

DECLARATION OF STEFANIE HEDLUND

I, Stefanie D. Hedlund, declare:

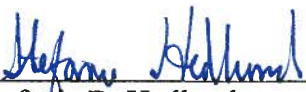
1. I am an associate of the law firm of Best, Best & Krieger LLP, counsel for cross-defendant, Los Angeles County Waterworks District No. 40. I have personal knowledge of the facts stated herein and if called upon to do so, I could and would competently testify to these facts.

2. Attached to this declaration as Exhibit "A" is a true and correct copy of the Bibliography to Appendix B of the Public Water Suppliers Expert Report posted on the Court's website on July 15, 2010. The Appendix at page 9 shows a citation to the USGS Fact Sheet 2005-3112.

3. Attached to this declaration as Exhibit "B" is a true and correct copy of relevant portions of Joseph Scalmanini's Deposition, Volume 2.

4. Attached to this declaration as Exhibit "C" is a true and correct copy of relevant portions of Joseph Scalmanini's Deposition, Volume 3.

I declare under penalty of perjury under the laws of the State of California that the above is true and correct. Executed this 4th day of March, 2011, at Sacramento, California.

  
Stefanie D. Hedlund

26345.0000A\5867350.1

# **EXHIBIT A**

**Bibliography for the Summary Report, Appendix B**  
Antelope Valley Area of Adjudication

- |  |           |  |
|--|-----------|--|
| AVEK   | 2005      | Antelope Valley-East Kern Water Agency, California, Urban Water Management Plan, December 20, 2005.  |
| Bedinger, M.S., et.al.                           | 1984      | Map Showing Ground-Water Units and Withdrawal, Basin and Range Province, Southern California, USGS WRI 83-4116-A, 6p., 1 Plate, Scale 1:500,000.   |
| Benda, W.K., et.al.                              | 1960      | Core Logs From Five Test Holes Near Kramer, CA, USGS Bull. 1045-F, pp. 319-393.  |
| Blankenbaker, G.G.                               | 1978      | Map of the Antelope Valley-East Kern Water Agency Area, CA, Showing Groundwater Subunits and Areas, Location of Wells, and Lines of Equal Depth to Water for Spring 1978, USGS OFR 78-937. |
| Blodgett, J.C.                                   | 1995      | Precipitation Depth, Duration, and Frequency Characteristics for Antelope Valley, Mojave Desert, CA, USGS WRI 95-4056., 33p.   |
| Blodgett, J.C., and Williams, R.P.               | 1992      | Land Subsidence and Problems Affecting Land Use at Edwards Air Force Base and Vicinity, CA, 1990, USGS WRI 92-4035, 25p.   |
| Bloyd, R.M., Jr.                                 | 1966      | A Progress Report on the Test Well Drilling Program in the Western Part of Antelope Valley, CA, USGS OFR '66-7', 22p.(missing), 1 Plate.   |
| Bloyd, R.M., Jr.                                 | 1967      | Water Resources Inventory for 1966, Antelope Valley-East Kern Water Agency Area, CA, USGS OFR '67-20', 19p., 8 Figures   |
| Bloyd, R.M., Jr.                                 | 1967      | Water Resources of the Antelope Valley-East Kern Water Agency Area, CA, USGS OFR '67-21', 69p., 4 Plates   |
| Bortugno, E.J. and Spittler, Compilers           | 1986      | Geologic Map of the San Bernardino Quadrangle; CA Div. Mines and Geology, Regional Map Series, Map 3A, Scale 1:250,000   |
| CA Dept. Health Services                         | 2000-2006 | Records of Population and Connections for Small System Purveyors, various years between 2000 and 2006.   |
| CA Dept. of Conservation, Div. Mines and Geology | 1967      | Geologic Map of California, San Bernardino Sheet, Scale 1:250,000.   |
| CA Dept. of Conservation, Div. Mines and Geology | 1969      | Geologic Map of California, Trona Sheet (2nd Printing), Scale 1:250,000.   |
| CA Dept. of Conservation, Div. Mines and Geology | 1975      | Geologic Map of California, Los Angeles Sheet (3rd Printing), Scale 1:250,000.   |
| CA Dept. of Conservation, Div. Mines and Geology | 1992      | Geologic Map of California, Bakersfield Sheet (4th Printing), Scale 1:250,000.   |
| CA Dept. Public Works, Div. Water Resources      | 1947      | Report to the Assembly of the State Legislature on Water Supply of Antelope Valley in Los Angeles and Kern Co.'s., 22p., 9 Plates.   |
| CA Dept. Public Works, Div. Water Resources      | 1955      | Memorandum Report on Water Conditions in Antelope Valley in Kern, Los Angeles and San Bernardino Co.'s., 27p., 10 Plates.  |
| CA Dept. Water Resources                         | 1960      | Data on Water Wells in the Willow Springs, Gloster, and Chaffee Areas, Kern Co., CA, Bull. 91-4, 85p., 1 Plate; aka-Kunkel, F. and Dutcher, L.C.   |

CA Dept. Water Resources	1962	Data on Water Wells in the Edwards Air Force Base Area, CA, Bull. 91-6, 208p., 1 Plate; aka-Dutcher, L.C. et. Al.
CA Dept. Water Resources	1963	Desert Areas of Southeastern California Land and Water Use Survey, 1958, Bull. 101., 74pp.
CA Dept. Water Resources	1965	Southern Lahontan Area Land and Water Use Survey, 1961, Bull. 121., 52pp.
CA Dept. Water Resources	1965	Water Wells in the Western Part of the Antelope Valley Area, Los Angeles and Kern Counties, CA, Bull. 91-11, 16p, 2 Plates, Appendices A-F; aka-Moyle, W.R., Jr.
CA Dept. Water Resources	1966	Water Wells in the Eastern Part of the Antelope Valley Area, Los Angeles County, CA, Bull. 91-12, 17p., 1 Plate, Appendices A-F; Koehler, J.H.
CA Dept. Water Resources	1969	Water Wells and Springs in the Fremont Valley Area, Kern County, CA, Bull. 91-16, 157p.; aka-Moyle, W.R. Jr.
CA Dept. Water Resources	1974	Desert Area Land and Water Use Survey, 1972, Southern District Report. 22pp.
CA Dept. Water Resources	1990	South Lahontan and Northern Colorado Desert Land Use Survey, Southern District Report. 49pp.
CA Dept. Water Resources, CIMIS Program	1994-2003	Records of Reference Evapotranspiration, Victorville Station, California, available for years 1994 - 2003.
CA State Water Resources Board	1955	Water Utilization and Requirements of California, <u>Bull. 2, v. 1, 2.</u> ; excerpts.
CH2MHill	2006	Estimated Recharge from the Piute Ponds to the Upper Aquifer, Draft Technical Memorandum; prepared for Los Angeles County Sanitation District No. 14.
CH2MHill	2006	Modeling of Proposed Storage Reservoirs at the Lancaster Water Reclamation Plant; prepared for Los Angeles County Sanitation District No. 14.
Carlson, C.S., and Phillips, S.P.	1998	Water-Level Changes (1975-98) in the Antelope Valley, CA, USGS OFR 98-561. 2 Plates.
Carlson, C.S., et.al.	1998	Regional Water Table (1996) and Water-Table Changes in the Antelope Valley Ground Water Basin, CA, USGS WRI 98-4022., 2 Plates.
Carollo Engineers	2005	Palmdale Water District 2005 Urban Water Management Plan. December 2005.
Chandler, T.S.	1972	Water Resources Inventory, Spring 1966 to Spring 1971, Antelope Valley-East Kern Water Agency Area, CA, USGS OFR 72, 14p.
Christensen, A.H.	1999	Generalized Water-Table and Water-Level Data at the U.S. Air Force Plant 42 and Vicinity Palmdale, California, March-April 1997., USGS WRI 99-4262, 1 Plate.
Christensen, A.H.	2005	Generalized Water-Level Contours, September-October 2000 and March-April 2001, and Long-Term Water Level Changes, at the U.S. Air Force Plant 42 and Vicinity, Palmdale, California., USGS SIR 2004-5074, 130p.
Cotton/Bridges Associates	2001	Final EIR (SCH#2001061084): Palmdale Water District 2001 Water System Master Plan, November 2001.

- Cox, B.F., Hillhouse, J.W., and Owen, L.A. 2003 Pliocene and Pleistocene Evolution of the Mojave River, and Associated Tectonic Development of the Transverse Ranges and Mojave Desert, Based on Borehole Stratigraphy Studies and Mapping of Landforms and Sediments Near Victorville, California., in: Enzel, and Others-eds, 2003, p. 1-42.
- Crowell, John C. 1952 Geology of the Lebec Quadrangle, CA, CDMG Special Report 24, 23p.; 2 Plates.
- Crowell, John C. 2003 Overview of Rocks Bordering Ridge Basin, Southern California.in Crowell, J.C.-ed, 2003; p. 89-112.
- Crowell, John C., Ed. 2003 Evolution of Ridge Basin, Southern California: An Interplay of Sedimentation and Tectonics., Geological Society America, Special Paper 367, 247p.
- Densmore, J.N,et, al, & etal. 2004 Evaluation of Volatile Organic Compounds in Two Mojave Desert Basins - Mojave River and Antelope Valley - in San Bernardino, Los Angeles, and Kern Counties, California, June-October 2002., USGS SIR 2004-5248, VER.1.01., 40 p.
- Dibblee, T.W. Jr. 1958a Tertiary Stratigraphic Units of Western Mojave Desert, CA, Am. Assoc. Petroleum Geologists Bull, v. 42, #1, pp. 135-144, Fig. 1, Scale 1:500,000.
- Dibblee, T.W. Jr. 1958b Geologic Map of the Castle Butte (15') Quadrangle, CA, USGS MF-170., Scale 1:62,500.
- Dibblee, T.W. Jr. 1958c Geologic Map of the Boron (15') Quadrangle, CA, USGS MF-204., Scale 1:62,500.
- Dibblee, T.W. Jr. 1959a Preliminary Geologic Map of the Mojave (15') Quadrangle, CA, USGS MF-219., Scale 1:62,500.
- Dibblee, T.W. Jr. 1959b Geologic Map of the Alpine Butte (15') Quadrangle, CA, USGS MF-222. Scale 1:62,500.
- Dibblee, T.W. Jr. 1960a Geology of the Rogers Dry Lake and Kramer\* Quadrangles, CA, USGS Bull. 1089-B.; p. 73-139; 2 Plates.
- Dibblee, T.W. Jr. 1960b Geologic Map of the Lancaster (15') Quadrangle, CA, USGS MF-76., Scale 1:62,500.
- Dibblee, T.W. Jr. 1960c Preliminary Geologic Map of the Shadow Mountains (15') Quadrangle, CA, USGS MF-227., Scale 1:62,500.
- Dibblee, T.W. Jr. 1961 Geologic Map of the Bouquet Reservoir (15') Quadrangle, CA, USGS MF-79., Scale 1:62,500.
- Dibblee, T.W. Jr. 1963 Geology of the Willow Springs and Rosamond (15') Quadrangles, CA, USGS Bull. 1089-C, p. 141-253, 2 Plates., Scale 1:62,500.
- Dibblee, T.W. Jr. 1967 Areal Geology of the Western Mojave Desert, CA, USGS PP 522, 153p, 4 Plates.
- Dibblee, T.W. Jr. 1980a Pre-Cenozoic Rock Units of the Mojave Desert., p.13-40.; in Fife, D.L. and Brown, A.R.-eds.
- Dibblee, T.W. Jr. 1980b Cenozoic Rock Units of the Mojave Desert., p. 41-68; in Fife, D.L. and Brown, A.R.-eds.
- Dibblee, T.W. Jr. 1980c Geologic Structure and Basin, A.R.-ed., 1980., p. 69-100; in Fife, D.L. and Brown, A.R.-eds.

- Dibblee, T.W. Jr. 1997 Geologic Map of the Sleepy Valley and Ritter Ridge Quadrangles, CA, Dibblee Geological Foundation Map DF-66., Scale 1:24,000.
- Dibblee, T.W. Jr. 2001 Geologic Map of the Pacifico Mountain and Palmdale (south half) Quadrangles, CA, Dibblee Geological Foundation Map DF-76., Scale 1:24,000.
- Dibblee, T.W. Jr. 2002a Geologic Map of the Juniper Hills (and South Littlerock) Quadrangle(s), Los Angeles County, CA, Dibblee Geological Foundation Map DF-79, Scale 1:24,000.
- Dibblee, T.W. Jr. 2002b Geologic Map of the Valyermo Quadrangle, Los Angeles County, CA, Dibblee Geological Foundation Map DF-80, Scale 1:24,000.
- Dibblee, T.W. Jr. 2002c Geologic Map of the Mescal Creek Quadrangle, Los Angeles and San Bernardino Counties, CA, Dibblee Geological Foundation Map DF-81, Scale 1:24,000.
- Dibblee, T.W. Jr. 2002d Geologic Map of the Lake Hughes and Del Sur Quadrangles, CA, Dibblee Geological Foundation Map DF-82.
- Dibblee, T.W. Jr. 2002e Geologic Map of the Burnt Peak Quadrangle, Los Angeles County, CA, Dibblee Geological Foundation Map DF-83, Scale 1:24,000.
- Dibblee, T.W. Jr. 2002f Geologic Map of the Liebre Mountain Quadrangle, CA, Dibblee Geological Foundation Map DF-93., Scale 1:24,000.
- Dibblee, T.W. Jr. 2003a Geologic Map of the Cajon Quadrangle, San Bernardino County, CA, Dibblee Geology Center Map DF-104, Scale 1:24,000.
- Dibblee, T.W. Jr. 2003b Geologic Map of the Telegraph and Phelan Quadrangles, San Bernardino County, CA, Dibblee Geology Center Map DF-107, Scale 1:24,000.
- Dibblee, T.W. Jr. 2006 Geologic Map of the Frazier Mountain and Lebec Quadrangles, Los Angeles, Ventura, and Kern Counties, CA, Dibblee Geological Foundation Map DF-198., Scale 1:24,000.
- Dibblee, T.W. Jr. and Louke, G.P. 1970 Geologic Map of the Tehachapi (15') Quadrangle, Kern County, CA, USGS Map I-607, Scale 1:62,500.
- Dixon, G.L., and Ward, A.W. 2002a Preliminary Geologic Map of the Rogers Lake South Quadrangle, Los Angeles and Kern Counties, CA, USGS OFR 93-696, 8p., 1 Plate, Scale 1:24,000.
- Dixon, G.L., and Ward, A.W. 2002b Preliminary Geologic Map of the Edwards Quadrangle, Kern County, CA, USGS OFR 93-697, 7p., 1 Plate, Scale 1:24,000.
- Duell, L.F.W. Jr. 1987 Geohydrology of the Antelope Valley Area, CA, and Design for a Groundwater Quality Monitoring Network, USGS WRI-84-4081, 72p, 3 Plates.
- Durbin, T.J. 1976 Calibration of a Mathematical Model of the Antelope Valley Groundwater Basin, CA, USGS OFR '76-833'.
- Durbin, T.J. 1978 Calibration of a Mathematical Model of the Antelope Valley Groundwater Basin, CA, USGS WSP 2046., 51p., 13 Plates.
- Dutcher, L.C. 1959a Data on Water Wells in the Fremont Valley Area, Kern Co., CA, USGS OFR '59-135'; 128p., 1 Plate.

Dutcher, L.C.	1959b	Groundwater Inventory for 1958, Edwards Air Force Base, CA, USGS OFR '60-40', 69p, _____, - 10 Plates (Missing).
Dutcher, L.C., and Hiltgen, W.J.	1960	(1955) Appendix A - Tables of Basic Data for Wells on Edwards AFB., (1954) Appendix B- Tables of Basic Data for Areas Outside Edwards AFB; USGS OF '60-41, 199p, 2 Plates.
Dutcher, L.C., and Worts, G.F., Jr.	1960	Geology and Ground-Water Appraisal of Edwards Air Force Base and Vicinity, CA, USGS OFR '60-43';
Dutcher, L.C., and Worts, G.F., Jr.	1963	Geology, Hydrology, and Water Supply of Edwards Air Force Base, Kern Co., CA, USGS OFR '63-146', 251p., 3 Plates (missing).
Environmental Science Associates	2004	Lancaster Water Reclamation Plant, 2020 Facilities Plan; prepared for Los Angeles County Sanitation Districts; May 2004.
Environmental Science Associates	2004	Lancaster Water Reclamation Plant, 2020 Facilities Plan, Final EIR; prepared for Los Angeles County Sanitation Districts; May 2004.
Environmental Science Associates	2005	Final Palmdale Water Reclamation Plant 2025 Plan and EIR; prepared for Los Angeles County Sanitation Districts; September 2005.
Enzel, Y., Wells, S.G. and Lancaster, N., -eds.	2003	Paleoenvironments and Paleohydrology of the Mojave and Southern Great Basin Deserts., Geological Society America, Special Paper 368, x, 249p.
Faughn, J.C.	1979	Map of the Antelope Valley-East Kern Water Agency Area, CA, Showing Well Density in the Groundwater Subunits and Areas, USGS OFR 79-1298.
Fife, D.L., and Brown, A.R. - eds.	1980	Geology and Mineral Wealth of the California Desert - Dibblee Volume, South Coast Geological Society, Santa Ana, CA., vi, 555p.
Fram, M.S., et.al.	2002	Water-Quality Monitoring and Studies of the Formation and Fate of Trihalomethanes During the Third Injection, Storage, and Recovery Test at Lancaster, Antelope Valley, CA, March 1998 Through April 1999, USGS OFR 02-102, 48p.
Fram, M.S., Bergamaschi, B.A., Goodwin, K.D., & Fujii, R., & Clark, J.F.	2003	Processes Affecting the Trihalomethane Concentrations Associated with the third Injection, Storage, and Recovery Test at Lancaster, Antelope Valley, California, March 1988 Through April 1999., USGS WRI 03-4062, 72p.
Freeman, L.A.	1996	Time Series Groundwater-Level and Aquifer System Compaction Data, Edwards Air Force Base, CA, January 1991-September 1993, USGS OFR 96-186.
Galloway, D.L., et.al.	1998	Land Subsidence and its Relation to Past and Future Water Supplies in Antelope Valley, California; in Borchers, J., ed., Land Subsidence - Case Studies and Current Research: Proceedings of the Dr. Joseph F. Poland Symposium on Land Subsidence, Association of Engineering Geologists Special Pub. 8, pp. 529-539.
GeoMatrix Consultants	2002	Letter Report: Summary of Assessment of Phase I Issues, Wm. Bolthouse Farms, Inc., vs. City of Lancaster, et.al. (July 16, 2002).
Giessner, F.W., and Robson, S.G.	1965	Groundwater Inventory for 1964, Edwards Air Force Base, CA, USGS OFR '65-62', 28p., 6 Figures.
Giessner, F.W., and Westphal, J.A.	1966	Groundwater Inventory for 1965, Edwards Air Force Base, CA, USGS OFR '66-49', 24p., 6 Figures.
Glenn, F.M.	1982	Map of the Antelope Valley-East Kern Water Agency Area, CA, Showing Groundwater Subunits, Areas, and Well Hydrographs (1962-82), USGS OFR 82-917.

Geochemical Technologies Corporation	2006	Subsurface Geohydrology Project: Paiute Ponds, memorandum; prepared for Los Angeles County Sanitation Districts; December 2006.
Hills, F.A.	1984	Map Showing Outcrops of Granitic Rocks and Silicic, Shallow-Intrusive Rocks, Basin and Range Province, Southern California, USGS WRI 83-4116-D, 38p., 1 Plate, Scale 1:500,000.
Howle, J.F., et.al.	2003	Determination of Specific Yield and Water-Table Changes Using Temporal Microgravity Surveys Collected During the Second Injection, Storage, and Recovery Test at Lancaster, Antelope Valley, CA, November 1996 Through April 1997, USGS WRI 03-4019., 28p.
Ikehara, M.E., and Phillips, S.P.	1994	Determination of Land Subsidence Related to Groundwater-Level Declines Using Global Positioning System and Leveling Surveys in Antelope Valley, Los Angeles and Kern Co.'s., CA, USGS WRI 94-4184., 101p.
Jeness, J.E., and Lopez, D.A.	1984	Map Showing Outcrops of Pre-Quaternary Ash-Flow Tuffs, Basin and Range Province, Southern California, USGS WRI 83-4116-F, 7p., 1 Plate, Scale 1:500,000.
Johnson, H.R.	1911	Water Resources of Antelope Valley, CA, USGS WSP 278, 92p., 7 Plates
Johnson, W.D. Jr.	1984	Map Showing Outcrops of Thick, Dominantly Argillaceous Sedimentary and Metasedimentary Rocks, Basin and Range Province, Southern California, USGS WRI 83-4116-E, 6p., 1 Plate, Scale 1:500,000.
Kennedy/Jenks Consultants	1995	Final Report (K/J 934620.00): Antelope Valley Water Resource Study; prepared for the Antelope Valley Water Group, November 10, 1995.
Kennedy/Jenks Consultants	2000	Palmdale Water Reclamation Concept Study.
Kennedy/Jenks Consultants	2005	2005 Integrated Urban Water Management Plan for the Antelope Valley; prepared for Los Angeles County Dept. of Public Works, Rosamond Community Services District, Quartz Hill Water District, and Los Angeles County Sanitation Districts; December 16, 2005.
Kennedy/Jenks Consultants	2006	Final Facilities Planning Report, Antelope Valley Recycled Water Project; prepared for Los Angeles County Waterworks District No. 40; August 2006.
Kern County	2006	Draft EIR (SCH#2005091117): Antelope Valley Water Bank Project, v. 1, Ch. 1-10, Proposed by Western Development and Storage, LLC, Prepared by Kern County and Jones and Stokes for Kern County Planning Department, April 2006.
Kern County Agricultural Commissioner	1994-2006	Pesticide Use Reports (available online), annually, 1994 - 2006
Koehler, J.H.	1969	Groundwater Inventory for 1967, Edwards Air Force Base, CA, USGS OFR '69-140', 15p., 2 Plates.
Koehler, J.H.	1974	Map of the Antelope Valley-East Kern Water Agency Area, CA, Showing Groundwater Subunits and Areas, Location of Wells, and Water Level Contours for Spring 1974, USGS OFR ____.
Koehler, J.H.	1975	Map of the Antelope Valley-East Kern Water Agency Area, CA, showing Groundwater Subunits and Areas, Location of Wells, and Water Level Contours for Spring 1975, USGS OFR ____.



Koehler, J.H.	1977	Groundwater in the Koehn Lake Area, Kern Co., CA, USGS WRI 77-66, 24p.
Kunkel, F.	1962	Reconnaissance of Groundwater in the Western Part of the Mojave Desert Region, CA, USGS HA-31., Scale 1:316,800.
Kunkel, F. & others	1957	Data on Water Wells in the Willow Springs, Gloster, and Chaffee Area, Kern County, CA, USGS OFR '57-62', 67p., 1 Plate.;(superceded by, DWR Bull. 91-4, 1960).
Lamb, C.E.	1976	Map of the Antelope Valley-East Kern Water Agency Area, CA, Showing Groundwater Subunits and Areas, and Water-Quality Diagrams, USGS OFR ____.
Lamb, C.E.	1980	Map of the Antelope Valley-East Kern Water Agency Area, CA, Showing Groundwater Subunits and Areas, Location of Wells, and Water Level Contours for Spring 1979, USGS OFR 80-1222. 1-Oversized Sheet.
Lamb, C.E. and Hadley, T.L.	1981	Map of the Antelope Valley-East Kern Water Agency Area, CA, Showing Groundwater Subunits and Areas, and Dissolved Solids Concentrations (1970-1980), USGS OFR 81 698.
Lamb, C.E., and McIntyre, M.J.	1978	Map of the Antelope Valley-East Kern Water Agency Area, CA, showing Groundwater Subunits and Areas, and Well Hydrographs, USGS OFR 78-435.
Langenheim, V.E., and Plescia, J.B.	1991	Complete Bouguer Gravity Anomaly and Isostatic Residual Gravity Maps of the Bakersfield 1x2 degree Quadrangle, California, USGS OFR 91-554, 2 Plates, Scale 1:250,000.
Langer, W.H., et.al.	1984	Map Showing Ground-Water Levels, Springs, and Depth to Ground-Water, Basin and Range Province, Southern California, USGS WRI 83-4116-B, 6p., 2 Plates, Scale 1:500,000.
Law Environmental	1991	Water Supply Evaluation, Antelope Valley, CA (#58-969501.01), Prepared by Law Environmental, Inc., for Palmdale Water District, November 25, 1991, 49p., Appendices, Plates.
Leighton, D.A., and Phillips, S.P.	2000	Simulation of Ground-Water Flow and Land Subsidence in the Antelope Valley Ground-Water Basin, CA (draft). WRI-00-Not Assigned; ____;
Leighton, D.A., and Phillips, S.P.	2003	Simulation of Ground-Water Flow and Land Subsidence in the Antelope Valley Ground-Water Basin, CA, USGS WRI 03-4016. 107p.
Lewis, R.E., and Bloyd, R.M.	1968	Water Resources Inventory for 1967, Antelope Valley-East Kern Water Agency Area, CA, USGS OFR '68-169', 19p.
Lewis, R.E., and Miller, R.E.	1968	Geologic and Hydrologic Maps of the Southern Part of the Antelope Valley, CA, ____ U.S. Dept. Agric., 13p.
Londquist, C.J., et.al.	1993	Hydrogeology and Land Subsidence, Edwards Air Force Base, Antelope Valley, CA, January 1989-December 1991, USGS WRI 93-4114, 74 p.
Los Angeles County Agricultural Commissioner	1970-2006	Crop and Livestock Reports, published annually, 1970 - 2006
Los Angeles County Department of Public Works	2007	Antelope Valley Integrated Regional Water Management Plan, Draft

Los Angeles County Sanitation Districts	1999	Preliminary Groundwater Quality Assessment Report for the Palmdale Water Reclamation Plant.
Luhdorff and Scalmanini, Consulting Engineers	2002	Technical Memorandum, Ground-Water Basin and Subbasin Boundaries, Antelope Valley Ground-Water Basin (File No. 01-6-086).
Mabey, D.R.	1960	Gravity Survey of the Western Mojave Desert, CA, USGS PP 316-D, pp. 51-73.
McCelland, E.J.	1963	Aquifer Test Compilation For the Mojave Desert Region, California., U.S. Geological Survey., OF-'63-90'. , 30p.
Melitas, et.al.	2005	Reuse of Treated Wastewater for Beneficial Effluent Management in Arid Environments, HELECO Conference Paper, February 2005.
Metzger, L.F., et.al.	2002	Vertical-Deformation, Water-Level, Microgravity, Geodetic, Water-Chemistry, and Flow-Rate Data Collected During Injection, Storage, and Recovery Tests at Lancaster, Antelope Valley, CA, September 1995 Through September 1998, USGS OFR 01-414.
Montgomery Watson	2001	Palmdale Water District Final Water System Master Plan Update.
Morin, R.L., et.al.	1990	Isostatic Residual Gravity Map of Edwards Air Force Base and Vicinity, Kern, Los Angeles, and San Bernardino Counties, CA, USGS OFR 90-664, 1 Sheet, Scale 1:62,500.
Moyle, H.R. Jr.	1960	Groundwater Inventory for 1959, Edwards Air Force Base, CA, USGS OFR '60-101', 35p.
Moyle, H.R. Jr.	1961	Groundwater Inventory for 1960, Edwards Air Force Base, CA, USGS OFR '60-108', 45p. 7 Figures
Moyle, H.R. Jr., and Glenn, F.M.	1985	Map of the Antelope Valley-East Kern Water Agency Area, CA, Showing Groundwater Subunits and Areas, Location of Wells, and Lines of Equal Depth to Water for Spring 1983, USGS OFR 84-726.
Moyle, H.R. Jr., and Glenn, F.M.	1986	Map of the Antelope Valley-East Kern Water Agency Area, CA, Showing Groundwater Subunits and Areas, Location of Wells, and Water Level Contours for Spring 1984, USGS OFR 86-498.
Nishikawa, T., et.al.	2001	Numerical Simulation of Groundwater Flow and Land Subsidence at Edwards Air Force Base, Antelope Valley, CA, WRI 01-4038., 111p.
NOAA	1920-2006	Records of Historical Precipitation and Streamflow, Antelope Valley Stations
Noble, L.F.	1953	Geology of the Pearland Quadrangle, CA, USGS Geologic Quadrangle Maps of the U.S., GQ Map 24, Scale 1:24,000.
Noble, L.F.	1954	Geology of the Valyermo Quadrangle and Vicinity, CA, USGS Geologic Quadrangle Maps of the U.S., GQ Map 50, Scale 1:24,000.
Noble, L.F.	1954	Geology of the Rosamond Hills, Kern County, CDMG Bull. 170, Map Sheet #14, Scale 1:125,000.
Palmdale Water District	2000	Palmdale Water District Urban Water Management Plan

- Pederson, D 2007 Personal communication, March 19, 2007.
- Phillips, S.P., et.al. 2003 Analysis of Tests of Subsurface Injection, Storage, and Recovery of Freshwater in Lancaster, Antelope Valley, CA, USGS WRI 03-4061.
- Ponti, D.J. 1980 Stratigraphy and Engineering Characteristics of Upper Quaternary Sediments in the Eastern Antelope Valley and Vicinity, California: M.S. Thesis, Stanford University, 140p.
- Ponti, D.J. 1985 The Quaternary Alluvial Sequence of the Antelope Valley, CA, GSA Special Paper 203, pp. 79-96.
- Ponti, D.J., and Burke, D.B. 1980 Map Showing Quaternary Geology of the Eastern Antelope Valley and Vicinity, CA, USGS OFR 80-1064., Scale 1:62,500
- Ponti, D.J., et.al. 1981 Map Showing Quaternary Geology of the Central Antelope Valley and Vicinity, CA, USGS OFR 81-737., Scale 1:62,500
- Powers, W.R., III 1970 Water Resources Inventory, Spring 1968 to Spring 1969, Antelope Valley-East Kern Water Agency Area, CA, USGS OFR '70-268', 15p.
- Powers, W.R., III, and Irwin, G.A. 1971 Water Resources Inventory, Spring 1969 to Spring 1970, Antelope Valley-East Kern Water Agency Area, CA, USGS OFR '71-229', 19p.
- Prince, K.R., et.al., Eds. 1995 USGS Subsidence Interest Group Conference, Edwards Air Force Base, Antelope Valley, CA, November 18-19, 1992: Abstracts and Summary, USGS OFR 94-532, 92 p.
- Qiu, H. 2005 Study of Historical Land Use by Satellite Imagery Analysis for the Antelope Valley; conducted for the Antelope Valley-East Kern Water Agency, ongoing, unpublished
- Rewis, D.L. 1993 Drilling, Construction, and Subsurface Data for Piezometers on Edwards Air Force Base, Antelope Valley, CA, 1991-1992, USGS OFR 93-148, 35p.
- Rewis, D.L. 1995 Groundwater Level Monitoring, Basin Boundaries, and Potentiometric Surfaces of the Aquifer System at Edwards Air Force Base, CA, 1992, USGS WRI 95-4131.
- Roggensack, K., and Lopez, D.A. 1984 Map Showing Outcrops of Basaltic Rocks of Early Quaternary and Tertiary Age, Basin and Range Province, Southern California, USGS WRI 83-4116-G, 13p., 1 Plate, Scale 1:500,000.
- Sneed, M., and Galloway, D.L. 2000 Aquifer-System Compaction and Land Subsidence: Measurements, Analyses, and Simulations - the Holly Site, Edwards Air Force Base, Antelope Valley, CA, WRI 00-4015. 65p.
- Sneed, M., et.al. 2005 Water Resources Investigations at Edwards Air Force Base Since 1988, USGS Fact Sheet 2005-3112, 4p.
- Snyder, J.H. 1955 Ground Water in California, The Experience of Antelope Valley, Giannini Foundation Ground Water Studies No. 2, 171 p.
- Stamos, C.L., and Predmore, S.K. 1995 Data and Water-Table Map of the Mojave River Ground-Water Basin, San Bernardino County, CA, USGS WRI 95-4148., 1 resized plate

Stetson Engineers, Inc., and Psomas	2001	Centennial Water Supply Plan Technical Feasibility (Preliminary), Prepared for R.M. Development Associates, LLC, Sept 15, 2001.
Stone, R.S.	1957	Groundwater Reconnaissance in the Western Part of the Mojave Desert, California, with Particular Respect to the Boron Content of Well Water, USGS OFR ____.
Tait, C.E.	1912	Irrigation Resources of Southern California: California Conservation Commission Report, pp. 322-324
Templin, W.E., et.al.	1995	Land Use and Water Use in the Antelope Valley, CA, USGS WRI 94-4208, 97p.
Thayer, W.N.	1946	Geologic Features of Antelope Valley, CA, Los Angeles County Flood Control District Report, 19p., 1 Plate.
Thompson, D.G.	1929	The Mojave Desert Region, CA, A Geographic, Geologic, and Hydrologic Reconnaissance, USGS WSP 578.
Thompson, T.H., et.al.	1984	Maps Showing Distribution of Dissolved Solids and Dominant Chemical Type in Ground Water, Basin and Range Province, Southern California, USGS WRI 83-4116-C, 7p. 2 Plates, Scale 1:500,000.
Tyley, S.J.	1967	Groundwater Inventory for 1966, Edwards Air Force Base, CA, USGS OFR '67-223', 13p, 7 Figures (2,4,7-missing)
Univ. of California Cooperative Extension Program	na	Table 2: "Normal Year" grass potential evapotranspiration (ET <sub>o</sub> ), forage crop coefficients and ET for the High Desert.
UltraSystems Environmental	2003	Final Recirculated EIR (SCH#2001051091): Waterworks District No. 40, Antelope Valley Aquifer Storage and Recovery Project, Prepared by UltraSystems Environmental for County of Los Angeles Dept. of Public Works, Waterworks and Sewer Maintenance Division, July 2003.
UltraSystems Environmental	2003	Waterworks District No. 40, Antelope Valley Aquifer Storage and Recovery Project, Findings of Fact and Statement of Overriding Considerations, Prepared by UltraSystems Environmental for County of Los Angeles Dept. of Public Works, Waterworks and Sewer Maintenance Division, July 2003.
US Census Bureau	1970-2000	Census Reports of Population and Service Areas, published by decade.
US Census Bureau, Population Estimates Program	1990-2005	Records of Population for Lancaster and Palmdale (available online), various years between 1990 and 2005.
US Dept. of Housing and Urban Development, State of the Cities Program	2000-2005	Records of Population for Lancaster, Palmdale, and Littlerock (available online), various years between 2000 and 2005.
US Geological Survey	1970	Aeromagnetic Map of the Antelope Valley and Part of the Garlock Fault Zone, South-Central California, USGS Geophysical Invest. Map GP695, Scale 1:250,000.
US Geological Survey	1996	Aeromagnetic Map of Parts of the Los Angeles, San Bernardino, Bakersfield, Long Beach, and Santa Ana 1x2 degree Quadrangles, California, USGS OFR 96-550, 1 Plate, Scale 1:250,000.
Ward, A.W., and Dixon, G.L.	2002	Preliminary Geologic Map of the Redman Quadrangle, Los Angeles and Kern Counties, CA, USGS OFR 93-695, 7p., 1 Plate, Scale 1:24,000.

- Ward, A.W., and Dixon, G.L. 2002 Preliminary Geologic Map of the Rogers Lake North Quadrangle, Kern County, CA, USGS OFR 93-694, 7p., 1 Plate, Scale 1:24,000.
- Ward, A.W., et.al. 1993 Geologic Setting of East Antelope Basin, with Emphasis on Fissuring on Rogers Lake, Edwards Air Force Base, Mojave Desert, CA, USGS OFR 93-263, 9p.
- Weir, J.E., et.al. 1965 A Progress Report and Proposed Test Well Drilling Program in the Western Part of Antelope Valley, CA, USGS OFR '65-172', 121p.
- Weir, J.E., Jr. 1962 Groundwater Inventory for 1961, Edwards Air Force Base, CA, USGS OFR '62-152', 54p., 8 Figures
- Weir, J.E., Jr. 1963 Groundwater Inventory for 1962, Edwards Air Force Base, CA, USGS OFR '63-136', 30p., 7 Figures
- Weir, J.E., Jr. 1965 Groundwater Inventory for 1963, Edwards Air Force Base, CA, USGS OFR '65-173', 28p., 6 Figures
- Wiese, J.H. 1950 Geology and Mineral Resources of the Neenach Quadrangle, CA, CDMG Bull. 153, 53p.; 4 Plates.
- Youngs, L.G., and Mattison, Elise 1989 Aeromagnetic Map of the Los Angeles 1x2 Degree Quadrangle, CDMG OFR 89-22.
- Zohdy, A.A.R., and Bisdorf, R.J. 1991 Groundwater Exploration Using Deep Schlumberger Soundings at Edwards Air Force Base, CA, Part 2: Rogers Lake and North of Edwards Air Force Base, USGS OFR 91-446, 109p.
- Zohdy, A.A.R., et.al. 1990 Groundwater Exploration Using Deep Schlumberger Soundings at Edwards Air Force Base, CA, Part 1: Graham Ranch and Rogers Lake, USGS OFR 90-536, 95p.

# **EXHIBIT B**

1 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
2 FOR THE COUNTY OF SANTA CLARA  
3

4 -----  
5 ANTELOPE VALLEY ) Santa Clara Case No.  
6 GROUNDWATER CASES, ) 1-05-CV-049053  
7 ) Volume II  
8 -----

9  
10  
11 Continued Deposition of JOSEPH SCALMANINI,  
12 taken at 301 North Lake Avenue, 10th Floor,  
13 Pasadena, California, commencing at 9:29 a.m.,  
14 Tuesday, November 16, 2010, before Janice  
15 Schutzman, CSR No. 9509.  
16  
17  
18  
19  
20  
21  
22  
23  
24

25 PAGES 190 - 415

Page 190

1 those are typically described as a chronic lowering,  
2 as I said yesterday, originally of the water plane,  
3 but of the groundwater surface; a depletion of  
4 groundwater storage; advent of groundwater quality  
5 degradation, land subsidence; and as I described 11:45AM  
6 yesterday, the latter of which sort of triggered off  
7 of the declining water surface or declining water  
8 level.

9 MR. DUNN: And, Mr. Zimmer, I would note  
10 that he did answer questions concerning this 11:45AM  
11 definition of "overdraft" yesterday.

12 MR. ZIMMER: Yeah, if he did, he did. I  
13 can't recall.

14 BY MR. ZIMMER:

15 Q. Okay. Let's go to the definition of 11:45AM  
16 "overdraft."

17 You said it's your opinion that the basin  
18 is currently in overdraft?

19 A. I did.

20 Q. And what undesirable conditions are 11:45AM  
21 currently occurring that cause you to say the  
22 basin's currently in overdraft?

23 A. Groundwater levels are declining.  
24 Groundwater storage has been declining and continues  
25 to decline. And subsidence has been mapped and is 11:45AM



1 ongoing.

2 Q. And where is it ongoing, or where is  
3 subsidence currently occurring?

4 A. Well, there's a mapped depiction of it. I  
5 describe it generically as about the central third 11:46AM  
6 of the overall basin. So one depiction, through  
7 '92, anyway, is reflected in figure 4.5-1.

8 Q. All right. Let's find that. That's in the  
9 main text?

10 A. Yes. 11:46AM

11 MR. ZIMMER: Mark this as Exhibit 6.

12 (Deposition Exhibit 6 was marked for  
13 identification.)

14 BY MR. ZIMMER:

15 Q. This says total subsidence 1930 to 1992. 11:47AM

16 A. Uh-huh.

17 Q. That doesn't tell us what subsidence there  
18 is now.

19 A. I'm not sure how actively the ongoing  
20 monitoring is. 11:47AM

21 Q. Have you done any analysis, or are you  
22 aware of anybody in the summary expert committee  
23 that has done any analysis of whether there is any  
24 subsidence or has actually been any subsidence since  
25 1992? 11:47AM

1 all and went into the database. So Joe Dokes  
2 brought data to the meeting, and it was shared. Joe  
3 Dokes's opinions or how he worked on something or  
4 what he thought about it all and stuff was treated  
5 as privileged.

03:28PM

6 So what I'm struggling with from memory is  
7 because Wildermuth did the change in storage from  
8 compaction, so that kind of took possession of the  
9 subsidence topic in terms of writing it up too.

10 I can't from memory recall, you know, the  
11 fate of the active extensometers and piezometers  
12 that are associated with those, that were installed  
13 by the USGS as part of an investigation and whether  
14 that data comes forward in time. I just don't  
15 remember.

03:28PM

16 So I intend to go back and look. But it's  
17 not part of my chapters, so to speak, you know. So  
18 I'm not walking around with it in my memory.

19 Q. So the expert most knowledgeable about  
20 subsidence would be Wildermuth; is that correct?

03:29PM

21 A. In terms of testifying experts, yes, but I  
22 think, you know, that Andy Malone did a lot of the  
23 subsidence-related work within his shop.

24 Q. And so you mentioned the extensometer?

25 A. Plural, more than one.

03:29PM

Page 371

1 STATE OF CALIFORNIA ) ss:  
2 COUNTY OF LOS ANGELES )  
3

4 I, JANICE SCHUTZMAN, C.S.R. No. 9509, do hereby  
5 certify:

6 That the foregoing deposition testimony was taken  
7 before me at the time and place therein set forth and at  
8 which time the witness was administered the oath;

9 That the testimony of the witness and all objections  
10 made by counsel at the time of the examination were  
11 recorded stenographically by me, and were thereafter  
12 transcribed under my direction and supervision, and that  
13 the foregoing pages contain a full, true and accurate  
14 record of all proceedings and testimony to the best of  
15 my skill and ability.

16 I further certify that I am neither counsel for any  
17 party to said action, nor am I related to any party to  
18 said action, nor am I in any way interested in the  
19 outcome thereof.

20 IN WITNESS WHEREOF, I have subscribed my name this  
21 2nd day of December, 2010.  
22  
23  
24

25 \_\_\_\_\_  
JANICE SCHUTZMAN, C.S.R. No. 9509

# **EXHIBIT C**

1 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
2 FOR THE COUNTY OF SANTA CLARA  
3  
4

5 -----  
6 ) Santa Clara  
7 ) Case No.  
8 ANTELOPE VALLEY GROUNDWATER CASES, ) 1-05-CV-049053  
9 )  
10 ) Volume III  
11 -----

12  
13  
14  
15  
16 Continued Deposition of JOSEPH SCALMANINI, taken at  
17 301 North Lake Avenue, 10th Floor, Pasadena, California,  
18 beginning at 10:37 a.m. and ending at 5:27 p.m. on  
19 Monday, December 13, 2010, before RUBEN GARCIA,  
20 Certified Shorthand Reporter No. 11305.  
21  
22  
23  
24

25 PAGES 416 - 619

Page 416

1 from the mid '80s to the mid to late '90s. And then  
2 turned around and went down. And that correlates with  
3 the change in land use and the change in the pumping  
4 stresses that are out there.  
5 Q But you said something about that's where it's  
6 using about what the yield is, the amount of the yield  
7 is being pumped?  
8 A Close.  
9 Q Let's talk about Grismer and -- were there any  
10 other opinions on Sheehan?  
11 A I told you if I thought there was anything  
12 else from memory over lunch I'd tell you, so I guess I  
13 better tell you. The thing I didn't mention was  
14 subsidence. He makes some pretty matter of fact  
15 statements of how subsidence had leveled off in the  
16 early '90s and then there wasn't any ongoing subsidence  
17 in the basin. And I would disagree with that.  
18 Q And why?  
19 A Well, when was I here last? Two weeks ago?  
20 Q Right. Close enough.  
21 A So you asked me some questions about that  
22 topic.  
23 Q I asked you whether subsidence was continuing  
24 or not. And you said you hadn't looked at it.  
25 A Yeah, I did. And I don't often admit this out

Page 485

1 the record.  
2 (Discussion off the record.)  
3 MR. ZIMMER: We're back on.  
4 BY MR. ZIMMER:  
5 Q You said that the subsidence had continued at  
6 the same level since the 1990s?  
7 A Well, for all practical purposes, a linear  
8 rate, meaning the rate of subsidence, is pretty much a  
9 straight line.  
10 Q I'm not familiar with extensometer. How does  
11 that read out? Does that show subsidence or does it  
12 give you some other data?  
13 A It's a device that physically measures, if you  
14 will, the movement of the ground surface or the entire  
15 column from the ground surface down to the depth of  
16 installation of the extensometer.  
17 Q How sensitive is that?  
18 A Extremely.  
19 Q Does it measure in hundredths of inches?  
20 Thousandths?  
21 A Wow. I think I could say confidently at least  
22 within hundredths of a foot. I probably shouldn't  
23 speculate beyond that. I think it has to do with the  
24 sensitivity of the instrumentation that's installed at  
25 the ground surface to measure it. But you can see

Page 487

1 loud, but I will. I was frustrated because I knew I  
2 had, but I couldn't call it to mind when I was sitting  
3 here. But I was thinking to myself -- so I was  
4 answering your question and I was thinking to myself,  
5 I'm going to go home and double check. So I did.  
6 And remember we talked about extensometers.  
7 It might have been more when Michael was asking me  
8 questions.  
9 Q It was.  
10 A And I said I couldn't remember about the  
11 ongoing data collection because I thought there was a  
12 possibility the funding had dried up and they might just  
13 be sitting out there. But I was wrong on that  
14 speculation.  
15 So there have been extensometers out there  
16 since 1990. They have been read. And there's a clear  
17 and complete dataset that tracks water levels and  
18 monitoring wells around the extensometers and subsidence  
19 itself from the extensometers since they went in. And  
20 subsidence continues, for all practical purposes,  
21 linearly from 1990 to the present.  
22 Q When you say linearly, do you mean it's  
23 remained the same or --  
24 A At the same rate.  
25 MR. DUNN: Can I interrupt just for a second? Off

Page 486

1 extremely small fluctuations. Whether they're less,  
2 meaning smaller than a hundredth of a foot, I can't tell  
3 you from instant memory.  
4 But, you know, if you looked at data plotted,  
5 which are recorded with some kind of a data logger on  
6 various small time steps, you could see a little bit of  
7 what I call noisiness to the line when you plot it out,  
8 which shows real small -- almost like vibrations, it's  
9 the wrong word on the ground surface, so it's not like a  
10 nice clean line. It's got a little bit of small  
11 jaggedness to it, which is partly result of how  
12 frequently the measurements are made.  
13 But the instrumentation on the extensometer  
14 can record to very high sensitivity or very small  
15 fluctuations in the ground surface.  
16 Q How long have the extensometers been there?  
17 A Since 1990. Investigation of subsidence went  
18 on for decades before that, but that's when the  
19 extensometers went in.  
20 Q And was there a range on what the  
21 extensometers showed in terms of subsidence throughout  
22 that period from 1990 to --  
23 A Well, the one I recall is that based on  
24 measurements of the ground surface itself prior to 1992  
25 there was -- the location where the extensometer is on

Page 488

<p>1 STATE OF CALIFORNIA )  ) SS.  2 COUNTY OF LOS ANGELES )  3  I, RUBEN GARCIA, CSR No. 11305, do hereby  4 certify:  5 That the foregoing deposition testimony of  6 JOSEPH SCALMANINI was taken before me at the time and  7 place therein set forth, at which time the witness was  8 placed under oath and was sworn by me to tell the truth,  9 the whole truth, and nothing but the truth.  10 That the testimony of the witness and all  11 objections by counsel at the time of the examination  12 were recorded stenographically by me, and were  13 thereafter transcribed under my direction and  14 supervision, and that the foregoing pages contain a  15 full, true and accurate record of all proceedings and  16 testimony to the best of my skill and ability.  17 I further certify that I am neither counsel  18 for any party in said action, nor am I related to any  19 party in said action, nor am I in any way interested in  20 the outcome thereof.  21 IN WITNESS WHEREOF, I have subscribed my name  22 this 27th day of December, 2010.  23  24  25 RUBEN GARCIA, CSR No. 11305</p> <p style="text-align: right;">Page 617</p>	<p>1 DEPOSITION EXHIBITS  2 JOSEPH SCALMANINI  3  4 NUMBER DESCRIPTION IDENTIFIED  5 Exhibit 7 Jump drive produced by 583  Mr. Scalmanini  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25</p> <p style="text-align: right;">Page 619</p>
<p>1 INDEX  2  3  4 MONDAY, DECEMBER 13, 2010  5  6 WITNESS EXAMINATION  7  8 JOSEPH SCALMANINI  9 By Mr. Zimmer 419, 606  10 By Mr. Fife 496  11  12  13  14  15 INSTRUCTION NOT TO ANSWER  16 (None)  17  18  19 INFORMATION REQUESTED  20 (None)  21  22  23  24  25</p> <p style="text-align: right;">Page 618</p>	