Sciences; 7/2003-present

Graduate Advisor; Hydrologic Sciences; 7/92-present.

Associate Professor, Departments of LAWR and Agricultural Engineering, UC-Davis; 7/89–6/95.

As an associate professor, I have continued work as outlined below as well as serve on additional college and campus committees. These include chairing an undergraduate major review committee and chairing the Academic Senate and College Rules & Jurisdiction committees during a period of numerous rule changes resulting from integration of Cooperative Extension into the College. Also, as chair of the Earth Sciences & Resources Graduate Group, I was responsible for transformation of this Group into the new Hydrologic Sciences Graduate Group and the creation of Hydrology undergraduate teaching programs (new major and minor). My efforts in curriculum development also resulted in my chairing a graduate education oversight committee for the College.

Assistant Professor, Departments of Land, Air & Water Resources (LAWR) and Agricultural Engineering, UC-Davis; 10/84–6/89.

As an assistant professor, my research program considered near surface processes such as infiltration, surface evaporation and irrigation management, as well as various aspects of shallow groundwater including; vapor movement in unsaturated soils, lateral subsurface flows, seepage from wastewater impoundments, groundwater modeling, soil salinity and drainage of cracking clay soils, and regional modeling of shallow groundwater as affected by irrigation and drainage (see publications). In addition to

regular teaching, research and committee responsibilities, I served as Chair of the Committee of Consultants on San Joaquin River Water Quality, Chair of a faculty position (geohydrology) search committee, and Chair of the interdisciplinary Graduate Program of Earth Sciences and Resources.

Research Associate, Department of Agricultural and Chemical Engineering, Colorado State University; 1/84–9/84.

As a research associate, I was responsible for completion of contracts with oil shale processing companies and consulting firms relative to the leaching of spent oil shales. This work involved laboratory leaching column and hydraulic property studies, as well as, a conceptual mass balance estimate of seepage/drainage from spent oil shale piles in the field.

Research Assistant, Department of Agricultural and Chemical Engineering, Colorado State University; 7/81–12/83.

During this period, I completed classroom and laboratory studies toward the Ph.D. In the laboratory, gamma ray attenuation methods were devised for simultaneously monitoring water and salt movement in relatively dry soils.

Research Assistant, Department of Agricultural Engineering, Oregon State University; 6/80–6/81.

In this year, I completed coursework in hydrology, water chemistry, and adult education, as well as, M.S. thesis work related to fecal coliform contamination of Tillamook Bay from land application of dairy wastes.

Engineer-in-Training, Oregon Soil and Water Conservation Commission, The Dalles, OR; 6/79–9/79.

As an intern, I worked with USDA-SCS personnel on the design, layout and surveying inspection of earthen terraces constructed to limit hillside erosion from dryland wheat fields.

TEACHING RESPONSIBILITIES

Principles of Hydrology (HYD/ERS 100 & 100L, 6 units) – Large enrollment course including multiple laboratory and discussion sections for environmental science students covering all aspects of general hydrology as well as basic hydrogeochemistry and hydraulics.

Seepage and Drainage, Irrigation and Drainage (HYD 140, HYD 115/EBS 145, 4 units) – An engineering principles and design course considering subsurface drainage issues associated with excess rootzone drainage, seepage from canals or impoundments and artesian groundwater conditions.

Multi-phase Transport in Soils, Infiltration and Drainage (HYD 244/EBS 240, 3 units) – A graduate course considering two and three-phase flow through porous media and its application to infiltration and vadose zone processes. Students design and complete research projects of interest as part of the course.

Wood Properties & Fabrication (ABT 15, 2 units) – A basic materials course with multiple laboratory sections considering wood as a biological material, its physical properties (e.g. strength, density, thermal conductivity), mechanics of materials and construction of wood hand planes.

OSHA HAZWOPER Training (HYD 410, HYD 440, 1&3 units) – OSHA 10-hr and 40-hr certification courses required before entering hazardous material sites.

Hydrologic Science Seminar (HYD 200, 1 unit) – Graduate seminar course considering basic literature review, proposal writing and lecture principles combined with attendance and review of seminars related to hydrology.

RESEARCH AREAS

Field Research – General hydrology and irrigation and drainage engineering. Extensive field research conducted related to irrigation, soil salinity and cracking, and drainage as well as general water quality issues associated with agricultural runoff. Current field research is considering erosion and riparian systems, restoration of tidal marshes via drainage channel design and construction, role of wetlands in watershed systems and use of constructed wetlands for treatment of agricultural process (e.g. winery, fruit) wastewaters.

Laboratory Research – Soil physics. Ongoing research related to measurement of soil hydraulic parameters, multi-phase transport through soils, adsorption/desorption of VOC's on clay minerals, strength of clays and general aspects of flow in porous media.

Modeling Research – Surface runoff and shallow groundwater systems. Have completed extensive modeling of the impacts of regional irrigation/drainage on soil salinity and shallow groundwater, river water quality, pesticide runoff from orchards and seepage from impoundments.

CONSULTING PROJECTS (selected few)

My consulting projects and work is generally directed at evaluation of environmental impacts of development, irrigation projects and related activities on the watershed. This includes evaluation of soil-salinity, water use, evapotranspiration, flooding and related processes and their effects. Some specific projects include:

Levee seepage – Modeled timing and extent of levee seepage near Sacramento for CA State Attorney General.

Santa Rosa Regional Wastewater Treatment System – Expert reviewer of draft EIR document development.

Subsurface Drainage System Design – Developed new design that incorporated an old system for the CA Department of Corrections doubling expansion of an existing prison in the San Joaquin Valley.

Lincoln City, CA Aggregate Mining - Expert reviewer of Draft EIR document on behalf of concerned citizen group (WPCARE) of Placer county.

Fresno, CA Aggregate Mining - Expert reviewer of Kings River Sand & Gravel Project Draft EIR document on behalf of concerned citizen group.

Orchard Surface Drainage – Surveyed and developed remedial surface drainage design for orchard near Gridley, CA.

Livingston Waste Water Treatment Plant – Evaluated declining percolation pond seepage rates and problems associated with river discharge of partially-treated effluent and recommended plant modifications to maintain compliance with waste discharge requirements.

La Conchita Ranch Orchard Seepage Evaluation – Conducted extensive field monitoring program and sampling to estimate avocado/citrus orchard water use and rootzone drainage relative to rainfall induced seepage through the vadose zone.

Evaluation of Dry/Linda Creek Flood Control Project - Expert reviewer of draft EIR document on behalf of concerned citizen group and Sierra Club to determine potential for downstream flooding resulting from the project. Developed model and possible alternative flood-control designs to reduce loss of “heritage” oak trees along riverbanks and protection of chinook salmon run for presentation to Roseville City officials and FEMA.

Evaluation of District Canal Seepage Problems – Assisted in conducting a field survey and analysis of shallow groundwater levels as they were affected by operation of a water district canal for orchard near Gridley, CA.

Independent Review Panel Expert on Agricultural Water Conservation for CALFED. Advised CALFED officials about proposed evaluation of agricultural water use efficiency around the state related to the Delta water issues.

Evaluation of Draft EIR Specific Plans for urban development in the Sacramento area. These typically involve assessment of water use, water quality, land use and flooding impacts associated with the proposed developments.

Evaluation of Imperial Valley Water Use (USBR & MWD). Completed a detailed assessment of the applicability of the “reduced-runoff” irrigation method to forage crop production in the Imperial Valley and how it would lead to significant water savings. This research and work resulted in USBR and DANR awards.

Mercury Fate & Transport in the Yuba Goldfields. This ongoing work involves assessment of mercury transport, transformation and fate as well as possible abatement and cleanup costs associated with mining and dredging operations in this unique area.

Assessment of Contaminant Transport & Remediation - DBCP, MTBE, Hg, Coliforms. Prepared reviews of the state of the science on these contaminants in groundwater systems for DBCP and MTBE, and surface waters for Hg and in the seawater environment for fecal coliforms.

Evaluation of Water Use and Stream-Water Table interactions on Middle Rio Grande River, NM. Completed a detailed current and historical assessment (1896-2000) of Pueblo Indian water use, crop production, evapotranspiration, effects of shallow water table depth on losses in crop production and dependence of this relationship on changing stream – WT aquifer conditions.

CONFERENCE PUBLICATIONS

Moore, J. A., M. E. Grismer, S. R. Crane, and J. R. Miner. 1982. Evaluating dairy waste management systems' influence on fecal coliform concentration in runoff. ASAE Paper No. 82-4024.

- McCullough-Sanden, B. L., T. K. Gates, and **M. E. Grismer**. 1986. Analysis of seepage in an on-farm evaporation pond. ASAE Paper No. 86-2064.
- Grismer, M. E.** 1987. Water vapor adsorption kinetics during constant-rate infiltration. ICIDA Conference, Hawaii. January.
- van der Tak, L. D. and **M. E. Grismer**. 1987. Irrigation, drainage and soil salinity in cracking soils. ASAE Paper No. 87-2052.
- Grismer, M. E.** 1987. Automated monitoring of remote soil sensors. ASAE Paper No. 87-2095.
- Gates, T. K. and **M. E. Grismer**. 1987. Stochastic optimal management of saline perched aquifers in irrigated regions. Proceedings of International Conference on Groundwater Contamination: Use of models in Decision-Making. Amsterdam, The Netherlands. October.
- Tod, I. C. and **M. E. Grismer**. 1988. Drainage efficiency and cracking clay soils. ASAE Paper No. 88- 2588. December.
- Grismer, M. E.** 1989. Drainage efficiency and drain water quality. *In*: Proceedings of the Eleventh International Congress on Agricultural Engineering, Dublin, Ireland. September. pp. 285-290.
- Grismer, M. E.** 1990. Deep percolation, drainage and water quality. *In*: Proceedings of the ASCE National Conf. on Irrigation and Drainage Engineering. July. pp. 355-362.
- Lyons, T. C. and **M.E. Grismer**. 1992. Management of agricultural drainage pollution considering regional cooperation. *In*: Proceedings of the ASCE National Conf. on Irrigation and Drainage Engineering. July.
- Grismer, M.E.,** F. Karajeh and H. Bouwer. 1993. Evaporation pond hydrology. *In*: Proceedings of the ASCE National Conf. on Irrigation and Drainage Engineering, Durango, CO. July.
- Bali, K. M. and **M. E. Grismer**. 1993. Measurement of multi-phase flow in relatively dry porous-media. ASAE Paper No. 932063. June.
- Bali, K. M. and **M. E. Grismer**. 1993. Calibration of dual-energy gamma systems for determining liquid saturations during multiphase flow in soils. International Conf. on Physical Properties of Agricultural Materials, Bonn, Germany. Paper No. 93-1007. Sept. Also in *Int'l Agrophysics* 8:1-8.
- Bali, K. M., **M. E. Grismer**, K. S. Mayberry and J. M. Gonzalez. 1994. Temporal and spatial variability of infiltration in heavy clay soils. ASAE/ASCE International Summer Meeting, Kansas City, MO. Paper No. 94-2044.
- Bali, K.M. and **M.E. Grismer**. 1995. Management of surface irrigation systems in heavy clay soils. *In*: Proceedings of ASCE Intl. Conf. on Water Resources Engr., San Antonio, Texas. pp. 1590-94.
- Dudley, L.M., **M.E. Grismer**, D. L. Suarez, and L. S. Williardson. 1995. Hydrodynamics and Chemical Transport in the Root Zone and Shallow Ground Water System: Modeling. *In*: Proceedings of ASCE Intl. Conf. on Water Resources Engr., San Antonio, Texas. pp. 927-931.
- Guitjens, J.C., J.E. Ayars, **M.E. Grismer** and L.S. Willardson. 1995. Irrigation/drainage practices for water quality management. *In*: Proceedings of ASCE Intl. Conf. on Water Resources Engr., San Antonio, Texas. pp. 927-931.
- Ayars, J.E., **M.E. Grismer** and J.C. Guitjens. 1995. Water quality as a design criteria in irrigation and drainage water management systems. *In*: Proceedings of ASCE Intl. Conf. on Water Resources Engr., San Antonio, Texas. pp. 932-936.
- Grismer, M.E.** 1996. Emerging concepts for management of salinity and drainage in irrigated regions. *In*: Proc. of N. American Water and Environ. Congress. Anaheim, CA. June.
- Tod, I.C. and **M.E. Grismer**. 1996. Efficiencies of drainage systems and improved water management. *In*: Proc. of N. American Water and Environ. Congress. Anaheim, CA. June.
- Bali, K.M. and **M.E. Grismer**. 1996. Water management and irrigation scheduling of sudan grass in clay soils. *In*: Proc. of N. American Water and Environ. Congress. Anaheim, CA. June.
- Grismer, M.E.,** J.L. Kollar and J. Syder. 1998. Drainage design for restoration of San Pablo Bay tidal wetlands. Soc. Wetland Sci. Annual Meeting, Anchorage, AK. June. Abstract, p.112.
- Grismer, M.E.,** H.L. Shepherd and M. Tausendschoen. 1998. Subsurface flow hydraulic characteristics of a constructed wetland for winery effluent. Soc. Wetland Sci. Annual Meeting, Anchorage, AK. June. Abstract, p.49.
- Shepherd, H.L. **M.E. Grismer**, and K. Sanders. 1998. Treatment efficiency of a subsurface flow constructed wetland for winery effluent: Application of a rate-dependent decay constant Soc. Wetland Sci. Annual Meeting, Anchorage, AK. June. Abstract, p.47.
- Bali, K.M. I.G. Escobosa, J.N. Guerrero, D.M. Crohn and **M.E. Grismer**. 1998. Effects of biosolids on infiltration in clay soils. ASAE Annual Summer Meeting, Orlando, FL. July. ASAE Paper No. 98-2114.
- Grismer, M.E.** 1998. Wetland hydrology and water quality assessment. Keynote Address *In*: Proc. of Int'l Symposium on Lowland Technology, Saga University, Japan. Nov. pp.35-48.

- Watanabe, H., **M.E. Grismer**, J.D. Henderson and B.W. Wilson. 1998. Nonpoint source pollution control of diazinon in dormant-sprayed orchards: Use of inter-row vegetative filter strips – A multi-system approach. Presentation at Int'l Symposium on Lowland Technology, Saga University, Japan. Nov.
- Shepherd, H. L.; **Grismer, M. E.** and Sanders, K. 1999. Constructed wetlands used for improving quality of winery process wastewater. (Annual Meeting of the American Society for Enology and Viticulture Reno, Nevada, USA June 30-July 2). *American J. of Enology and Viticulture* 50(3):371.
- Tod, I.C. and **M.E. Grismer**. 1999. Irrigation efficiencies and drainage requirements. *In: Proceedings of ASCE Intl. Conf. on Water Resources Engr., Seattle, WA.*
- Grismer, M.E.** 2000. Drainage channel design and restoration of inter-tidal marshes. Keynote Address *In: Proc. of Int'l Symposium on Lowland Technology, Saga University, Japan. Oct. pp.57-73.*
- Tod, I.C., K. M. Bali and **M.E. Grismer**. 2002. Irrigation efficiencies and drainage requirements. *In: Proceedings of USCID Conf., San Luis Obispo, CA. July.*
- Wallender, W. W. and **M.E. Grismer**. 2002. Irrigation hydrology: Crossing scales. *In: Proceedings of USCID Conf., San Luis Obispo, CA. July.*
- Grismer, M.E.** 2002. Constructed wetland hydraulics and water treatment. *In: Proc. of Int'l Symposium on Lowland Technology, Saga University, Japan. Sept. pp. 465-472.*
- Shepherd, H. L. and **M.E. Grismer**. 2003. Constructed Wetlands for Treating Winery Process Wastewater: Application & Field Results. Conference Proceedings of CA Chapter of ASA Plant & Soil Conf., Modesto, CA. Feb., 2003. pp. 108-114.
- Bali, K.M., I.C.Tod and **M.E. Grismer**. 2003. Linking irrigation practices to the quality of drainage waters. *In: Proceedings of USCID Conf. Sacramento, CA. Feb.*
- Shepherd, H. L. and **M.E. Grismer**. 2003. Disposal and Use of Winery Process Wastewater - Salinity Issues. ASEV Annual Meeting. Reno, NV. June.
- Bali, K.M., I.C.Tod and **M.E. Grismer**. 2004. Reducing drainage requirements in alfalfa production. ASAE Paper 701P0304. *In: Proceedings of 8th Int'l ASAE Drainage Symposium, March. 8 pp.*
- K. M. Bali, J. N. Guerrero, I. C. Tod and **M. E. Grismer**. 2005. Linking Irrigation Practices to the Quality of Drainage Waters. USCID 3rd International Conference on Irrigation and Drainage. San Diego, CA. March, 2005. pp. 391-398.
- Grismer, M.E.** 2005. Simulation evaluation of the effects of non-uniform flow and degradation parameter uncertainty on subsurface flow constructed wetland performance. American Ecological Engineering Society Annual Meeting, Columbus, OH. May, 2005.
- Ibrahim, J., **Grismer, M.E.** and MB Johnson. 2006. Sediment deposition and mercury transformations in an intertidal salt marsh, San Pablo, CA. *In: Proc. of Int'l Symposium on Lowland Technology, Saga University, Japan. Sept. pp.473-482.*
- Osterhuber, R. M. Hogan, **M.E. Grismer** & K. Drake. 2007. Delaying snowpack ablation. 75th Annual Western Snow Conference, Kailua-Kona, Hawaii. April.
- Grismer, M.E.** 2007. Constructed subsurface flow wetland hydraulics and treatment. 2-day short course. Mexican Institute of Ecology, Veracruz, MX. August, Invited.
- Grismer, M.E.** 2007. Quantifying erosion sediment yield, particle-sizes and infiltration on disturbed steeply sloping soils following revegetation. Mexican Institute of Ecology, Veracruz, MX. August, Invited presentation.
- Grismer, M.E.** 2007. Modeling forested uplands erosion in the Lake Tahoe Basin - setting TMDLs. Lahontan Regional WQ Control Board. Sept., Invited presentation.
- Grismer, M.E.** 2007. Functional Monitoring for Erosion Project Assessment and Policy Application. SERCAL Conference, San Jose, CA, Sept.
- Grismer, M.E.** 2007. TMDL Modeling and Loading from Forested Uplands in the Tahoe Basin – Phase I. Invited meeting with agency personnel. South Lake Tahoe, CA. Sept.
- Grismer, M.E.** 2008. Erosion Modeling for Land Management – Scaling from Plots to Forest Catchments in the Tahoe Basin. 4th Biennial Tahoe Science Symposium, Incline Village, NV. March.
- Grismer, M.E.** 2009. Erosion Modeling in the Tahoe Basin – Scaling from plots to Forest Catchments. SERCAL Conference, Folsom, CA. April.
- Grismer, M.E.** 2010. Erosion Modeling for Land Management – Scaling from Plots to Forest Catchments in the Tahoe Basin. 5th Biennial Tahoe Science Symposium, Incline Village, NV. March.
- Grismer, M.E.** 2010. Erosion Modeling for Land Management – Soil restoration thresholds. 5th Biennial Tahoe Symposium, Incline Village, NV. March.
- Grismer, M.E.** and A.B. Collins. 2010. Microbial Community Composition and Stability of Disturbed Soils in the Lake Tahoe Basin. 5th Biennial Tahoe Science Symposium, Incline Village, NV. March.

Hogan, M.P. and **Grismer, M.E.** 2010. Modeling and Real-time Measurements: Function, Constraints, Opportunities. 5th Biennial Tahoe Symposium, Incline Village, NV. March.

Grismer, M.E. and A.B. Collins. 2010. Microbial Community Composition and Stability of Disturbed Soils in the Lake Tahoe Basin. SERCAL Conference, Mammoth, CA. May.

REVIEWS

Grismer, M.E. 2001. DBCP Contamination and Treatment in Groundwater: A Review.

Grismer, M.E. 2002. Fecal Coliforms in Seawater: A Review.

Grismer, M.E. 2002. Rainfall Simulation (RS) Methods: Reviews of RS applied to rainfall effects on aggregate stability, RS design, environmental transport, erosion, fire effects, insecticide/spore dispersal, runoff modeling, slope/cover and tillage/traffic processes.

Grismer, M.E. 2003. Mercury Contamination, Transport and Bio-availability Associated with Dredging Operation in the Yuba Goldfields: A Review.

REFEREED PUBLICATIONS

Crane, S. R., J. A. Moore, **M. E. Grismer** and J. R. Miner. 1983. Bacterial pollution from agricultural sources: A Review Trans. of ASAE 26(3): 856-866 and 872.

Moore, J. A., **M. E. Grismer**, S. R. Crane and J. R. Miner. 1983. Modeling dairy waste management systems influence on coliform concentration in runoff. Trans. of ASAE 26(4): 1194-1200.

Tanji, K. K., **M. E. Grismer**, and B. R. Hanson. 1985. Subsurface drainage evaporation ponds. Cal. Agriculture 39(9-10):10-12.

Grismer, M. E., D. B. McWhorter, and A. Klute. 1986. Determination of diffusivity and hydraulic conductivity in soils at low water contents from nondestructive transient flow observations. Soil Science 141:10-19.

Grismer, M. E., D. B. McWhorter, and A. Klute. 1986. Monitoring water and salt movement in soils at low solution contents. Soil Science 141:163-171.

Grismer, M. E. 1986. Nondestructive observations of solution displacement in soils. Soil Science 141:185-189.

Grismer, M. E. 1986. Pore-size distributions and infiltration. Soil Science 141(4):249-260.

Grismer, M. E. 1987. Kinetics of water vapor adsorption on soils. Soil Science 143(5):367-371.

Gates, T. K. and **M. E. Grismer.** 1987. Optimal management of saline water tables in irrigated regions. Cal. Agriculture 41(3-4):20-21.

Grismer, M. E. and R. C. Woodring. 1987. Assessment of lateral groundwater flows in the San Joaquin Valley. Cal. Agriculture 41(3-4):22-23.

Rashmawi, E. A. and **M. E. Grismer.** 1987. Groundwater flows to the San Joaquin River. Cal. Agriculture 41(5-6):18-19.

Grismer, M. E. 1987. Vapor adsorption kinetics and vapor diffusivity. Soil Science 144(1):1-6.

van der Tak, L. D. and **M. E. Grismer.** 1987. Irrigation, drainage and soil salinity in cracking soils. Trans. of ASAE 30(3):740-744.

Grismer, M. E. 1987. Water vapor adsorption and specific surface. Soil Science 144(3):233-236.

Grismer, M. E. and B. L. McCullough-Sanden. 1988. Evaporation pond seepage. Cal. Agriculture 42(1):4-5.

Grismer, M. E. and T. K. Gates. 1988. Estimating saline water table contributions to cotton water use. Cal. Agriculture 42(2): 23-24.

Grismer, M. E. 1988. Vapor transport during solution displacement in soils. Soil Science 146(4):215-220.

Grismer, M. E. 1988. Water vapor adsorption kinetics and isothermal infiltration. Soil Science 146(5):297-302.

Alemi, M. H., D. A. Goldhamer, **M. E. Grismer**, and D. R. Nielsen. 1988. Elution of selenium from contaminated evaporation pond sediments. J. Environ.Qual. 17:613-618.

McCullough-Sanden, B. L. and **M. E. Grismer.** 1988. Field analysis of seepage from drainwater evaporation ponds. Trans. of ASAE 31(6):1710-1714.

Grismer, M. E., I. C. Tod, and F. E. Robinson. 1988. Subsurface drainage system performance after 20 years of operation in the Imperial Valley. Cal. Agriculture 42(3):24-25.

Grismer, M. E., T. K. Gates, and B. R. Hanson. 1988. Irrigation and drainage strategies for salinity problem areas. Cal. Agriculture 42(5):23-24.

- Gates, T. K., R. J-B. Wets, and **M. E. Grismer**. 1989. Stochastic approximation applied to optimal irrigation and drainage planning. *J. Irr. & Drain. ASCE* 115(3):489-503.
- Gates, T. K. and **M. E. Grismer**. 1989. Irrigation and drainage strategies in salinity-affected regions. *J. Irr. & Drain. ASCE* 115(2):258-287.
- Grismer, M. E.**, and B. L. McCullough-Sanden. 1989. Correlation of laboratory analyses of soil properties and infiltrometer seepage from drainwater evaporation ponds. *Trans. of ASAE* 32(1):173-176.
- Grismer, M. E.** 1989. Seepage control from drainwater evaporation ponds. *Cal. Agriculture* 43(1-2):21-23.
- Tanji, K. K. and **M. E. Grismer**. 1990. Evaluation of drainwater evaporation ponds. WRC Center final report.
- Lima, L. A., **M. E. Grismer**, and D. R. Nielsen. 1990. Salinity effects on Yolo loam hydraulic properties. *Soil Science* 150(1):451-458.
- Grismer, M. E.** 1990. Leaching fraction, soil salinity, and drainage efficiency. *Cal. Ag.* 44(6):24-27.
- Grismer, M. E.** and T. K. Gates. 1990. Hydrologic aspects of saline water table management in regional shallow aquifers. *In: The Economics and Management of Water and Drainage in Agriculture*, Ariel Dinar and David Zilberman (eds.), pp. 51-70.
- Grismer, M. E.** and I. C. Tod. 1991. Drainage of clay overlying an artesian aquifer: I. Hydrologic Assessment. *ASCE J. of Irr. and Drainage* 117(2):555-570.
- Tod, I. C. and **M. E. Grismer**. 1991. Drainage of clay overlying an artesian aquifer: II. Technical Analysis. *ASCE J. of Irr. and Drainage* 117(2):571-584.
- Tod, I. C., **M. E. Grismer**, and W. W. Wallender. 1991. Measurement of irrigation flows through spiles. *ASCE J. of Irr. and Drainage* 117(4):596-599.
- Grismer, M.E.** 1992. Cracks in irrigated soil may allow some drainage. *Cal. Ag.* 46(5):9-12.
- Grismer, M.E.** 1992. Field sensor networks and automated monitoring of soil water sensors. *Soil Sci.* 154(6):482-489.
- Lima, L. A. and **M. E. Grismer**. 1992. Soil cracking morphology and soil salinity. *Soil Science* 153(2):149-153.
- Weight, G., A. Orhun and **M. E. Grismer**. 1992. Automated power generation for measurement of subsurface drainage flows. *Applied Engineering in Agriculture*. 8(6):795-797.
- Grismer, M. E.** and E. A. Rashmawi. 1993. The Dupuit-Forchheimer approximation and ground water flows to the San Joaquin River. *Cal. Ag.* 47(1):12-16.
- Grismer, M. E.** 1993. Subsurface drainage system design and drainwater quality. *ASCE J. Irr. & Drain.* 119(3):537-543.
- Lima, LA. and **M.E. Grismer**. 1994. The formation of preferential paths in shrinking and swelling soils. *Proc. of the XII World Congress on Agricultural Engr., Int'l Comission of Ag. Engr. Milan, Italy.* 1:246-252. Sept.
- Grismer, M. E.** and I. C. Tod. 1994. Field procedure helps calculate irrigation time for cracking clay soil. *Cal. Ag.* 48(4):33-36.
- Grismer, M. E.**, M. N. Orang, V. Clausnitzer and K. Kinney. 1994. Effects of air compression and counterflow on infiltration into soils. *ASCE J. Irr. & Drain. Engr.* 120(4):775-795.
- Yusufzai, A. K. and **M. E. Grismer**. 1994. Vertical drainage may improve soil salinity and moisture. *Cal. Ag.* 49(2):12-15.
- Orang, M. N. and **M. E. Grismer**. 1994. New equations for evapotranspiration in the delta. *Cal. Ag.* 49(3):19-21.
- Lima, L. A. and **M. E. Grismer**. 1994. Application of fracture mechanics to cracking of saline soils. *Soil Science.* 158(2):86-96.
- Lyons, T. C. and **M. E. Grismer**. 1994. Irrigation land management model: Discussion. *ASCE J. Irrig. & Drain. Engr.* 121(1):123-127.
- Grismer, M. E.**, E. Labolle, T. Raihala and J. Eweis. 1994. A modified gravimetric method for measuring rates of vapor adsorption and desorption on soils: Kinetics of toluene adsorption/desorption on bentonite. *In: ASTM STP 1261, Volatile Organic Compounds in the Environment*, W. Wang, J. Schnoor and J. Doi. Eds. pp. 95-104.
- Bali, K. M., J. W. Hopmans and **M. E. Grismer**. 1994. Outflow methods for evaluating the soil hydraulic functional relationships between NAPL pressure and saturation in porous media. *In: ASTM STP 1261, Volatile Organic Compounds in the Environment*, W. Wang, J. Schnoor and J. Doi. Eds. pp. 105-118.
- Bali, K. M. and **M. E. Grismer**. 1994. Calibration of dual-energy gamma systems for determining liquid saturations during multiphase flow in soil. *International Agrophysics.* 8(1):1-8.

- Grismer, M. E., K. M. Bali and F. E. Robinson.** 1995. Field-scale neutron probe calibrations and errors in water content estimates for a heavy silty clay soil. *ASCE J. Irrig. & Drain. Engr.* 121(5): 354-362.
- Grismer, M. E., K. C. Tarboton and W. W. Wallender.** 1998. Integrated modeling of regional-scale irrigation/drainage management. Proceedings of AAAS Symposium. *In: Agroecosystems and the Environment: Sources, Control, and Remediation of Potentially Toxic Trace Element Oxyanions.* Ed. By L. Dudley and J. Guitjens. Pp. 137-157.
- Grismer, M.E.** and H. Watanabe. 1995. The effect of irrigated agriculture on flow of groundwater and its quality in California. *Japan. I. Groundwater Tech.* 37(1):20-32.
- Rolston, D. E., G. E. Fogg, D. L. Decker, D. T. Louie and **M. E. Grismer.** 1996. Nitrogen isotope ratios: A tool for identifying nitrate contamination sources. *Cal. Ag.* 50(2): 32-36.
- Grismer, M. E.** 1996. Education in Hydrologic Science. *J. College Sci. Teach.* 25(4): 243-253.
- Guitjens, J.C., J.E. Ayars, **M.E. Grismer** and L.S. Willardson. 1997. Drainage design for water quality management: Overview. *ASCE J. of Irr. & Drn. Engr.* 123(3):148-153.
- Ayars, J.E., **M.E. Grismer** and J.C. Guitjens. 1997. Water quality as a design criteria in irrigation and drainage water management systems. *ASCE J. of Irr. & Drn. Engr.* 123(3):154-158.
- Nichols, J.R. and **M.E. Grismer.** 1997. Measurement of fracture mechanics parameters in silty-clay soils. *Soil Sci.* 162(5):309-322.
- Grismer, M.E.** and K.M. Bali. 1997. Continuous ponding and shallow aquifer pumping leaches salts in clay soils. *Cal. Ag.* 51(3):34-37.
- Grismer, M. E., H. L. Shepherd and A. P. Stubblefield.** 1997. Winery wastewater treatment efficiency as it depends on depth and distance in a subsurface flow wetland. *In: Proc. of 27th IAHR Congress on Water for a Changing Global Community, San Francisco, CA.*
- Grismer, M. E., K. M. Bali, F. E. Robinson and I. C. Tod.** 1997. Effects of water management on water value relative to alfalfa yield: A case study for the low desert of California. *In: Water: Economics, Management and Demand.* Ed. By M. Kay, T. Franks and L. Smith. E & FN Publishers for ICID European Regional Conf. on Water as an Economic Good, Oxford, UK. Sept. pp.67-74.
- Shepherd, H. L. and **M. E. Grismer.** 1997. Constructed wetlands for waste water disposal. *Vineyard & Winery Mgmt.* 23(5): 65-68.
- Grismer, M. E.** and H.L. Shepherd. 1998. Literature Review: Fermentation Industry. *Water Env. Res.* 70(4):637-642.
- Fogg, G.E., D.E. Rolston, D.L. Decker, D.T. Louie and **M. E. Grismer.** 1998. Spatial variation in nitrogen isotope values beneath nitrate contamination sources. *Groundwater* 36(3):418-426.
- Grismer, M. E.** and K. M. Bali. 1998. Subsurface drainage systems have little impact on water tables, salinity of clay soils. *Cal. Ag.* 52(5):18-22.
- Morrisey, F. A. and **M. E. Grismer.** 1999. Kinetics of VOC sorption/desorption on clay minerals. *J. of Contaminant Hydro.* 36:291-312.
- Hopmans, J.W., **M. E. Grismer,** J. Y. Chen and V. P. Liu, V. P. 1998. Parameter estimation of two-fluid capillary-pressure and permeability functions. Final report to EPA. Located at EPA website www.epa.gov/ada/reports.html. 86 pp.
- Liu, V. P., J. W. Hopmans, **M. E. Grismer** and J. Y. Chen. 1998. Direct estimation of air-oil and oil-water capillary pressure and permeability relations from multi-step outflow experiments. *J. Contaminant Hydro.* 32:223-245.
- Chen, J. Y., J. W. Hopmans and **M.E. Grismer.** 1999. Parameter estimation of two-fluid capillary-pressure-saturation and permeability functions. *Adv. Water Res.* 22(5):479-493.
- Mirti T.H., W.W. Wallender, W.J. Chancellor and **M.E. Grismer.** 1999. Performance characteristics of the shaduf: A manual water-lifting device. *ASAE Appl. Engr. in Agriculture* 15(3):225-231.
- Grismer, M.E.** 1999. Wetland hydrology and water quality assessment. *J. Lowland Technology* 1(1):19-33.
- Grismer, M.E., M.A. Carr** and H.L. Shepherd. 1999. Literature Review: Fermentation Industry. *Water Env. Res.* 71(4):805-811.
- Battany, M.C. and **M.E Grismer.** 2000. Development of a portable field rainfall simulator system for use in hillside vineyard runoff and erosion studies. *Hydrological Proc.* 14:1119-1129.
- Battany, M.C. and **M.E Grismer.** 2000. Rainfall runoff, infiltration and erosion in hillside vineyards: Effects of slope, cover and surface roughness. *Hydrological Proc.* 14:1289-1304.
- Grismer, M.E., R.L. Snyder and B.A. Faber.** 2000. Determination of avocado and citrus orchard actual evapotranspiration along the southern California coast. *California Agriculture:* 54(3):25-29.
- Grismer, M.E.** 2000. Long-Term Evapotranspiration from a Coastal Avocado/Citrus Orchard. *ASCE J. Irrig. & Drain. Engr.* 126(1):1-7.

- Xiao, Q. E.G. McPherson, S.L. Ustin and **M.E. Grismer**. 2000. Winter Rainfall Interception by Two Mature Open Grown Trees in Davis, California. *Hydrological Proc.* 14(4):763-784.
- Xiao, Q. E.G. McPherson, S.L. Ustin and **M.E. Grismer**. 2000. A new approach to modeling tree rainfall interception. *J. of Geophysical Research-Atmospheres* 105(D23):29173-29188.
- Grismer, M.E.**, S. Bachman and T. Powers. 2000. Comparison of groundwater recharge estimation methods from irrigated in a semi-arid, coastal avocado/citrus orchard, Ventura county, CA. *Hydrological Proc.* 14(14):2527-2543.
- Graham, M.M., **M.E. Grismer**, L.J. Schwankl , and R.A. Matthews. 2000. Geohydrologic evaluation of a rapidly recharging municipal aquifer. Submitted to *Hydrogeology* journal.
- Grismer, M.E.**, M.A. Carr and H.L. Shepherd. 2000. Literature Review: Fermentation Industry. *Water Env. Res.* 72(4): CD-ROM.
- Grismer, M.E.** 2000. Drainage channel design and restoration of inter-tidal marshes. *J. Lowland Technology* 2(2):1-16.
- Bali, K.M., **Grismer M. E.**, and R. L. Snyder. 2001. Alfalfa water use pinpointed in saline, shallow water tables of Imperial Valley. *California Agriculture* 55(4):38-43.
- Bali K. M., **M. E. Grismer** and I. C. Tod. 2001. Reduced-Runoff Irrigation of alfalfa in Imperial Valley, California. *ASCE J. Irrig. & Drain. Engr.* 127(3):123-130.
- Grismer, M. E.** 2001. Regional alfalfa yield, ET_c , and water value in the western states. *ASCE J. Irrig. & Drain. Engr.* 127(3):131-139.
- Grismer M. E.** and Bali K. M. 2001. Reduced-Runoff Irrigation of Sudangrass Hay, Imperial Valley, California. *ASCE J. Irrig. & Drain. Engr.* 127(5):319-324.
- Grismer, M. E.** 2001. Sudangrass hay uses water at rates similar to alfalfa, depending on location. *California Agriculture.* 55(4):44-48.
- Shepherd H. L., **M. E. Grismer** and G. Tchobanoglous. 2001. Treatment of High-Strength Winery Wastewater using a Subsurface Flow Constructed Wetland. *Water Env. Research* 73(4):394-403.
- Grismer M. E.**, M. Tausendschoen and H. L. Shepherd. 2001. Subsurface Flow Hydraulic Characteristics of a Constructed Wetland for Treatment of Winery Effluent. *Water Env. Research* 73(4):466-477.
- Shepherd, H.L., G. Tchobanoglous and **M.E. Grismer**. 2001. Time-Dependent Retardation Model for COD Removal in a Subsurface Flow Constructed Wetland for Winery Wastewater Treatment. *Water Env. Research* 73(5):567-606.
- Grismer, M.E.**, Orang, M. and S. Matyac. 2001. Evaluation of pan evaporation to evapotranspiration conversion methods. *ASCE J. of Irrig. & Drain. Engr.* 128(3):180-185.
- Grismer, M. E.** 2001. Regional cotton lint yield, ET_c and water value in Arizona and California. *Agricult. Water Mgmt.* 1710:1-16.
- Wallender, W. W. and **M.E. Grismer**. 2002. Irrigation hydrology: Crossing scales. *ASCE J. of Irrig. & Drain. Engr.* 128(4):203-211.
- Watanabe, H. and **M. E. Grismer**. 2001. Diazinon transport through inter-row vegetative filter strips: micro-ecosystem modeling. *J. Hydrology* 247(3-4):183-199.
- Watanabe, H. and **M. E. Grismer**. 2003. Numerical modeling of diazinon transport through inter-row vegetative filter strips. *J. Environmental Mgmt.* 69:157-168.
- Schuster, S. and **Grismer M. E.** 2004. Evaluation of Water Quality Projects in the Lake Tahoe Basin. *Environ. Monitoring & Assessment* 90(1-3):225-242.
- Grismer M. E.**, M. A. Carr and H. L. Shepherd. 2003. Evaluation of Constructed Wetland Treatment Performance for Winery Wastewater. *Water Env. Research.* 75(5):412-421.
- Grismer M.E.**, Ross, C.C., Valentine, G.E., Smith, B.M. and Walsh, J.L. 2002. Literature Review: Food Processing Wastes. *Water Env. Res.* 74(4): 377-384.
- Grismer M. E.** 2005. Simulation evaluation of the effects of non-uniform flow and degradation parameter uncertainty on subsurface flow constructed wetland performance. *Water Env. Research* 77(7):3047-3053.
- Grismer, M.E.**, J. Kollar and J Syder. 2004. Assessment of marsh restoration hydraulics; San Pablo Bay, California. *Environ. Monitoring & Assessment.* 98(1-3):69-92.
- Snyder, R.L., Orang, M., Matyac, S. and **M.E. Grismer**. 2004. Simplified estimation of ET_o from pan evaporation data in California. *ASCE J. of Irrig. & Drain. Engr.* 131(3):249-253.
- Curtis, M.J., **M.E. Grismer** and V.P. Claassen. 2004. Improving water relations in decomposed granites using yard waste composts. *Compost Sci. Util.* 12(2): .
- Grismer, M.E.** and M.P. Hogan. 2004. Evaluation of Revegetation/Mulch Erosion Control Using Simulated Rainfall in the Lake Tahoe Basin: 1. Method Assessment. *Land Degradation & Dev.* 13:573-588.

- Grismer, M.E.** and M.P. Hogan. 2005. Evaluation of Revegetation/Mulch Erosion Control Using Simulated Rainfall in the Lake Tahoe Basin: 2. Bare Soil Assessment. *Land Degradation & Dev.* 16:397-404.
- Grismer, M.E.** and M.P. Hogan. 2005. Evaluation of Revegetation/Mulch Erosion Control Using Simulated Rainfall in the Lake Tahoe Basin: 3. Treatment Assessment. *Land Degradation & Dev.* 16:489-501.
- Grismer, M.E.** and A.L. Ellis. 2006. Sediment Particle-size Distributions in Runoff from Disturbed Soils in the Lake Tahoe Basin. *California Ag.* 60(2):72-76.
- Hatchett, B., M. P. Hogan and **M. E. Grismer.** 2006. Mechanized Mastication Effects on Soil Compaction and Runoff from Forests in the Western Lake Tahoe Basin. *California Ag.* 60(2):77-82.
- Ibrahim, J., **Grismer, M.E.** and MB Johnson. 2006. Sediment deposition and mercury transformations in an intertidal salt marsh, San Pablo, CA. *In: Proc. of Int'l Symposium on Lowland Technology*, Saga University, Japan. Sept. pp.473-482.
- Grismer, M. E.,** A.T. O'Geen and D. Lewis. 2006. Vegetative filter strips for nonpoint source pollution control in agriculture. UC-ANR Publication 8195.
<http://anrcatalog.ucdavis.edu/SoilWaterIrrigation/8195.aspx>
- Curtis, M.J., **M.E. Grismer** and V.P. Claassen. 2007. Effect of compost incorporation on infiltration capacity and erosion control from a decomposed granite roadcut. *J. Soil & Water Conservation* 62(5):338-344.
- H. Okada, S. W. Styles & **M. E. Grismer.** 2007. Application of the Analytic Hierarchy Process to irrigation project improvement, Part I. Impacts of irrigation project internal Processes on crop yields. *Ag. Water Management* 95:199-204.
- H. Okada, S. W. Styles & **M. E. Grismer.** 2007. Application of the Analytic Hierarchy Process to irrigation project improvement, Part II. How Professionals Evaluate an Irrigation Project for Its Improvement. *Ag. Water Management* 95:205-210.
- Shepherd, H.L., **M.E. Grismer** & others. 2007. Quantifying erosion rates for various vineyard management practices. *Practical Winery & Vineyard Mgmt.* Jan/Feb. pp. 50-63.
- Grismer, M. E.** 2007. Water value and sustainable use in the American Southwest. *J. of Developments in Sustainable Agriculture.* 2:1-16.
- Grismer, M.E.,** A.L. Ellis and A. Fristensky. 2008. Runoff Sediment Particle-sizes associated with Soil Erosion in the Lake Tahoe Basin, USA. *Land Degradation & Dev.* 19:331-350.
- Grismer, M.E.** 2007. Soil Restoration and Erosion Control: Quantitative Assessment in Rangeland and Forested areas. Invited to ASABE Transactions Soil & Water Centennial Collection. 50(5):1619-1626.
- Grismer, M.E.,** C. Shnurrenberger, R. Arst and M.P. Hogan. 2009. Integrated Monitoring and Assessment of Soil Restoration Treatments in the Lake Tahoe Basin. *Environ. Monitoring & Assessment.* 150:365-383.
- Fristensky, A. and **M.E Grismer.** 2008. A modeling approach for ultrasonic soil aggregate stability assessment. *Catena* 74:153-164.
- Fristensky, A. and **M.E Grismer.** 2009. Evaluation of ultrasonic aggregate stability and rainfall erosion resistance of disturbed and amended soils in the Lake Tahoe Basin, USA. *Catena.* 79:93-102.
- Verburg, P.S.J., Miller, W.W., Busse, Rice, E. and **M.E. Grismer.** 2009. Soil response to fuels management in the Lake Tahoe Basin. *In: Effects of Fuels Management in the Tahoe Basin; A scientific literature review.* USDA SW Forest Service Research Station. Pp. 133 - 214.
- Rice, E.C. and **M.E Grismer.** 2010. Dry-season soil-water repellency effects on infiltration rates in the Tahoe Basin. *California Agriculture* 64(3):141-148.
- Grismer, M.E.** & H.L. Shepherd. 2010. Evaluation of Plant Effects on the Performance of Constructed Wetlands for Treatment of Sugar-Cane and Winery Process Waters. *California Agriculture – in-press.*
- Grismer, M.E.,** Drake, K.M. and M.P. Hogan. 2010. Adaptive Management and Effective Implementation of Sediment TMDLs in the Lake Tahoe Basin. *Watershed Science Bulletin.* In-press.
- Collins, A.B. and **M.E. Grismer.** 2010. Microbial Community Composition and Stability of Disturbed Soils in the Lake Tahoe Basin, USA; 1. Assessment. *Environmental Monitoring & Assessment.* Submitted.
- Collins, A.B. and **M.E. Grismer.** 2010. Microbial Community Composition and Stability of Disturbed Soils in the Lake Tahoe Basin, USA; 2. Restoration Trajectory. *Environmental Monitoring & Assessment.* Submitted.
- Grismer, M.E.** 2010. Erosion Modeling for Land Management in the Tahoe Basin – Scaling from plots to small forest catchments. *J. Environ. Management.* Submitted.
- Grismer, M.E.** 2010. Erosion Modeling for Land Management in the Tahoe Basin – Soil disturbance & restoration detection thresholds. *J. Environ. Management.* Submitted.
- Saha, R., M. Josaih, **M. E. Grismer** and S. K. Upadhyaya. 2010. Effects of spatial variability in soil hydraulic conductivity and crop evapotranspiration rate on variability in crop yield. *ASABE Trans.* Submitted.

PROOF OF SERVICE

1 ANTELOPE VALLEY GROUNDWATER CASES
2 JUDICIAL COUNCIL PROCEEDING NO. 4408
3 CASE NO.: 1-05-CV-049053

4 I am a citizen of the United States and a resident of the county aforesaid; I am over the age
5 of eighteen years and not a party to the within action; my business address is: 5001 E. Commercenter
6 Drive, Suite 300, Bakersfield, California 93309. On July 15, 2010, I served the within
7 **DESIGNATION OF EXPERT WITNESSES BY DIAMOND FARMING COMPANY,**
8 **CRYSTAL ORGANIC FARMS, LLC, GRIMMWAY ENTERPRISES, INC. AND LAPIS**
9 **LAND COMPANY, LLC**

10 **(BY POSTING)** I am "readily familiar" with the Court's Clarification Order.
11 Electronic service and electronic posting completed through www.scefilng.org ; All papers filed
12 in Los Angeles County Superior Court and copy sent to trial judge and Chair of Judicial Council.

13 Los Angeles County Superior Court
14 111 North Hill Street
15 Los Angeles, CA 90012
16 Attn: **Department 1**
(213) 893-1014

Chair, Judicial Council of California
Administrative Office of the Courts
Attn: Appellate & Trial Court Judicial Services
(Civil Case Coordinator)
Carlotta Tillman
455 Golden Gate Avenue
San Francisco, CA 94102-3688
Fax (415) 865-4315

17 **(BY MAIL)** I am "readily familiar" with the firm's practice of collection and
18 processing correspondence for mailing. Under that practice it would be deposited with the U.S.
19 Postal Service on that same day with postage thereon fully prepaid at Bakersfield, California, in
20 the ordinary course of business.

21 **(STATE)** I declare under penalty of perjury under the laws of the State of
22 California that the above is true and correct, and that the foregoing was executed on July 15,
2010, in Bakersfield, California.

23 
24 **DEQUETTA HANSEN**