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EXEMPT FROM FILING FEES UNDER GOVERNMENT CODE SECTION 6103

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF LOS ANGELES – CENTRAL DISTRICT

ANTELOPE VALLEY GROUNDWATER CASES

Included Actions:
Los Angeles County Waterworks District No. 40 v. Diamond Farming Co., Superior Court of California, County of Los Angeles, Case No. BC 325201;

Los Angeles County Waterworks District No. 40 v. Diamond Farming Co., Superior Court of California, County of Kern, Case No. S-1500-CV-254-348;

Wm. Bolthouse Farms, Inc. v. City of Lancaster, Diamond Farming Co. v. City of Lancaster, Diamond Farming Co. v. Palmdale Water Dist., Superior Court of California, County of Riverside, Case Nos. RIC 353 840, RIC 344 436, RIC 344 668

Judicial Council Coordination No. 4408

CLASS ACTION

Santa Clara Case No. 1-05-CV-049053
Assigned to The Honorable Jack Komar

DECLARATION OF JOSEPH C. SCALMANINI IN SUPPORT OF PUBLIC WATER SUPPLIERS' STATEMENT OF SUPPORT FOR A MODIFIED CLASS AS PROPOSED BY REBECCA LEE WILLIS

DECLARATION OF JOSEPH C. SCALMANINI

1. I am a registered Civil Engineer in California and president of Luhdorff and Scalmanini, Consulting Engineers, Inc., which specializes in geologic, hydrologic and engineering work associated with the investigation, assessment, development and management of groundwater resources throughout California, and which also specializes in water resources engineering work for municipal, agricultural, and industrial water supply throughout California. I have conducted and directed ground-water assessments and investigations, developed and implemented ground-water monitoring and management programs, designed ground-water development projects, and conducted and directed water resources engineering projects throughout California over the last 40 years.

2. Prior to the founding of Luhdorff and Scalmanini, Consulting Engineers in 1980, I was a Development Engineer at the University of California, Davis, where I directed applied research in ground water and taught classes in Hydraulics and Principles of Ground-Water Management; my association with the University continues as an instructor in a University Extension class on Ground-Water Hydrology and Law. A copy of my resume, which accurately states my education and experience, is attached to this declaration as Exhibit A.

3. I have prepared this declaration regarding the common nature of water supplies and the related interests of overlying landowners in the Antelope Valley Area of Adjudication at the request of Rosamond Community Services District and Los Angeles County Waterworks District No. 40. This declaration is organized into four parts to first discuss my understanding of the fundamental issue at question in this stage of the Antelope Valley adjudication as a basis for providing the balance of information in this declaration; to describe the common nature of water supplies available to all overlying landowners and other interests in the Antelope Valley; to describe the limitations in availability of information on which to reliably identify different types of landowners, i.e. groundwater pumpers vs. non-pumpers, at this time; and to conclude by suggesting an approach to assure that all overlying landowner interests in the Area of

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Adjudication, as defined by this Court ("Adjudication Area") will be provided an opportunity to have their interests represented in this litigation.

4. My understanding of the current issue in the Antelope Valley Adjudication is that the Court would like to include all overlying land owners in the Adjudication Area, except those who are within the water service area of any Public Water Supplier. My interpretation of that issue is that all those overlying landowners with a potential right to groundwater in the Adjudication Area need to be identified and given notice of the opportunity to participate in the litigation.

5. My further understanding of the current issue is that there may be some desire to divide overlying landowner interests in the Adjudication Area into groups based on whether they actively pump groundwater. While that may ultimately be required, my conclusion at this time is that there is neither readily available nor sufficiently reliable information on which to accurately and completely identify and classify all pumpers and non-pumpers in the Area of Adjudication. However, I would also conclude that classification of overlying landowners into groups of pumpers and non-pumpers can ultimately be achieved by other methods, as discussed below.

6. On a basin-wide basis, the entire Adjudication Area overlies a common aquifer system that, which represents a common water supply to all overlying lands. While the nature of the aquifer system is not uniform, as would be expected for such a large and irregularly shaped area in a geologic setting like the Antelope Valley, the aquifer system underlies the entire basin and is contiguous throughout the Adjudication Area. There are no substantial areas where the aquifer system is absent (there are local intrusions of bedrock materials up into the aquifer system, but they do not disrupt the regional continuity and extent of the overall aquifer system). Geologic features at various locations in the area have local effects on groundwater movement and on the magnitude and extent of pumping effects; however, they do not completely isolate or eliminate the occurrence of groundwater beneath lands within the basin. Similarly, geologic

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features at various locations affect the occurrence and availability of groundwater, whether in unconfined or confined aquifer conditions; but, again, those do not isolate or eliminate the occurrence and availability of groundwater beneath lands within the basin. Finally, geologic features affect the spatial extent of some basin response to pumping stresses, such as subsidence; but they do not isolate or eliminate the occurrence and availability of groundwater beneath lands within the Adjudication Area.

7. As part of our work on the geology and hydrology of the basin, I have interpreted approximately 5,000 logs of wells that have been constructed in the Adjudication Area; about half of those logs are available in published reports, and the other half were recently made available in the recent production of logs from the confidential files of the California Department of Water Resources (DWR). My interpretation of well logs is currently being organized, in part, in a series of 20 geologic cross-sections through various parts of the overall area; the locations of those cross-sections are illustrated in Exhibit B. Rather than laboriously review a great number of those sections, two of them are attached as Exhibit C through Exhibit E (Exhibits D and E are west and east portions of the same cross-section), still in working format, which illustrate the spatial extent of aquifer materials in general, and to also illustrate some of the geologic features which locally affect the nature of groundwater occurrence.

8. In a north-south orientation, Section A-A' (Exhibit C) illustrates the extensive and largely unconfined aquifer system in the south-central part of the basin, underlain by a blue clay sequence that thickens and progressively extends closer to the surface in a northerly direction toward Rosamond Dry Lake. The section also illustrates the confined aquifer system beneath the blue clay sequence. Overall, the section reflects the lack of exploration below about 1,200 feet in most of the area (where geophysical interpretation suggests that unconsolidated deposits extend for several thousands of feet); to the north, limited exploration allows depiction of granitic basement rocks at depths to nearly 2,000 feet.

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9. In an east-west orientation, Section B-B'-B" (Exhibits D and E) illustrates the spatially extensive, largely unconfined aquifer system throughout the western extent of the basin. The same blue clay illustrated in Section A-A' (where it occurs closer to the ground surface) creates an area of aquifer confinement in the east-central part of the basin; but that clay does not extend to the eastern boundary of the basin, resulting in a recurrence of largely unconfined aquifer conditions toward the east. While basement has not been explored through almost all the area, it is notable that there is a mappable intrusion of bedrock (bedrock ridge) into the aquifer system in about the middle of this east-west cross-section. That bedrock ridge may affect groundwater flow but it does not isolate or eliminate the occurrence and availability of groundwater beneath lands within the Adjudication Area.

10. In summary, while there are various local details that contribute to differences in groundwater conditions (e.g. water levels, water quality, well yields, etc.) at different locations throughout the basin, groundwater occurs beneath all lands in the Area of Adjudication. As a result, all landowners share an interest in the same common groundwater supply.

11. Prior to the importation of supplemental surface water into the Antelope Valley, which has been continuously ongoing since 1972, various investigators had estimated the amount of surface water runoff into the valley from the surrounding mountains. It has long been considered that such runoff is the primary component of natural recharge to the groundwater basin in the Adjudication Area. The results of various reported analyses of runoff prior to the importation of supplemental water, which date to as early as 1929, are summarized in Exhibit F and reflect total average runoff estimates in a range between about 40,000 and 75,000 acre-feet per year (afy). While those numbers should not be interpreted as the yield of the basin, they do reflect the general range of the amount of water that contributes to the natural recharge of the basin.

12. In contrast to the amount of water that has been historically estimated to contribute

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to natural recharge of the aquifer system, the historical rate of groundwater pumping has been much larger in the last 80 years. As part of my work on the hydrology of the basin, I have reviewed and interpreted reports and data on historical land use, water requirements, and water supplies to meet those water requirements. Based on that work, I estimate that historical groundwater pumping to meet both agricultural and municipal water requirements in the Area of Adjudication, as illustrated in Exhibit G, has ranged between a high of nearly 360,000 afy in 1950 to a low of nearly 80,000 afy in 1990. Since then, total groundwater pumping has increased, as high as about 156,000 afy by 2002, followed by a decline to about 130,000 afy in 2006. Over the last decade, total groundwater pumping has averaged around 135,000 afy.

13. While the preceding is not intended, and should not be interpreted, to reflect anything regarding "safe yield" or "overdraft", it is intended to reflect that groundwater pumping has continuously been, for at least 60 years, from slightly to very significantly greater than all estimates of natural water supply that contributes to groundwater recharge within the Adjudication Area. Consequently, on a basin-wide scale, all overlying landowners with the Adjudication Area share a common problem of limited groundwater supply when compared to the magnitude of pumping that has historically occurred, and continues through the present.

14. As a result of the disparity between groundwater recharge and pumping, a significant amount of groundwater has been removed from storage in the aquifer system. While the amount of depleted storage is currently being investigated by the Technical Committee, one published value indicates that cumulative depletion exceeds eight million acre-feet. Associated with that depletion of storage has been a lowering of groundwater levels that, in turn, precipitates subsurface drainage of extensive fine-grained geologic units (e.g. the blue clays illustrated in Exhibits C through E), which in turn consolidate and are reflected in subsidence and fissuring of the overlying land surface. Land subsidence in the Adjudication Area has been measured to be up to about six feet. The causes and contributions to subsidence are complex; however, they are known to extend beyond the finite extent of the fine-grained materials that ultimately physically

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consolidate, resulting in subsidence of the overlying land surface. As a result, such as all overlying landowners share in access to a common groundwater basin, they similarly share, to varying degrees, in the effects that derive from the limited groundwater supply when compared to the amount of pumping that has occurred, and continues through the present.

15. As part of my work on historical land use and related water requirements, I have reviewed and interpreted a number of projections of future water requirements in the Adjudication Area. Most of those projections are for municipal water supply, but there is also one projection of future agricultural water requirements. From current total water requirements of about 230,000 afy, a reasonable projection of future water requirements over the next 20 years is that they will increase into a range of about 285,000 to 385,000 afy. (See Exhibit H.) The large range in projected water demand reflects uncertainty in agricultural land use and associated water requirements. Several independent projections of municipal water demand all reflect more than a doubling of municipal demand, from about 108,000 afy at present to nearly 245,000 afy by 2030. Future agricultural land use and water requirements are notably less defined and more difficult to project. One reasonable estimate is that agricultural water demand will be between recent historical demand and a decline that continues the recent prevailing trend since about 2000. The latter range is reflected, with the concurrent increase in municipal water demand as described above, in Exhibit H. Of most note for purposes of this declaration is recognition that, regardless of exact trends in agricultural water requirements, total water requirements over the next 20 years in the Area of Adjudication can be expected to approach or exceed the highest historical water demands, which were consistently in the range of about 300,000 to 350,000 afy as illustrated in Exhibit H. As discussed above, that level of water demand substantially exceeds every historical estimate of runoff that contributes to groundwater recharge. Consequently, on a basin-wide scale, all overlying landowners share continuation of a common problem that total water requirements are projected to progressively increase over the next 20 years, even further exceeding every historical estimate of runoff that contributes to groundwater recharge in the Adjudication Area.

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16. As noted above, supplemental water has been continuously imported from the State Water Project since 1972. Over that time, imported supplemental water supplies have progressively increased to a range of about 65,000 to nearly 82,000 afy since 2000. At that range of imported water, supplemental water represents about 30 percent of total current water demand. With limited groundwater basin yield and a significant projected increase in total water requirements as described above, all interests in the basin share a common need to increase the use of supplemental water to augment local supplies. As projected total water demand continues to increase, all interests in the Area of Adjudication will become increasingly dependent on imported and other supplemental water supplies to meet those demands while utilizing local groundwater supplies at a sustainable rate.

17. As introduced above, I understand that there might be a desire or need to identify and differentiate between landowners who actively pump groundwater and those who do not. All the work generally described above to analyze land use, water requirements and water supplies is based on such information as gross crop reports, gross electrical power consumption, periodic historical maps of irrigated lands, and metered water use by municipal water purveyors. There is no available data that identifies pumping by land parcels or by individual land owners on a basin-wide basis. To investigate the question of pumpers vs. non-pumpers to some degree, I briefly investigated three sources of information related to wells and/or pumping in the basin: records of pumping filed at the State Water Resources Control Board (SWRCB) pursuant to California Water Code Section 5001; well logs filed at the State Department of Water Resources (DWR); and Los Angeles County well drilling permits. The investigation of each of these sources was brief because, as confirmed in the investigation, each was expected to have shortfalls that would preclude it from providing definition of current pumper vs. non-pumper status throughout the Adjudication Area. Each is briefly discussed below.

18. California Water Code section 5001 requires pumpers that pump 25 afy or more to file an annual notice with the SWRCB. Los Angeles County is one of the specified counties;

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Kern County is not. The Adjudication Area is bifurcated by the Kern-Los Angeles County line. Thus it was expected, and ultimately confirmed, that the filings of records of groundwater pumping at the SWRCB would not contain sufficient information on which to even begin to identify pumpers in the Kern County portion of the Adjudication Area. Despite the constraint that there are no filings in Kern County, a cursory review of the 2005 filings in Los Angeles County (recognizing that those filings are now two years out of date regarding pumping status), identified approximately 416 wells pumping 25 afy or more. However, as discussed above, review of well logs from DWR suggest that thousands of wells have been constructed in the Adjudication Area. There is no record of how many of those might be operational. Logically, it would be far more than 416 wells. In the preceding context, the filings a the SWRCB are incomplete and inadequate to reliably define pumpers and segregate them from non-pumpers throughout the Adjudication Area.

19. The Department of Water Resources logs are written records that describe the drilling and construction of a well. Useful information on a well log can include the well's location, its owner, the date of construction, a description of materials encountered in the subsurface, and a description of the materials of construction and their placement (i.e. depth) in the well. Well logs sometimes also include abbreviated information on groundwater level (at the time of construction), well testing (if conducted), and whether any water quality testing was conducted. Well logs do not provide any record of whether permanent pumping equipment was installed in a well, or what size (capacity) pumping equipment might have been installed. More importantly, well logs provide no ongoing record, beyond the original date of construction, about the use of a well for water supply (strictly speaking, reports comparable to "well logs" are required to be filed if a well structure is modified, or if a well is destroyed; but again, those provide no ongoing record of the use of the well for water supply).

20. As noted above, we have reviewed and interpreted the geologic information recorded on about 5,000 well logs in the overall Area of Adjudication, about half from published

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reports and half from DWR records. Ultimately, however, as regards the question of active well operation, those well logs identify that wells were constructed at various locations and times. The well logs do not provide any definition about current or other well operation, i.e. whether their owners are active pumpers or not.

21. Counties throughout California, usually through their Health Departments, issue permits for the construction of wells. The primary focus of county permitting has historically been to ensure that wells are constructed with adequate sanitary (surface) seals to prevent the entry of contaminants into the well at the ground surface; that focus has expanded in some areas as a function of local physical conditions. Ultimately, however, local county permitting involves well construction only and does not extend to follow-up permitting or recording whether permanent pumping equipment was installed in a well, or what size (capacity) pumping equipment might have been installed. More importantly, county well drilling permits provide no ongoing record, after initial construction and sealing, about the use of a well for water supply (strictly speaking, for a few wells, constructed to supply small public water systems, county health departments permit such systems; thus they inspect and monitor those systems, with a primary focus on water quality, on an ongoing basis; beyond those few, however, there is no tracking of the use of wells after satisfaction of the initial county permitting of construction). Thus, county well drilling permits cannot be interpreted to identify active pumpers throughout the area of adjudication, and to definitively segregate them from non-pumpers.

22. With regard to the overall question of identifying overlying landowners and classifying them as to whether they are active groundwater pumpers, I would offer the following three conclusions.

23. Common Interests in Groundwater – Overlying landowners throughout the Area of Adjudication share correlative interests in a common groundwater supply. Groundwater occurrence, movement and yield are not uniform throughout the basin; but there are no internal

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features that isolate or eliminate the occurrence and availability of groundwater in the Area of Adjudication to overlying landowners within the basin. All historical and current data indicate that the groundwater supply is limited when compared to the magnitude of pumping that has historically occurred and continues through the present. Overlying landowners share that common problem of limited groundwater supply. They similarly share in a common problem related to land subsidence and ground fissuring that have resulted from significant historical removal of groundwater from storage. And they share in a common problem that projected water requirements in the overall Area of Adjudication are projected to notably increase over the next 20 years, ever further exceeding every historical estimate of runoff that contributes to groundwater recharge. Finally, as a result of a limited groundwater supply and notable projected increases in total water requirements, all interests in the Area of Adjudication will become increasingly dependent on supplemental water supplies in order to maintain local groundwater use at a sustainable rate.

24. Identification of Pumpers and Non-Pumpers – There is no data set or similar information on which to readily or reliably identify pumpers vs. non-pumpers throughout the Adjudication Area. Information such as filings at the SWRCB, well log records maintained by DWR, and county well drilling permits is insufficient to serve as a basis for completely and reliably identifying and differentiating all pumpers and non-pumpers.

25. I understand from counsel that, for purposes of ultimately adjudicating rights to groundwater throughout the Adjudication Area, the Court needs to assure that due process is afforded to all interests in the Adjudication Area. My conclusion that all overlying landowners share interest in a common groundwater supply is independent of their current pumping status. While there may ultimately be a need to differentiate between active pumpers and non-pumpers, it is practically impossible to reliably do so with currently available information. Consequently, I would recommend that overlying landowners that do not fall within the service areas of any Public Water Supplier be initially grouped or classified on a correlative basis without regard to

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pumping status. That grouping or classification can remain as the adjudication proceeds through characterization of the groundwater basin, its yield, and general rights to its yield. If it ultimately becomes necessary to differentiate between overlying pumpers and non-pumpers, all overlying landowners will already be in the adjudication, and can then be queried as to their respective pumping history and status.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed at Woodland, California this 6th day of August, 2007.

Joseph C. Scalmanini

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PROOF OF SERVICE

I, Kerry V. Keefe, declare:

I am a resident of the State of California and over the age of eighteen years, and not a party to the within action; my business address is Best Best & Krieger LLP, 5 Park Plaza, Suite 1500, Irvine, California 92614. On August 9, 2007, I served the within document(s):

DECLARATION OF JOSEPH C. SCALMANINI IN SUPPORT OF PUBLIC WATER SUPPLIERS' STATEMENT OF SUPPORT FOR A MODIFIED CLASS AS PROPOSED BY REBECCA LEE WILLIS

☒ by posting the document(s) listed above to the Santa Clara County Superior Court website in regard to the Antelope Valley Groundwater matter.

☐ by placing the document(s) listed above in a sealed envelope with postage thereon fully prepaid, in the United States mail at Irvine, California addressed as set forth below.

☐ by causing personal delivery by ASAP Corporate Services of the document(s) listed above to the person(s) at the address(es) set forth below.

☐ by personally delivering the document(s) listed above to the person(s) at the address(es) set forth below.

☐ I caused such envelope to be delivered via overnight delivery addressed as indicated on the attached service list. Such envelope was deposited for delivery by Federal Express following the firm's ordinary business practices.

I am readily familiar with the firm's practice of collection and processing correspondence for mailing. Under that practice it would be deposited with the U.S. Postal Service on that same day with postage thereon fully prepaid in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

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

Executed on August 9, 2007, at Irvine, California.

Kerry V. Keefe

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