

**COURT OF APPEAL, STATE OF CALIFORNIA
FIFTH APPELLATE DISTRICT
F075451**

ANTELOPE VALLEY GROUNDWATER CASES

Appeal from the Superior Court of Los Angeles
Superior Court No. JCCP4408
Hon. Jack Komar

**TRANSMITTAL OF THE
WILLIS CLASS'S TRIAL EXHIBITS
[CRC 8.224]**

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Attorneys for Appellants REBECCA LEE WILLIS and
DAVID ESTRADA, on behalf of themselves and
others similarly situated

Pursuant to California Rule of Court 8.244, Appellants REBECCA LEE WILLIS and DAVID ESTRADA, on behalf of themselves and others similarly situated, hereby transmit to this Court true and correct copies of the Class’s original trial exhibits proffered to the Superior Court (whether admitted in evidence, refused, or lodged) during Phase VI of the proceedings leading to the 2015 Judgment entered by the Superior Court and subject to this appeal. The trial exhibits are identified as follows: “Phase of trial – Party offering – Exhibit no.”
Example: “6 – Willis – 1.”

Dated: August 22, 2019

Respectfully submitted,
NIDDRIE ADDAMS FULLER
SINGH LLP
THE KALFAYAN LAW FIRM, APC
GREGORY L. JAMES

By: s/ Ralph B. Kalfayan

Attorneys for Appellants, REBECCA LEE WILLIS and DAVID ESTRADA, on behalf of themselves and others similarly situated

LIST OF EXHIBITS SENT		
Exhibit No.	Description	Page
	Willis Class' List of Exhibits Offered and/or Admitted During Phase VI/Physical Solution Trial, filed November 2, 2015; (JA 155154-155161)	5
6-Willis-1	Grant deed of Kamran and Cynthia Kamalyan, dated May 9, 2014	13
6-Willis-2	June 15, 2015 letter from LA County Waterworks Dist. 40 to Mr. Kamalyan regarding denial of water service	18
6-Willis-3	Correspondence from Art Vander Vis to Robert Glaser recommending non-approval for the plan of the Slaughterhouse	20
6-Willis-4	E-mail from Stefanie Hedlund regarding the make-up of the Willis Class	36
6-Willis-5	David Estrada Quitclaim Deed	42
6-Willis-6	2014 David Estrada property tax records for all parcels	46
6-Willis-7	Maps of David Estrada's parcels in relation to the Antelope Valley Area of Adjudication	52
6-Willis-8	Notice of proposed Willis Class action settlement and settlement hearing	55
6-Willis-9	Notice of proposed settlement for the "Small Pumper" class action and settlement hearing	62
6-Willis-10	Curriculum vitae of Rodney T. Smith, Ph.D.	69
6-Willis-11	Rodney T. Smith, Ph.D.- prior testimony experience	76
6-Willis-12	January 9, 2015 Letter from Rodney Smith regarding impact of the proposed physical solution on the Willis Class and alternative approaches	81
6-Willis-13	Spreadsheet regarding valuation	103

LIST OF EXHIBITS SENT		
Exhibit No.	Description	Page
6-Willis-14	January 9, 2015 letter from Rodney Smith regarding economic valuation of overlying production rights	106
6-Willis-15	Spreadsheet regarding land use and water	122
6-Willis-16	July 14, 2015 letter from Rodney Smith regarding consistency of the proposed physical solution and the Willis Class judgment	124
6-Willis-17	New production application procedure, section 18.5.13 of the physical solution	135
6-Willis-18	Curriculum vitae of Stephen D. Roach	139
6-Willis-19	Report of Stephen D. Roach	150

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Lynne M. Brennan (SBN 149131)
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San Diego, CA 92101
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5 Attorneys for the Willis Class
6
7

8 SUPERIOR COURT OF THE STATE OF CALIFORNIA
9 FOR THE COUNTY OF LOS ANGELES
10

11 ANTELOPE VALLEY
12 GROUNDWATER CASES

13 This Pleading Relates to Included Action:
14 REBECCA LEE WILLIS and DAVID
ESTRADA, on behalf of themselves and
15 all others similarly situated,

16 *Plaintiffs,*

17 v.

18 LOS ANGELES COUNTY
19 WATERWORKS DISTRICT NO. 40;
20 CITY OF LANCASTER; CITY OF
PALMDALE; PALMDALE WATER
21 DISTRICT; LITTLEROCK CREEK
IRRIGATION DISTRICT; PALM
22 RANCH IRRIGATION DISTRICT;
QUARTZ HILL WATER DISTRICT;
23 ANTELOPE VALLEY WATER CO.;
24 ROSAMOND COMMUNITY SERVICE
DISTRICT; PHELAN PINON HILL
25 COMMUNITY SERVICE DISTRICT; and
DOES 1 through 1,000;

26 *Defendants.*
27
28

RELATED CASE TO JUDICIAL COUNCIL
COORDINATION PROCEEDING NO. 4408

The Honorable Jack Komar
Coordination Trial Judge

**WILLIS CLASS' LIST OF EXHIBITS
OFFERED AND/OR ADMITTED DURING
PHASE VI/PHYSICAL SOLUTION TRIAL**

Date: November 3, 2015

Time: 10:00 a.m.

Place: Superior Court of California,
County of Los Angeles
111 North Hill Street, Room 222
Los Angeles, CA 90012

1 **TO ALL PARTIES AND TO THEIR ATTORNEYS OF RECORD:**

2 PLEASE TAKE NOTICE The Willis Class hereby respectfully submits the following list
3 of exhibits offered and/or admitted in the above-captioned Phase VI/Physical Solution Trial .
4

5 The exhibit list does not include exhibits used by the Willis Class for rebuttal and
6 impeachment purposes, if any, and does not include any demonstrative exhibits. Furthermore, the
7 Willis Class reserves the right to amend or supplement this Exhibit List and will amend or modify
8 the Exhibit List to the extent necessary.

No.	Description	Offered	Admitted
6- Willis - 1	Grant Deed of Kamran and Cynthia Kamalyan dated May 9, 2014	Yes	Yes
6- Willis - 2	June 15, 2015 Letter from LA County Waterworks Dist. 40 to Mr. Kamalyan regarding denial of water service	Yes	Yes
6- Willis - 3	Correspondence from Art Vander Vis to Robert Glaser recommending non-approval for the plan of the Slaughterhouse	Yes	Yes
6- Willis - 4	Email from Stefanie Hedlund regarding the make-up of the Willis Class	Yes	No
6- Willis - 5	David Estrada Quitclaim Deed	Yes	Yes
6- Willis - 6	2014 David Estrada Property Tax Records – all parcels	Yes	Yes
6- Willis - 7	Maps of David Estrada’s parcels in relation to the Antelope Valley Area of Adjudication	Yes	Yes
6- Willis - 8	Notice of Proposed Willis Class Action Settlement and Settlement Hearing	Yes	No
6- Willis - 9	Notice of Proposed Settlement For the “Small Pumper” Class Action and Settlement Hearing	Yes	No
6- Willis - 10	Curriculum Vitae of Rodney T. Smith, Ph.D.	Yes	Yes

1	6- Willis - 11	Rodney T. Smith, Ph.D. Prior Testimony Experience	Yes	Yes
2				
3	6- Willis - 12	January 9, 2015 Letter from Rod Smith re: Impact of Proposed Physical Solution on the Willis Class and Alternative Approaches	Yes	No
4				
5	6- Willis-13	Spreadsheet regarding Valuation	Yes	No
6				
7	6- Willis - 14	January 9, 2015 Letter from Rod Smith re: Economic Valuation of Overlying Production Rights	Yes	No
8				
9	6- Willis -15	Spreadsheet regarding Land Use and Water	Yes	No
10				
11	6- Willis - 16	July 14, 2015 Letter from Rod Smith re: Consistency of the Proposed Physical Solution and the Willis Class Judgment	Yes	No
12				
13	6- Willis-17	New Production Application Procedure 18.5.13	Yes	No
14				
15	6- Willis - 18	Curriculum Vitae of Stephen D. Roach	Yes	Yes
16				
17	6- Willis - 19	Report of Stephen D. Roach	Yes	Yes

Dated: November 2, 2015

Respectfully submitted,

Ralph B. Kalfayan, Esq.
Lynne M. Brennan, Esq.
KRAUSE, KALFAYAN, BENINK &
SLAVENS, LLP

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5 Class Counsel for the Willis Class
6
7

8 SUPERIOR COURT OF THE STATE OF CALIFORNIA
9 FOR THE COUNTY OF LOS ANGELES

10 ANTELOPE VALLEY
11 GROUNDWATER CASES

RELATED CASE TO JUDICIAL COUNCIL
COORDINATION PROCEEDING NO. 4408

12 This Pleading Relates to Included Action:
REBECCA LEE WILLIS and DAVID
13 ESTRADA, on behalf of themselves and
all others similarly situated,

PROOF OF SERVICE

14
15 *Plaintiffs,*

16 v.

17 LOS ANGELES COUNTY
18 WATERWORKS DISTRICT NO. 40;
CITY OF LANCASTER; CITY OF
19 PALMDALE; PALMDALE WATER
DISTRICT; LITTLEROCK CREEK
20 IRRIGATION DISTRICT; PALM
RANCH IRRIGATION DISTRICT;
21 QUARTZ HILL WATER DISTRICT;
22 ANTELOPE VALLEY WATER CO.;
ROSAMOND COMMUNITY SERVICE
23 DISTRICT; PHELAN PINON HILL
COMMUNITY SERVICE DISTRICT;
24 and DOES 1 through 1,000;

25 *Defendants.*
26
27
28

1 I, Ian D. Krupar, declare:

2 I am a citizen of the United States and employed in San Diego County, California. I am
3 over the age of eighteen years and not a party to the within-entitled action. My business address
4 is Krause Kalfayan Benink & Slavens, LLP 550 West C Street, Suite 530, San Diego, California,
5 92101. On November 2, 2015, I caused the following document(s): to be served on the parties in
6 this action, as follows:

7 **WILLIS CLASS' LIST OF EXHIBITS OFFERED AND/OR ADMITTED DURING**
8 **PHASE VI/PHYSICAL SOLUTION TRIAL**

9 (X) (BY ELECTRONIC SERVICE) by posting the document(s) listed above to the Santa
10 Clara County Superior Court website: www.scefiling.org regarding the Antelope Valley
11 Groundwater matter.

12 () (BY U.S. Mail) I am readily familiar with the firm's practice of collection and processing
13 of documents for mailing. Under that practice, the above-referenced documents(s) were placed in
14 sealed envelope(s) addressed to the parties as noted above, with postage thereon fully prepaid and
15 deposited such envelope(s) with the United States Postal Service on the same date at San Diego,
16 California, addressed to:

17 () (BY FEDERAL EXPRESS) I served a true and correct copy by Federal Express or other
18 overnight delivery service, for the delivery on the next business day. Each copy was enclosed in
19 an envelope or package designed by the express service carrier; deposited in a facility regularly
20 maintained by the express service carrier or delivered to a courier or driver authorized to receive
21 documents on its behalf; with delivery fees paid or provided for; addressed as shown on the
22 accompanying service list.

23 () (BY FACSIMILE TRANSMISSION) I am readily familiar with the firm's practice of
24 facsimile transmission of documents. It is transmitted to the recipient on the same day in the
25 ordinary course of business.

26 (X) (STATE) I declare under penalty of perjury under the laws of the State of California that
27 the above is true and correct.

28 () (FEDERAL) I declare under penalty of perjury under the laws of the United States of
America that the foregoing is true and correct.



Ian D. Krupar

**THE SUPERIOR COURT OF CALIFORNIA, COUNTY OF SANTA CLARA
ELECTRONIC FILING - WWW.SCEFILING.ORG**

c/o Glotrans
2915 McClure Street
Oakland, CA94609
TEL: (510) 208-4775
FAX: (510) 465-7348
EMAIL: Info@Glotrans.com

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

Coordination Proceeding Special Title (Rule 1550(b)) ANTELOPE VALLEY GROUNDWATER CASES (JCCP 4408) Included Actions: Los Angeles County Waterworks District No. 40)	Antelope Valley Groundwater Cases (JCCP 4408)
)	
)	Lead Case No.1-05-CV-049053
)	
Plaintiff,)	Hon. Jack Komar
vs.)	
)	
Diamond Farming Co. Superior Court of California County of Los Angeles, Case No. BC 325 201 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, consolidated actions, Case Nos. RIC 353 840, RIC 344 436, RIC 344 668)	
)	
Defendant.)	
<hr/>)	PROOF OF SERVICE
AND RELATED ACTIONS)	Electronic Proof of Service
<hr/>)	

I am employed in the County of Alameda, State of California.

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

The documents described on page 2 of this Electronic Proof of Service were submitted via the worldwide web on Mon. November 2, 2015 at 2:26 PM PST and served by electronic mail notification.

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

The document was electronically filed on the Court's website, <http://www.scefiling.org>, on Mon. November 2, 2015 at 2:26 PM PST

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

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

correct. Executed on November 2, 2015 at Oakland, California.

Dated: November 2, 2015

For WWW.SCEFILING.ORG

Andy Jamieson

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2 **Electronic Proof of Service**
3 **Page 2**

4 **Document(s) submitted by Ralph Kalfayan of Krause, Kalfayan, Benink & Slavens, LLP on Mon. November 2, 2015 at**
5 **2:26 PM PST**

- 6 1. Exhibits List: Willis Class' List of Exhibits Offered and/or Admitted During Phase VI/Physical Solution Trial
- 7
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Exhibit No.

6 – Willis - 1

This page is part of your document - DO NOT DISCARD

1



20140585507



Pages:
0004

Recorded/Filed in Official Records
Recorder's Office, Los Angeles County,
California

06/08/14 AT 08:00AM

FEES:	38.00
TAXES:	42.90
OTHER:	0.00
PAID:	80.90



LEADSHEET



201406060170015

00009262607



006229507

SEQ:
15

DAR - Title Company (Hard Copy)



THIS FORM IS NOT TO BE DUPLICATED

T01

E442314

RECORDING REQUESTED BY:
On Track Escrow
Order No. 111405487 LA
Escrow No. 3659-SR
Parcel No. 3175-0021-007



AND WHEN RECORDED MAIL TO:

KAMRAN KAMALYAN
5901 Allston St.
Los Angeles CA
90022

SPACE ABOVE THIS LINE FOR RECORDER'S USE

80

GRANT DEED

THE UNDERSIGNED GRANTOR(S) DECLARE(S) THAT DOCUMENTARY TRANSFER TAX IS \$42.90 and CITY

- computed on full value of property conveyed, or
- computed on full value less liens or encumbrances remaining at the time of sale.
- unincorporated area: Lancaster, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

Jonathan Silva and Diana Lee Silva, As Trustees of The Silva Trust dated 10/24/2008

hereby GRANT(S) to **Kamran Kamalyan and Cynthia Kamalyan, Husband and Wife as Joint Tenants**

the following described real property in the County of , State of California:

Commonly known as: APN 3175-004-007 , Lancaster, CA
Legal Description "A" Attached

Date May 9, 2014

The Silva Trust dated 10/24/2008
[Signature] Trustee
By Jonathan Silva, Trustee

[Signature] Trustee
By Diana Lee Silva, Trustee

STATE OF California }
COUNTY OF Los Angeles } S.S.

On 5-16-2014, before me, S. Roskilly, a Notary Public, personally appeared Diana Lee Silva who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature [Signature] (Seal)



Mail Tax Statement to: SAME AS ABOVE or Address Noted Below

15E

CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT

STATE OF CALIFORNIA }
COUNTY OF Los Angeles } S.S.

On 5/22/2014, before me, S. Roskilly, a Notary Public,
personally appeared Jonathan Silva

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature S. Roskilly (Seal)



OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

DESCRIPTION OF ATTACHED DOCUMENT

Title or Type of Document: Grant Deed

Document Date: _____ Number of Pages: _____

Signer(s) other than named above _____

CAPACITY(IES) CLAIMED BY SIGNER(S)

INDIVIDUAL

CORPORATE OFFICER(S)

TITLE(S) _____

PARTNER(S)- LIMITED
 GENERAL

ATTORNEY-IN-FACT

TRUSTEE(S)

GUARDIAN OR CONSERVATOR

OTHER _____

Right Thumbprint Of Signer
Top of thumb here

INDIVIDUAL

CORPORATE OFFICER(S)

TITLE(S) _____

PARTNER(S)- LIMITED
 GENERAL

ATTORNEY-IN-FACT

TRUSTEE(S)

GUARDIAN OR CONSERVATOR

OTHER _____

Right Thumbprint of Signer
Top of thumb here

SIGNER IS REPRESENTING:

EXHIBIT "A"
Legal Description

For APN/Parcel ID(s): 3175-004-007

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF LOS ANGELES,
STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

The Southwest Quarter of the Southwest Quarter of the Northwest Quarter of the Southwest Quarter of
Section 35, Township 8 North, Range 12 West, San Bernardino Meridian, in the County of Los Angeles,
State of California, according to the official plat of said land approved by the Surveyor General on June 19,
1856.

Exhibit No.

6 – Willis - 2

2



COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

June 15, 2015

IN REPLY PLEASE
REFER TO FILE: WW-3

Mr. Kamran Kamalyan
1037 Flint Avenue
Wilmington, CA 90744

Dear Mr. Kamalyan:

**LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 40, ANTELOPE VALLEY
WATER SERVICE TO ASSESSOR PARCEL NO. 3175-004-007**

This is in response to your recent correspondence regarding water service from the Los Angeles County Waterworks District No. 40, Antelope Valley, to Assessor Parcel No. 3175-004-007. The District hereby denies water service as your parcel is located outside the Los Angeles County Waterworks District and it is more than 2,000 feet from one of the District's existing water mains.

Government Code Section 56133 only allows a District's governing board to provide new or extended services outside its jurisdictional boundaries when the Local Agency Formation Commission (LAFCO) provides written approval. Your subject project is situated outside the District's boundaries. Therefore, the District is unable to issue service for your project at this time. You may wish to file an annexation application with LAFCO and complete annexation procedures for the District to set water service conditions for the parcel.

If you have any questions, please contact Mrs. Aracely Jaramillo at (626) 300-3353 or ajaramillo@dpw.lacounty.gov.

Very truly yours,

GAIL FARBER
Director of Public Works


ADAM ARIKI
Assistant Deputy Director
Waterworks Division

AJ:dvt/LTS983

Exhibit No.

6 – Willis - 3

3

May 12, 2015

TO: Robert Glaser
Zoning Permits North Section
Department of Regional Planning

Attention Thuy Hua

FROM: Art Vander Vis
Land Development Division
Department of Public Works

**CUSTOM EXEMPT SLAUGHTERHOUSE
PROJECT NO. R 2015-00706, R1ST 201500018
ASSESSOR'S MAP BOOK NO. 3175, PAGE NO. 4, PARCEL NO. 7
LANCASTER**

We reviewed the project for the proposed 3,500 square foot slaughter house within the vacant parcel (APN 3175-004-007). There is no public sewer fronting the project site; waste will be dumped into a large septic tank and will be hauled by a septic pump company. No public water is fronting the site; private well systems will be constructed.

- Public Works recommends approval of this site plan.
- Public Works does **NOT** recommend approval of this site plan.

Prior to our recommendation of approval, setting of final conditions, and Regional Planning's scheduling of a public hearing, the following items need to be addressed, submitted, or shown on a revised site plan:

Please note the applicant should work directly with Public Works staff to clear the comments shown below.

A. Road/Traffic:

1. Provide additional information to fully determine the traffic impacts of the proposed project. This information should include but is not limited to the anticipated peak number of vehicles (cars and vans) and heavy trucks (livestock transport, waste hauling) entering and leaving the site during the morning peak hours, evening peak hours, and total vehicles expected on a

Robert Glaser
May 11, 2015
Page 2

single day. Based on this information, it will be determined if additional traffic analysis will be required.

2. Evaluate the need for exclusive left-turn and/or right-turn lanes into the project site by following the procedures outlined in Chapters 1 and 2 of the Access Management for Private Developments Guidelines Manual, which can be viewed at <http://dpw.lacounty.gov/idd/index.cfm?p=Whatsnew>. Should an exclusive left-turn and/or right-turn lanes be needed after evaluation, a conceptual striping plan shall be submitted for review and approval to evaluate how much right of way must be dedicated and how much pavement transition must be constructed. It shall be the sole responsibility of the applicant to construct the necessary improvements and dedicate or obtain offsite dedication from adjacent property owners for the additional right of way to accommodate any additional lanes.
3. Show and label all existing and proposed street improvements including inverted shoulders/edge of pavement, driveways, culverts, utility poles, etc., using accepted topographic conventions (see Standard Plans for Public Works Construction), on Division Street and Avenue F-12, 100 feet beyond the property lines. All existing improvements should be shown as dashed lines and all proposed improvements should be shown as solid lines.
4. Show, label, and dimension (from the street centerlines) the existing and proposed road right-of-way width, inverted shoulder/edge of pavement width, and parkway width on Division Street and Avenue F-12.

The proposed right-of-way for the Division Street should be located at 43 feet from centerline to be consistent with rural secondary highway. Additional right-of-way may be required if exclusive left-turn and/or right-turn lane is warranted for the proposed project.

The proposed offer of future right-of-way for Avenue F-12 should be located at 52 feet from centerline to be consistent with rural Local Street.
5. (If applicable) Show all pavement transitions (design speed to one transition) from the proposed widened pavement section of Division Street to the existing pavement section.
6. Show all proposed driveways serving the project site and clearly show the circulation onsite. This is to ensure no queuing will occur within public right-of-way on Division Street or Avenue F-12.

Robert Glaser
May 11, 2015
Page 3

7. Clearly show all proposed parking spaces to ensure adequate throat length is provided based on the type of vehicles accessing the site.

For questions regarding road/Traffic comment number 1, please contact Andrew Ngumba of Traffic and Lighting Division at (626) 458-4851 or angumba@dpw.lacounty.gov. *SUBMITTED APPROVED BY ANDREW VIA EMAIL
NO ADVANCE TRAFFIC*

For questions regarding road/Traffic comments number 2 through 7, please contact Teni Mardirosian of Land Development Division at (626) 458-4910 or tmardirosian@dpw.lacounty.gov.

B. Grading

1. Revise the site plan as follows:
 - a. Show information for a Los Angeles County accepted benchmark. You may visit www.ladpw.org/sur/benchmark/ to obtain said benchmark on the site plan.
 - b. Show (if applicable), all existing on-site public and private easement with names of the holders, document numbers, and recorded dates. Label all easements as "to remain", "to be relocated", or "to be abandoned". Show new location of any relocated easements.
 - c. Provide earthwork volume, including import, export, and over excavation, as applicable. The earthwork volume must be the same in the environmental document, site plan, and zoning application.

For questions regarding the grading comments, please contact Teni Mardirosian of Land Development Division at (626) 458-4910 or tmardirosian@dpw.lacounty.gov.

C. Water

1. Project is located in the Antelope Valley water adjudicated area. Provide information about source of water used for construction and dust control, landscaping, fire protection maintenance and operation. Provide documents showing entitlement to the specified source of water.

Robert Glaser
May 11, 2015
Page 4

2. Provide additional information for the existing and/or proposed well system. This information should include details about the well, the location of the existing/proposed well, the historical amount of water provided and the proposed amount of water to be pumped from the well.
3. Since the project is located within Antelope Valley water adjudicated area, proof must be provided that the existing/proposed well will not individually cause a significant impact to the ground water in the basin.

For questions regarding water comment, please contact Tony Khalkhali of Land Development Division at (626) 458-4921 or tkhalkh@dpw.lacounty.gov.

D. Environmental Program

1. The proposed project will increase the generation of solid waste and negatively impact the solid waste management infrastructure. Identify the measures that will be implemented to mitigate this impact. Mitigation measures may include waste reduction and recycling programs and development of infrastructure in the project to facilitate recycling. All the mitigation measures implemented shall be discussed in the environmental document and any proposed infrastructure to mitigate this impact shall be shown on the site plan.
2. The existing hazardous waste management (HWM) infrastructure in this County is inadequate to handle the hazardous waste currently being generated. The proposed project may generate hazardous waste, which could adversely impact existing HWM infrastructure. Provide mitigation to address this impact. Visit <http://dpw.lacounty.gov/epd/hhw/index.cfm> online for available educational materials. All the mitigation measures implemented shall be discussed in the environmental document and any proposed infrastructure to mitigate this impact shall be shown on the site plan.

For questions regarding the Environmental Program comments, please contact Nilda Gemeniano of Environmental Program Division at (626) 458-5184 or ngemenia@dpw.lacounty.gov.

PRIOR TO SCHEDULING A PUBLIC HEARING, AN APPROVAL LETTER FROM PUBLIC WORKS IS REQUIRED. THE FOLLOWING ARE PRELIMINARY CONDITIONS.

1. Road

Robert Glaser
May 11, 2015
Page 5

- * 1.1 Dedicate an additional 3 feet of right of way along the property frontage of Division Street to achieve an ultimate width of 43 feet from the street centerline, to the satisfaction of Public Works. A processing fee will be required for the dedication.
- * 1.2 Make and offer of private and future right of way, 32 feet from centerline, along the property frontage of Avenue F-12 to the satisfaction of Public Works.
- * 1.3 Make an adequate offer of private and future right of way for property corner cut off based on the private and future right-of-way radius of 13 feet at the northeast corner of Avenue F-12 and Division Street (southwest corner of APN 3175-004-007) to the satisfaction of Public Works.
- 1.4 Dedicate any right of way needed to accommodate additional left-turn and/or right-turn lanes and the associated pavement transitions on Division Street along the property frontage. A fee deposit will be required.
- 1.5 Provide adequate slope and drainage easements beyond the required dedication on Division Street along the property frontage to adequately construct future road improvements to the satisfaction of Public Works. The final amount of slope easement shall be determined upon review of detailed plans.
- 1.6 Make an offer of dedication for adequate slope easements on all offers of private and future right of way to the satisfaction of Public Works. The final amount of slope easement shall be determined upon review of detailed plans.
- 1.7 If applicable, construct adequate pavement and transitions along Division Street and in the vicinity of the project to accommodate any necessary right-turn and left-turn lanes to the satisfaction of Public Works.
- 1.8 Construct driveway approaches at the site to comply with Americans with Disabilities Act guidelines to the satisfaction of Public Works.
- 1.9 Submit street improvement plans and acquire street plan approval before obtaining grading permit.
- 1.10 If applicable, submit a detailed signing and striping plan (scale: 1"=40') on Division Street to Traffic and Lighting Division for review and approval before obtaining grading permit.

Robert Glaser
May 11, 2015
Page 6

- 1.11 Execute an Agreement to Improve for the street improvements prior to issuance of a building permit.

For questions regarding the road conditions, please contact Teni Mardirosian of Land Development Division at (626) 458-4910 or tmardirosian@dpw.lacounty.gov.

2. Grading\ Drainage

- 2.1 Submit grading/drainage plans for approval to the satisfaction of Public Works. The grading plans must show and call out the construction of at least all drainage devices and details, paved driveways, elevation and drainage of all pads, and the water quality and Low Impact Development (LID) devices if applicable. The LID manual can be found at <http://dpw.lacounty.gov/idd/web/>

The grading/ drainage plan must also show compliance with National Pollutant Discharge Elimination Discharge System (NPDES), Site Waste Management Plan (SWMP), and Water Quality requirements.

- 2.2 The applicant is required to show and call out all existing easements on the grading plan and obtain the easement holder approvals. Acknowledgement and/or approval from all easement holders may be required.
- 2.3 Provide the latest, approved Low Impact Development (LID) plan by the Storm Drain and Hydrology Section of Land Development Division.
- 2.4 Provide a maintenance agreement/covenant for any privately maintained drainage devices.
- 2.5 Provide soil/geology approval of the grading plan by the Geotechnical and Materials Engineering Division (GMED), as applicable.
- 2.6 Provide permits and/or letters of non-jurisdiction from all State and Federal Agencies, as applicable. These agencies may include, but may not be limited to the California Department of Transportation, State of California Regional Water Quality Control Board, State of California Department of Fish and Wildlife, State of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), and the Army Corps of Engineers.

Robert Glaser
May 11, 2015
Page 7

For questions regarding the grading\drainage conditions, please contact Teni Mardirosian of Land Development Division at (626) 458-4910 or tmardirosian@dpw.lacounty.gov.

3. Environmental Program

- 3.1 Environmental documents should indicate the landfill(s) with sufficient capacity to be used to accommodate the solid waste disposal needs of the proposed project. The environmental document should also identify specific services available to accommodate the processing or transferring of organics and recyclables to divert from landfill disposal. Visit <http://dpw.lacounty.gov/epd/swims/OnlineServices/search-solid-waste-sites-esri.aspx> online for more information on such facilities.
- 3.2 If any excavated soil is contaminated by or classified as hazardous waste by an appropriate agency, the soil must be managed and disposed in accordance with applicable Federal, State, and local laws and regulations.
- 3.3 State law, Assembly Bill 939, as amended, requires each city and county (for the unincorporated areas) in the State to reduce by 50 percent the amount of solid waste disposed at land disposal and transformation facilities through source reduction, recycling, composting, and other waste reduction activities. In addition Assembly Bill 341 (2011) and Assembly Bill 1826 (2014) require certain businesses to set up recycling services for recyclables and organic waste. These laws also require the County to implement a commercial solid waste recycling program and an organic waste recycling program that is designed specifically to divert commercial solid waste and organic waste generated by businesses. Failure to comply may subject the city or county to fines of up to \$10,000 per day.

Based on the project description, this project may be subject to requirements of Assembly Bill 341 and/or Assembly Bill 1826 and will be required to address the following issues:

- a. Business/entities subject to Assembly Bill 341 must provide at least one of the following options:
 - Source separate recyclable materials from solid waste and subscribe to a basic level of recycling service that includes collection, self-hauling, or other arrangements for the pickup of the recyclable materials.

- Subscribe to a recycling service that may include mixed waste processing that yields diversion results comparable to source separation.
- b. Business/entities subject to Assembly Bill 1826 must take at least one of the following actions:
- Source separate organic waste and subscribe to a basic level of organic waste recycling service that includes collection and recycling of organic waste.
 - Recycle its organic waste onsite or self-haul its own organic waste for recycling.
 - Subscribe to an organic waste recycling service that may include mixed waste processing that specifically recycles organic waste.
- 3.4 Should any operation within the subject project include the construction, installation, modification or removal of underground storage tanks (Los Angeles County Code [LACC] title 11, Division 4), industrial waste treatment or disposal facilities, and/or storm water treatment facilities, Public Works' Environmental Program Division must be contacted for required approvals and operating permits. Specific industry types will also be subject to registration and inspections related to implementation of best management practices to prevent stormwater related pollution (LACC Title 12, Chapter 12.80). Visit <http://dpw.lacounty.gov/epd/cleanla/Business.aspx> online for more permit information.
- 3.5 The applicant/owner will be required to provide adequate areas for the collection and removal of recyclable materials and organic waste. Environmental documentation for the project should include/discuss standards to provide adequate recyclable storage areas for collection/storage of recyclable materials and green waste for this project.
- 3.6 Submit a recycling plan for the reuse of construction and demolition debris to Public Works' Environmental Programs Division for review and approval prior to obtaining any construction, demolition, or grading permits. Construction, demolition and grading projects in the County's unincorporated areas are required to recycle or reuse a minimum of 65 percent of the construction and demolition debris generated by weight per the California Building Standards Code. Visit <http://dpw.lacounty.gov/epd/CD/resources.cfm> for the list of approved construction and demolition recycling facilities.

Robert Glaser
May 11, 2015
Page 9

For questions regarding the Environmental Program conditions, please contact Nilda Gemeniano of Environmental Program Division at (626) 458-5184 or ngemmenia@dpw.lacounty.gov.

4. Building & Safety

- 4.1 Submit building plans to the Building and Safety Division, Antelope Valley District Office for review and permit issuance.

For questions regarding Building and Safety comments, please contact Clint Lee at (626) 458-3154 or cllee@dpw.lacounty.gov.

For questions regarding the site plan, preliminary conditions, or if you require additional information, please contact Teni Mardirosian at (626) 458-4910 or tmardirosian@dpw.lacounty.gov.

TM:

WPWD1\FWP\Public\dpw\SUBPCHECK\Plan Checking Files\Single Lots\APN 3175-004-007\R1ST 201500018\2015-04-13 R1ST 201500018
SUBMITTAL\DPW Comments.docx

4

RESOLUTION NO. R-14-11 (9/23/2014)

BE IT RESOLVED by the Board of Directors of Antelope Valley-East Kern Water Agency that the Rules and Regulations for Distribution of Water be amended, by amending Section 12. WATER RATES AND CHARGES, effective January 1, 2015 as follows:

WATER RATES
Page 1

**ANTELOPE VALLEY-EAST KERN WATER AGENCY
WHOLESALE WATER RATES AND CHARGES
EFFECTIVE JANUARY 1, 2015**

12. WATER RATES AND CHARGES

(a)

**FOR MUNICIPAL AND INDUSTRIAL WATER DELIVERED TO CONSUMERS
UNDER TERMS OF WATER SERVICE AGREEMENTS**

<u>Year</u>	<u>Treated Water Delivery Charge</u> ¹ \$/AF	<u>Untreated Water Delivery Charge</u> \$/AF
2015	451.00 (225.50/mo. min.)	310.00 (155.00/mo. min.)

4

¹ Summer/Winter Rate option removed for 2015 Treated Water Rate.

PWS-0516-0001

WATER RATES

Page 2

(a-1)

**FOR TREATMENT & DELIVERY OF
PALMDALE WATER DISTRICT ALLOCATION**

<u>Year</u>	<u>Treated Water Delivery Charge</u> \$/AF
2015 ¹	483.00 (241.50/mo. min.)

(a-2)

**FOR TREATMENT AND DELIVERY OF
MOJAVE WATER AGENCY ALLOCATION**

<u>Year</u>	<u>Treated Water Delivery Charge</u> \$/AF	<u>Treated Water Capacity Charge</u> ² \$/AF	<u>Rebate to Mojave WA</u> ³ \$/AF
2015	1,088.00	180.93	414.00

¹ Estimated 2015 State Variable: \$192.00/AF. Actual charges subject to specific terms of Agreement.

² Rate to be calculated regularly based on CPI Index as per Agreement.

³ Estimated Rate Shown. Actual Rate to be Determined Prior to January 1, 2015.

PWS-0516-0002

WATER RATES

Page 3

(a-3)

**FOR MUNICIPAL & INDUSTRIAL WATER
DELIVERED TO MAIN BASE AT EDWARDS AFB**

<u>Year</u>	<u>Treated Water Delivery & Capacity Charge ¹</u> \$/AF
2015	987.00

(a-4)

**FOR MUNICIPAL & INDUSTRIAL WATER
DELIVERED TO PHILLIPS LAB AT EDWARDS AFB**

<u>Year</u>	<u>Treated Water Delivery Charge ¹</u> \$/AF
2015	1,030.00

¹ Estimate rate shown. Actual charges subject to specific terms of agreement.

PWS-0516-0003

WATER RATES

Page 4

(b)

**FOR AGRICULTURAL WATER DELIVERED TO CONSUMER
UNDER TERMS OF WATER SERVICE AGREEMENTS
FROM THE CALIFORNIA AQUEDUCT THROUGH CONSUMER-OWNED FACILITIES**

<u>Year</u>	<u>Water Availability Charge</u> \$/AF	<u>Untreated Water Delivery Charge</u> \$/AF
2015	150.00	300.00

(b-1)

**FOR AGRICULTURAL WATER DELIVERED TO CONSUMER
UNDER TERMS OF WATER SERVICE AGREEMENTS
FROM AGENCY-OWNED FACILITIES**

<u>Year</u>	<u>Water Availability Charge</u> \$/AF	<u>Treated Water Delivery Charge</u> \$/AF	<u>Untreated Water Delivery Charge</u> \$/AF
2015	122.00	437.00 (218.50/mo. min.)	304.00 (152.00/mo. min.)

PWS-0516-0004

WATER RATES
Page 5

(c-2)

GROUNDWATER BANKING/STORAGE
PRICE FOR UNTREATED WATER TO BE STORED IN THE
ANTELOPE VALLEY FOR USE WITHIN AVEK BOUNDARIES
BY DIRECT OR IN-DIRECT (IN-LIEU) RECHARGE
Effective April 1, 2014 – March 31, 2015

<u>Year</u> ¹	<u>Untreated Water</u> <u>Delivery Charge</u> ² \$/AF
2015	260.00

(c-3)

GROUNDWATER BANKING/STORAGE
PRICE FOR TREATED WATER TO BE STORED
IN THE ANTELOPE VALLEY
BY DIRECT RECHARGE, INCLUDING AQUIFER STORAGE & RECOVERY (ASR)

<u>Year</u>	<u>Treated Water</u> <u>Delivery Charge</u> ⁴ \$/AF
2015 Winter Season ³	386.00

¹ The Groundwater Banking / Storage Rate will be in effect from April 1, 2014 through March 31, 2015. The next annual rate will be set by March 2015.

² Water Rate to be based on the variable rate charges indicated to AVEK on the January Department of Water Resources (DWR) invoice, including Variable O & M Power, Variable Transportation, and Off-Aqueduct, plus an overhead factor to be determined by the AVEK Board annually.

³ Winter Season: January – May, October – December. The 12 (c-3) ASR Rate is available only during the winter period.

⁴ Water Rate to be set at \$65.00/AcFt less than the Section 12(a) Treated Water Rate. As shown: The Treated Water Rate = \$451.00/AcFt, therefore the 12 (c-3) ASR Rate is: \$451.00 - \$65.00 = \$386.00/AcFt.

PWS-0516-0005

WATER RATES
Page 6

(c-4)

FOR DRY-YEAR WATER PURCHASE PROGRAM
WATER DELIVERY TO CONSUMER UNDER TERMS OF AGREEMENT

Year	Water Delivery Charge ¹ \$/AF
2015	800.00

¹ Estimate rate shown. Actual charges subject to specific terms of agreement.

PWS-0516-0006

Exhibit No.

6 – Willis - 4

Ralph Kalfayan

From: Ralph Kalfayan
Sent: Tuesday, September 22, 2015 5:44 PM
To: Ian Krupar
Subject: FW: Antelope Valley Litigation
Attachments: 1P8R01_XLS

Ian, please save in good spot for future reference; thanks

From: Ralph Kalfayan
Sent: Thursday, August 6, 2015 6:42 PM
To: Lynne Brennan (lbrennan@kkbs-law.com) <lbrennan@kkbs-law.com>
Cc: 'rkalfayan@kkbs-law.com' <rkalfayan@kkbs-law.com>
Subject: FW: Antelope Valley Litigation

Here's the email of breakdown of our class.

From: Stefanie Hedlund [<mailto:Stefanie.Hedlund@bbklaw.com>]
Sent: Friday, August 14, 2009 1:23 PM
To: Stefanie Hedlund; Ralph Kalfayan; David Zlotnick
Cc: Jeffrey Dunn; Eric Garner
Subject: RE: Antelope Valley Litigation

Ralph and David:

Please find attached a spreadsheet (including the back-up data) answering your questions. Please understand that we were not able to give an estimate of the total amount of acres in the Wood Class. This would require significant work. Also, as indicated on the spreadsheet, we had to base the information provided off only those parcels that are outside the public water suppliers service areas. It would be very time consuming and expensive to answer your questions including those parcels that are within the public water supplier service areas.

Please let Eric know if you have additional questions or need clarification.

Thank you,
Stefanie

Stefanie Hedlund
for Best Best & Krieger

From: Stefanie Hedlund
Sent: Wednesday, August 12, 2009 3:13 PM
To: Ralph Kalfayan; 'David Zlotnick'
Cc: Jeffrey Dunn; Eric Garner
Subject: RE: Antelope Valley Litigation

Ralph and Dave:

In regards to your requests below, I am having Bill Leever pull together as much of the information as possible. I don't think we can pull it before tomorrow but I will give you an update this afternoon. Also, there are a few requests that I am not sure we will easily be able to answer.

Thanks,
Stef

-----Original Message-----

From: Ralph Kalfayan [<mailto:Ralph@kkbs-law.com>]
Sent: Friday, August 07, 2009 11:50 AM
To: Eric Garner
Cc: David Zlotnick
Subject: FW: Antelope Valley Litigation

Hi Eric, below is the email we discussed seeking information from your consultant Bill Leever. I have also attached the letter sent to Jeff Dunn for the Willis declaration. Please let me know if we may receive a response to these matters by end of week. I am willing to visit with Bill Leever next week if he is available.

Also, can we get Joe Scalmanini to generate safe yield numbers each year that he claims there was an overdraft. I know the definition is in dispute but I recall he informed me that only he can perform the calculation.

Thanks, I will be in touch next week. Ralph

Ralph B. Kalfayan

Krause, Kalfayan, Benink & Slavens
625 Broadway, Suite 635
San Diego, Ca 92101
Phone: 619-232-0331
Fax: 619-232-4019
Email: rkalfayan@kkbs-law.com

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-----Original Message-----

From: David Zlotnick
Sent: Wednesday, April 29, 2009 9:46 AM
To: 'Jeffrey Dunn'
Cc: Ralph Kalfayan; 'Eric Garner'
Subject: Antelope Valley Litigation

Jeff,

We have a few questions that I hope you or your expert can answer for us.

What is the total acreage of the adjudication area?

How many acres do the Willis Class members own collectively?

How many acres do the Wood Class members own collectively?

How many acres does the United States own?

State of California? Other public entities?

Re Willis Class members:

How many persons own less than 5 acres? (Or how many parcels are less than 5 acres?)

Same question re 5-20 acres?

Same question re 20-100 acres?

Same question re parcels over 100 acres?

Please let us know if you will provide this information to us.

Regards,

David

David B. Zlotnick
Krause, Kalfayan, Benink & Slavens LLP
625 Broadway, Suite 635
San Diego, CA 92101
(619) 232-0331
david@kkbs-law.com

We have a few questions that I hope you or your expert can answer for us.

What is the total acreage of the adjudication area?	890,137
How many acres do the Willis Class members own collectively?	531,904
How many acres do the Wood Class members own collectively?	
How many acres does the United States own?	265,986
State of California? Other public entities?	10,221

Re Willis Class members:

How many persons own less than 5 acres? (Or how many parcels are less than 5 acres?)	49,070
Same question re 5-20 acres?	14,157
Same question re 20-100 acres?	3,683
Same question re parcels over 100 acres?	638

Notes:

- 1) This analysis did not include the Willis Class members inside public water supplier service areas.
- 2) The amount of land owned by each entity is and approximation, based upon the area of full and partial parcels within the entity shape file.

EXHIBIT "A"
Legal Description

For APN/Parcel ID(s): **3175-004-007**

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF LOS ANGELES,
STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

The Southwest Quarter of the Southwest Quarter of the Northwest Quarter of the Southwest Quarter of
Section 35, Township 8 North, Range 12 West, San Bernardino Meridian, in the County of Los Angeles,
State of California, according to the official plat of said land approved by the Surveyor General on June 19,
1858.

Exhibit No.

6 – Willis – 5

This page is part of your document - DO NOT DISCARD

RECORDING REQUESTED BY
WHEN RECORDED MAIL TO

05 0012614

Name: *Tobi J. Chinski*
Mailing Address: *1801 Century Pk East #2500*
City, State Zip Code: *L.A., CA 90067*

RECORDED/FILED IN OFFICIAL RECORDS
RECORDER'S OFFICE
LOS ANGELES COUNTY
CALIFORNIA

4:01 PM JAN 03 2005

TITLE(S) :

DEED



FEE

FEE \$13 QQ
3

D.T.T

Ø

CODE
20

CODE
19

CODE
9

CODE
24

NOTATION SET 10

Assessor's Identification Number (AIN)

To be completed by Examiner OR Title Company in black ink.

Number of Parcels Shown

3318 - 001 - 001

005

THIS FORM NOT TO BE DUPLICATED

RECORDING REQUESTED BY

Tobi J. Chinski
Law Offices of Tobi J. Chinski
AND WHEN RECORDED MAIL THIS DEED AND, UNLESS OTHERWISE SHOWN BELOW, MAIL TAX STATEMENT TO:

05 0012614

7

Name Tobi J. Chinski
LAW OFFICES OF TOBI J. CHINSKI
Street 1801 Century Park East, #2500
Address Los Angeles, CA 90067-2327
City & State
Zip

Title Order No. Escrow No.

SPACE ABOVE THIS LINE FOR RECORDER'S USE

T 360 LEGAL (1-94)

Quitclaim Deed

THE UNDERSIGNED GRANTOR(S) DECLARE(S)

DOCUMENTARY TRANSFER TAX IS \$ 0*
unincorporated area City of
Parcel No. **
computed on full value of property conveyed, or
computed on full value less value of liens or encumbrances remaining at time of sale, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, Rita M. Estrada, a married woman as her sole and separate property hereby REMISE, RELEASE AND FOREVER QUITCLAIM to DAVID ESTRADA and RITA ESTRADA, HUSBAND AND WIFE, AS COMMUNITY PROPERTY

the following described real property in the county of Los Angeles, state of California:

See legal description attached hereto and marked as Exhibit "A".

*"This is a bonafide gift and the grantor received nothing in return, R & T 11911."

APNs: 3318-001-001, 3318-001-002, 3318-002-001, 3318-006-013 and 3318-006-014

Dated November 29, 2004

X Rita M. Estrada
Rita M. Estrada

STATE OF CALIFORNIA
COUNTY OF LOS ANGELES } s.s.

On November 29, 2004 before me, Elizabeth Cairo

a Notary Public in and for said County and State, personally appeared Rita M. Estrada

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within Instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the Instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal
Elizabeth Cairo
Signature Elizabeth Cairo



(This area for official notarial seal)

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SHOWN, MAIL AS DIRECTED ABOVE

David & Rita Estrada, 6134 Manzanar Ave., Pico Rivera, CA 90660

Name Street Address City & State CTC-13F

05 0012614

3

EXHIBIT "A"

AS TO AN UNDIVIDED ONE-HALF (1/2) INTEREST IN

PARCEL 1:

LOT ONE (1) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 6, TOWNSHIP 8 NORTH RANGE 8 WEST, S.B.B.M., IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL 2:

LOT TWO (2) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 6, TOWNSHIP 8 NORTH, RANGE 8 WEST, S.B.B.M., IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL 3:

LOTS ONE (1) AND TWO (2) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 6, TOWNSHIP 8 NORTH RANGE 8 WEST S.B.B.M., IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL 4:

THE EASTERLY HALF OF THE SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 8 NORTH, RANGE 8 WEST, S.B.B.M. ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL 5:

"THE WESTERLY HALF OF THE NORTHEAST QUARTER OF SECTION 9, TOWNSHIP 8 NORTH RANGE 8 WEST S.B.B.M., ACCORDING TO THE OFFICIAL PLAT THEREOF."

More commonly known as: Five (5) unimproved parcels located in Antelope Valley, Hi-Vista, California

- APNS: 3318-001-001
- 3318-001-002
- 3318-002-001
- 3318-006-013
- 3318-006-014

Exhibit No.

6 – Willis – 6

CITIES, COUNTY, SCHOOLS AND ALL OTHER TAXING AGENCIES IN LOS ANGELES COUNTY
SECURED PROPERTY TAX FOR FISCAL YEAR JULY 1, 2014 TO JUNE 30, 2015

MARK J. SALADINO, TREASURER AND TAX COLLECTOR

FOR ASSISTANCE CALL 1(213) 974-2111 OR 1(888) 807-2111, ON THE WEB AT lacountypropertytax.com

ASSESSOR'S ID. NO.

CK

DETAIL OF TAXES DUE FOR **3318 001 001** 14 000 84

PROPERTY IDENTIFICATION

ASSESSOR'S ID. NO.: 3318 001 001 14 000
OWNER OF RECORD AS OF JANUARY 1, 2014
SAME AS BELOW

MAILING ADDRESS

BUSHAW, ALAN R ET AL
GETZ, ALENE M
C/O DAVID ESTRADA
6134 MANZANAR AVE
PICO RIVERA CA 90660-3211

ELECTRONIC FUND TRANSFER (EFT) NUMBER

ID#: 19 3318 001 001 7 YEAR: 14 SEQUENCE: 000 4
PIN: MJEALN

For American Express, Mastercard and Visa payments call 1(888) 473-0835 and have available the EFT number listed above. Service fees will be charged.

SPECIAL INFORMATION



AGENCY	AGENCY PHONE NO.	RATE	AMOUNT
GENERAL TAX LEVY			
ALL AGENCIES		1.000000 \$	422.28
VOTED INDEBTEDNESS			
SPECIAL WATER		.070490 \$	29.77
COMMNTY COLLEGE		.024798	10.47
HIGH SCHOOLS		.025854	10.92
ELEM SCHOOLS		.088933	37.55
DIRECT ASSESSMENTS			
COUNTY LIBRARY	(562) 940-8455	\$	29.31
COUNTY PARK DIST	(213) 738-2983		84.23
LA CO FIRE DEPT	(323) 881-6151		64.78

PROPERTY LOCATION AND/OR PROPERTY DESCRIPTION
VAC/VIC AVE A8/200 STE HI VISTA C
(EX OF ST) LOT 1 IN NW 1/4 OF
SEC 6 T 8N R 8W

TOTAL TAXES DUE \$689.31
FIRST INSTALLMENT TAXES DUE NOV. 1, 2014 \$344.66
SECOND INSTALLMENT TAXES DUE FEB. 1, 2015 \$344.65

ASSESSOR'S REGIONAL OFFICE

REGIDN #A1 INDEX: TRA:03435
LANCASTER OFFICE
251 E AVE K-6
LANCASTER CA 93535
(661)940-6700

ACCT. NO.: PRINT NO.: 583979 BILL ID.:

ROLL YEAR 14-15	CURRENT ASSESSED VALUE	TAXABLE VALUE
LAND	42,228	42,228
IMPROVEMENTS		
TOTAL		42,228
LESS EXEMPTION:		
NET TAXABLE VALUE		42,228

ANY RETURNED PAYMENT MAY BE SUBJECT TO A FEE UP TO \$50.00.

CITIES, COUNTY, SCHOOLS AND ALL OTHER TAXING AGENCIES IN LOS ANGELES COUNTY
SECURED PROPERTY TAX FOR FISCAL YEAR JULY 1, 2014 TO JUNE 30, 2015

MARK J. SALADINO, TREASURER AND TAX COLLECTOR

FOR ASSISTANCE CALL 1(213) 974-2111 OR 1(888) 807-2111, ON THE WEB AT lacountypropertytax.com

ASSESSOR'S ID. NO.

CK

DETAIL OF TAXES DUE FOR 3318 001 002 14 000 74

PROPERTY IDENTIFICATION

ASSESSOR'S ID. NO.: 3318 001 002 14 000
OWNER OF RECORD AS OF JANUARY 1, 2014
SAME AS BELOW

MAILING ADDRESS

BUSHAW, ALAN R ET AL
GETZ, ALENE M
1621 OLD HART RANCH RD
ROSEVILLE CA 95661-5848

AGENCY	AGENCY PHONE NO.	RATE	AMOUNT
GENERAL TAX LEVY ALL AGENCIES		1.000000 \$	422.28
VOTED INDEBTEDNESS			
SPECIAL WATER		.070490 \$	29.77
COMMUNITY COLLEGE		.024798	10.47
HIGH SCHOOLS		.025854	10.92
ELEM SCHOOLS		.088933	37.55
DIRECT ASSESSMENTS			
COUNTY LIBRARY	(562) 940-8455	\$	29.31
COUNTY PARK DIST	(213) 738-2983		84.23
LA CO FIRE DEPT	(323) 881-6151		64.78

ELECTRONIC FUND TRANSFER (EFT) NUMBER

ID#: 19 3318 001 002 6 YEAR: 14 SEQUENCE: 000 4
PIN: GYCDFM

For American Express, Mastercard and Visa payments call 1(888) 473-0835 and have available the EFT number listed above. Service fees will be charged.

SPECIAL INFORMATION



PROPERTY LOCATION AND/OR PROPERTY DESCRIPTION

VAC/VIC AVE A/200 STE HI VISTA C
(EX OF ST) LOT 2 IN NW 1/4 OF
SEC 6 T 8N R 8W

TOTAL TAXES DUE	\$689.31
FIRST INSTALLMENT TAXES DUE NOV. 1, 2014	\$344.66
SECOND INSTALLMENT TAXES DUE FEB. 1, 2015	\$344.65

VALUATION INFORMATION

ROLL YEAR 14-15	CURRENT ASSESSED VALUE	TAXABLE VALUE
LAND	42,228	42,228
IMPROVEMENTS		

ASSESSOR'S REGIONAL OFFICE

REGION #A1 INDEX: TRA: 03435
LANCASTER OFFICE
251 E AVE K-6
LANCASTER CA 93535
(661)940-6700

ACCT. NO.: PRINT NO.: 1473091 BILL ID.:

TOTAL	42,228
LESS EXEMPTION:	
NET TAXABLE VALUE	42,228

ANY RETURNED PAYMENT MAY BE SUBJECT TO A FEE UP TO \$50.00.

CITIES, COUNTY, SCHOOLS AND ALL OTHER TAXING AGENCIES IN LOS ANGELES COUNTY
SECURED PROPERTY TAX FOR FISCAL YEAR JULY 1, 2014 TO JUNE 30, 2015

MARK J. SALADINO, TREASURER AND TAX COLLECTOR

FOR ASSISTANCE CALL 1(213) 974-2111 OR 1(888) 807-2111, ON THE WEB AT lacountypropertytax.com

ASSESSOR'S ID. NO.

CK

DETAIL OF TAXES DUE FOR **3318 002 001 14 000 64**

PROPERTY IDENTIFICATION

ASSESSOR'S ID. NO.: 3318 002 001 14 000
OWNER OF RECORD AS OF JANUARY 1, 2014
SAME AS BELOW

MAILING ADDRESS

BUSHAW, ALAN R ET AL
GETZ, ALENE M
C/O DAVID ESTRADA
6134 MANZANAR AVE
PICO RIVERA CA 90660-3211

AGENCY	AGENCY PHONE NO.	RATE	AMOUNT
GENERAL TAX LEVY			
ALL AGENCIES		1.000000 \$	769.52
VOTED INDEBTEDNESS			
SPECIAL WATER		.070490 \$	54.24
COMMNTY COLLEGE		.024798	19.08
HIGH SCHOOLS		.025854	19.89
ELEM SCHOOLS		.088933	68.44
DIRECT ASSESSMENTS			
COUNTY LIBRARY	(562) 940-8455	\$	29.31
COUNTY PARK DIST	(213) 738-2983		84.23
LA CO FIRE DEPT	(323) 881-6151		64.78

ELECTRONIC FUND TRANSFER (EFT) NUMBER

ID#: 19 3318 002 001 5 YEAR: 14 SEQUENCE: 000 4
PIN: HZFF05

For American Express, Mastercard and Visa payments call 1(888) 473-0835 and have available the EFT number listed above. Service fees will be charged.

SPECIAL INFORMATION



PROPERTY LOCATION AND/OR PROPERTY DESCRIPTION

VAC/190 STE/VIC AVE B HI VISTA C
LOT 1 AND (EX OF ST) LOT 2 IN SW 1/4 OF
SEC 6 T 8N R 8W

TOTAL TAXES DUE \$1,109.49
FIRST INSTALLMENT TAXES DUE NOV. 1, 2014 \$554.75
SECOND INSTALLMENT TAXES DUE FEB. 1, 2015 \$554.74

VALUATION INFORMATION

ROLL YEAR 14-15	CURRENT ASSESSED VALUE	TAXABLE VALUE
LAND IMPROVEMENTS	76,952	76,952

ASSESSOR'S REGIONAL OFFICE

REGION #A1 INDEX: TRA: 03435
LANCASTER OFFICE
251 E AVE K-6
LANCASTER CA 93535
(661)940-6700

ACCT. NO.: PRINT NO.: 583980 BILL ID.:

TOTAL LESS EXEMPTION: 76,952
NET TAXABLE VALUE 76,952

ANY RETURNED PAYMENT MAY BE SUBJECT TO A FEE UP TO \$50.00.

CITIES, COUNTY, SCHOOLS AND ALL OTHER TAXING AGENCIES IN LOS ANGELES COUNTY
SECURED PROPERTY TAX FOR FISCAL YEAR JULY 1, 2014 TO JUNE 30, 2015

MARK J. SALADINO, TREASURER AND TAX COLLECTOR

FOR ASSISTANCE CALL 1(213) 974-2111 OR 1(888) 807-2111, ON THE WEB AT lacountypropertytax.com

ASSESSOR'S ID. NO.

CK

DETAIL OF TAXES DUE FOR **3318 006 013 14 000 34**

PROPERTY IDENTIFICATION

ASSESSOR'S ID. NO.: 3318 006 013 14 000
OWNER OF RECORD AS OF JANUARY 1, 2014
SAME AS BELOW

MAILING ADDRESS

ESTRADA, DAVID AND RITA TRS
ESTRADA FAMILY TRUST AND
MARTY, FRANK A
6134 MANZANAR AVE
PICO RIVERA CA 90660-3211

ELECTRONIC FUND TRANSFER (EFT) NUMBER

ID#: 19 3318 006 013 2 YEAR: 14 SEQUENCE: 000 4
PIN: JLP3H8

For American Express, Mastercard and Visa payments call 1(888) 473-0835 and have available the EFT number listed above. Service fees will be charged.
SPECIAL INFORMATION



PROPERTY LOCATION AND/OR PROPERTY DESCRIPTION
VAC/CDR AVE C(DRT)/225 STE (DRHI VISTA C
E 1/2 OF SW 1/4 OF
SEC 9 T 8N R 8W

AGENCY	AGENCY PHONE NO.	RATE	AMOUNT
GENERAL TAX LEVY			
ALL AGENCIES		1.000000 \$	317.83
VOTED INDEBTEDNESS			
SPECIAL WATER		.070490 \$	22.40
COMMNTY COLLEGE		.024798	7.88
HIGH SCHOOLS		.025854	8.22
ELEM SCHOOLS		.088933	28.26
DIRECT ASSESSMENTS			
COUNTY LIBRARY	(562) 940-8455	\$	29.31
COUNTY PARK DIST	(213) 798-2983	.	84.23
LA CO FIRE DEPT	(323) 881-6151		64.78

TOTAL TAXES DUE \$562.91
FIRST INSTALLMENT TAXES DUE NOV. 1, 2014 \$281.46
SECOND INSTALLMENT TAXES DUE FEB. 1, 2015 \$281.45

VALUATION INFORMATION

ROLL YEAR 14-15	CURRENT ASSESSED VALUE	TAXABLE VALUE
LAND IMPROVEMENTS	31,783	31,783

ASSESSOR'S REGIONAL OFFICE

REGION #A1 INDEX: TRA: 03435
LANCASTER OFFICE
251 E AVE K-6
LANCASTER CA 93535
(661)940-6700

ACCT. NO.: PRINT NO.: 583981 BILL ID.:

TOTAL 31,783
LESS EXEMPTION:
NET TAXABLE VALUE 31,783

ANY RETURNED PAYMENT MAY BE SUBJECT TO A FEE UP TO \$50.00.

CITIES, COUNTY, SCHOOLS AND ALL OTHER TAXING AGENCIES IN LOS ANGELES COUNTY
SECURED PROPERTY TAX FOR FISCAL YEAR JULY 1, 2014 TO JUNE 30, 2015

MARK J. SALADINO, TREASURER AND TAX COLLECTOR

FOR ASSISTANCE CALL 1(213) 974-2111 OR 1(888) 807-2111, ON THE WEB AT lacountypropertytax.com

ASSESSOR'S ID. NO.

CK

DETAIL OF TAXES DUE FOR **3318 006 014 14 000 24**

PROPERTY IDENTIFICATION

ASSESSOR'S ID.NO.: 3318 006 014 14 000
OWNER OF RECORD AS OF JANUARY 1, 2014
SAME AS BELOW

MAILING ADDRESS

ESTRADA, DAVID AND RITA TRS
ESTRADA FAMILY TRUST AND
MARTY, FRANK A
6134 MANZANAR AVE
PICO RIVERA CA 90660-3211

AGENCY
GENERAL TAX LEVY
ALL AGENCIES

AGENCY PHONE NO.

RATE

AMOUNT

VOTED INDEBTEDNESS

SPECIAL WATER
COMMNTY COLLEGE
HIGH SCHOOLS
ELEM SCHOOLS

.070490 \$
.024798
.025854
.088933

25.91
9.12
9.50
32.70

DIRECT ASSESSMENTS

COUNTY LIBRARY (562) 940-8455
COUNTY PARK DIST (219) 738-2983
LA CO FIRE DEPT (323) 881-6151

\$
29.31
84.23
64.78

ELECTRONIC FUND TRANSFER (EFT) NUMBER

ID#: 19 3318 006 014 1 YEAR: 14 SEQUENCE: 000 4
PIN: LQNJNG

For American Express, Mastercard and Visa payments call 1(888) 473-0835 and have available the EFT number listed above. Service fees will be charged.

SPECIAL INFORMATION



PROPERTY LOCATION AND/OR PROPERTY DESCRIPTION

VAC/AVE B8/VIC 225 STE HI VISTA C
W 1/2 OF NE 1/4 OF
SEC 9 T 8N R 8W

TOTAL TAXES DUE

\$623.20

FIRST INSTALLMENT TAXES DUE NOV. 1, 2014

\$311.60

SECOND INSTALLMENT TAXES DUE FEB. 1, 2015

\$311.60

VALUATION INFORMATION

ROLL YEAR 14-15

CURRENT ASSESSED VALUE

TAXABLE VALUE

LAND
IMPROVEMENTS

36,765

36,765

ASSESSOR'S REGIONAL OFFICE

REGION #A1 INDEX: TRA: 03435
LANCASTER OFFICE
251 E AVE K-6
LANCASTER CA 93535
(661)940-6700

TOTAL

36,765

LESS EXEMPTION:

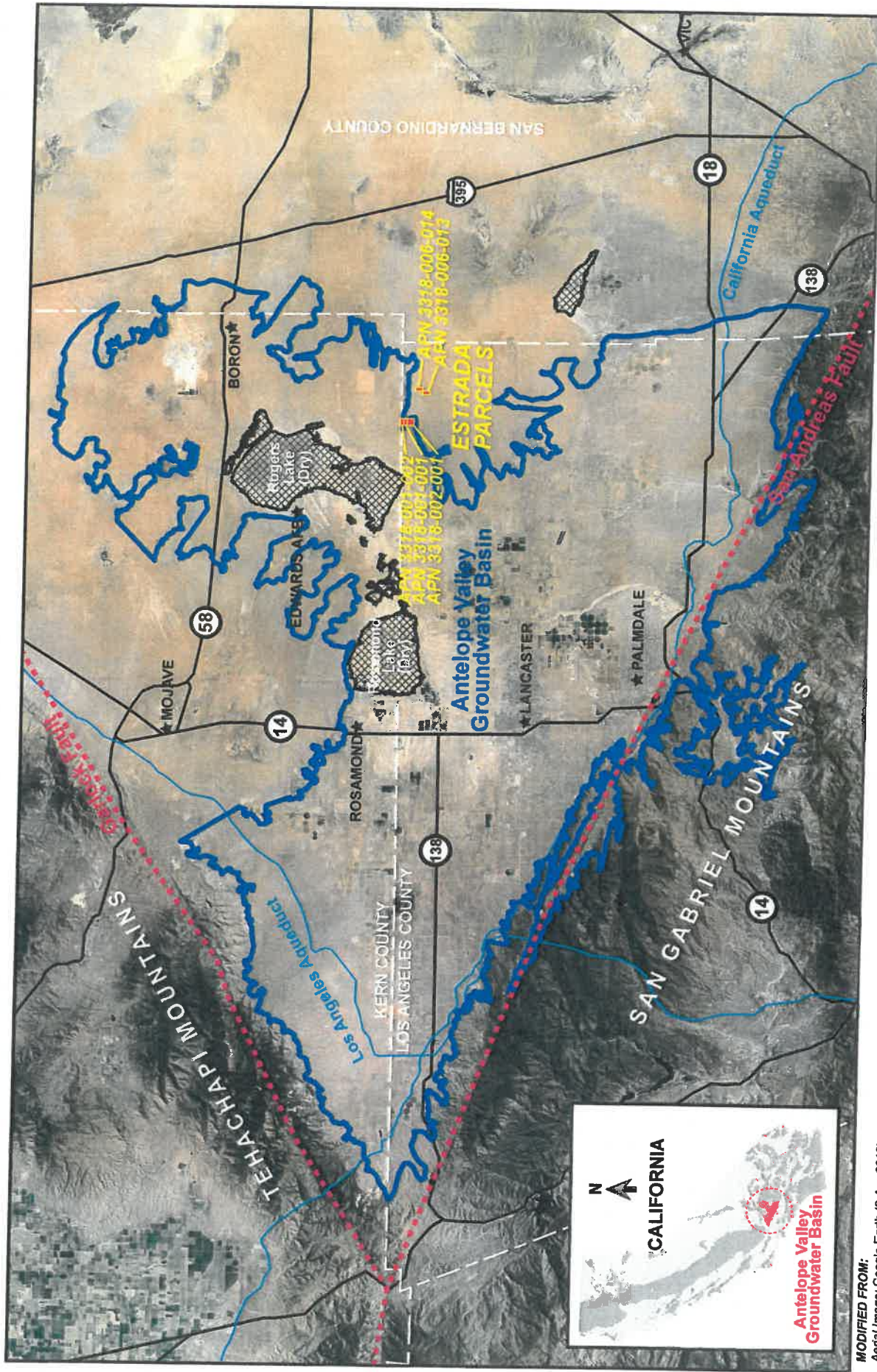
NET TAXABLE VALUE

36,765

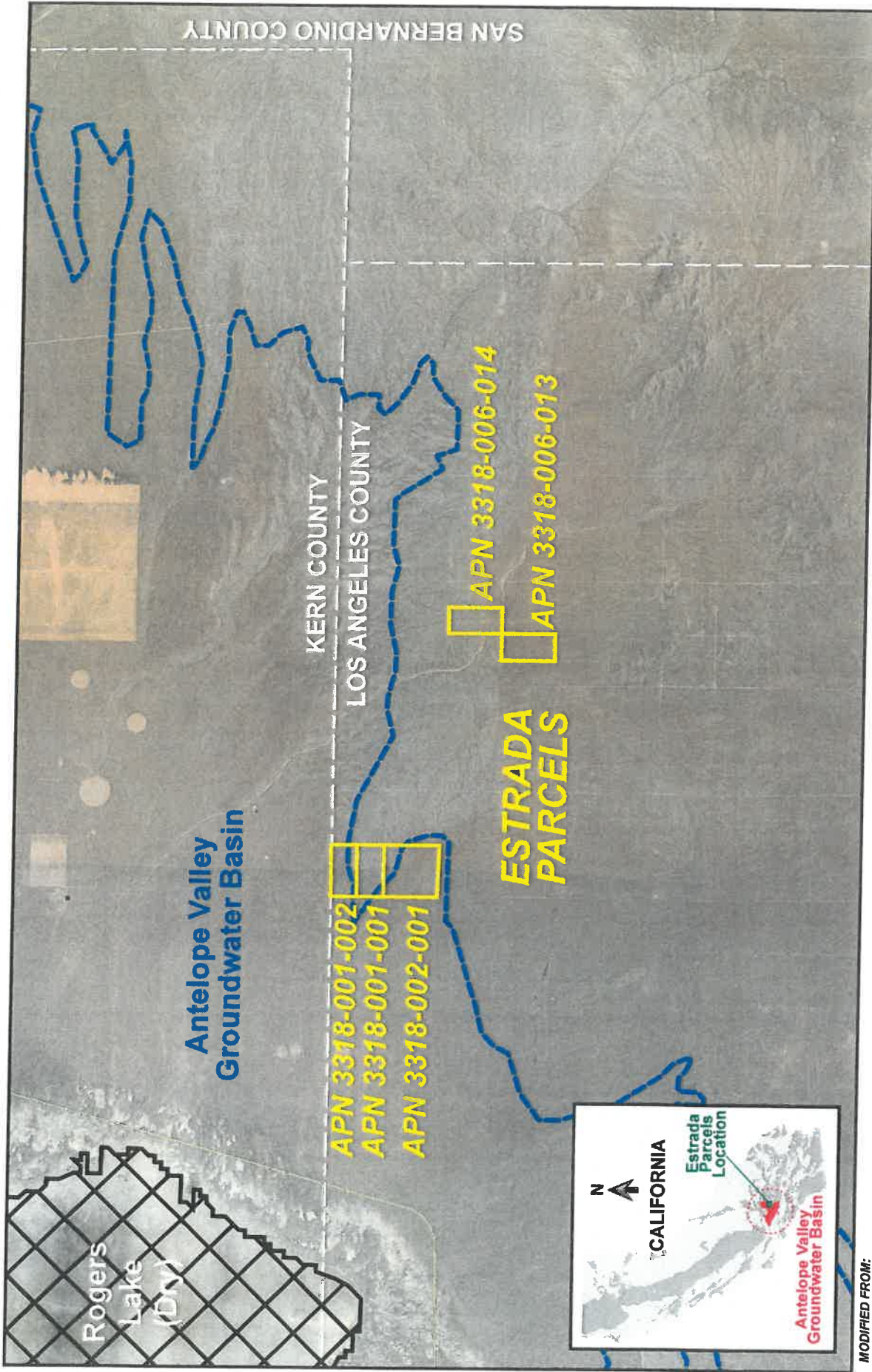
ANY RETURNED PAYMENT MAY BE SUBJECT TO A FEE UP TO \$50.00.

Exhibit No.

6 – Willis – 7



MODIFIED FROM:
 Aerial Image: Google Earth (9-Apr-2013)
 Antelope Valley Groundwater Basin, Aqueducts, Location Map: USGS (2013)
 Faults: Los Angeles County DPW (2008)



MODIFIED FROM:
 Aerial Image: Google Earth (25-Aug-2012)
 Antelope Valley Groundwater Basin, Location Map: USGS (2013)

Exhibit No.

6 – Willis – 8

1. WHY SHOULD I READ THIS NOTICE

Available records indicate that you may own property in the Antelope Valley Groundwater Basin. Your property rights may be affected by the proposed settlement of this lawsuit. Your right to object to or comment on that settlement is described below. In addition, this notice contains important information about your disclosure obligations in the event you sell your property. **PLEASE TAKE THE TIME TO READ THIS IMPORTANT LEGAL NOTICE, WHICH IS DIFFERENT FROM THE PRIOR NOTICE SENT TO YOU ABOUT THIS CASE.**

2. WHAT IS THIS LAWSUIT ABOUT?

Under California law, property owners have a right to pump groundwater (water underneath the surface) and use it for reasonable purposes on their overlying land. In this case, however, the naturally available supply of water in the Basin may not be adequate to satisfy the needs of everyone who wants to use that water. Plaintiff Willis brought this action to protect her right and that of other “dormant” Antelope Valley landowners (i.e., persons who do not now and have not previously pumped groundwater on their properties) to pump groundwater and use the water on their properties in the future. She claims that she and other such landowners have water rights which are superior to the rights of certain public water suppliers and entities (listed as defendants on page 1) to use that water. The public water suppliers claim that their historical pumping has given them superior water rights.

This lawsuit has been consolidated with other pending cases relating to groundwater rights in the Antelope Valley, but the proposed settlement only concerns this case.

3. WHO IS COVERED BY THE PROPOSED SETTLEMENT?

You have been designated as a possible class member because records indicate that you own property in the Antelope Valley. **The Willis class includes all private (i.e., non-governmental) landowners within the Antelope Valley Groundwater Basin who do not pump and have not pumped water on their properties, with certain exceptions set out below.** A map of the Basin is attached to this notice.

You are not in the Class if you do not own real property within the Basin. In addition, you are **NOT** in the Class if any of the following are true as to you:

1. You pump groundwater on your property or have ever pumped water on your property; *or*
2. Your property is connected to *and* receives water from a public water system, public utility or mutual water company; *or*
3. You are already a party to this litigation.

4. WHAT ARE THE TERMS OF THE PROPOSED SETTLEMENT?

The following is a summary of the basic terms and conditions of the proposed settlement. You may view the complete settlement agreement at www.avgroundwater.com. If you do not have Internet access, you may request a copy of the settlement agreement by

writing to the following: Antelope Valley Groundwater Litigation, P.O. Box 12013, Riverside, CA 92502-9839.

In summary, the proposed settlement provides as follows: (capitalized terms are defined in the Agreement).

- a. The Class agrees not to contest the Settling Defendants' estimates of the Basin's Native Safe Yield. The Court will determine the Basin's Native Safe Yield based on evidence to be presented in open court.
- b. The Class agrees not to contest the Settling Defendants' estimates of the Basin's Total Safe Yield. The Court will determine the Basin's Total Safe Yield based on evidence to be presented in open court.
- c. The parties agree that the United States has a Federal Reserved Right to some portion of the Basin's Native Safe Yield, the amount of which will be determined by the Court.
- d. The Settling Parties agree that the Settling Parties each have rights to produce groundwater from the Basin's Native Safe Yield, as follows: (i) Settling Defendants collectively have the right to produce up to 15% of the Basin's Federally Adjusted Native Safe Yield; and (ii) the Willis Class has a correlative right (along with other overlying landowners) to produce up to 85% of the Federally Adjusted Native Safe Yield.
- e. All parties have the right to recapture return flows from water that they had imported. The Class agrees not to contest the Settling Defendants' estimates that such return flows total 28,200 acre-feet per year, of which 25,100 acre-feet is from municipal and industrial use.
- f. The Settling Parties agree that the Basin has limited water resources and that there is a need for a groundwater management plan for the Basin. The Parties have agreed to be bound by such a plan, as may later be ordered by the Court.
- g. The Settlement contains mutual releases of the claims the Settling Parties have asserted against each other in the litigation. The Settlement specifically provides that it will not prejudice the rights of non-settling parties.

5. WHAT DO I NEED TO DO?

You are not required to do anything. However, if you wish to object to the settlement or to Plaintiffs' Counsel's Application for Fees and Expenses, you should mail a Notice of Intent to Appear and Be Heard to the Clerk, Los Angeles County Superior Court, 111 N. Hill Street, Los Angeles, CA 90012. **That Notice should be sent by February 10, 2011** for it to be considered and must briefly state the position(s) you wish to take with respect to the Settlement and/or any related matters, such as counsel's fee application. In addition, you should send a copy of that Notice to the following attorneys by that date:

Ralph B. Kalfayan, Esquire
rkalfayan@kkbs-law.com
Krause Kalfayan Benink & Slavens LLP
625 Broadway, Suite 635
San Diego, CA 92101
Willis Class Counsel

Stefanie D. Hedlund, Esquire
avgroundwater@bbklaw.com
Best Best & Krieger LLP
400 Capitol Mall, Suite 1650
Sacramento, CA 95814
Liaison Counsel for Defendants

6. CAN I EXCLUDE MYSELF FROM THE CLASS?

No. Class members were previously given the opportunity to exclude themselves from the Class, but you may not do so at this time. If you previously excluded yourself from the Class and wish to rejoin the Class, you may request the Court's approval to do so by contacting Ms. Rowena Walker, Clerk, at (408) 882-2286.

7. WHY, WHEN, AND WHERE WILL THE SETTLEMENT HEARING TAKE PLACE?

The Court must approve the proposed settlement after a fairness hearing in order for the settlement to become effective. That fairness hearing will take place on February 24, 2011 at 10:00 a.m. in Courtroom 1 on the fifth floor of the Stanley Mosk Courthouse, 111 N. Hill Street, Los Angeles, CA 90012. ***You are welcome to attend that hearing but you are not required to attend.***

Any class member may appear in person or through counsel and state his or her comments on or objections to the proposed settlement and/or on counsel's fee application, but should mail a Notice of Intent to Appear pursuant to the procedures set forth in paragraph 5, above. ***You are not required to submit any papers to attend the fairness hearing, but if you wish to be heard at that hearing you should mail a Notice pursuant to the procedures set forth above.***

8. WHO REPRESENTS PLAINTIFF AND THE CLASS?

Plaintiff and the Class are represented by the following attorneys in this matter:

Ralph B. Kalfayan, Esquire ralph@kkbs-law.com
David B. Zlotnick, Esquire david@kkbs-law.com
Krause Kalfayan Benink & Slavens LLP
625 Broadway, Suite 635
San Diego, CA 92101
(619) 232-0331
(619) 232-4019 (fax)

9. WHY DOES CLASS COUNSEL SUPPORT THE SETTLEMENT?

Class Counsel believe that the settlement reflects a reasonable and fair resolution of the claims asserted in this matter. The Settling Defendants assert that they have prescriptive rights to substantially more than 15% of the Basin's Native Safe Yield; the Class asserts that the Settling Defendants have no such prescriptive rights. Counsel believe that the Settlement fairly compromises the parties' positions.

Under the Settlement, the Class has agreed not to contest the Settling Defendants estimates of the Basin's yield because we are confident that the Court will have adequate information to make an informed and fair determination of the Basin's yield. Other parties to the litigation have retained numerous experts who will provide evidence that will aid the Court in that determination.

The Court is required to independently determine the Basin's safe yield and other pertinent aspects of the Basin after hearing the relevant evidence, and the Settling Parties will be bound by the Court's findings in that regard. In addition, the Parties will be required to comply with the terms of any Physical Solution that may be imposed by the Court to protect the Basin, and the Court will not be bound by the Settling Parties' agreements in that regard. Willis

and Class Counsel believe that the Court will have the benefit of adequate relevant information to make fully informed decisions and that further participation by the Class may not be necessary. To the extent issues arise that affect the Class' rights, Class counsel will act to protect the Class' interests.

10. HOW WILL PLAINTIFF'S COUNSEL'S FEES BE PAID?

Plaintiffs' counsel will petition for an award of fees and expenses to be paid by the Settling Defendants. *You will not be responsible to pay any portion of their fees.*

Plaintiffs' counsel have worked on this matter for over 4 years without being paid and they have advanced considerable amounts to pay for out-of-pocket expenses, including travel, hearing transcripts, consultants, etc. Plaintiffs' Counsel reserve the right to seek a fee award of up to \$4.5 million to compensate them for their time and expenses in representing the Class in this matter. The Court will ultimately determine whether counsel are entitled to a fee award and the appropriate amount of any such award.

11. WILL I HAVE TO PAY ANYTHING?

No. You will not be required to pay anything in connection with the proposed settlement.

12. WILL I RECEIVE ANY MONETARY COMPENSATION FROM THE SETTLEMENT?

No. The settlement does not provide you with any monetary benefits. It simply preserves your correlative rights to use the groundwater under your property for reasonable and beneficial purposes.

13. WHAT HAPPENS IF THE SETTLEMENT IS APPROVED BY THE COURT?

If the Settlement is approved, the above litigation will be over. But the consolidated cases will continue until all claims to groundwater rights in the Basin have been settled or decided and a management plan (Physical Solution) has been adopted to protect the Basin, if necessary. The extent to which the Class will need to participate in those matters or other aspects of the consolidated cases is unclear at this time. The Class members will be bound by the terms of any later findings made by the Court and any Physical Solution imposed by the Court.

14. WHAT HAPPENS IF THE SETTLEMENT IS NOT APPROVED BY THE COURT?

If the settlement is not approved, the settlement agreement will be null and void and the parties will be returned to their prior positions in the litigation.

15. WHERE CAN I GET ADDITIONAL INFORMATION?

The amended complaint, the settlement agreement, and certain other documents from the litigation are available at www.avgroundwater.com. In addition, that website has a list of answers to certain other questions you may have and it has an e-mail address for you to obtain information if you have further questions. That website will be updated from time to time to advise you of the status of this litigation. Or you may call the following number for information: (619) 232-0331. Also, all of the documents filed in the case are available on the court's website at <http://www.scefilling.org/cases/casehome.jsp?caseId=19>.

16. WHAT ARE THE RELEVANT DATES?

The Settlement Hearing is scheduled for February 24, 2011. If you wish to be heard at the Hearing, you should mail a Notice of Intent to Appear and Be Heard with the Clerk, Los Angeles County Superior Court. **That Notice should be mailed by February 10, 2011** for it to be fully considered. In addition, by that date, you should send a copy of that Notice to the attorneys identified in paragraph 5, above.

17. MAY I PUMP WATER ON MY PROPERTY?

Yes. There are presently no restrictions on your ability to pump water on your property or the amount that you can pump for reasonable and beneficial uses on your property. However, it is likely that there will be limits imposed on the amount of pumping in the near future and that pumpers will be required to install meters on their pumps. *Hence, we strongly urge anyone who installs a pump on their property to make sure that it has a meter that will accurately record the amount of water pumped.* That will be less costly for you than being required to later install a meter on an existing pump.

18. WHAT HAPPENS IF I SELL MY ANTELOPE VALLEY PROPERTY?

If the Settlement is approved by the Court, anyone who acquires your property will be bound by the terms of the Settlement. Hence, you should disclose the terms of the Settlement to anyone who may acquire your Antelope Valley property.

PLEASE DO NOT CALL OR WRITE THE COURT OR CLERK'S OFFICE. IF YOU HAVE ANY QUESTIONS, PLEASE CONSULT YOUR OWN COUNSEL, VISIT THE WEB SITES LISTED ABOVE, OR WRITE TO CLASS COUNSEL AT THE ADDRESS ABOVE.

Dated: December, 2010

BY ORDER OF THE SUPERIOR COURT OF CALIFORNIA FOR
THE COUNTY OF LOS ANGELES

Exhibit No.

6 – Willis – 9

**SUPERIOR COURT FOR THE STATE OF CALIFORNIA
COUNTY OF LOS ANGELES**

RICHARD A. WOOD, an individual, on behalf of
himself and all others similarly situated,

Plaintiff,

v.

LOS ANGELES COUNTY WATERWORKS
DISTRICT NO. 40; et al.

Defendants.

JUDICIAL COUNCIL COORDINATION
PROCEEDING No. 4408

**NOTICE OF PROPOSED SETTLEMENT
FOR THE "SMALL PUMPER" CLASS
ACTION AND SETTLEMENT HEARING**

TO CERTAIN ANTELOPE VALLEY LANDOWNERS: CAREFULLY READ AND RESPOND TO THIS NOTICE, AS IT MAY AFFECT YOUR RIGHT TO PUMP GROUNDWATER ON YOUR PROPERTY IN THE FUTURE.

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QUESTIONS? VISIT WWW.AVGROUNWATER.COM.

1. WHY SHOULD I READ THIS NOTICE?

Available records indicate that you own property in the Antelope Valley Groundwater Basin (the “Basin”). Your property rights may be affected by the proposed settlement of this lawsuit. Your right to object to, or comment on that settlement is described below. In addition, this Notice contains important information about your disclosure obligations in the event you sell your property. ***PLEASE TAKE THE TIME TO READ THIS IMPORTANT LEGAL NOTICE, WHICH IS DIFFERENT FROM THE PRIOR NOTICES SENT TO YOU ABOUT THIS CASE.***

2. WHAT IS THIS LAWSUIT ABOUT?

This Class Action lawsuit involves water rights in the Antelope Valley Groundwater Basin. Plaintiff Richard Wood brought this case to protect his right and those of other landowners (the Wood Class comprises persons who are pumping or have pumped less than 25 acre-feet of groundwater during any year from 1946 to the present) in the Basin to pump water on their properties in the future. The case has been combined with other cases to determine all the groundwater rights in the Basin. The Court has not yet decided the case.

Property owners have a right to pump groundwater (water underneath the surface) and use it for reasonable and beneficial purposes on their overlying land. The right to use groundwater, however, may be limited during times of groundwater shortage conditions. In this case, the naturally available supply of groundwater is not adequate to meet the groundwater pumping demands of everyone who wants to use that water. For that reason, the Court decides how much water can be pumped by each party under a claim of priority to use the groundwater. Richard Wood claims that he and other such landowners have water rights that are superior to the water rights of certain public water suppliers and entities, listed in the Settlement Agreement (“Settling Defendants”) who have used and continue to use groundwater. The public water suppliers claim that their historical pumping has given them superior water rights for a public water supply as to some or all of the Richard Wood and Wood Class members’ rights to use groundwater.

3. WHO IS COVERED BY THE PROPOSED SETTLEMENT?

You have been designated as a Class member because records indicate that you own property in the Antelope Valley. **The Wood Class includes all private (i.e., nongovernmental) landowners within the Antelope Valley Groundwater Basin who are pumping or have pumped less than 25 acre-feet of groundwater during any year from 1946 to the present on their properties, with certain exceptions set out below.**

You are not in the Class if you do not own real property within the Basin. In addition, you are NOT in the Class if any of the following are true as to you:

1. Your property is connected to and receives water from a public water system, public utility or mutual water company; or
2. You are already a party to this litigation; or
3. You have already timely excluded yourself from the Wood Class and have not rejoined the Class.

4. WHAT ARE THE TERMS OF THE PROPOSED SETTLEMENT?

The Small Pumper Class has previously settled its claims with the City of Lancaster, Palmdale Water District, Phelan Piñon Hills Community Services District, and the Rosamond Community Services District. By way of the current settlement, the Small Pumper Class is now attempting to resolve all claims with California Water Service Company, City of Palmdale, Desert Lake Community Services District, Littlerock Creek Irrigation District, Los Angeles County Waterworks District No. 40, North Edwards Water

QUESTIONS? VISIT WWW.AVGROUNDWATER.COM.

District, Palm Ranch Irrigation District, and Quartz Hill Water District. Through the Stipulation for Entry of Judgment and Physical Solution, which is incorporated into the Small Pumper Class Stipulation of Settlement, the Small Pumper Class is also resolving its claims with many other parties claiming beneficial interest in the groundwater in the Antelope Valley basin. These additional parties are listed on the signature pages to the Judgment and Physical Solution.

The following is a summary of the basic terms and conditions of the proposed settlement. You may view the complete settlement agreement at www.avgroundwater.com. If you do not have Internet access, you may request a copy of the settlement agreement by writing to the following: Small Pumper Class Settlement, 44 Hermosa Avenue, Hermosa Beach, CA 90254.

In summary, the proposed settlement includes the following terms (capitalized terms are defined in the Settlement Agreement), in addition to other terms discussed in other sections of this Notice:

- A. Members of the Small Pumper Class will have the right to pump up to 3 acre-feet of groundwater per year for reasonable and beneficial use without having to pay any replacement water assessment. Small Pumper Class members pumping between 3 and 25 acre-feet per year will pay a replacement water assessment.
- B. To the extent the Settling Defendants have obtained water rights by prescription, those rights shall not be exercised to diminish the Small Pumper Class' water rights.
- C. The Parties agree that the United States has a Federal Reserved Right to some portion of the Basin's Native Safe Yield.
- D. The Class agrees not to challenge certain Parties' right to recapture return flows from water that they import. The Class agrees not to contest Settling Defendants' best estimates that agricultural use of imported water results in 34% return flows and municipal and industrial use of imported water results in 39% return flows.
- E. The Settling Parties agree that the Basin has limited water resources and that there is a need for a groundwater management plan for the Basin. The Parties have agreed to be bound by such a plan, which is subject to approval and modification by the Court. This management plan will be supervised and administered by a watermaster engineer and watermaster board, which will report to the Court.
- F. The Settlement contains mutual releases of the claims the Settling Parties have asserted against each other in the litigation.

5. WHAT DO I NEED TO DO?

You are not required to do anything, unless you wish to object to the settlement. However, if you wish to object to the settlement or to Plaintiffs' Counsel's Application for Fees and Expenses, you must file a Notice of Intent to Appear and Be Heard with the Clerk, Los Angeles County Superior Court, 111 N. Hill Street, Los Angeles, CA 90012. **That Notice must be received by May 15, 2015** for it to be considered and must briefly state the position(s) you wish to take with respect to the settlement and/or any related matters, such as Counsel's fee application. In addition, you must send a copy of that Notice to the following attorneys by that date:

Michael D. McLachlan
mike@mclachlan-law.com
Law Offices of Michael D. McLachlan
44 Hermosa Avenue
Hermosa Beach, CA 90254
Class Counsel

Jeffrey V. Dunn
jeffrey.dunn@bbklaw.com
Best Best & Krieger LLP
18101 Von Karman Avenue, Suite 1000
Irvine, CA 92614
Liaison Counsel for Defendants

QUESTIONS? VISIT WWW.AVGROUNDEWATER.COM.

6. CAN I EXCLUDE MYSELF FROM THE CLASS?

No. All Class members have been given two prior opportunities to opt out of the Class, therefore the Court will not permit further opt outs.

7. WHY, WHEN, AND WHERE WILL THE SETTLEMENT HEARING TAKE PLACE?

The Court must approve the proposed settlement after a fairness hearing in order for the settlement to become effective. That fairness hearing will take place on August 3, 2015, at 10:00 a.m. in Room 222 of the Stanley Mosk Courthouse, 111 North Hill Street, Los Angeles, CA 90010. **You are welcome to attend that hearing but you are not required to attend.**

Any Class member may appear in person or through counsel and state his or her comments on or objections to the proposed settlement and/or on counsel's fee application, *but only if he or she files a Notice of Intent to Appear and Be Heard pursuant to the procedures set forth in paragraph 5, above, on or before May 15, 2015.*

8. WHO REPRESENTS PLAINTIFF AND THE CLASS?

Plaintiff and the Class are represented by the following attorneys in this matter:

Michael D. McLachlan
mike@mclachlan-law.com
Law Offices of Michael D. McLachlan
44 Hermosa Avenue
Hermosa Beach, CA 90254
310.954-8270
310.954.8271 (fax)

Daniel M. O'Leary
dan@danolearylaw.com
Law Offices of Daniel M. O'Leary
2300 Westwood Boulevard, Suite 105
Los Angeles, CA 90064
310.481.2020
310.481.0049 (fax)

9. WHY DOES CLASS COUNSEL SUPPORT THE SETTLEMENT?

Class Counsel believes that the settlement reflects a reasonable and fair resolution of the claims asserted in this matter. The Settling Defendants assert that they have prescriptive rights to substantially more than 15% of the Basin's Native Safe Yield; the Class asserts that the Settling Defendants have no such prescriptive rights. Counsel believe that the Settlement fairly compromises the parties' positions, and resolves the risk that the class members will lose water rights to the Settling Defendants. Further, the settlement protects the rights of all Class members to use water for domestic use in amounts sufficient to sustain such use without the requirement to pay any replacement water assessment.

10. HOW WILL PLAINTIFF'S COUNSEL'S FEES BE PAID?

Plaintiff's Counsel will petition for an award of fees and expenses to be paid by the Settling Defendants. *You will not be responsible to pay any portion of their fees.* Plaintiff's Counsel have already been paid for some work on this matter.

Plaintiff's Counsel have worked on this matter for over seven years without being paid and they have advanced considerable amounts to pay for out-of-pocket expenses, including travel, hearing transcripts, consultants, etc. The Court will ultimately determine whether Counsel is entitled to a fee award and the appropriate amount of any such award.

QUESTIONS? VISIT WWW.AVGROUNDEWATER.COM.

11. WILL I HAVE TO PAY ANYTHING?

You will not be required to pay anything in connection with Plaintiff's Counsel's fees and costs. However, you will have to pay an annual administrative assessment which will be used to fund the watermaster appointed by the Court to implement certain provisions of the settlement. For those pumping in excess of three acre-feet of groundwater per year, the assessment will be up to \$5 per acre-foot, or as ordered by the Court. For those pumping less than three acre-feet per year, the administrative settlement will be based on 1.2 acre-feet of groundwater pumping multiplied by up to \$5 per acre-foot, or as ordered by the Court. You might also be required to pay an additional balance assessment in the future if the watermaster determines it necessary.

12. WILL I RECEIVE ANY MONETARY COMPENSATION FROM THE SETTLEMENT?

No. The settlement does not provide you with any monetary benefits.

13. WHAT HAPPENS IF THE SETTLEMENT IS APPROVED BY THE COURT?

If the settlement is approved, and not successfully appealed, the above litigation between and among the settling parties will be over and you will be bound by the stipulation for judgment and physical solution.

14. WHAT HAPPENS IF THE SETTLEMENT IS NOT APPROVED BY THE COURT?

If the settlement is not approved, the settlement agreement will be null and void and the parties will be returned to their prior positions in the litigation.

15. WHERE CAN I GET ADDITIONAL INFORMATION?

The amended complaint and certain other documents from the litigation are available at www.avgroundwater.com. In addition, that website has a list of answers to certain other questions you may have and has an email address for you to obtain information if you have further questions. That website will be updated from time to time to advise you of the status of this litigation. Also, all of the documents filed in the case are available on the court's website at <http://www.sceffiling.org/cases/casehome.isp?caseld=19>.

16. WHAT ARE THE RELEVANT DATES?

The Settlement Hearing is scheduled for August 3, 2015. If you wish to be heard at the Hearing, you must file a Notice of Intent to Appear and Be Heard with the Clerk, Los Angeles County Superior Court, as discussed above in paragraph 5. That Notice must be received by May 15, 2015 for it to be considered. In addition, by that date, you must send a copy of that Notice to the attorneys identified in paragraph 5, above.

17. MAY I PUMP WATER ON MY PROPERTY?

Yes. There are presently no restrictions on your ability to pump water on your property or the amount that you can pump for reasonable and beneficial uses on your property. However, it is possible that there will be limits imposed on the amount of pumping in the future.

QUESTIONS? VISIT WWW.AVGROUNWATER.COM.

18. WHAT IF I PUMP MORE THAN 3 ACRE-FEET OF GROUNDWATER PER YEAR?

A Class Member will have the right to pump up to 3 acre-feet per year for reasonable and beneficial use on his or her property, without assessment. However, if you pump more than 3 acre-feet per year, you may be required to pay a replacement assessment in the future for any water you pump in excess of 3 acre-feet per year. This settlement does not affect your ability to continue to pump in excess of 3 acre-feet per year, but the Court may limit those rights in future proceedings. The replacement assessments, if any, will be levied by a court-appointed watermaster, who will implement various provisions of this settlement.

19. WILL I HAVE TO INSTALL A WATER METER ON MY PROPERTY?

If the watermaster develops a reasonable belief that you are pumping more than 3 acre-feet of groundwater per year, you may be required to install a water meter.

20. WILL MY GROUNDWATER USE BE MONITORED?

The watermaster may choose to monitor your water use through aerial photography and/or satellite imagery. The watermaster may also decide to subpoena your electrical usage records from your electrical utility provider. As noted above, if you are pumping less than 3 acre-feet of groundwater per year, you will not be required to install a meter.

21. WHAT HAPPENS IF I SELL MY ANTELOPE VALLEY PROPERTY?

If the settlement is approved by the Court, anyone who acquires your property will be bound by the terms of the settlement. Hence, you should disclose the terms of the settlement to anyone who may acquire your Antelope Valley property.

PLEASE DO NOT CALL OR WRITE THE COURT OR CLERK'S OFFICE. IF YOU HAVE ANY QUESTIONS, PLEASE CONSULT YOUR OWN COUNSEL, VISIT THE WEB SITES LISTED ABOVE, OR WRITE TO CLASS COUNSEL AT THE ADDRESS ABOVE.

Dated: March 27, 2015

BY ORDER OF THE SUPERIOR COURT
OF CALIFORNIA FOR THE COUNTY OF
LOS ANGELES

QUESTIONS? VISIT WWW.AVGROUNDWATER.COM.

Exhibit No.

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Rodney T. Smith, Ph.D.

Stratecon Inc

1490 N. Claremont Blvd, Suite 203

Claremont, CA 91711

(909) 626-2221, x 204 | rsmith@stratwater.com

Expert in the economics, finance, policy and politics of water resources, water media and prediction markets. Written extensively on economics, policy and finance of water and other natural resources.

Education

- **Ph.D. in Economics, University of Chicago**
- **B.A. in Economics, University of California at Los Angeles (Phi Beta Kappa)**

Experience

- **advisor in the acquisition of water rights throughout the western United States and in the sale and leasing of water rights and water supplies to public and private sector water users**
- **consulted extensively for public and private sector clients, including high net worth investor, on business and public policy issues including**
 - **California's Drought Water Bank,**
 - **the government of New South Wales, Australia's effort to privatize irrigation organizations,**
 - **Imperial Irrigation District/San Diego County Water Authority Agreement, the settlement of Colorado River disputes on behalf of the Imperial Irrigation District, and the acquisition of 42,000 acres from the United States Filter Corporation, an unit of Veolia Environment**
 - **Western Governors' Association, "Water Transfers in the West: Projects, Trends, and Leading Practices in Water Trading"**
- **Expert witness in civil litigation involving valuation of surface and groundwater rights, breach of contracts, takings, groundwater contamination, groundwater adjudications**
- **Asset management of water resources**
- **Manager of a proposed groundwater project to acquire and transport 40,000 acre feet per year of Edwards Aquifer through a new \$250 million regional pipeline**

- Founding Editor of *Water Strategist*, quarterly analysis of water marketing, finance, legislation and litigation
- Founder and Executive Blogger, *Hydrowonk Blog* (www.hydrowonk.com)
- Founder of *Water Strategist Community* (www.waterchat.com) a web based news portal providing free access to the direct press releases and important reports from over 300 public agencies, water firms and bond rating agencies
- Founder of *Stratecon Water Policy Markets* (www.waterpolicymarkets.com) prediction markets to assess the risk and consequences of future events involving legislative and regulatory actions, political change, hydrology, project operations, litigation outcomes and water prices
- Founder of *Journal of Water* (www.journalofwater.com). A web based specialized news and information service critical for managing water resources

Current Positions

- President, Stratecon Inc, strategic planning and economic consulting firm in water resources
- President, Baja Norte Water Resources LLC, developer of bi-national water and energy infrastructure projects
- Managing Member, AquaFair LLC, web-based platform for water exchanges
- Member, Board of Visitors, School of Politics and Economics, Claremont Graduate University

Prior Positions

- Senior Vice President, Stratecon Inc. (1982-2012)
- President, Strategic Water Group LLC (2008-2011)
- President, Southwest Texas Water Resources LP (2008-2011)
- Managing Member, Strategic Water Management LLC (2005-2013)
- July 1999 to 2007, Managing Member, J&M Water Development LLC
- July 1983 to September 2013, Senior Vice President, Stratecon, Inc., Claremont, CA
- July 1991 to June 1996, Professor of Economics, Claremont McKenna College
- July 1985 to June 1991, Associate Professor of Economics, Claremont McKenna College
- July 1989 to June 1990, Visiting Senior Scholar of Law and Economics, School of Law, Columbia University
- July 1986 to June 1989, Director, Lowe Institute of Political Economy, Claremont McKenna College
- January 1986 to July 1987, Director, Center for the Study of Law Structures, Claremont McKenna College
- July 1984 to December 1985, Acting Director, Center for the Study of Law Structures, Claremont McKenna College

- July 1983 to June 1985, Visiting Associate Professor of Economics, Claremont McKenna College
- July 1983 to June 1984, Acting Associate Director, Center for the Study of Law Structures, Claremont McKenna College
- September 1981 to June 1983, Visiting Assistant Professor of Economics, Graduate School of Business, University of Chicago
- September 1980 to June 1983, Associate Director, Center for the Study of the Economy and the State, Graduate School of Business, University of Chicago
- September 1978 to June 1983, Research Fellow, Center for the Study of the Economy and the State, University of Chicago
- September 1977 to July 1978, Visiting Assistant Professor of Economics, Claremont McKenna College
- September 1974 to August 1978, Research Economist, RAND Corporation, Santa Monica, CA
- May 1973 to August 1973, Staff Economist, Presidential Commission on Housing Policy, Washington D.C.

TEACHING EXPERIENCE

Claremont McKenna College: economic regulation, antitrust, law and economics, introductory economics, intermediate micro-economic theory, and New Liberal Arts Clinic

Claremont Graduate School: advanced micro-economic theory, regulation, antitrust, law and economics

University of Chicago, Graduate School of Business: public finance, antitrust

University of Chicago, Executive Program of the Graduate School of Business: public regulation of business

BOOKS AND MONOGRAPHS

Trading Waters: An Economic and Legal Framework for Water Marketing (Washington D.C.: Council of State Policy and Planning Agencies, 1988)

An Open Access Rights System for Interstate Natural Gas Pipelines (Washington D.C.: Natural Gas Supply Association, 1988)(unpublished report) with A. DeVany and R. Michaels

Troubled Waters: Financing Water Investment in the West (Washington D.C.: Council of State Policy and Planning Agencies, 1985)

ARTICLES

"The Economic Structure of Contracts for International Water Trades," forthcoming in *North American Free Trade Agreement and Water Resources*, T. Anderson (editor), (Pacific Research Institute of Public Policy, forthcoming, 1994).

"Tradable Air Permits to Reduce Point and Non-Point Source Pollution: Southern California's RECLAIM Project," in *Our Lands: New Strategies for Protecting the West* (Western Governor's Association, June 1993)

"District Control of Water Transfers," *California Agriculture*, December 1992, pp. 8-11.

"Water Right Claims in Indian Country: From Legal Theory to Economic Reality" in T. Anderson (editor), *Property Rights and Indian Economies*, (London: Rowman & Littlefield Press, 1992), pp. 167-194

"The Case for Groundwater Adjudication" in *Changing Practices in Ground Water Management -- the Pros and Cons of Regulation* (Eighteenth Biennial Conference on Ground Water, University of California, September 1992), pp. 47-56.

"The Role of Water Markets in the Mono Lake Controversy", *Southern California Academy of Science Symposium on Mono Lake*, December 1991

"Local Fiscal Arrangements after Proposition 13," forthcoming in (F. Stocker, ed) *Proposition 13: A Ten Year Retrospective* (Boston: Lincoln Institute of Land Policy, 1991)

"Comment on *The Significance of the FERC's Transmission Task Force Report in the Evolution of the Electric Industry*," *International Research Journal on Law and Economics*, December 1990.

"A Public Choice Perspective of the International Energy Program," forthcoming in (Vaubel and Willett eds.), *The Political Economy of International Organizations: A Public Choice Approach* (Westview Press, 1990)

"Canons of Public Choice Analysis of International Agreements," forthcoming in (Vaubel and Willett eds.), *The Political Economy of International Organizations: A Public Choice Approach* (Westview Press, 1990)

- "Constitutional Reform Gone Awry: The Apportionment of Property Tax Revenues in California after Proposition 13," 23 *Loyola of Los Angeles Law Review* 829 (1990)
- "Defining a Transport Right for Interstate Natural Gas Pipelines," with A. DeVany and R. Michaels, *Contemporary Policy Issues* (April 1990)
- "Water Transfers, Irrigation Districts, and the Compensation Problem," *Journal of Policy Analysis and Management* 446 (1989)
- "A Reconciliation of Water Markets and Public Trust Values in Western Water Policy," in *Transactions of the Fifty-Third North American Wildlife and Natural Resources Conference* (Washington D.C.: Wildlife Management Institute, 1988): pp. 326-336.
- "International Energy Cooperation: A Mismatch Between Policy Actions and Policy Goals," in (G. Horwich and D. Weimer, eds) *Responding to International Oil Crises* (Washington D.C.: American Enterprise Institute, 1988): 17-109
- "Studying Firm-Specific Effects of Regulation with Stock Market Data: An Application to Oil Price Regulation" 17 *Rand Journal of Economics* 467-489 (1986)(with M. Bradley and G. Jarrell)
- "A Comparative Study of State Taxation of Oil and Gas: The Lessons for Montana," in *Taxation and the Montana Economy* (Missoula, Montana: The University of Montana, 1986): 15-20
- "Comment on Notice of Proposed Rule-Making Regulation of Natural Gas after Partial Wellhead Decontrol" in (Thompson and DeAngelo, eds.) *World Energy Markets: Stability or Cyclical Change?* (Westview Press, 1985): 365-382
- "The Economic Determinants and Consequences of Private and Public Ownership of Local Irrigation Facilities," in (T. Anderson, ed.) *Water Rights: Scarce Resource Allocation, Property Rights, and the Government* (Cambridge, MA: Ballinger Publishing, 1984): 167-217
- "An Economic Analysis of Income Growth by U.S. Oil Firms: The Roles of U.S. Oil Regulation and OPEC," 55 *Journal of Business* 427 (1982)
- "Comment: The Economic Effects of Federal Regulation of the Market for New Security Issues," 24 *Journal of Law and Economics* 677 (December 1981)
- "In Search of the 'Just' U.S. Oil Policy," 54 *Journal of Business* 87 (1981)
- "The Subtle Impact of Price Controls on Domestic Oil Production," 68 *American Economic Review: Papers and Proceedings* 428 (May 1978) (with C. Phelps)

"The Legal and Illegal Markets for Taxed Goods," 19 *Journal of Law and Economics* 393 (August 1976)

RAND PUBLICATIONS

"Housing Assistance and Welfare Reform," R-2333-HUD (December 1978)

"International Capital Markets in the 1970s" R-2202-CIEP (July 1977)

"Petroleum Regulation: The False Dilemma of Decontrol" R-1951-RC (January 1977) (with C. Phelps)

"U.S. Grain Reserve Policy: Objectives, Costs, and Distribution of Benefits," R-2087-RC (February 1977) (with J. Stein and E. Keeler)

"The Economics of United States Grain Stockpiling" R-1861-CIEP (March 1977) (with J. Stein)

OTHER PUBLICATIONS

"Irrigation Districts: Obstacles to Water Marketing" *Viewpoint Column in Journal, American Waterworks Association* (March 1988) (with R. Vaughan)

"Taking Water to Market" *Civil Engineering* (March 1987) (with R. Vaughan)

"The Hidden Crisis Behind the Iran-Iraq War" *New York Times* Business section (October 28, 1984) (with S. Salant)

"Innovative Water Project Financing" *Proceedings of the Second Annual Missouri River Basin State Water Resources Planning Seminar* (Denver, CO, June 6-7, 1984)

"Deregulation and Small Business" *Kiwanis Magazine* (April 1981)

"Response to 'Pricing U.S. Oil Products'" *The Wall Street Journal* (November 11, 1977) (with C. Phelps)

"The Flaw in the Crude Oil Tax" *The Wall Street Journal* (September 28, 1977) (with C. Phelps)

Exhibit No.

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June 1, 2015

**Recent Testimony
By Rodney T. Smith, Ph.D.
Stratecon Inc.**

Clear Creek Community Services District v United States: (2014). Expert for plaintiff to estimate the economic losses from a reduction in Clear Creek's contract amount for municipal and industrial water use stated in the district's contract with the Bureau of Reclamation: Status: pending trial

William Meyers, George Ravenscroft, Palomar Artesan Springs, Palomar Spring Water Corporation v. San Diego Gas & Electric Company (2012). Expert for plaintiffs to estimate the economic valuation of the income permanently lost when a diesel spill by San Diego Gas & Electric destroyed Well No. 1 owned by Palomar Artesian Springs Partnerships. Status: pending trial

Stockton East Water District, Central San Joaquin Water Conservation District and California Water Service Company, San Joaquin County and Stockton, City v. United States (2012). Expert witness for Central San Joaquin Water Conservation District to determine the economic value of water not delivered to the district due to a breach of contract by the Bureau of Reclamation. Status: trial completed

Central San Joaquin Water Conservation District v. Stockton East Water District (2012). Expert witness for Central San Joaquin Water Conservation District to determine the economic benefit Stockton East Water District enjoys from the wheeling of Central's New Melones water. Status: pending trial

Poe Investment Company v. Lennar Stevenson Holdings LLC (2011). Expert witness for Poe Investment Company regarding whether Lennar meet its obligations under a prior agreement to secure a water supply for a real estate development project. Status: settled

Primex v, Chapparal Farms Inc, Cal Pure Pistachios Inc. and Paramount Farming Inc (2010). Expert witness for Paramount Farming to address whether Paramount had market power in California water market. Status: settled.

Vail Lake v. Rancho California Water District (2009). Witness for landowner. Provided testimony regarding potential for landowner to develop a water storage program.

Sandridge Partners v. Belridge Water Storage District (2008). Expert witness for Paramount Farming regarding the economic impact of an action taken by the Board of Directors of the Belridge Water Storage District on Paramount Farming. Status: settled

Imperial Irrigation District v. San Diego County Water Authority (2007). Expert witness for Imperial Irrigation District. Provided testimony regarding contractual provisions related to mitigation for the socioeconomic impacts attributable to land fallowing for the transfer of conserved water to San Diego and for mitigation water to Salton Sea. Status: Settled

Casitas Mutual Water District v. United States (2007). Expert witness for Casitas Mutual Water District. Provided economic valuation of the loss of water supply suffered by the Casitas Municipal Water District from the Ventura River Project (Lake Casitas) due to changes in operational criteria at Robles Diversion Dam required by a Biological Opinion by the National Oceanic & Atmospheric Administration and physical limitations to diversion capacity caused by a fish screen installed at the Robles Fish Passage Facility. Status: U.S. Court of Federal Claims issued opinion concluding that actions did not constitute a regulatory taking, reversed on appeal. Status: Decision that taking not ripe for judicial review.

Bronwood v. Tri-Center Industrial Center (2006). Expert witness for Bronwood. Provided economic valuation of water rights and water service area related to a nexus of agreements between Tri-Center Industrial Center and Sierra Pacific concerning water right exchanges, dismissal of protests regarding water right applications, and allocation of service areas for water and power among the parties. Status: Completed

Board of Supervisors of the County of Yolo v. Conaway Conservancy Group (2006). Expert witness for Conaway Conservancy Group. Expert witness for Conaway Conservancy Group. Provided economic valuation of marketable water from implementation of long-term water management plan that maximizes the economic value of the group's groundwater and surface water rights. Status: Settled (Yolo County terminated condemnation)

California-American Water v. City of Seaside et al (2005). Expert witness for City of Seaside. Provided economic valuation of reductions in pumping allowed under alternative proposed management strategies for groundwater basin in Monterey County. *Status*: Completed

Slemmer v. Fontana Union (2005). Expert witness for Slemmer, a minority shareholder in Fontana Union. Provided economic valuation of water rights appurtenant to mutual water company shares. *Status*: Settled

Sierra Club and Owens Valley Committee v. City of Los Angeles, et al before Inyo County Superior Court in California (2005). Expert witness for Sierra Club and Owens Valley Committee. Provided economic valuation of the City of Los Angeles's economic gain from delaying implementation of projects identified in a 1997 Memorandum of Understanding between the City of Los Angeles and Inyo County, the State of California, the Owens Valley Committee and the Sierra Club. *Status*: Completed

In Support of Recovery of Litigation Memorandum Account, Application 03-10-057 before the California Public Utilities Commission (2005). Expert witness for the Southern California Water Company. Provided economic valuation of impact of contamination on the groundwater rights. *Status*: Completed

American States Water Company v. State of California and American States Water Company v. Aerojet General Corporation (1999-2004). Expert witness for American States Water Company. Provided economic valuation of impact of groundwater contamination. *Status*: Settled

IID v. United States, Federal District Court of Southern California (2003): Case involves Secretary of the Interior action to reduce the quantity of water available under the Colorado River water right of the Imperial Irrigation District. Expert witness for the Imperial Irrigation District. Provided economic analysis of Imperial's water use, the economic cost of water conservation, the economic impact of regulatory obligations on the local economy, and the economic foundation of Secretary of the Interior's regulatory decision making. *Status*: Settled

Imperial Irrigation District and San Diego County Water Authority Joint Petition for Approval of a Long-Term Transfer of Conserved Water, before the California State Water Resources Control Board (2002). Proceeding involved the review of proposed

transfer pursuant to state law. Expert witness on behalf of the Imperial Irrigation District. Provided testimony on the economics of the proposed transfer, economics of water conservation and Imperial's water use, and the economics of land fallowing. *Status:* Completed with regulatory approval of transaction.

Orchard Hill LLC v. Julian Community Services District (2002). Case involved contamination of landowner's well. Expert witness on behalf of landowner. Provided economic valuation of groundwater rights destroyed by contamination. *Status:* Completed

Southern California Water Company v. Water Replenishment District (2001). Case involved definition of rights for groundwater storage and conjunctive use programs. Expert testimony on behalf of a group of groundwater producers. Provided comparative economic analysis of decentralized versus centralized institutions and the role of tradable rights. *Status:* Completed

Fontana Water Resources Inc. v. Cucamonga County Water District, San Bernardino County, CA (2001): Case involved interpretation of pricing provisions of long-term lease in light of financial restructuring of Metropolitan Water District of Southern California ("Metropolitan"). Expert witness for Fontana Water Resources. Provided economic interpretation of long-term water lease and analysis of Metropolitan's rate structure. *Status:* Settled

City of Sweetwater v. Duer Wagner and Company, District Court of Nolan County, Texas (2000): Case involved city's condemnation of Wagner's groundwater rights. Expert witness for Wagner. Provided economic valuation of groundwater rights. *Status:* Ongoing

Scalzo v. Vermeulen, Orange County, CA (2000): Case involved dispute over marketing of groundwater jointly owned by parties. Expert witness on behalf of Scalzo. Provided economic valuation of groundwater rights. *Status:* Settled

Exhibit No.

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January 9, 2015

VIA EMAIL

Ralph B. Kalfayan, Esq., LL.M.
Krause, Kalfayan, Benink & Slavens, LLP
550 W. C. Street, Suite 530
San Diego, CA 92101

RE: Impact of Proposed Physical Solution on the Willis Class and Alternative Approaches to Recognize the Willis Class's Groundwater Rights

Dear Mr. Kalfayan:

You have requested that *Stratecon Inc.* identify the impact of the Proposed Physical Solution on the Willis Class, and develop approaches recognizing the groundwater rights of the Willis Class. With the rapid urbanization in the Antelope Valley, one can reasonably anticipate that some currently undeveloped lands in Antelope Valley would be developed in the future and developed lands currently in agriculture converted to municipal use.

The Proposed Physical Solution confers a significant economic advantage for real property receiving overlying production rights relative to the Willis Class. The Proposed Physical Solution generally grants overlying owners groundwater rights of 3 acre feet ("AF") per acre for developed land historically in agriculture.¹ Overlying owner groundwater rights have an economic value of \$16,300/AF.² Therefore, lands with water rights have a valuable asset (*i.e.* water rights) worth \$48,900 per acre.

The Proposed Physical Solution allocates no overlying groundwater rights to the Willis Class free of replacement water assessments. Therefore, as urbanization in the Antelope Valley moves into corridors of historically undeveloped land, landowners outside the service area of water providers (*i.e.* the Willis Class) face an economic

¹ Meeting with Ralph B. Kalfayan, September 9, 2014 at offices of Stratecon Inc.

² Letter from Rodney T. Smith, Ph.D. to Mr. Ralph Kalfayan, "Economic Valuation of Overlying Groundwater Rights in the Antelope Valley Groundwater Cases," January 9, 2015. Hereinafter cited as "Stratecon Economic Valuation".

disadvantage—lack of water rights. To develop under the Proposed Physical Solution, the Willis Class will need to either acquire overlying groundwater rights or pay replacement water assessments. This added cost burden places the Willis Class at an economic disadvantage in development. By shutting the Willis Class out of the allocation of overlying groundwater rights, the Proposed Physical Solution reduces the economic value of Willis Class lands.

The discussion below addresses the following issues:

- Description of the Willis Class groundwater rights
- The Proposed Physical Solution and Inconsistency with the Settlement Stipulation
- Methods to Recognize Willis Class groundwater rights in A Physical Solution
- Quantification of the Willis Class

Willis Class Groundwater Rights

The Willis Class Groundwater Rights are defined in the Willis Class Stipulation of Settlement.³ “Willis Class members have an Overlying Right to a correlative share of 85% of the Federally Adjusted Native Safe Yield for reasonable and beneficial uses on their overlying lands free of any Replacement Assessment.”⁴ “The Settling Defendants will not take any positions or enter into any agreements that are inconsistent with the exercise of the Willis Class Members’ Overlying Right to produce and use their correlative share of 85% of the Basin’s Federally Adjusted Native Safe Yield.”⁵ The Settlement Stipulation defines the following capitalized terms:

- *Overlying Right*: “the appurtenant right of an Overlying Owner to use groundwater from the Native Safe Yield for overlying reasonable and beneficial use”⁶

³ Willis Class Stipulation of Settlement, Antelope Valley Groundwater Cases, July 13, 2010. (“Settlement Stipulation”).

⁴ Settlement Stipulation, p. 10.

⁵ *Ibid.*

⁶ *Ibid*, p. 7.

- *Native Safe Yield*: “the amount of pumping . . . (that) results in no long-term depletion of Basin groundwater storage.” “Pumping of the Settling Parties’ share of Native Safe Yield is not subject to any Replacement Assessment.”⁷ The settlement stipulates that the Native Safe Yield is 82,300 AF.⁸
- *Federally Adjusted Native Safe Yield*: “Native Safe Yield less the actual annual production of the United States’ during the prior year pursuant to its Federal Reserve Right.”⁹

In effect, the Willis Class receives a correlative share of 85% of the Native Safe Yield (82,300 AF) less the actual annual production of the United States under its Federal Reserve Right. Production under this right is not subject to any replenishment assessment.

The Stipulated Settlement defines correlative rights as “Overlying Owners may make reasonable and beneficial use of the water in the Basin and that, if the supply of water is insufficient for all reasonable and beneficial needs, each Overlying Owner is entitled to a fair and just proportion of the water available to the Overlying Owners.”¹⁰

The Proposed Physical Solution and Inconsistencies with the Settlement Stipulation

The Proposed Stipulated Interlocutory Judgment and Physical Solution specifies production rights for the Overlying Production, Small Pumper (Wood) Class, Federal Reserve Rights, State of California, and Non-Overlying Production (see Table 1).¹¹ These allocations exhaust the Native Safe Yield of 82,300 AF.

⁷ *Ibid*, pp. 6-7.

⁸ *Ibid*, p. 9.

⁹ *Ibid*, p. 6.

¹⁰ *Ibid*, pp. 5-6.

¹¹ Proposed Stipulated Interlocutory Judgment and Physical Solution, Draft July 31, 2014, pp. 15-23 and Exhibit 4.

Table 1

Production Rights in Proposed Physical Solution

<i>Party</i>	<i>Acre-Feet</i>
Overlying Production	58,341.6
Small Pumpers (Woods)	3,806.4
Federal Reserve Rights	7,600.0
State of California	207.0
Non-Overlying Production	12,345.0
Total	82,300.0

The Willis Class pumpers “can Produce Groundwater from the Native Safe Yield for reasonable and beneficial use on their overlying land provided they pay the Replacement Water Assessment for any such Production.”¹²

The Proposed Physical Solution is incoherent from a resource management perspective and inconsistent with the Willis Class Groundwater rights specified in the Settlement Stipulation.

Replacement water assessments are levied under adjudications and groundwater regulatory schemes on the amount of groundwater pumping in excess of safe yield, not on production of groundwater under a right to a portion of safe yield. The justification for this common approach is that it is the pumping in excess of safe yield that must be mitigated by a replacement water program. The magnitude of the Replacement Water Assessment reflects the cost of the replacement water program.¹³ The Proposed Physical Solution is incoherent from a resource management perspective.

Under the Settlement Stipulation, Willis Class members have “an Overlying Right to a correlative share of 85% of the Federally Adjusted Native Safe Yield for reasonable and beneficial uses on their overlying lands free of any Replacement Assessment.”¹⁴ With a Native Safe Yield of 82,300 AF and Federal Reserve Rights of 7,600 AF, the Willis Class has a correlative right to 85% of the Federally Adjusted Native Safe Yield,

¹² *Ibid*, pp. 16-17.

¹³ Note that the Proposed Physical Solution defines Replacement Water Assessment as “the amount charged by the Watermaster to pay for all costs incurred by the Watermaster related to Replacement Water.” *Ibid*, p. 12.

¹⁴ Settlement Stipulation, p. 10.

or 63,495 AF.¹⁵ The Settlement Stipulation defined correlative rights as “Overlying Owners may make reasonable and beneficial use of the water in the Basin and that, if the supply of water is insufficient for all reasonable and beneficial needs, each Overlying Owner is entitled to a fair and just proportion of the water available to the Overlying Owners.”¹⁶

Is a zero allocation a “fair and just” proportion of the water available to Overlying Owners? Groundwater rights in the Antelope Valley are anticipated to have significant economic value--\$16,300/AF.¹⁷ As discussed in the introduction, the lack of groundwater rights places Willis Class members at an economic disadvantage in terms of their development potential. Unlike the Overlying Owners who receive 58,341.6 AF under the Proposed Physical Solution, the Willis Class must either acquire groundwater rights from the other Overlying Owners or incur the obligation of paying Replacement Water Assessments when they develop their lands. Under what standards of fairness and justice is an allocation that gives one set of Overlying Owners all the economic value of 85% of the Federally Adjusted Native Safe Yield and provides another set of Overlying Owners with nothing but a cost burden?

Recent developments in California have dimmed the prospects for securing replacement water for the Antelope Valley. The historically unprecedented low (zero) water allocations for the State Water Project and the Central Valley Project has made the use of the term “supply reliability” for these projects no longer relevant.¹⁸ Significant new investments must be made in water resources that will prove far more expensive than past water resources. The timing of availability and cost of replacement water is a significant unknown given California’s deteriorating water resource situation. The Proposed Physical Solution discriminates against the Willis Class by having the other

¹⁵ 63,495 AF = 85% (82,300 AF – 7,600 AF)

¹⁶ Settlement Stipulation, pp. 5-6.

¹⁷ Stratecon Economic Valuation.

¹⁸ The 2014 federal and state project allocations shattered key assumptions of the water industry. See <http://hydrowonk.com/blog/2014/02/26/rethinking-californias-water-industry-part-1-a-zero-state-water-project-allocation-world/>. The water industry must go back to the drawing boards on how it thinks about water supply availability. See <http://hydrowonk.com/blog/2014/06/09/rethinking-california-part-iii-back-to-the-drawing-boards-on-water-supply-availability/>

Overlying Owners grabbing the entire available Federally Adjusted Native Safe Yield for themselves and foists on the Willis Class the risk of securing replacement water when their lands are developed.

There is no reasonable “fair and just” standard that treats a correlative right in groundwater among Overlying Owners as in the Proposed Physical Solution. The draft Judgment reaches out to historic use to divide the “haves” from the “have nots”. But, groundwater rights are not compromised by non-use. They are not subject to loss from forfeiture or abandonment. The Settlement Stipulation is consistent with this view as it provides the Willis Class with correlative rights, not no rights to the Federally Adjusted Native Safe Yield “free of any Replacement Assessment.”¹⁹

Methods to Recognize Willis Class Groundwater Rights in A Physical Solution

How can Willis Class groundwater rights be included in A Physical Solution for the Antelope Valley? I explore three options:

- *Pro Rata Model*: Overlying owners have a “common carrier” right to Federally Adjusted Native Safe Yield irrespective of their historic use of groundwater
- *The Antelope Valley Accord*:²⁰ Willis Class landowners have groundwater rights without any obligation to pay replacement water assessments for domestic uses and a Class Reserved right
- *Quantification of Willis Class Groundwater Rights*: Diluted Common Carrier Model where Overlying Owners with the historic use may use the block of rights reserved for the Willis Class until needed, provided that they lease unused Willis Class Groundwater Rights

¹⁹ Settlement Stipulation, p. 10.

²⁰ *The Antelope Valley Accord*, Appendix A of Ex Parte Application of “Moving Principals” for Continuance of Trial, Superior Court of the State of California for the County of Los Angeles, LASC, Case No. BC 325201, July 29, 2010 (hereinafter cited as “Waldo Report”).

Pro-Rata Model

Groundwater rights originate from land ownership, not from the historic use of groundwater. Therefore, all Overlying Owners in the Antelope Valley have groundwater rights. These rights are not subject to loss from non-use, forfeiture or abandonment. From a basin wide perspective, the long-term annual amount of groundwater available is safe yield.²¹

A well-known tenet of water law is that there are rights to use water, but no rights to specific molecules of water. From a law and economics perspective, the right to pump safe yield is jointly shared by overlying landowners. How can one reconcile landowner groundwater rights with an adjudication quantifying the safe yield available to overlying landowners?

The situation is analogous to interstate natural gas pipelines that are common carriers: “A facility obligated by law to provide service to all potential users without discrimination, with services to be prorated among users in the event capacity is not sufficient to meet all requests.”²² Safe yield is the capacity of the facility. Overlying landowners are “all potential users.” Groundwater pumping exceeding safe yield is “in the event capacity is not sufficient to meet all requests.” To apply the common carrier model to overlying landowners’ groundwater rights, we need to consider the meaning “without discrimination” and “prorated.”

The word “discrimination” originates from the Latin *discrimire* that means “to separate, to distinguish, to make a distinction.”²³ Moral philosophers define discrimination as disadvantageous treatment.²⁴ So, “without discrimination” would mean not separating, distinguishing or making a distinction that is disadvantageous to one class of overlying landowners relative to another.

²¹ Groundwater conditions, of course, can be supplemented by return flows from the use of imported water or a replacement water program. The discussion in the text focuses on the groundwater available by virtue of land ownership, the relevant issue for Stratecon’s analysis.

²² <http://www.spectraenergy.com/Natural-Gas-101/Glossary-of-Energy-Terms/C/>

²³ <http://en.wikipedia.org/wiki/Discrimination>

²⁴ *Ibid.*

The Proposed Physical Solution engages in discrimination. All overlying landowners have groundwater rights before the adjudication. The rights are not lost from non-use. The Proposed Physical Solution divides overlying landowners into two groups: one with historic use and another without historic use of groundwater. For the former group, overlying landowners receive a right to pump a share of safe yield without an obligation to pay replacement water assessments. For the latter group, overlying landowners receive no rights to pump a share of safe yield without an obligation to pay replacement water assessments. In other words, the Proposed Physical Solution cutbacks (ramps down) the groundwater right of the former group and extinguishes the groundwater right of the latter group. “Limited rights” for the first group and “extinguished rights” for the second.

The critical issue is the meaning of “prorated.” There are tools in the Proposed Physical Solution useful for a definition: developed acreage using groundwater and type of land use. Available safe yield could be prorated among overlying landowners in proportion to their developed acreage and type of water use. Based on the information you provided me about the Proposed Physical Solution, land developed for agriculture would have a claim to 3 AF/acre. Land developed for domestic (non-agricultural) use would have a claim to 1.2 AF/acre. In any year where the developed acreage and type of use yielded rights in excess of the water available under safe yield, the allowed pumping by all overlying landowners would be cutback proportionately.

A simple example illustrates the approach. The Proposed Physical Solution grants 58,341.6 AF of overlying production rights to Overlying Owners with historic use (“Appendix 4 Overlying Owners”). With an agricultural duty of 3 AF/acre, this groundwater supply can support 19,447.2 developed acres.²⁵ Appendix 4 Overlying Owners may allocate this water in any way on their developed acres.

Now, suppose that members of the Willis Class develop 500 acres for agriculture and 500 acres for non-agriculture. The former acres have a duty of 3 AF/acre and the latter acres a duty of 1.2 AF/acre. Therefore, by developing 1,000 acres with these land uses, they would have a right of 2,100 AF.²⁶

²⁵ $19,447.2 = 58,341.6/3$

²⁶ $2,100 \text{ AF} = 3 \text{ AF/acre} \times 500 \text{ acres} + 1.2 \text{ AF/acre} \times 500 \text{ acres}$

Development of Willis Class lands would increase water rights above the safe yield available to Overlying Owners (see Table 2). Limiting groundwater production without Replacement Water Assessments to approximately 96.5% of pre Pro-ration Rights brings allowed pumping without Replacement Water Assessments back in balance with the share of safe yield available to overlying owners (58,341.6 AF). The Pro Rata Model uses a common pro-ration factor among all Overlying Owners as a “fair and just” method to allocate “water available to Overlying Owners” when “the supply of water is insufficient for all reasonable and beneficial uses.”

Table 2
Example of Pro Rata Model

<i>Overlying Owner</i>	<i>Pre Pro-ration Rights</i>	<i>Post Pro-ration Water</i>
Appendix 4	58,341.60	56,314.56
Willis Class	2,100.00	2,027.04
Total	60,441.60	58,341.60

The Antelope Valley Accord

The Waldo Report provided a defined, limited right to use groundwater for the Willis Class free of replacement water assessments. A Willis Class member gains access to groundwater rights when they develop lands to make reasonable and beneficial use of groundwater.²⁷

Parcels of 20 acres or less are assigned groundwater rights as follows:²⁸

- For parcels located “within, adjacent to or in close proximity to the service area” of a water provider, owner entitled to groundwater rights free of replacement water assessments equal to average use of a residence²⁹

²⁷ Waldo Report, Section III(G)(3).

²⁸ *Ibid*, Section III(G)(4)

²⁹ *Ibid*, Section III(G)(4)(a)(i)

- For non-adjacent or distant parcels, owner entitled to groundwater rights free of replacement water assessments of 1 AF per single family residence for domestic use³⁰
- Owners may sub-divide their parcels and receive 1 AF of groundwater rights free of replacement water assessments per single family residence³¹

These parcels also receive an allocation of 0.1 AF/year per acre.³² These groundwater rights “will remain constant whether Total Sustainable Yield is adjusted downward or upward.”³³

Parcels with more than 20 acres are also assigned groundwater rights free of replacement water assessments: 1 AF per single family residence for domestic use and 0.1 AF/year per acre.³⁴ As with the groundwater rights of parcels 20 acres or less, these rights “remain constant whether Total Sustainable Yield is adjusted downward or upward.”³⁵

The sole difference between the treatment of groundwater rights for the two parcel categories involves whether there are pro rata adjustments by other groundwater right owners for the exercise of the Willis Class groundwater rights. “The expected quantities of groundwater involved in this category (20 acres or less) *will be considered de minimis* and will not adversely affect the Basin as a whole.”³⁶ So, their use will not reduce the allocation of any other party.³⁷ Adjudications commonly exclude “small” water users from restrictions, although the definition of small varies.³⁸ However, “the impacts of the perfection of Class rights, thereby reducing the portion of Total Sustainable Yield available to other users” will be borne pro-rata by appropriators and “overlyers”.³⁹

³⁰ *Ibid*, Section III(G)(4)(a)(ii)

³¹ *Ibid*, Section III(G)(4)(a)(iii)

³² *Ibid*, Section III(G)(4)(b) with reference to Section III(G)(5)(a).

³³ *Ibid*, Section III(G)(4)(c)

³⁴ *Ibid*, Section III(G)(5)(a)-(b)

³⁵ *Ibid*, Section III(G)(5)(c)

³⁶ *Ibid*, Section III(G)(4)(c), emphasis added

³⁷ *Ibid*

³⁸ Declaration of Eric L. Garner in support of motion for preliminary approval of the Wood Class Settlement, Antelope Valley Groundwater Cases, May 2, 2011.

³⁹ Section III(G)(7)

The Antelope Valley Accord shares many features with the pro-rata model:

- Trigger for access to Willis Groundwater rights: development of land for reasonable and beneficial use of groundwater
- Quantification of individual groundwater right: based on acreage and type of water use
- As Willis Class development perfects groundwater rights reducing the amount of groundwater available (without replacement water assessment obligation) to other parties, reductions in groundwater use free of replacement water assessments are borne pro rata
- No total limit placed on the size of the Willis Class groundwater rights

The difference in approaches involves the definition of limitations on individual rights. The Antelope Valley Accord uses the water duties defined in the Waldo Report.⁴⁰ The Pro Rata model uses the water duties in the Proposed Physical Solution.

Quantification of the Willis Class Groundwater Rights

In a world of scarce resources, there are always competing demands. By extinguishing the groundwater rights of the Willis Class, the Proposed Physical Solution maximizes the groundwater rights received by Appendix 4 Overlying Owners. Relative to this position, the Pro Rata Model and the Antelope Valley Accord will enable the Willis Class to exercise a limited groundwater right as they develop their lands.⁴¹ Appendix 4 Overlying Owners face a future of increased pro-rations, the timing and extent depending on future development on Willis Class lands.

How to balance the interests of Appendix 4 Overlying Owners for firm groundwater rights and the Willis Class existing groundwater rights for future development? One way would be to place a cap on the amount of groundwater rights the

⁴⁰ A water duty is a statement of the amount of water available for a defined use, such as a residence or amount of water per acre.

⁴¹ The limit under the Pro Rata Model involves the 1.2 AF/acre duty for non-agricultural use and 3 AF/acre duty for agricultural use of developed lands. The limit under the Antelope Valley Accord are the water duties per residence (for parcels 20 acres or less, average residential use or 1 AF; for parcels more than 20 acres, 1 AF) and 0.1 AF/acre.

Willis Class can receive for future development. A cap would provide Appendix 4 Overlying Owners a minimum level of groundwater rights. At the same time, relative to the Proposed Physical Solution, a cap would provide the Willis Class with groundwater rights for future development.

A cap on the groundwater rights of the Willis Class would be a partial extinguishment of the Willis Class's groundwater rights. There would be a limited pool of groundwater rights available for land development by the Willis Class. Once development uses those rights, there would be no further rights available for other Willis Class members ("Disadvantaged Willis Class Members"). These class members would be as disadvantaged under this alternative method as they would be under the Proposed Physical Solution.

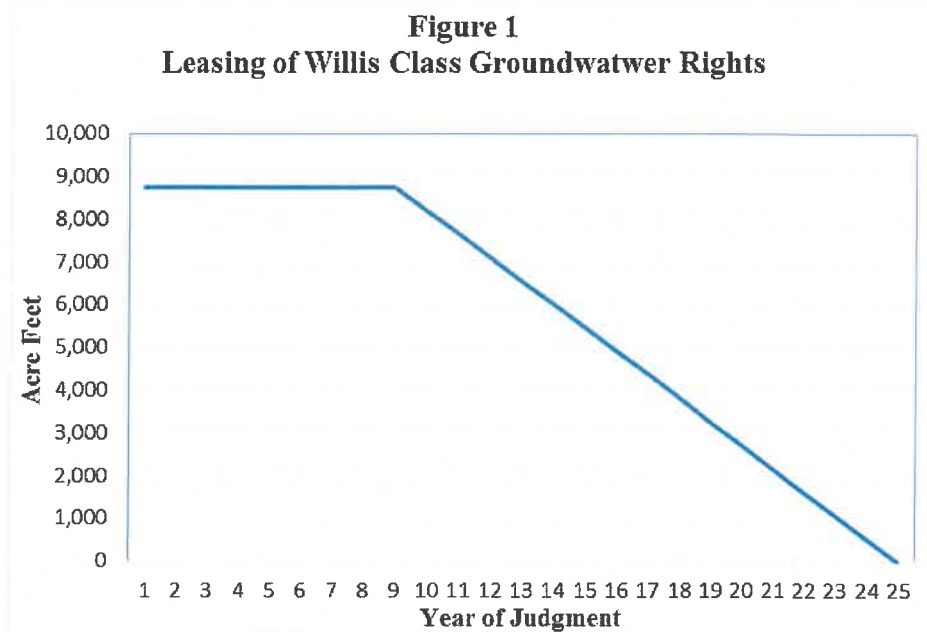
Unused Willis Class rights could be leased to generate income to pay the Replacement Water Assessments of Disadvantaged Willis Class Members when they develop their lands in later years. A simple example illustrates the approach with the following assumptions:⁴²

- Total Groundwater Rights for All Overlying Owners: 58,341.6 AF
- Share Reserved for Willis Class: 15%
- Minimum Rights of Appendix 4 Overlying Owners: 49,590.36 AF
- Willis Class Pool: 8,751.24 AF
- Judgment Year Development Starts on Willis Class Lands: Year 10
- Judgment Year Development Exhausts Willis Class Pool: Year 25
- Number of Years of Development of Willis Class After Exhaustion of Willis Class Pool: 10 Years (cumulative water demands 5,469.525 AF)
- Replacement Water Assessment: \$400/AF in Judgment Year 1 increasing at annual rate of 2.5%
- Lease Rate: 10% discount off Replacement Water Assessment
- Earned Annual Interest on Fund Reserves: 1%

Figure 1 shows the time profile of the leasing of the Willis Class pool. Given the water demand and supply situation, it is reasonable to assume that the Willis Class Pool

⁴² The assumptions are for illustrative purposes only.

of groundwater rights can be leased; ⁴³ in this example, at a 10% discount off the Replacement Water Assessment. Therefore, the annual leasing of Willis Class Groundwater Rights would be 8,751.24 AF for the first nine years until land development starts on the Willis Class lands. The volume of leased groundwater rights then declines until land development by the Willis Class exhausts the Willis Class pool of groundwater by Year 25.

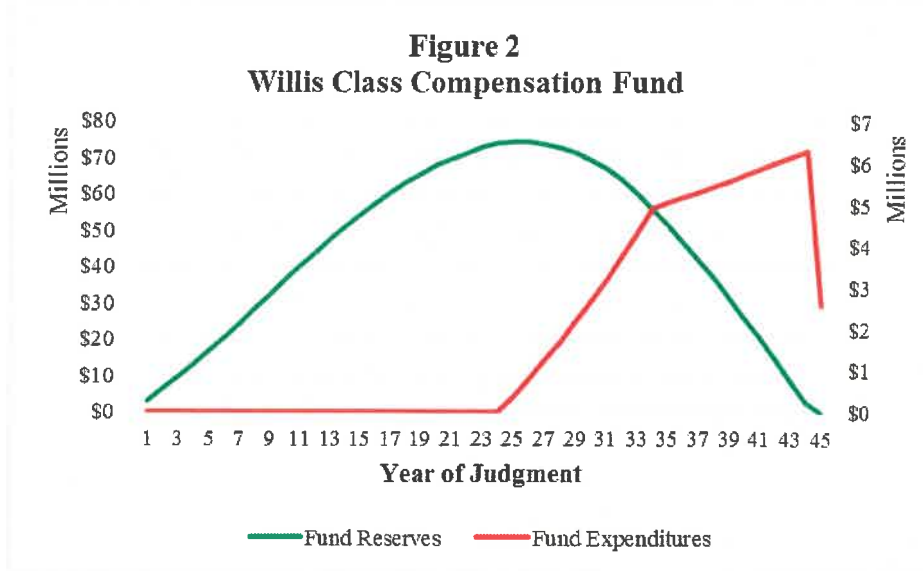


This leasing activity will build up the Willis Class fund for Willis Class members whose land development is after the exhaustion of the Willis Class groundwater rights pool (see Figure 2).⁴⁴ Leasing revenues are deposited in the Willis Class Compensation Fund that grows, including earned interest, to more than \$74 million by Year 25 of the Judgment. The continued new development on the Willis Class lands after Year 25 has no groundwater rights. Therefore, the built-up compensation fund is used to pay the Replacement Water Assessments until the funds are exhausted. Under the assumptions

⁴³ Stratecon Economic Valuation, p. 12.

⁴⁴ Stratecon could address the administrative features of this fund in a subsequent letter.

of this example, land development on the Willis Class lands reaches full build-out in Year 34 and the compensation fund is not exhausted until Year 45.⁴⁵



In this example, the Willis Class landowners receive a cumulative of \$84.6 million in compensation between year 26 and year 45 of the Judgment to pay for Replacement Water Assessments.⁴⁶ Thereafter, they must either fund acquisitions of groundwater rights or pay Replacement Water Assessments. The 25 years of payments is compensation for the extinguishment of their groundwater rights.

The timing and pace of development on Willis Class lands, of course, is uncertain. Leasing activity of the entire Willis Class pool will proceed until development starts on Willis Class lands. Leasing will continue, albeit at a lower level, until continued development exhausts the Willis Class pool of groundwater rights. What is certain is that

⁴⁵ Annual expenditures from the funds grow steadily after year 25 due to increasing amount of developed Willis Class lands without groundwater rights and annual increases in the Replacement Water Assessment. The drop in annual expenditures of the last year of the fund reflects the fact that available monies in that year are not sufficient to pay all Replacement Water Assessments.

⁴⁶ The \$84.6 million of expenditures are funded by \$64.6 million in lease revenues and \$20.0 million of earned interest on collected lease revenues before paying Replacement Water Assessments of Disadvantaged Willis Class Members. Earned interest accrues on fund balances at the start of any year. Therefore, earned interest continues throughout the life of the fund.

the Willis Class Fund will build financial reserves. What is uncertain is how many years will the reserve accumulate funds and how large the fund will grow before development on the Willis Class lands exhausts the Willis Class pool of groundwater rights.

Similarly, further development of Willis Class lands after the Willis Class pool of groundwater rights is exhausted is expected to be in distant years; this adds to the uncertainty concerning the timing and size of further land development. If further development is “low and slow”, expenditures on Replacement Water Assessments may be less than the interest earned on reserve funds. In this instance, the Willis Class Compensation Fund will continue to grow.

In other words, “low and slow” development of Willis Class lands can yield a large and growing Willis Class Compensation Fund.

An adaptive management strategy can adjust the compensation scheme in response to the actual circumstances of development on Willis Class lands. As with any adaptive management strategy, there are two components:

- Anticipated development profile
- Tools of adjustment

The anticipated development profile involves quantification of the Willis Class (see below). The tools of adjustment involve establishing ceilings on the compensation fund, triggers for changing the size of the Willis Class groundwater rights pool, adjustment in leasing prices and rebates. Discussion of the tools of adjustment should be deferred until we know the anticipated development profile.

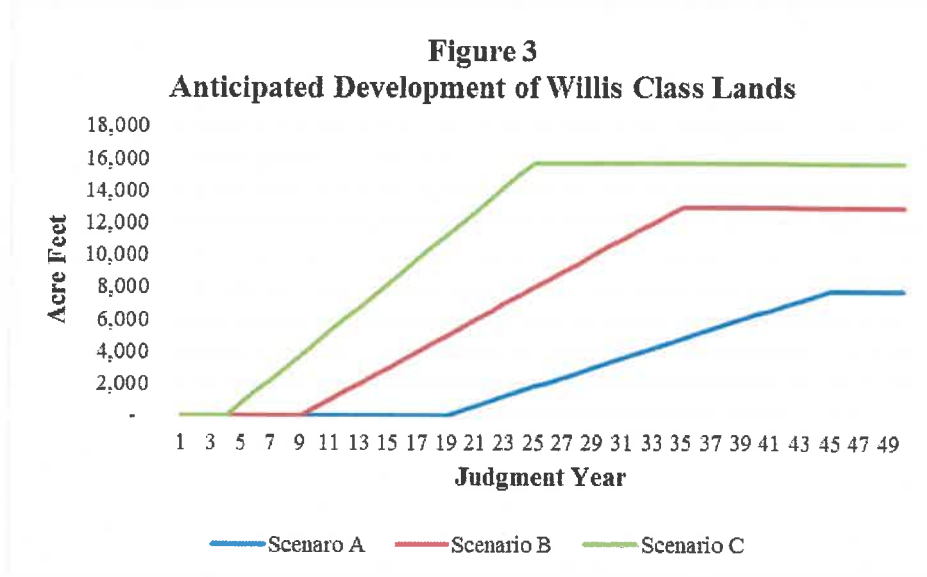
Quantifying the Willis Class

What is a reasonable share for the Willis Class to receive of the groundwater rights available to Overlying Owners? The answer depends on two factors:

- Time Profile of anticipated development on Willis Class lands
- Time Horizon

The first factor involves the most critical information. Consider three hypothetical scenarios for the water demand from anticipated development on Willis Class lands (see Figure 3). Scenario A is a “low and slow” growth scenario. Anticipated development does not start for 20 years with smallest new annual water demands (300

AF/year) and build out not reached until year 45. Scenario C is a “high and fast” growth scenario. Anticipated development starts in year 5 with new annual water demands at 750 AF/year and build out achieved by year 25. Scenario B is in between (anticipated development starts in year 10, new annual water demands at 500 AF/year and build out reached at year 35). For a 30-year time horizon, the size of the Willis Class pool would be set at 8,000 AF under Scenario A, at 10,000 AF under Scenario B and at 16,000 AF under Scenario C.⁴⁷ For setting the size of the Willis Class groundwater rights pool, “anticipated development matters.”⁴⁸



There are two approaches to determining the anticipated development of Willis Class lands:

⁴⁷ To put these numbers in perspective, water demand in the Antelope Valley is projected increase from 143,190 AF in 2015 to 283,950 AF by 2035 (2010 Urban Water Management Plan for the Antelope Valley, Los Angeles County Waterworks District No. 40, June 2011, p. 36.). The quantification of the Willis Class Groundwater Rights would represent 6% of anticipated growth in water demand over 25 years under Scenario A, 7% under Scenario B and 11% under Scenario C.

⁴⁸ The time horizon also matters. Stratecon believes that tying down the anticipated development of the Willis Class is the first step so we know which scenario is relevant. Selecting a shorter or longer time horizon than 30 years will have little impact on the size of the Willis Class groundwater rights pool under Scenario A, modest impact under Scenario B and the largest impact under Scenario C.

- Examination of local and state planning studies for Antelope Valley
- Survey of Willis Class members

In preparing the California Water Plan, the Department of Water Resources examines the “urban footprint” by 2050 for population growth and population density scenarios at the regional level.⁴⁹ This study can help determine which portion of urban growth in the Antelope Valley will involve conversion of agricultural lands versus development of undeveloped lands. This information can be supplemented by information from city and water agency planning documents to estimate the amount and timing of development on Willis Class lands.

Another source of information would be to survey the members of the Willis Class directly about their development plans. A survey can be cheaply and promptly done with the online survey tool “Survey Monkey.”⁵⁰ See Attachment A for a draft of a survey.

Conclusion

The Proposed Physical Solution would extinguish the existing groundwater rights of the Willis Class. Unlike the Appendix 4 overlying producers, Willis Class landowners have no right to produce groundwater without the burden of paying Replacement Water Assessments. The economic value of the right to pump groundwater without this burden is \$16,300/AF. With 58,341.6 AF of groundwater rights (without an obligation to pay Replacement Water Assessments) available to overlying owners, the aggregate value of groundwater rights allocated under the Proposed Physical Solution is \$951 million.

Large and concentrated interests often prevail over small and diffuse interests; the Proposed Physical Solution is not an exception. Further, it has been my experience in negotiations that the interests of those outside the room are often sacrificed to the interest of those in the room. Again, the Proposed Physical Solution is not an exception.

⁴⁹ p. *California’s Water Plan Update—2013*, South Lahontan Region, Department of Water Resources, p. SL-83

⁵⁰ For background, go to www.surveymonkey.com

The Settlement Stipulation provided the Willis Class with defined groundwater rights based on correlative rights to 85% of Federally Adjusted Native Safe Yield. Those rights expressly stated that pumping under those rights were “free of Replacement Water Assessments.” As discussed above, the Proposed Physical Solution statement that the Willis Class “can Produce Groundwater from the *Native Safe Yield* for reasonable and beneficial use on their overlying land provided they pay the Replacement Water Assessment for any such Production” is incoherent from a water resource management perspective and inconsistent with the groundwater rights of the Willis Class.

I have discussed three ways a physical solution can address the existing groundwater rights of the Willis Class:

- *Pro Rata Model*: land development by the Willis Class can proceed under the water duties of the Proposed Physical Solution with the groundwater rights of the Appendix 4 overlying owners and the Willis Class with developed lands subject to the same pro-rations
- *Antelope Valley Accord*: an approach similar to the Pro Rata Model
- *Quantification of the Willis Class Groundwater Rights*: groundwater users in the Antelope Valley can lease unused groundwater rights reserved for the Willis Class until development occurs on Willis Class lands. Leasing revenues would be placed in a fund to pay for the Replacement Water Assessments in future years for Willis Class members who developed lands after the groundwater rights reserved for the Willis Class are exhausted by earlier development.

Implementation of the Pro Rata Model is an exercise in drafting based on the hypothetical example provided above. Implementation of the Antelope Valley Accord is a similar exercise.

Quantification of the Willis Class needs a reasonable anticipated development profile identified and a reasonable time horizon for the quantification of the Willis Class’s correlative right of 85% of the Federally Adjusted Native Safe Yield. Paraphrasing the Settlement Stipulation, what time horizon is consistent with a “fair and just proportion of the water available to the Overlying Owners”? With the anticipated

development profile and time horizon defined, the cap on the Willis Class groundwater rights is quantified.

Quantification of the Willis Class shuts out Willis Class members whose land development occurs after earlier development on Willis Class lands exhausts the class's quantified groundwater rights. This third option provides some compensation for those Willis Class members only if they develop their lands. As discussed above, this model should use an adaptive management strategy. The tools of adjustment involve establishing ceilings on the compensation fund, triggers for changing the size of the Willis Class groundwater rights pool, adjustment in leasing prices and rebates.

In the end, the extinguishment of the Willis Class existing groundwater rights is not a necessity of a Physical Solution. Instead, it is a convenience to enhance the economic interests of Appendix 4 overlying owners in the Proposed Physical Solution.

If you have any questions, please do not hesitate to contact me.

Very Truly Yours,

A handwritten signature in black ink, appearing to read "R. T. Smith". The signature is stylized with a large initial "R" and a long horizontal stroke at the end.

Rodney T. Smith, Ph.D.
President

Attachment A
Willis Class Survey

As a member of the Willis Class in the Antelope Valley Groundwater Cases, you own real property within the boundary of the proposed Antelope Valley Adjudication, are outside the service area of water providers and have never pumped groundwater on your property. As a landowner, you own groundwater rights under California law that cannot be lost due to non-use. Under the terms of the settlement, the Willis Class has a correlative groundwater right for the reasonable and beneficial use on your lands.

As your lawyers, Krause, Kalfayan, Benick & Slavins are developing methods of how integrate your right into a physical solution for the Antelope Valley. We would like your input regarding the history of your land ownership and future plans. Please feel free to provide your best “approximate” answer. We will keep your individual answers confidential but will include your response in an analysis of the survey findings.

1. Name: _____
2. Total Acres Owned as member of Willis Class: _____
3. Year of Latest Acquisition of Property: _____
4. Are you considering development of your land in the next 30 years?
Yes ___
No ___

If you answered Yes to Question 4, please answer Questions 5 through 8. If you answered No to Question 4, please proceed to Question 9

5. Please indicate the earliest year you are considering starting development: _____
6. How many acres may you develop: _____ (enter any number of acres up to the total acres you own)
7. Please specify the number of acres developed for the following uses:
 - Agricultural: _____ (acres)
 - Domestic: _____ (acres)
 - Industrial: _____ (acres)
 - Municipal: _____ (acres)
8. Which actions have you taken as you prepare for land development (Please state “yes” in all that apply):
 - Retained third party professionals to start preparation of development plan: _____
 - Identified land use approvals needed for development: _____
 - Identified water supply for development project: _____
 - If you said yes, please specify water source: _____
 - List other actions undertaken: _____

9. Why do you not plan to develop your acreage?

- Will sell property to developer ____
- Will hold property for future generations ____
- Other (please specify) _____

Exhibit No.

6 – Willis – 13

Results

	Sales	Leasing	Total
Valuation	\$560,259,525	\$298,587,523	\$858,847,048
Mid-Yr Adjustment	\$13,835,652	\$7,373,642	\$21,209,294
Total	\$574,095,177	\$305,961,164	\$880,056,341

Assumptions

Years to Sell	25
Sales Price	\$8333
Lease Price	\$345
Start of Stabilization	5
Years to Stabilization	10

	Quantity	Real Sales Price	Nominal Sales Revenue	Lease Volume	Real Lease Inc	Real Lease Price	Nominal Lease Revenues	Total Revenues
2015	2,333	\$8,939	\$21,311,632	55,987	7.1%	\$369.55	\$21,145,305	\$42,456,937
2016	2,333	\$9,485	\$23,110,225	53,654	7.1%	\$395.85	\$22,183,836	\$45,294,062
2017	2,333	\$10,069	\$25,074,351	51,322	7.1%	\$424.02	\$23,229,380	\$48,303,730
2018	2,333	\$10,695	\$27,219,582	48,989	7.1%	\$454.19	\$24,273,943	\$51,493,525
2020	2,333	\$11,920	\$31,684,524	44,323	6.0%	\$513.18	\$25,918,457	\$57,602,981
2021	2,333	\$12,503	\$33,965,930	41,990	5.5%	\$541.29	\$26,468,753	\$60,434,683
2022	2,333	\$13,057	\$36,250,563	39,658	4.9%	\$567.97	\$26,807,641	\$63,058,204
2023	2,333	\$13,573	\$38,513,905	37,325	4.4%	\$592.86	\$26,915,957	\$65,429,862
2024	2,333	\$14,045	\$40,729,906	34,992	3.8%	\$615.61	\$26,778,167	\$67,508,073
2025	2,333	\$14,465	\$42,871,453	32,659	3.3%	\$635.86	\$26,383,043	\$69,254,496
2026	2,333	\$14,827	\$44,910,896	30,326	2.7%	\$653.30	\$25,724,257	\$70,635,152

2027	2,333	\$15,125	\$46,820,632	27,994	2.2%	\$667.65	\$24,800,842	\$71,621,475
2028	2,333	\$15,354	\$48,573,729	25,661	1.6%	\$678.66	\$23,617,516	\$72,191,245
2029	2,333	\$15,354	\$49,642,351	23,328	0.0%	\$678.66	\$21,942,819	\$71,585,170
2030	2,333	\$15,354	\$50,734,483	20,995	0.0%	\$678.66	\$20,183,005	\$70,917,488
2031	2,333	\$15,354	\$51,850,641	18,662	0.0%	\$678.66	\$18,335,139	\$70,185,780
2032	2,333	\$15,354	\$52,991,356	16,330	0.0%	\$678.66	\$16,396,198	\$69,387,553
2033	2,333	\$15,354	\$54,157,165	13,997	0.0%	\$678.66	\$14,363,069	\$68,520,235
2034	2,333	\$15,354	\$55,348,623	11,664	0.0%	\$678.66	\$12,232,547	\$67,581,170
2035	2,333	\$15,354	\$56,566,293	9,331	0.0%	\$678.66	\$10,001,331	\$66,567,623
2036	2,333	\$15,354	\$57,810,751	6,998	0.0%	\$678.66	\$7,666,020	\$65,476,771
2037	2,333	\$15,354	\$59,082,588	4,666	0.0%	\$678.66	\$5,223,115	\$64,305,703
2038	2,333	\$15,354	\$60,382,405	2,333	0.0%	\$678.66	\$2,669,012	\$63,051,416
2039	2,333	\$15,354	\$61,710,817	-	0.0%	\$678.66	\$0	\$61,710,817

Exhibit No.

6 – Willis – 14



January 9, 2015

VIA EMAIL

Ralph B. Kalfayan, Esq., LL.M.
Krause, Kalfayan, Benink & Slavens, LLP
550 W. C. Street, Suite 530
San Diego, CA 92101

RE: Economic Valuation of Overlying Production Rights in the Antelope Valley Groundwater Cases

Dear Mr. Kalfayan:

You have requested that *Stratecon Inc.* provide an economic valuation of the overlying production rights in the proposed Antelope Valley Groundwater Adjudication. Under the proposal, eligible parties would be awarded 58,341.6 acre-feet (“AF”) of overlying production rights that would enable claimants to pump groundwater without any obligation to pay assessment fees.¹ With the rapid urbanization in the Antelope Valley, one can reasonably anticipate the overlying production rights will be leased or sold to municipal water providers.

Based on analysis of trading in comparable groundwater rights in the Alto Subarea of the Mojave River Adjudication, I conclude that the economic value of the overlying production rights would be at least \$951 million, or about \$16,300/AF.

The discussion below addresses the following issues:

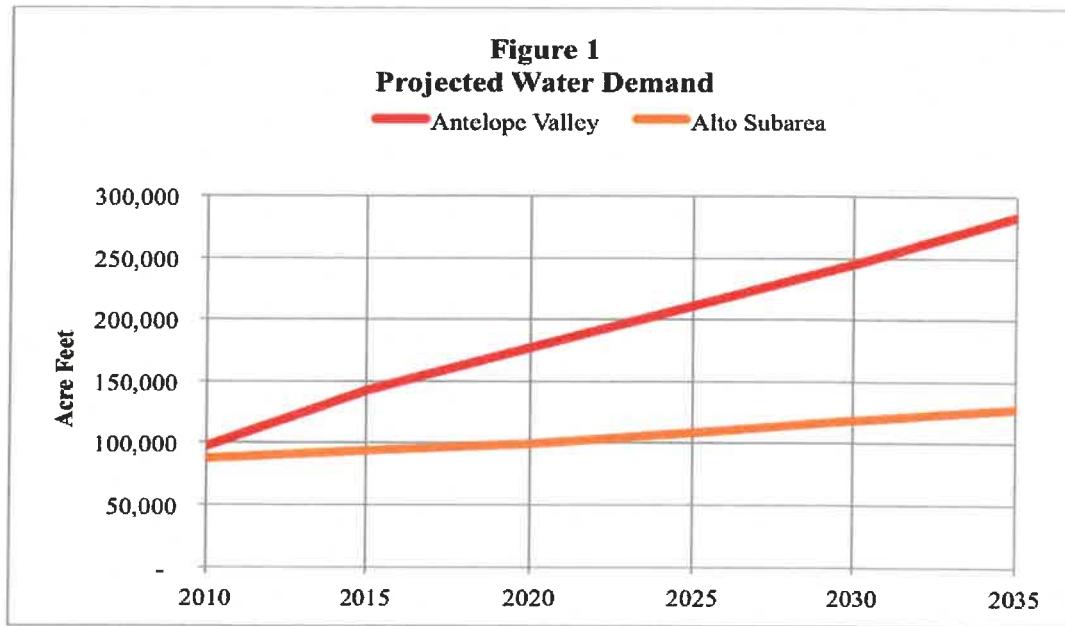
- Comparison of the water supply circumstances of the Antelope Valley and the Alto Subarea of the Mojave Adjudication
- The lease rates and groundwater right prices in the Alto Subarea
- Application of the information from the Alto Subarea to reach an opinion about the economic value of the overlying production rights under the proposed settlement of the Antelope Valley adjudication.

¹ Appendix 4, Antelope Valley Groundwater Cases

Comparison of the Antelope Valley with the Alto Sub-basin in Mojave

The Antelope Valley and the Mojave River basins are the two major groundwater sources in the South Lanhontan hydrologic study area in Southern California.² The California Department of Water Resources has designated both basins as “high priority” for groundwater management. Both areas are in the high desert and, from a water resource management perspective, face comparable problems: (i) historical reliance on over-drafted groundwater resources and (ii) connection to California’s State Water Project to import supplemental water supplies.

Antelope Valley faces more severe water supply challenges than the Alto Subarea. Los Angeles County Waterworks No. 40 projects that water demand in the Antelope Valley will increase from 98,010 AF in 2010 to 283,950 AF by 2035 (see Figure 1).³ The cumulative annual growth rate is 4.3%. The Mojave Water Agency projects that water demands in the Alto Subarea will increase from 87,001 AF in 2010 to 127,674 AF by 2035.⁴ The cumulative annual growth rate is 1.5%.

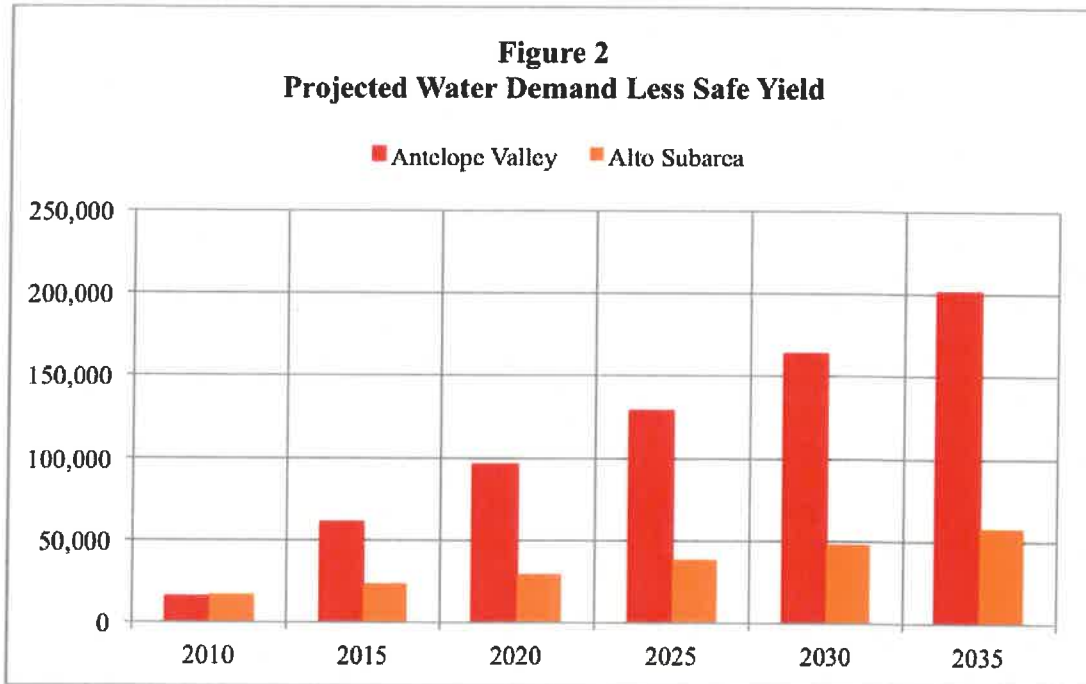


² *California’s Water Plan Update—2013*, South Lanhontan Region, Department of Water Resources (hereinafter cited as “DWR Water Plan, SL Region”), Table SL-3.

³ 2010 Urban Water Management Plan for the Antelope Valley, Los Angeles County Waterworks District No. 40, June 2011, p. 36.

⁴ Final 2010 Urban Water Management Plan, Mojave Water Agency, June 9, 2011, p. 2-9.

Water demands in the Alto Subarea are closer to safe yield than in Antelope Valley (see Figure 2). With a safe yield of 69,862 AF,⁵ the demand for supplemental water supplies in the Alto Subarea will be about 80% of the safe yield by the year 2035. With a “native” safe yield of 82,300 AF,⁶ the demand for supplemental supplies in the Antelope Valley will be 2.5 times safe yield by the year 2035.⁷



The Market for Adjudicated Groundwater Rights in the Alto Subarea

Groundwater rights in the Alto Subarea originate from the adjudication of groundwater rights in the Mojave River Basin. The adjudication divided the basin into five subareas in which groundwater rights were allocated and regulated. Within each subarea, the watermaster (Mojave Water Agency) determines the total “Free Production Allowances” (“FPA”) consistent with the hydrologic balance of the subarea (e.g., avoid

⁵ *Ibid*, p.3-25.

⁶ Antelope Valley Groundwater Cases, [Proposed] Judgment and Physical Solution, p. 15.

⁷ The Total Safe Yield of the Antelope Valley is 110,000 AF including return flows of imported water. As discussed below, the recent experience with the yield from the State Water Project demonstrates the unreliability of this supply going forward.

groundwater overdraft). The total Free Production Allowances are allocated among producers based on the producer's share of total "Base Annual Production" ("BAP"). A producer's BAP is defined as the verified maximum annual production of groundwater during the five-year period 1986-1990 (the five-year period preceding the initiation of legal proceedings that culminated in the Mojave Adjudication). The producer must replace all water produced in excess of its FPA either by making a payment to the watermaster with funds sufficient to acquire replacement water or by acquiring unused FPA from other producers.

To maintain proper water balances in the subareas, the Judgment provides for declining Free Production Allowances expressed as a percentage of total Base Annual Production. For the Alto subarea, FPA have equaled 80% of BAP for agricultural users and 60% of BAP for municipal users for the past seven years (see Table 1).

Table 1
Free Production Allowances for Alto Sub-Area Since 2007-2008

<i>Year</i>	<i>Agriculture</i>	<i>Municipal Industrial</i>	<i>Total BAP (acre feet)</i>	<i>Total FPA (acre feet)</i>
2007-08	80%	60%	116,412	74,632
2008-09	80%	60%	116,412	74,595
2009-10	80%	60%	116,412	74,534
2010-11	80%	60%	116,412	74,534
2011-12	80%	60%	116,412	74,502
2012-13	80%	60%	116,412	74,485
2013-14	80%	60%	116,412	73,261

Source: compiled from Annual Reports of Mojave Watermaster

The adjudication provides for the lease of FPA and sale of BAP within each sub-area. The watermaster will recognize these transactions once the parties to the transactions have stipulated to the adjudication's court judgment, have paid all current

and past assessments due the watermaster, and file with the watermaster appropriate transfer documents. For the sale of BAP, the parties must file a “form c” specifying the amount of BAP transferred, price paid, and name of the parties. Execution and notice requirements include the following

- Thirty days prior to filing with watermaster, the transferor must provide notice to any party with a recorded interest, deed of trust or lien on real property or crops grown on the property of the proposed transaction
- Provide watermaster with list of parties notified with copies of notice and return receipts
- Submit a copy of preliminary title report of seller’s property
- If real estate transaction closed prior to watermaster notice, then transferee provides watermaster with a record of deed and title insurance policy showing ownership of land associated with the BAP

Other requirements include acknowledgment among the parties of the transaction in a form sufficient for recordation with the county recorder, list of designees for future notice of papers and process, maps of service areas where transferor used the BAP and the transferee will use the BAP, and a list and identification of production facilities involved or affected by the transaction. The materials must be filed with the watermaster 45 days before a regularly scheduled watermaster meeting.

A leasing and sales market has developed in the Alto Subarea. Table 2 provides summary data on pricing and volume. The sales price for BAP has increased from \$1,300 per acre-foot (“AF”) in 2002 to \$5,000/AF by 2014—an annual rate of increase of 12.0%.⁸ Lease prices increased from \$63/AF to \$345/AF; a cumulative annual rate of increase of 15.2%. Leasing volume of FPA ranges from a low of 18,178 AF in 2008 to a high of 31,949 AF in 2002—averaging 22,448 AF (about one-third of total FPAs).

⁸ Sales price based on weighted average of transactions with reported prices. 2014 price reflects transactions in January through June. Generally speaking, prices are not available for transfers involving sales of water rights with real estate or administrative transfers. Sales volumes exclude administrative transfers.

Table 2
Sales of BAP and Leasing of FPA in Alto Sub-Area

<i>Year</i>	<i>BAP Sale Price</i>	<i>BAP Sales Volume (AF)</i>	<i>FPA Lease Price</i>	<i>FPA Lease Volume (AF)</i>
2002	\$1,305	1,329	\$63.00	31,949
2003	\$1,378	2,289	\$61.00	20,715
2004	\$1,674	792	\$73.00	21,469
2005	\$2,400	1,345	\$105.00	19,183
2006	\$2,699	920	\$139.00	21,517
2007	\$3,289	2,715	\$169.00	21,753
2008	\$3,625	714	\$207.50	18,178
2009	\$3,796	667	\$260.50	24,652
2010	\$4,004	7,289	\$265.00	28,814
2011	\$3,817	1,168	\$290.40	29,758
2012	\$4,997	6,175	\$321.00	24,825
2013	\$4,665	339	\$333.91	20,380
2014	\$5,000	844	\$344.78	22,488
CAGR/ Average	11.8%	2,045	15.2%	23,514

Compiled from watermaster reports
Volume-weighted average of prices
CAGR: cumulative annual growth rate

A total of 28,631 AF of BAPs have been sold independently or as part of a real estate transaction, or 24.6% of the 116,412 AF BAP in the Alto Subarea. If one includes the administrative transfer of 23,892 AF to the Victor Valley Water District in 2007, then 45.1% of the BAPs have been transferred since 2002. The total value of BAPs sold independently or as part of real estate transactions is \$96,275,464.⁹

Valuation of Overlying Groundwater Rights in the Antelope Valley Adjudication

The economic valuation of the Overlying Groundwater Rights in the Antelope Valley Adjudication is based on a discounted cash flow model of water right sales and leasing. The pricing information from the Alto Subarea involves relatively small transactions, especially BAP sales. Extrapolation of pricing from small volume transactions to the valuation of the entire block of water rights would severely under-

⁹ The calculation applies the weighted average price for sales to independent parties to the BAPs transferred as a part of a real estate transaction.

estimate the value of the block of water rights.¹⁰ Therefore, the valuation replicates the type of small-volume transactions of the Alto Subarea.

Five assumptions generate the cash flows: lease prices, sale prices of groundwater rights, schedule of groundwater right sales, inflation rate and interest rate.

The valuation approach applies the market information from the Alto Subarea of the Mojave Adjudication to Antelope Valley. As noted above, they are the two largest groundwater basins in the South Lanhontan hydrologic area in Southern California. California Department of Water Resources has designated both basins as “high priority” for groundwater management. Both face severe groundwater overdraft problems without groundwater management. As such, they seem roughly comparable areas, but for one exception.

The groundwater management challenges are greater in the Antelope Valley than in the Alto Subarea. As shown in Figure 2 above, water demands are projected to be substantially higher relative to safe yield in Antelope Valley than the Alto Subarea. Since both areas are connected to the State Water Project, they face the same water supply alternatives for bringing new supplemental supplies into their basins. With a greater problem to solve in Antelope Valley than the Alto Subarea, one can reasonably anticipate that Antelope Valley must secure larger and higher cost water from supply alternatives than the Alto Subarea. As a result, using the market information from the Alto Subarea to value groundwater rights in the Antelope Valley should yield a lower bound estimate. As such, the valuation approach used below should be viewed as conservative.

¹⁰ In 2012, the City of Hesperia purchased 5,971 AF of Base Annual Production out of the Bankruptcy Auction of the Rancho Las Flores project for \$30 million. http://www.capitalholdingsinc.com/pdf_2012/121114.pdf The \$5,024/AF price was a 32% premium over the weighted average of BAP prices in 2011. Note that the BAP prices in 2013 and 2014 are still below the level the City of Hesperia paid. This experience shows that prices set in small-volume transactions understate the prices paid in large volume transactions. Therefore, using prices for small-volume transactions to value the entire block of water rights would understate the value of water rights. While the Rancho Las Flores acquisition was 5,971 AF (which is over one hundred times the average volume of BAP sales), this transaction involved only 5% of the BAPs in the Alto Subarea. With a 5% block commanding a 32% premium over the prices of small-volume transactions, the entire block of BAPs should command a substantially higher premium.

Lease Prices

Future lease prices reflect two trends: (i) the real (inflation-adjusted) lease price for water and (ii) the rate of inflation.

Table 3 shows the lease price in the Alto Subarea (from Table 2) and the inflation-adjusted lease price (“real lease price”).¹¹ For the entire period, the cumulative annual growth rate in the real lease price was 13.2%. From 2008 onward, the cumulative annual growth rate fell to 7.1%.

Table 3
Lease Price and Real Lease Price of Water in Alto Sub-area

<i>Year</i>	<i>Lease Price</i>	<i>CPI Inflation Calculator</i>	<i>Real Lease Price</i>	<i>Increase in Real Lease Price</i>
2002	\$63.00	1.31	\$82.53	
2003	\$61.00	1.28	\$78.08	-5.39%
2004	\$73.00	1.25	\$91.25	16.87%
2005	\$105.00	1.21	\$127.05	39.23%
2006	\$139.00	1.17	\$162.63	28.00%
2007	\$169.00	1.14	\$192.66	18.47%
2008	\$207.50	1.10	\$228.25	18.47%
2009	\$260.50	1.10	\$286.55	25.54%
2010	\$265.00	1.08	\$286.20	-0.12%
2011	\$290.40	1.05	\$304.92	6.54%
2012	\$321.00	1.03	\$330.63	8.43%
2013	\$333.91	1.01	\$337.25	2.00%
2014	\$344.78	1.00	\$344.78	2.23%
CAGR				
2002-14				13.2%
2008-14				7.1%

CAGR: cumulative annual growth rate

¹¹ Inflation-adjusted lease price uses the Bureau of Labor Statistics CPI Inflation Calculator that states what a dollar in an earlier year would be worth in 2014. For example, the Calculator for 2002 is 1.31. This means that a dollar in 2002 is worth \$1.31 in 2014. Therefore, the \$63/AF lease price paid in 2002 is worth \$82.53/AF in 2014 dollars.

The valuation model makes three assumptions about the increase in real lease prices. First, the assumption about the future increase in lease prices starts with the 2008-14 period (annual increase of 7.1%) rather than the entire period (13.2%) to reflect the post 2008 economic slowdown where the growth in real lease prices is generally slower than before 2008.

Second, I assume that real lease prices will eventually grow at slower rates. As California's water supply problems find solutions, one should anticipate that there is a time when real lease prices start stabilizing. The model uses two assumptions:

- How many years before real lease prices grow slower than 7.1%
- How many years thereafter will real lease prices stabilize (e.g., the annual increase falls to zero)

Given California's severe water supply challenges, it is not reasonable to assume that the growth in the real value of water will decline in the short term. The historically unprecedented low (zero) water allocations for the State Water Project and the Central Valley Project has made the use of the term "supply reliability" for these projects no longer relevant.¹² Significant new investments must be made in water resources that will prove far more expensive than past water resources. Therefore, California will remain, in the short term, in a period of rapid increases in real water prices. These forces will make groundwater increasingly valuable. Will it take 5 years, 10 years or 15 years for California to work through its water supply problems?

Once the increases in real water prices start falling, it will take years before the rate of increase in real water prices falls to zero. When will the real water price peak? Will it take 10 years, 15 years, 20 years or 25 years?

The valuation looks at the implications of the various combinations regarding the timing of the stabilization in the real lease price and averages over the outcomes in

¹² The 2014 federal and state project allocations shattered key assumptions of the water industry. See <http://hydrowonk.com/blog/2014/02/26/rethinking-californias-water-industry-part-1-a-zero-state-water-project-allocation-world/>. The water industry must go back to the drawing boards on how it thinks about water supply availability. See <http://hydrowonk.com/blog/2014/06/09/rethinking-california-part-iii-back-to-the-drawing-boards-on-water-supply-availability/>

reaching an opinion on the economic value of the proposed overlying groundwater rights in the Antelope Valley.

Prices of Groundwater Rights

In the Alto Subarea, the permanent right sold is Base Annual Production rights. Under the terms of the Mojave River Adjudication, the water available from a BAP is determined by the ratio of FPA to BAP set annually by the watermaster. Therefore, the market price of a right to pump groundwater equals the BAP market price divided by the FPA/BAP ratio set by the watermaster (see Table 4).

Table 4
Real Price of BAP in Alto Subarea versus Real Price of Groundwater Right

<i>Year</i>	<i>BAP Price</i>	<i>FPA/BAP</i>	<i>Right Price</i>
2002	\$1,710	80%	\$2,137
2003	\$1,764	75%	\$2,352
2004	\$2,093	70%	\$2,989
2005	\$2,904	65%	\$4,468
2006	\$3,157	60%	\$5,262
2007	\$3,749	60%	\$6,249
2008	\$3,987	60%	\$6,645
2009	\$4,175	60%	\$6,958
2010	\$4,324	60%	\$7,207
2011	\$4,008	60%	\$6,680
2012	\$5,147	60%	\$8,578
2013	\$4,712	60%	\$7,853
2014	\$5,000	60%	\$8,333

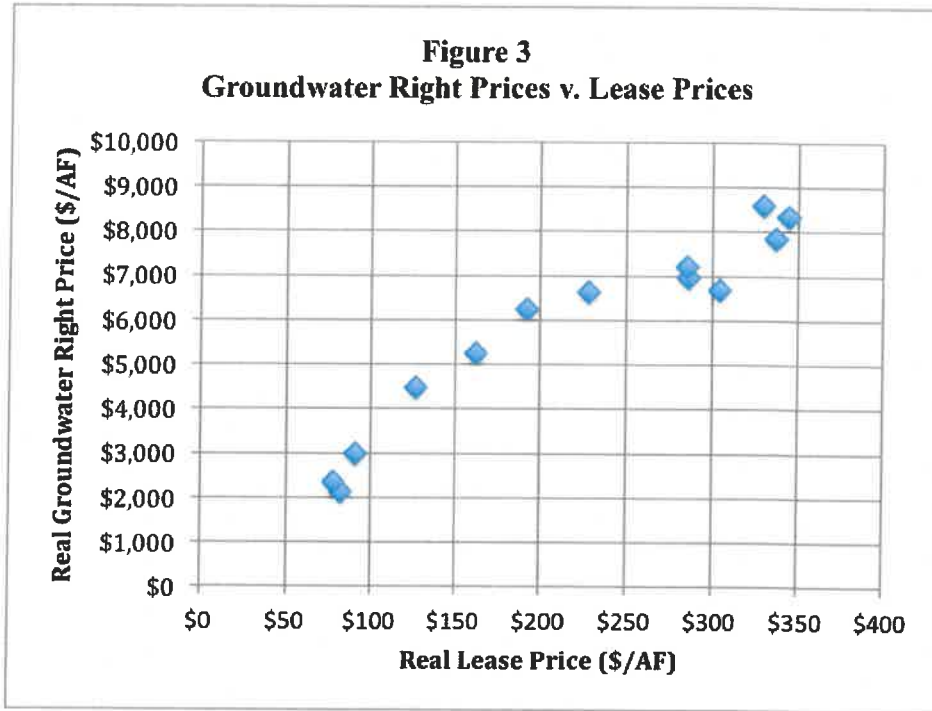
Prices of groundwater rights are related to lease prices (see Figure 2).¹³ For each one-dollar increase in the real lease price, the real groundwater right price increases by \$20.75.¹⁴ The annual variation in the real lease price in the Alto Subarea explains 92.5 percent of the annual variation in real groundwater right prices in the Alto Subarea.¹⁵

¹³ Linear regression of the Price of Rights in year “t” (R_t) against the Lease Price in year “t” (L_t) is: $R_t = \$1,270 + 20.75 L_t$ $R^2 = 0.925$.

¹⁴ *Ibid*

¹⁵ *Ibid*

The valuation model uses this relation in projecting the real price of groundwater rights based on the projection of real lease prices discussed above.



Schedule of Groundwater Right Sales and Leasing

The valuation assumes that the overlying groundwater rights in the Antelope Valley Adjudication will be eventually sold to municipal uses. Based on the experience in the Alto Subarea, where 45% of BAPs were transferred between 2002 and 2014, it may take up to 25 years to transfer the overlying groundwater rights. As previously discussed, the water situation in the Antelope Valley is much tighter than the Alto Subarea. Therefore, it is reasonable to anticipate that the sale of rights could be accomplished more quickly—15 years or 20 years.

Overlying groundwater rights can be leased until sold. Given the large discrepancy between water demand and safe yield in the Antelope Valley, one can reasonably anticipate a strong leasing market for the overlying groundwater rights.

Inflation Rate

The annual inflation rate averaged 2.22% during 2002-2014.¹⁶ This rate is consistent with the long-term inflation rate of 2.5% since the early 1980s and the yield differential between nominal 10-year treasury notes and 10-year Treasury Inflation Protected Securities.¹⁷

Interest Rate

The model uses an interest rate of 5%. This level is 50 basis points above the long-term treasury interest rate of 4.5%.¹⁸ A small risk premium is reasonable given the certainty about the legal standing of the overlying groundwater rights once a final court order is entered.

Economic Valuation

Tables 5(a) to 5(c) show the present value of revenues from sales of water rights and leasing of unsold water rights under various assumptions regarding three factors: (i) years before increase in real lease rate starts declining, (ii) years thereafter before real lease rates stabilize and (iii) years to sell groundwater rights.¹⁹ The valuation is based on the average over the various scenarios. The conclusion about the economic value of the overlying groundwater rights is based on the average of the valuations found in Table 5(a), Table 5(b) and Table 5(c): **\$951 million**.²⁰

¹⁶ Calculation based on data on CPI Inflation Calculator in Table 3.

¹⁷ For further discussion, see <http://hydrowonk.com/blog/2013/01/11/project-evaluation-ii-thoughts-about-interest-rates/#more-337>

¹⁸ *Ibid.*

¹⁹ The calculation of present value uses the “NPV” function in excel plus a mid-year adjustment for cash flows occurring throughout the year rather than year end.

²⁰ \$951 million is the average of \$892 million (Table 5(a)), \$962 million (Table 5(b)) and \$999 million (Table 5(c)).

Table 5(a)
Valuation of 58,341.6 Acre Feet of Overlying Groundwater Rights
(Years Before Increase in Real Lease Rate Starts Declining: 5)

<i>Years Real Price Stabilize</i>	<i>Years to Sell</i>		
	15	20	25
10	\$779	\$836	\$880
15	\$803	\$890	\$958
20	\$815	\$919	\$1,013
25	\$822	\$936	\$1,046
Average	\$805	\$895	\$974

Valuation (average over all scenarios): \$892 million

Table 5(b)
Valuation of 58,341.6 Acre Feet of Overlying Groundwater Rights
(Years Before Increase in Real Lease Rate Starts Declining: 10)

<i>Years Real Price Stabilize</i>	<i>Years to Sell</i>		
	15	20	25
10	\$836	\$941	\$1,021
15	\$841	\$964	\$1,075
20	\$844	\$975	\$1,103
25	\$845	\$981	\$1,120
Average	\$841	\$965	\$1,080

Valuation (average over all scenarios): \$962 million

Table 5(c)
Valuation of 58,341.6 Acre Feet of Overlying Groundwater Rights
(Years Before Increase in Real Lease Rate Starts Declining: 15)

<i>Years Real Price Stabilize</i>	<i>Years to Sell</i>		
	15	20	25
10	\$851	\$994	\$1,125
15	\$851	\$999	\$1,147
20	\$851	\$1,001	\$1,158
25	\$851	\$1,002	\$1,164
Average	\$851	\$999	\$1,148

Valuation (average over all scenarios): \$999 million

Conclusion

The overlying groundwater rights in the Antelope Valley Adjudication have substantial economic value. Antelope Valley is a high growth area where water demands have overrun safe yield. The situation will intensify in the future. A comparable, though less severe situation exists in the Alto Subarea of the Mojave River Adjudication. Using the market information on leasing and sales of water rights in the Alto Subarea, a reasonable (conservation) valuation of the overlying groundwater rights in the Antelope Valley Adjudication is \$951 million, or about \$16,300 per AF for the 58,341.6 AF of overlying groundwater rights.

Stratecon's economic valuation uses standard financial valuation techniques in reaching its conclusion. The data relied upon are from the Mojave River Adjudication watermaster and California Department of Water Resources. As such, they represent the best and accurate data sources.

If you have any questions, please do not hesitate to contact me.

Very Truly Yours,

A handwritten signature in black ink, appearing to read "Rodney T. Smith". The signature is stylized and cursive.

Rodney T. Smith, Ph.D.
President

Confidential

Page 15 of 15

Exhibit No.

6 – Willis – 15

Land Use or Population Based Water Demand Projections (AF)

	2010	2035 Growth
Mutuals	5,000	8,660
Littlerock Irrigation District	2,000	5,680
Cal Water	1,000	7,570
Plant 42	2,000	3,660
Unincorporated Kery	6,000	28,000
		37,570

Range of Willis Class	Willis Class	Share
	25%	9,393
	40%	15,028
		16%
		26%

Pool 58341.6

Source: Integrated Water Resource Management Plan for the Antelope Valley, 2011, p. 36

Comment: Census Tract projections assuming that entities may serve new demands, but water demands may be served by other entities

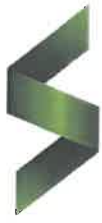
Growth in Urban Footprint in Antelope Valley

	2006	2050
Population/Acres	3.3	3.9
Population	440,800	1,025,100
Acres	133,576	262,846

Source: DWR Scenarios of Future Water Demand Through 2050, p. 55
 Urban Water Management Plan for Antelope Valley

Exhibit No.

6 – Willis – 16



STRATECON INC.

July 14, 2015

VIA EMAIL

Ralph B. Kalfayan, Esq., LL.M.
Krause, Kalfayan, Benink & Slavens, LLP
550 W. C. Street, Suite 530
San Diego, CA 92101

RE: Analysis of the Consistency of the Proposed Physical Solution with the Willis Class Judgment

Dear Mr. Kalfayan:

You have requested that *Stratecon Inc*

c. analyze the consistency of the Proposed Physical Solution with the Willis Class Judgment. As discussed below, there are three inconsistencies:

1. The Proposed Physical Solution allocates greater groundwater rights to non-overlying production than the Willis Class Judgment.
2. The Proposal Physical Solution sets at zero the Willis Class's "fair and just allocation" of the water available to Overlying Owners correlative rights under the Willis Class Judgment.
3. By not recognizing the groundwater rights of the Willis Class, the Proposed Physical Solution places an economically material, discriminatory burden on future groundwater production by the Willis Class.

Summary of Willis Class Judgment

The Willis Class Groundwater Rights are defined in the Willis Class Stipulation of Settlement.¹ "Willis Class members have an Overlying Right to a correlative share of

¹ Willis Class Stipulation of Settlement, Antelope Valley Groundwater Cases, July 13, 2010 (herein after cited as "Willis Class Judgment").

85% of the Federally Adjusted Native Safe Yield for reasonable and beneficial uses on their overlying lands free of any Replacement Assessment.”² “The Settling Defendants will not take any positions or enter into any agreements that are inconsistent with the exercise of the Willis Class Members’ Overlying Right to produce and use their correlative share of 85% of the Basin’s Federally Adjusted Native Safe Yield.”³ The Willis Class Judgment defines the following capitalized terms:

- *Overlying Right*: “the appurtenant right of an Overlying Owner to use groundwater from the Native Safe Yield for overlying reasonable and beneficial use”.⁴
- *Native Safe Yield*: “the amount of pumping . . . (that) results in no long-term depletion of Basin groundwater storage.” “Pumping of the Settling Parties’ share of Native Safe Yield is not subject to any Replacement Assessment.”⁵ The settlement stipulates that the Native Safe Yield is 82,300 acre feet (“AF”).⁶
- *Federally Adjusted Native Safe Yield*: “Native Safe Yield less the actual annual production of the United States’ during the prior year pursuant to its Federal Reserve Right.”⁷

In effect, the Willis Class receives a correlative share of 85% of the Native Safe Yield (82,300 AF) less the actual annual production of the United States under its Federal Reserve Right. Production under this right is not subject to any replenishment assessment.

The Willis Class Judgment defines correlative rights as “Overlying Owners may make reasonable and beneficial use of the water in the Basin and that, if the supply of water is insufficient for all reasonable and beneficial needs, each Overlying Owner is entitled to a fair and just proportion of the water available to the Overlying Owners.”⁸

² Willis Class Judgment, p. 10.

³ *Ibid.*

⁴ *Ibid.*, p. 7.

⁵ *Ibid.*, pp. 6-7.

⁶ *Ibid.*, p. 9.

⁷ *Ibid.*, p. 6.

⁸ *Ibid.*, pp. 5-6

Inconsistency #1: The Proposed Physical Solution Allocates Greater Groundwater Rights to Non-Overlying Production than the Willis Class Judgement

The Proposed Stipulated Interlocutory Judgment and Physical Solution specifies production rights for Overlying Production, Small Pumper (Wood) Class, Federal Reserve Rights, State of California, and Non-Overlying Production (see Table 1).⁹ These allocations exhaust the Native Safe Yield of 82,300 AF.

**Table 1
Production Rights in Proposed Physical Solution**

<i>Party</i>	<i>Acre-Feet</i>
Overlying Production	58,341.6
Small Pumpers (Woods)	3,806.4
Federal Reserve Rights	7,600.0
State of California	207.0
Non-Overlying Production	12,345.0
Total	82,300.0

The 12,345 acre feet (“AF”) allocated to non-overlying production equals 15% of Native Safe Yield.¹⁰ That is, non-overlying production receives 15% of the Federally Adjusted Native Safe Yield assuming that the actual use of Federal Reserve Rights is zero.

The Willis Class Judgment limits non-overlying production to 15% of Federally Adjusted Native Safe Yield.¹¹ Therefore, the production rights of non-overlying producers declines with the actual use of Federal Reserved Rights (see Figure 1 attached). Under the Willis Class Judgment, the production rights fall by 15% of the actual use of Federal Reserved Rights. As the actual use of Federal Reserved Rights increases to the amount recognized in the Proposed Physical Solution, the production rights of non-

⁹ Proposed Stipulated Interlocutory Judgment and Physical Solution (“Proposed Physical Solution), Draft July 31, 2014, pp. 15-23 and Exhibit 4.

¹⁰ 12,345 AF = 15% 82,300 AF

¹¹ “The Settling Parties agree that the Settling Defendants collectively have the right to produce up to 15% of the Basin Native Safe Yield free of any Replacement Assessments.” Willis Class Judgment, p. 10 (emphasis added).

overlying producers declines to 11,205 AF, the minimum available under the Willis Class Judgement.

In 2011 and 2012, respectively, the actual use of Federal Reserved Rights was 1,246.09 AF and 1,450.59 AF.¹² Under these circumstances, the production rights of non-overlying producers would be 12,158.09 AF and 12,127.41 AF respectively.¹³ These amounts of allowed pumping is less than the 12,345 AF stated for non-overlying producers in the Proposed Physical Solution.

The Proposed Physical Solution further states:¹⁴

“In the event that the United States does not produce its entire 7,600 acre feet in any given Year, the unused amount in any Year will be allocated to the Non-Overlying Right holders in the following Year . . .”

That is, the non-overlying producers receive 12,345 AF (amount under the Willis Class Judgment when there is no actual use of Federal Reserved Rights) plus the amount of unused Federal Reserved Rights. Under the circumstances where the actual use of Federal Reserved Rights were in the amounts used in 2011 and 2012, the allowed production of non-overlying producers under the Proposed Physical Solution would be 18,698.91 AF and 18,494.41 AF respectively.¹⁵ These allocations represent an increase above the allocations under the Willis Class Judgement by 6,540.82 AF and 6,367.00 AF respectively, equaling about 23% of the Native Safe Yield.¹⁶ The difference between the allocations decline with the actual use of Federal Reserve Rights (see Figure 2 attached).

¹² Amended [~~Proposed~~] Statement of Partial Decision for Phase IV Trial with Party Name Corrections, in *Antelope Valley Groundwater Cases*, dated June 29, 2013, filed July 19, 2013, see p. 4 for US: Edwards AFB and Plant 42.

¹³ 12,158.09 AF = 15% (82,300 AF – 1,246.09 AF)

12,127.41 AF = 15% (82,300 AF – 1,450.59 AF)

¹⁴ Proposed Physical Solution, section 5.1.4.1, p. 19.

¹⁵ 18,699 AF = 12,345 AF + (7,600 AF – 1,246.09 AF)

18,494 AF = 12,345 AF + (7,600 AF – 1,450.59 AF)

¹⁶ 6,540.82 AF = 18,698.91 AF – 12,158.09 AF, or 23% = 18,698.91 AF/82,300 AF

6,367.00 AF = 18,494.41 AF – 12,127.41 AF, or 22% = 18,494.41 AF/82,300 AF

Inconsistency #2: The Proposed Physical Solution Eliminates the Willis Class's Correlative Share of Federally Adjusted Native Safe Yield

The Proposed Physical Solution states that the Willis Class pumpers “can Produce Groundwater from the Native Safe Yield for reasonable and beneficial use on their overlying land provided they pay the Replacement Water Assessment for any such Production.”¹⁷

Under the Willis Class Judgment, Willis Class members have “an Overlying Right to a correlative share of 85% of the Federally Adjusted Native Safe Yield for reasonable and beneficial uses on their overlying lands free of any Replacement Assessment.”¹⁸ The Willis Class Judgment defined correlative rights as “Overlying Owners may make reasonable and beneficial use of the water in the Basin and that, if the supply of water is insufficient for all reasonable and beneficial needs, each Overlying Owner is entitled to a fair and just proportion of the water available to the Overlying Owners.”¹⁹

The Proposed Physical Solution sets the Willis Class's correlative share at zero. Unlike the Overlying Owners who receive 58,341.6 AF under the Proposed Physical Solution, the Willis Class must incur the obligation of paying Replacement Water Assessments when they develop their lands, provided that they receive Watermaster approval for new production under onerous terms (see below). Under what standards of fairness and justice is an allocation that gives one set of Overlying Owners all the economic value of 85% of the Federally Adjusted Native Safe Yield and provides another set of Overlying Owners with nothing but a cost burden? The Proposed Physical Solution offers no justification.

In other words, the Willis Class Judgment provided the Willis Class with a correlative share of the Federally Adjusted Native Safe Yield. The Proposed Physical Solution provides the Willis Class with no correlative share.

¹⁷ Proposed Physical Solution, pp. 16-17.

¹⁸ Willis Class Judgment, p. 10.

¹⁹ *Ibid*, pp. 5-6.

Inconsistency #3: By not recognizing the groundwater rights of the Willis Class, the Proposed Physical Solution places an economically discriminatory burden on future groundwater production by the Willis Class.

The Proposed Physical Solution defines New Production as “Any Production of Groundwater from the Basin not of right under this Judgment, as of the date of the Judgment.”²⁰ Where the Willis Class Judgment recognized the Willis Class’s correlative share of the Federally Adjusted Native Safe Yield, the Proposed Physical Solution does not recognize the Willis Class’s groundwater rights.

Relegating the exercise of the Willis Class groundwater rights to “new production” places a material burden on the Willis Class. The Proposed Physical Solution would place thirteen requirements on “New Production” that includes many obligations outside the jurisdiction of the Watermaster.²¹ The list includes, among many requirements, hydrologic information related to well development, completion of all federal, state, local and land use entitlements, environmental compliance, economic impact analysis and an open-ended, non-specific “other pertinent information which the Watermaster may require.” None are required for groundwater production for rights “under this Judgment.”

This differential treatment of the Willis Class represents a “poison pill” for development of Willis Class lands. I have personal knowledge concerning the development of water projects. The proposed requirements for “new production” evidences a lack of understanding of how the world works. For example, land use approvals cannot be obtained without designation of a water supply. Yet, the Proposed Physical Solution requires obtaining land use approval prior to receiving approval of a groundwater source from the Watermaster. Further, it would be not be prudent for a developer to initiate environmental reviews of a project before securing a water supply.

These requirements are unprecedented for adjudicated groundwater basins in California. For example, a party without groundwater rights can acquire Free Production Allowances (groundwater rights recognized by the Mojave Adjudications) in the Mojave Basin. The major substantive requirement is that the party must become a party to the

²⁰ Proposed Physical Solution, section 3.5.19, p. 9.

²¹ Proposed Physical Solution, section 19.5.13.

Mojave Judgment.²² The list of burdensome (poison pill) requirements in the Proposed Physical Solution are not found.

Conclusion

The Proposed Physical Solution is not consistent with the Willis Class Judgment. There are three problems.

First, the Proposed Physical Solution provides non-overlying producers with greater allocation of groundwater rights than under the Willis Class Judgment. Using the average actual use of Federal Reserve Rights for 2011 and 2012, the Proposed Physical Solution grants non-overlying producers an extra 6,453.91 AF of allowed pumping without obligation to pay a Replacement Water Assessment.²³ Given that the economic value of groundwater rights in the Antelope Valley is \$1,630/AF,²⁴ the extra pumping granted non-overlying producers is worth \$106 million.²⁵

Second, the Proposed Physical Solution sets the Willis Class correlative share of the Federally Adjusted Native Safe Yield at zero. While Stratecon is still investigating the basis of a reasonable correlative share for the Willis Class, I believe that a reasonable range may be between 15% and 25%. In this instance, the Proposed Physical Solution extinguishes between 10,321.34 AF and 17,202.23 AF of groundwater rights available under the correlative rights recognized by the Willis Class Judgment.²⁶ With the economic value of groundwater rights at \$16,300/AF, the Proposed Physical Solution expropriates groundwater rights from the Willis Class worth between \$168 million and \$280 million.²⁷

²² See section 12, Transfers of Production Rights of the Mojave Watermaster Rules & Regulations.

²³ 6,453.91 AF = average of 6,453.91 AF and 6,367.00 AF, the extra allowed pumping from the Proposed Physical Solution given the actual water use of Federal Reserved Rights in 2011 and 2012 respectively.

²⁴ Letter from Rodney T. Smith, Ph.D. to Mr. Ralph Kalfayan, "Economic Valuation of Overlying Groundwater Rights in the Antelope Valley Groundwater Cases," January 9, 2015.

²⁵ \$106 million \approx 6,453.91 AF \cdot \$16,300/AF

²⁶ 10,321.34 AF = 15% \cdot 85% (82,300 AF - 1,348.34 AF)

17,202.23 AF = 25% \cdot 85% (82,300 AF - 1,348.34 AF)

²⁷ \$168 million \approx 10,321.34 AF \cdot \$16,300/AF

Third, the Proposed Physical Solution relegates the exercise of Willis Class groundwater rights to a regulatory purgatory. The substance of the Proposed Physical Solution speaks for itself. Having extinguished the Willis Class's correlative rights found in the Willis Class Judgment, the Proposed Physical Solution proposes economic barriers to groundwater development on Willis Class lands.

If you have any questions regarding the substance or basis of Stratecon's opinion, please do not hesitate to contact me.

Very Truly Yours,

A handwritten signature in black ink, appearing to read "Rodney T. Smith". The signature is stylized with a large initial "R" and a long horizontal stroke at the end.

Rodney T. Smith, Ph.D.
President

\$280 million \approx 17,202.23 AF \cdot \$16,300/AF

Figure 1
Non-Overlying Production Rights versus
Actual Use of Federal Reserved Rights

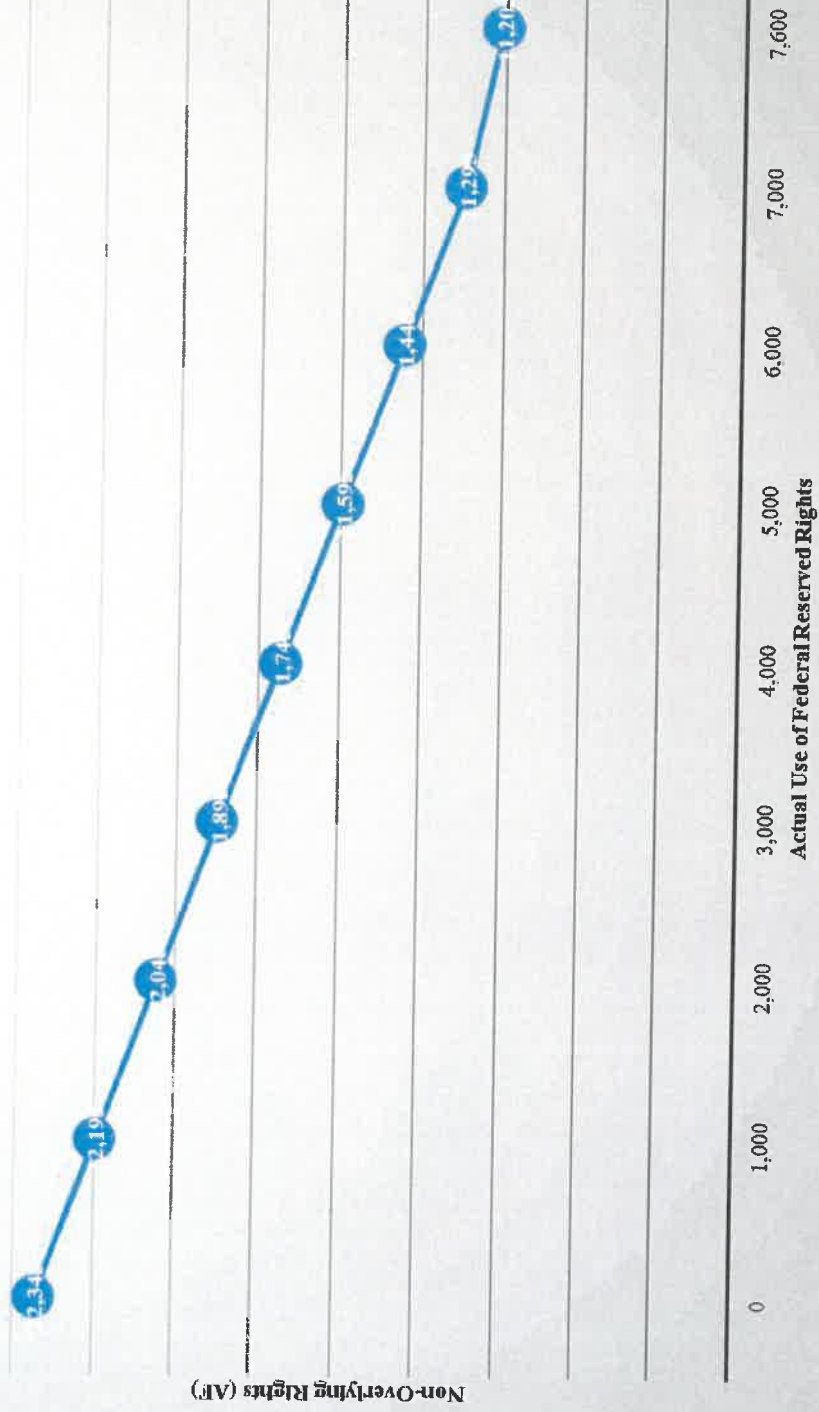


Figure 2
Non-Overlying Production Under Willis Class Judgment
versus Proposed Physical Solution

—●— Willis Class Judgment —●— Proposed Physical Solution



Exhibit No.

6 – Willis – 17

STIPULATION EXHIBIT 1

1 **18.5.11 Review of Calculation of Imported Water Return Flow**

2 **Percentages.** Ten (10) Years following the end of the Rampdown, in the seventeenth (17th)
3 Year, or any time thereafter, the Watermaster Engineer may recommend to the Court an increase
4 or decrease of Imported Water Return Flow percentages. The Watermaster Engineer shall initiate
5 no recommendation to change Imported Water Return Flow percentages prior to end of the
6 seventeenth (17th) Year. In the event the Watermaster Engineer recommends in its report to the
7 Court that Imported Water Return Flow percentages for the Basin may need to be revised based
8 on the best available science, the Court shall conduct a hearing regarding the recommendations
9 and may order a change in Imported Water Return Flow percentages. Watermaster shall give
10 notice of the hearing pursuant to Paragraph 20.6. The Imported Water Return Flow percentages
11 set forth in Paragraph 5.2 shall remain in effect unless revised by Court order according to this
12 Paragraph. If the Court approves a reduction in the Imported Water Return Flow percentages,
13 such reduction shall be implemented over a seven (7) Year period. Only the Court can change the
14 Imported Water Return Flow percentages.

15 **18.5.12 Production Reports.** The Watermaster Engineer shall require each
16 Producer, other than unmetered Small Pumper Class Members, to file an annual Production report
17 with the Watermaster. Producers shall prepare the Production reports in a form prescribed by the
18 rules and regulations. The Production reports shall state the total Production for the reporting
19 Party, including Production per well, rounded off to the nearest tenth of an acre foot for each
20 reporting period. The Production reports shall include such additional information and supporting
21 documentation as the rules and regulations may reasonably require.

22 **18.5.13 New Production Application Procedure.** The Watermaster
23 Engineer shall determine whether a Party or Person seeking to commence New Production has
24 established the reasonableness of the New Production in the context of all other uses of
25 Groundwater in the Basin at the time of the application, including whether all of the Native Safe
26 Yield is then currently being used reasonably and beneficially. Considering common law water
27 rights and priorities, the mandate of certainty in Article X, section 2, and all other relevant
28

STIPULATION EXHIBIT 1

1 factors, the Watermaster Engineer has authority to recommend that the application for New
2 Production be denied, or approved on condition of payment of a Replacement Water Assessment.
3 The Watermaster Engineer shall consider, investigate and recommend to the Watermaster
4 whether an application to commence New Production of Groundwater may be approved as
5 follows:

6 **18.5.13.1** All Parties or Person(s) seeking approval from the
7 Watermaster to commence New Production of Groundwater shall submit a written application to
8 the Watermaster Engineer which shall include the following:

9 **18.5.13.1.1** Payment of an application fee sufficient to recover
10 all costs of application review, field investigation, reporting, and hearing, and other associated
11 costs, incurred by the Watermaster and Watermaster Engineer in processing the application for
12 New Production;

13 **18.5.13.1.2** Written summary describing the proposed quantity,
14 sources of supply, season of use, Purpose of Use, place of use, manner of delivery, and other
15 pertinent information regarding the New Production;

16 **18.5.13.1.3** Maps identifying the location of the proposed New
17 Production, including Basin Subarea;

18 **18.5.13.1.4** Copy of any water well permits, specifications and
19 well-log reports, pump specifications and testing results, and water meter specifications
20 associated with the New Production;

21 **18.5.13.1.5** Written confirmation that the applicant has obtained
22 all applicable Federal, State, County, and local land use entitlements and other permits necessary
23 to commence the New Production;

24 **18.5.13.1.6** Written confirmation that the applicant has complied
25 with all applicable Federal, State, County, and local laws, rules and regulations, including but not
26 limited to, the California Environmental Quality Act (Public Resources Code §§ 21000, et. seq.);
27

STIPULATION EXHIBIT 1

1 **18.5.13.1.7** Preparation of a water conservation plan, approved
2 and stamped by a California licensed and registered professional civil engineer, demonstrating
3 that the New Production will be designed, constructed and implemented consistent with
4 California best water management practices.

5 **18.5.13.1.8** Preparation of an analysis of the economic impact of
6 the New Production on the Basin and other Producers in the Subarea of the Basin;

7 **18.5.13.1.9** Preparation of an analysis of the physical impact of
8 the New Production on the Basin and other Producers in the Subarea of the Basin;

9 **18.5.13.1.10** A written statement, signed by a California licensed
10 and registered professional civil engineer, determining that the New Production will not cause
11 Material Injury;

12 **18.5.13.1.11** Written confirmation that the applicant agrees to pay
13 the applicable Replacement Water Assessment for any New Production.

14 **18.5.13.1.12** Other pertinent information which the Watermaster
15 Engineer may require.

16 **18.5.13.2** **Finding of No Material Injury.** The Watermaster Engineer
17 shall not make recommendation for approval of an application to commence New Production of
18 Groundwater unless the Watermaster Engineer finds, after considering all the facts and
19 circumstances including any requirement that the applicant pay a Replacement Water Assessment
20 required by this Judgment or determined by the Watermaster Engineer to be required under the
21 circumstances, that such New Production will not cause Material Injury. If the New Production is
22 limited to domestic use for one single-family household, the Watermaster Engineer has the
23 authority to determine the New Production to be *de minimis* and waive payment of a Replacement
24 Water Assessment; *provided*, the right to Produce such *de minimis* Groundwater is not
25 transferable, and shall not alter the Production Rights decreed in this Judgment.
26
27
28

Exhibit No.

6 – Willis – 18

Stephen D. Roach, MAI, SRA, AI-GRS

Professional Experience

Principal - Jones, Roach & Caringella, Inc. (previously Jones & Roach, Inc.), since 1986
Appraiser/Consultant - Andrew A. Smith Co., 1979-1986

Mr. Roach has provided appraisal, appraisal review, and consulting services regarding properties located in the California counties of San Diego, Orange, Los Angeles, Riverside, Imperial, San Bernardino, Ventura, Santa Barbara, San Luis Obispo, Kern, San Mateo, Santa Clara, Alameda, Santa Cruz, and Contra Costa. In addition, Mr. Roach has provided such services regarding properties in more than 35 U.S. states, with recent experience in Nevada, Arizona, Nebraska, New York, Texas, Tennessee, Indiana, Connecticut, Ohio, and New Jersey.

Expert Witness, Mediation, Arbitration, and Court Experience

Extensive Deposition and Trial Experience

Qualified as Expert Witness:

Superior Court: San Diego, Los Angeles, Ventura, Riverside, Orange, and San Luis Obispo Counties, CA

Federal District Court: San Diego, CA

Federal Bankruptcy Court: San Diego, CA; Phoenix, AZ; New York, NY

Court of Federal Claims: San Diego, CA; Washington, DC

Judicial District Court: Dallas County, TX

Administrative Law Hearing: Los Angeles, CA

Arbitrator for Valuation Matters in San Diego County, CA; Orange County, CA; Los Angeles County, CA, and Honolulu, HI
Have testified in numerous mediations and arbitrations as an expert witness

Professional Affiliations

Member, Appraisal Institute (MAI No. 7490; SRA; AI-GRS)

Currently certified under Appraisal Institute continuing education program

San Diego Chapter Professional Standards/Ethics Education Committee Chair (1993-1995)

Member of Region VII Regional Committee (1993)

Director of San Diego Chapter (1989-1992) and Member of Admissions Committee (1988-1991)

Chief Course Reviewer for Appraisal Institute Courses 510, 700, 705, and 715 (2001-2009)

Chief Course Reviewer for Appraisal Institute Course 310 (1996-2001)

Course Content Expert Team member for Appraisal Institute courses General Appraiser Income Approach/Parts 1 and 2 (2010-current)

Course Content Expert Team member for Appraisal Institute courses The Appraiser as an Expert Witness: Preparation and Testimony, Condemnation Appraising: Principles and Applications, and Litigation Appraising: Specialized Topics and Applications (2010-current)

Chair of Curriculum Subcommittee, National Education Committee (1999-2001); Member (1996-2004)

Member of General Comprehensive Examination Panel (2002-current)

Member of Education Committee (1999-2001; 2006-2009) and Qualifying Education Committee (1999-2001)

Vice-Chair of Education Committee (2008-2009)

Chair of International Relations Committee (2010-2013); Vice-Chair of International Relations Committee (2010)

Member of Strategic Planning Committee (2010-current); Vice-Chair of Strategic Planning Committee (2014)

Member of 717 Qualifying Education Reorganization Project Team (2002-2009)

Member of Advanced Education Specification Team (2006-2007)

Chair of Core Competency Project Team (2008-2011)

Member of Governance Work Group (2013)

Trustee, Appraisal Institute Education Trust (2015)

California Certified General Real Estate Appraiser (No. AG002159)

Nevada Certified General Real Estate Appraiser (No. A.0206288-CG)

Arizona Certified General Real Estate Appraiser (No. 31475 - Expired)

Member, International Right-of-Way Association (Served as a Director of San Diego Chapter 11 from 1999-2007)

Member, Lambda Alpha International (Honorary Society for the Advancement of Land Economics) (2010-current)

Principal Member, Real Estate Counseling Group of America (2010-current)

Educational Background

B.S. degree in Real Estate, San Diego State University - 1978 (Graduated Summa Cum Laude; received 1978 Robert C. Hird II Memorial Scholarship in Real Estate)

Professional Courses Completed:

Capitalization Theory and Techniques	1979, 1986, 1988
Real Estate Investment Analysis	1982
Real Estate Appraisal Principles	1984
Basic Valuation Procedures	1984
Standards of Professional Practice	1984, 1987, 1992, 1999, 2003, 2005, 2007, 2008, 2011, 2013, 2015
Business Practices and Ethics	2008, 2013
Case Studies in Real Estate Valuation	1985
Valuation Analysis and Report Writing	1985
Fundamentals of Separating Real Property, Personal Property, and Intangible Business Assets	2012
International Financial Reporting Standards for the Real Property Appraiser	2012
Review Theory - General	2015

Seminars Attended:

Land Use	1980
Real Estate Risk Analysis	1983
Subdivision Analysis	1984
Appraising Commercial Properties	1985
Appraising for the Institutional Investor	1987
Subdivision Analysis	1987
Valuation of Lease Interests	1987
Faculty Training Seminar	1988
Appraising From Plans and Specifications	1988
Apartment Seminar	1990
Planning and Land Use	1990
Demographics and Feasibility Analysis	1990
Litigation Seminar	1984, 1986, 1989, 1990, 1992, 1994, 1996, 2007
State Licensing and Certification Seminar	1991
Understanding Limited Appraisals & Appraisal Reporting Options: General	1994
Understanding Environmental Contamination in Real Estate	1999
Fair Lending and the Appraiser	1994
OREA Federal and State Laws and Regulations	1995, 1999
Dynamics of Office Building Valuation	1995
Case Studies in Limited Partnership and Common Tenancy Valuation	2002
San Diego Economic Forecast	2006
Legal Aspects of Easements	1984
The Skills of Expert Testimony	1988
Easement Valuation	1990
The Comprehensive Appraisal Workshop	1989
Pan Pacific Congress of Valuers	2004 (Taiwan, R.O.C.), 2006 (USA), 2008 (S. Korea)
Uniform Appraisal Standards for Federal Land Acquisitions	2007
XXV Union of PanAmerican Associations of Valuers Congress	2010
Appraising for the IRS: What you Need to Know	2011
IRS Valuation Summit	2013
Case Studies in Marketability Analysis	2013
The Green Advisory Guide to Valuing High Performance Green Buildings (RECGA)	2013
Determinants of Building Level Returns and Cap Rates (RECGA)	2013
IRWA Annual Valuation Seminar	2014
Converting Income to Value (RECGA)	2014
Dockin' USA - A Spacial Hedonic Valuation of Waterfront Properties (RECGA)	2014
Valuation of Long Term Leased Fee Interests Under Major Buildings (RECGA)	2014
Subdivision Analysis in Southern California	2014
Using Social Media Data in Commercial Real Estate Models (RECGA)	2014
Conflicts of Interest, Complexity, and the Mortgage Crisis (RECGA)	2014
Shale Gas: An Energy Revolution (RECGA)	2014
Science Friction - An Exploration of Vacancy and Value (RECGA)	2014
Recent Trends in Institutional Real Estate and Public and Private Real Estate (RECGA)	2014
Two-Day Advanced Income Capitalization/A	2015
Land Grant System, Water Rights, and Indigenous Peoples (RECGA)	2015
Commercial Building Automation (RECGA)	2015

Seminars Attended (continued):

Overview of Bureau of Land Management (RECGA)	2015
Current Issues in Easements and Eminent Domain (RECGA)	2015
Appraisal of Southwest Art and Collectibles (RECGA)	2015

Professional Honors

Awarded 2010 President's Award for outstanding service to the Appraisal Institute
Awarded 2009 Chapter Service Award for outstanding service to the San Diego Chapter of the Appraisal Institute
Awarded 2004 Chapter Service Award for outstanding service to the San Diego Chapter of the Appraisal Institute
Awarded 2003 Dr. William N. Kinnard, Jr., PhD Award for outstanding contributions to Appraisal Institute education
Awarded April 2015 Volunteer of Distinction Award for Appraisal Institute Region VII
Discussion Leader - 1993 Appraisal Institute Young Advisory Committee Meeting, Washington, DC
Invited Participant - 1991 and 1992 Appraisal Institute Young Advisory Committee Meetings

Other

Stephen D. Roach, MAI, SRA has completed the Appraisal Institute's *Litigation Professional Development Program* and is listed on the Litigation Professional Development Program Registry on the Appraisal Institute's Web Page.
Stephen D. Roach, MAI, SRA has completed the Appraisal Institute's *Valuation of the Components of a Business Enterprise Professional Development Program* and is listed on the Valuation of the Components of a Business Enterprise Professional Development Program Registry on the Appraisal Institute's Web Page.
Served on the selection committee for the Robert C. Hird II Memorial Scholarship in Real Estate (SDSU) - 2001-2012

Types of Appraisals/Properties Appraised

Agricultural	Leasehold and Leased Fee Interests	Residential Income Properties
Auto Dealerships	LLC Interests	Residential Subdivision Acreage
Commercial Condominiums	Master-Planned Communities	Restaurants
Contaminated Properties	Mineral Extraction Properties	Retail Centers
Easements	Mitigation and Open Space Land	Regional Malls
Farm and Ranch Land	Mobile Home Parks / Mobile Homes	Reviews
Fractional Interests	Office and Medical Office Buildings	Self Storage Facilities
Historical (Retrospective) Appraisals	Partial Acquisitions	Single Family Residences
Hotels/Motels/SRO Hotels	Partnership Interests	Tidelands Properties
Indian Reservations	Research and Development	Vacant Land
Industrial Properties	Residential Condominiums	Wetlands

Partial List of Clients - Developers and Investors

The Allen Group	General Growth Properties	Pardee Construction Company
American Assets, Inc.	Genstar Land Company	Phase One Development
American National Investments, Inc.	Griffin Properties	Premier Coastal Development
Bascom Group	Hearthstone Realty Advisors	Raintree Realty, LLC
BHA Properties	Home Capital Development Corp.	Red Mountain Retail Group
Boardwalk Development	Howard Hughes Heirs	Robinhood Development
Bosa Development	Hunt Building Corp.	Sammis Properties
Buie Corporation	Inland American Real Estate Trust	Seymour Lewis Development
Cornerstone Realty Advisors	Inland Western Retail Real Estate Trust	Southern California Financial Corp.
Century West Development	Intergulf Development	Starwood Development, LP
Citicorp Real Estate, Inc.	Janopaul + Block Co.	Sunroad Enterprises
ColRich Development	Kelwood Development Company	Thomas Enterprises
D.R. Horton	Kilroy Realty	Universal Medical Buildings
EastGroup	Legacy Commercial Partners	WAM Development Group
Extra Space Storage	The McMillin Companies	Westwind Development
Farmers and Merchants Trust Co.	Nexus Development Corporation	Western Devcon
Fenton Western Properties	Ocean Pacific Companies	Western Pacific Development
Garden Communities	Ohio State Teachers Retirement Fund	Westfield
Gatlin Development		

Partial List of Clients - Lenders

Bank of America NT&SA	Coast Federal Bank	NationsBank
Bank of California	East West Bank	San Diego National Bank
Bank of San Diego	First Interstate Bank	Security Pacific National Bank
California First Bank	Great American Bank	Union Bank
Century West Development	HomeFed Bank	Wells Fargo Bank
Citicorp Acceptance Company	Imperial Federal Savings Association	Western Financial Savings Bank
City National Bank	Lincoln Savings, F.A.	

Partial List of Clients - Public Agencies

California Dept. of Transportation
Cardiff School District
Centre City Devel. Corp. (CCDC)
Chaffey Joint Union HS District
City of Chula Vista
City of Corona
City of Coronado
City of El Centro
City of Escondido
City of Fontana
City of Lake Forest
City of Moreno Valley
City of Murrieta
City of Oceanside
City of Ontario
City of Poway
City of San Buenaventura
City of San Diego
City of Santee
City of Thousand Oaks
City of Tustin

Clark County (NV)
Colton Joint Union School District
County of San Diego
Cucamonga Valley Water District
Elsinore Valley MWD
Fallbrook Union Elementary District
Fallbrook Union High School District
Nevada Department of Transportation
North County Transit District
Oceanside Redevelopment Agency
Oceanside Unified School District
Orange County Trans. Authority
Orange County Flood Control District
Rancho California Water District
Regents of the University of California
Resolution Trust Corporation (RTC)
Rialto Unified School District
Riverside County Transportation
Commission
Riverside County Flood Control Dist.

San Diego Metropolitan Transit System
San Diego Unified School District
San Diego Unified Port District
Santa Clara Valley Transportation
Authority
Southeast Economic Devel. Corp.
State of California
22nd District Agricultural Association
United States Air Force
United States Army Corps of Engineers
United States Bureau of Indian Affairs
United States Bureau of Reclamation
United States Department of Homeland
Security
United States Department of Justice
United States Forest Service
United States Internal Revenue Service
United States Navy
United States Postal Service
Western Municipal Water District

Partial List of Clients - Corporations and Individuals

Ace Parking
American Hardware Mutual Ins. Co.
ARCO Petroleum Products Company
Bob Baker Enterprises
Carl Karcher Enterprises
Century Life Church
Chevron USA
Chicago Title Insurance Company
Chinese Community Church
Circle Line Statue of Liberty Ferry
Coldwell Banker Realty Advisory
Services
Columbia/HCA
Consolidated Electrical Distributors
Cost Plus
Crossword Christian Church
First American Title Insurance Co.

Fleming Companies
Ford Motor Company
Fraser Engineering Corporation
General Mills Restaurants, Inc.
Grace International Church
Greyhound Corporation
Highland Capital Management L.P.
Honey Baked Ham, Inc.
Insurance Company of the West
International Transportation Service
John Burnham Company
Judge Gilbert Harelson (Retired)
Judge Frederic Link
Judge Ross Tharpe (Retired)
Judge Robert C. Thaxton (Retired)
Kaiser Hospitals
La Salle Partners

Lucky Stores
McDonalds Corporation
Mobil Oil Corporation
Motorola, Inc.
Nissan Motors Acceptance Corporation
NV Energy
San Diego Gas & Electric Co.
San Diego Harbor Excursion
Science Applications International
Service Corporation International (SCI)
Southern California Edison
Shell Oil
Robert Sinclair
Texaco Oil
Veterans of Foreign Wars (VFW)
Waste Management Corporation
YMCA

Partial List of Clients - Attorneys and Law Firms

Allen Matkins Leck Gamble Mallory & Natsis LLP
Arrache, Clark & Potter
Asaro, Keagy, Freeland & McKinley
Baker & McKinzie
Ballard Spahr LLP
Benjamin, Weill & Mazer
Berger & Norton
Best Best & Krieger
Law Offices of David Boss
Broad & Cassel
Brobeck, Phleger & Harrison
Bronson, Bronson & McKinnon
Burkhalter Kessler Clement & George
Wasserman, Comden, Casselman & Esensten, LLP
Chapman Law Firm
Cox, Castle & Nicholson LLP
Daley & Heft
DLA Piper
Ducor Spradling & Metzger
Eischen & Associates
Endeman, Lincoln, Turek & Heater
Epsten & Grinnell
The Foldenauer Law Firm
Foley & Lardner
Glenn, Wright, Jacobs & Schell
Lou Goebel
Golub & Morales
Gordon & Holmes
Gordon & Rees
Grant, Genovese & Baratta, LLP
Greco Traficante Schulz & Brick
Gray, Cary, Ware & Friedenrich
Greenberg Traurig LLP
Grimm, Vranjes, McCormick & Graham
Guevara, Phippard & James
Haight, Brown & Bonesteel
Hart, King & Coldren
Hartnett Law Group
Higgs, Fletcher & Mack
Hillyer & Irwin
Hinchy, Witte, Wood, Anderson
Jennings, Engstrand & Henrikson
K&L Gates
Keeney Waite & Stevens
Kirby Noonan Lance & Hoge
Klinedist PC
Latham & Watkins
Lempres & Wulfsberg
Lewis, D'Amato, Brisbois & Bisgaard
Lobel, Winthrop & Broker
Lounsbury Ferguson
Luce, Forward, Hamilton & Scripps
McKenna & Cuneo
Meisenheimer Herron & Steele
Meyers & McConnell
Meyers Nave Riback Silver & Wilson
Miller & Giannini
Miller Barondess, LLP
Monaghan & Metz
Morris, Polich & Purdy
Munger Tolles & Olsen LLP
Murphy & Evertz
Musick Peeler & Garrett LLP
Neil Dymott Perkins Brown & Frank
Olmstead, Hughes & Garrett
Orrick, Herrington & Sutcliffe
Palmieri, Tyler, Wiener, Wilhelm & Waldron
Peterson Martin Reynolds LLP
Pettit Kohn Ingrassia & Lutz
Pillsbury Madison & Sutro
Terry Plummer, Attorney at Law
Procopio, Cory, Hargreaves & Savitch
Raffee Law Group
John H. Reaves, Attorney at Law
Reid Collins & Tsai LLP
Reid & Hellyer
Rockwood & Noziska
Rutan & Tucker LLP
Samuels, Green & Steel, LLP
Saxon, Dean, Mason, Brewer & Kincannon
Schaefer & Smith
Schall, Boudreau, Gore
Schwartz Semerdjian Haile Ballard & Cauley
Sean Schwerdtfeger, Attorney at Law
Seltzer Caplan McMahon Vitek
Sheppard, Mullin, Richter & Hampton
Sierra Club Legal Defense Fund
Silldorf Burdman
Solomon Ward Seidenwurm & Smith
Solomon Minton Cardinal, LLP
Songstad & Randall LLP
Sparber, Ferguson, Ponder & Ryan
Stutz Artiano Shinoff & Holtz
Sullivan Hill Lewin Rez & Engel
Sullivan, Workman & Dee, LLP
Wertz McDade Wallace & Moot
Thorsnes Bartolotta & McGuire
Treitler & Montisano
Turner & Williams
Valorem Law Group
Walker, Wright, Tyler & Ward
Mark Wasser, Attorney at Law
Wilke, Fleury, Hoffelt, Gould & Birney
Wood Smith Henning & Berman LLP
Worden, Williams
Worley, Schwartz, Garfield & Rice

Instructor Experience (Appraisal Institute Courses and Seminars)

Basic Income Capitalization

San Diego, CA: 11/91, 9/92, 10/93, 6/97, 7/03, 7/04, 6/05, 6/06

Los Angeles, CA: 3/91, 6/95

West Springfield, MA: 4/93

Orlando, FL: 5/94

Tuscaloosa, AL: 9/94

Pittsburgh, PA: 2/95

Phoenix, AZ: 2/96

Washington, D.C.: 8/96, 8/98

Chicago, IL: 6/97

West Palm Beach, FL: 8/99

Seoul, South Korea: 6/01

Seattle, WA: 3/07

Litigation Skills for the Appraiser: an Overview

Phoenix, AZ: 04/06

Las Vegas, NV: 10/06

Salt Lake City, UT: 2/07

The Appraiser as an Expert Witness: Preparation and Testimony

San Diego, CA: 12/06, 4/09, 10/10, 6/13

Chicago, IL: 5/08

San Jose, CA: 5/10, 7/12

Costa Mesa, CA: 3/12; 4/15

Las Vegas, NV: 4/12

Austin, TX: 5/13

Los Angeles, CA: 11/14

General Appraiser Income Approach/Part 1

San Diego, CA: 6/08

General Appraiser Income Approach/Part 2

San Diego, CA: 2/07

Advanced Income Capitalization

San Diego, CA: 9/89, 11/91, 10/92, 6/99, 6/01, 6/07, 6/09, 6/10; 6/11; 6/12; 6/13; 6/14; 5/15

Las Vegas, NV: 9/05

Los Angeles, CA: 6/90, 4/94, 7/04

Phoenix, AZ: 4/03

Chapel Hill, NC: 7/91

Dallas, TX: 5/92

Orlando, FL: 10/92

Salt Lake City, UT: 11/97

Portland, OR: 10/01

Dublin, CA: 6/02

Seoul, South Korea: 6/03

Sacramento, CA: 5/06

Chicago, IL: 5/07; 7/10; 9/14

Seattle, WA: 8/09

Chongqing, China: 7/12

Litigation Appraising: Specialized Topics and Applications

San Diego, CA: 6/02, 6/05, 10/08; 10/13; 3/15

Birmingham, AL: 4/03

San Jose, CA: 3/04

Las Vegas, NV: 10/04, 3/10, 6/12

Los Angeles, CA: 3/06

Portland, OR: 9/06

Chicago, IL: 5/08

Oakland, CA: 11/08

Tucson, AZ: 4/11

Costa Mesa, CA: 3/12

Austin, TX: 11/13

Ruidoso, NM: 10/14

Complex Litigation Appraisal Case Studies

San Diego, CA: 3/13

Ruidoso, NM: 9/13

Sacramento, CA: 5/15

Condemnation Appraising: Principles and Applications

Las Vegas, NV: 7/09; 9/12

San Diego, CA: 9/09, 8/11; 3/14

Sacramento, CA: 12/09

Costa Mesa, CA: 9/10

Orlando, FL: 10/10

Oakland, CA: 3/11

Austin, TX: 4/14

Pleasanton, CA: 1/15

Two-Day Advanced Income Capitalization/B

Chicago, IL: 3/15

Contract Rent or Effective Rent: Finding the Real Rent

San Diego, CA: 5/15

Rates and Ratios: Making Sense of GIMs, OARs, and DCF

Mission Viejo, CA: 9/03

Portland, OR: 5/04

Phoenix, AZ: 04/06

Las Vegas, NV: 07/07

Condemnation Appraising: Basic Principles and Applications

Chicago, IL: 10/98, 10/00, 5/04, 8/06
San Diego, CA: 10/98, 6/00, 8/04
Portland, OR: 2/99
Los Angeles, CA: 5/99
Boulder, CO: 6/99
Phoenix, AZ: 5/00
Seattle, WA: 10/00, 9/03
Sacramento, CA: 3/01, 6/05
San Francisco, CA: 3/00, 11/03, 3/05

Condemnation Appraising: Advanced Topics and Applications

Portland, OR: 2/99
Los Angeles, CA: 5/99
Phoenix, AZ: 5/00
San Diego, CA: 6/00, 8/04
Sacramento, CA: 3/01, 6/05
Seattle, WA: 9/03
San Francisco, CA: 3/00, 11/03
Chicago, IL: 5/04, 8/06

Appraisal Review - General

Mission Viejo, CA: 8/04
Las Vegas, NV: 10/06
San Diego, CA: 10/07

What Clients Want Their Appraisers to Know

Portland, OR: 9/06

Valuation in Challenging Markets

Washington, D.C.: 09/11

The Dynamics of Office Building Valuation

El Paso, TX: 10/95
Sacramento, CA: 1/96
San Diego, CA: 10/96
Phoenix, AZ: 5/97
Orange County, CA: 10/99
Buellton, CA: 9/01

Office Building Valuation: A Contemporary Perspective

Albuquerque, NM: 1/08
Sacramento, CA: 2/08
Las Vegas, NV: 3/08
Topeka, KS: 4/08
San Diego, CA: 10/08
Irvine, CA: 11/08

Instructor Experience (Other Courses, Seminars, Lectures, and Presentations)

- Course Developer/Instructor - Expropriation Appraising: International Center for Land Policy Studies and Training; Taoyuan, Taiwan, Republic of China: 10/04, 10/05, 10/06, 9/07, 4/08, 4/09, 4/10
- Course Developer/Instructor - Property Valuation for Property Tax Purposes: International Center for Land Policy Studies and Training; Taoyuan, Taiwan, Republic of China: 11/12, 10/13, 6/14
- Seminar Developer/Instructor - Expropriation Appraising (How Just is Just?): Taiwan Appraisal Institute, Taipei, Taiwan, Republic of China; 11/12
- Guest Lecturer at National Taipei University, Taipei, Taiwan: 10/06, 9/07, 4/08, 4/09
- Guest Lecturer at National Chengchi University, Taipei, Taiwan: 4/10, 11/12, 10/13, 6/14
- Guest Lecturer at SDSU, UCSD, and Point Loma Nazarene University
- Course Instructor - Valuation of Contaminated Properties (IR/WA Course 407): San Diego, CA: 11/99
- Co-Instructor - The Comprehensive Appraisal Workshop: 1/90
- Seminar Developer/Instructor - "Fast and Furious": 6/04
- Seminar Instructor - "State Licensing and Certification": 8/91
- Seminar Panel Member - "Discounted Cash Flow Analysis in the Homebuilding Industry": 3/93
- Seminar Moderator/Panel Member - "The Impact of Hazardous Materials on Real Estate": 9/93
- Seminar Panel Member - IR/WA Condemnation Seminar/Case Update: 9/94, 10/95, 6/05 (San Diego, CA); 5/11 (Sacramento, CA)
- Seminar Panel Member - "Taking 'Special' out of Benefits": 9/97, 10/97, 1/98
- Seminar Panel Member - "Eminent Domain in California", Oakland, CA: 12/05
- Seminar Panel Member - "Law of Easements in CA: Legal Issues and Practical Considerations" (Lorman), San Diego, CA: 2/06
- Co-Presenter - "Materialization of Protection of Property Rights" (Presentation to 24th Pan Pacific Congress), Seoul, South Korea: 8/08
- Seminar Panel Member - "Public Interest Value" (Presentation to American Real Estate Society), Monterey, CA: 4/09
- Seminar Panel Member - "Considerations for Effective Court Testimony", Appraisal Institute, Woodside, CA: 5/09
- Seminar Panel Member - "Skills for Expert Witness Testimony", Federal Agency Update, Las Vegas, NV: 1/10
- Seminar Panel Member - "Involuntary Acquisition of Property in a Down Market", Federal Agency Update, Las Vegas, NV: 1/10
- Seminar Moderator/Panel Member - "Recognizing Uncertainty and Valuing Flexibility in Appraisals", XXV Union of PanAmerican Associations of Valuers (UPAV) Congress, Miami, FL: 11/10
- Seminar Developer/Instructor - "Condemnation Appraising" (Presentation to China Institute of Real Estate Appraisers and Agents), Beijing, China: 7/11
- Seminar Developer/Instructor - "Assessed Value as the Basis of Property Tax" (Presentation to China Institute of Real Estate Appraisers and Agents), Beijing, China: 7/11
- Seminar Moderator/Panel Member - "The Quiet Giant: Explaining the Stability of Europe's Largest Real Estate Market" (Presentation to Appraisal Institute Annual Conference), San Diego, CA: 8/12
- Co-Presenter - "Discounted Cash Flow Analysis using Discount Rates Loaded for Property Taxes" (Presentation to Real Estate Counseling Group of America), Nashville, TN: 5/13
- Co-Presenter - "Mock Trial on a Hypothetical Gifting of Real Estate Matter before the US Tax Court" (Presentation at 2013 IRS Valuation Summit), Los Angeles, CA: 8/13
- Seminar Developer/Instructor - "Expropriation Appraising: Specialized Issues and Procedures" Seoul, South Korea; Guangzhou, Peoples Republic of China; Tokyo, Japan; 9/13
- Co-Presenter - "Hot Cases & Hot Topics in Condemnation Litigation" (Presentation at 2014 IRWA Annual Valuation Seminar), Montebello, CA: 4/14
- Seminar Developer/Instructor - "Marketability Analysis; the Foundation of Highest and Best Use" (Presentation at National Chengchi University), Taipei, Taiwan, Republic of China; 6/14
- Seminar Moderator/Panel Member - "Methodology and Discount Rates", Subdivision Analysis in Southern California (Appraisal Institute Seminar), Irvine, CA: 8/14

Publications - Articles

- Co-Author: "Valuation of Long Term Leases" - *The Appraisal Journal*, Volume LVII, No. 4 (October 1989)
Co-Author: *Materialization of Protection of Property Rights*, Presented to 24th Pan Pacific Congress of Appraisers, Valuers, and Counselors, Seoul, South Korea (2008)

Publications - Books

- Contributing Editor to *Real Estate Valuation in Global Markets* (2010), Published by Appraisal Institute
Contributing Editor to *The Appraisal of Real Estate, 11th Edition* (1996), *12th Edition* (2001), *13th Edition* (2007-2008), and *14th Edition* (2012-2013), published by Appraisal Institute
Contributing Editor to *The Dictionary of Real Estate Appraisal, Fourth Edition* (2002), *Fifth Edition* (2009), and *Sixth Edition* (Pending) published by Appraisal Institute
Contributing Editor to *Applications in Litigation Valuation: A Pragmatist's Guide* (2012)
Contributing Editor to *Review Theory and Procedures: A Systematic Approach to Review in Real Property Valuation* (2015)

Publications - Courses and Seminars

- Developer, *Condemnation Appraising: Basic Principles and Applications*, Appraisal Institute Course (1998)
Development Team Member: *Litigation Appraising: Specialized Topics and Applications*, Appraisal Institute Course (1999)
Contributing Editor to *Introduction to Conservation Easement Valuation*, Appraisal Institute Seminar (2009)
Contributing Editor to *Uniform Appraisal Standards for Federal Land Acquisitions: Practical Applications for Fee Appraisers*, Appraisal Institute Seminar (2002)
Contributing Editor to *Rates and Ratios: Making Sense of GIMs, OARs, and DCF*, Appraisal Institute Seminar (2002)
Contributing Editor to *Office Building Valuation: A Contemporary Perspective*, Appraisal Institute Seminar (2006)
Development Team Member: *General Appraiser Income Approach, Parts 1 and 2*, Appraisal Institute Courses, (2006-2007)
Contributing Editor to *Litigation Skills for the Appraiser: An Overview*, Appraisal Institute Seminar (2007)
Contributing Editor to *An Introduction to Valuing Green Buildings*, Appraisal Institute Seminar (2008)
Contributing Editor to *Capitalization Theory and Techniques Study Guide, Third Edition*, Appraisal Institute (2008)
Contributing Editor to *Condemnation Appraising - Principles and Applications*, Appraisal Institute Course (2008)
Development Team Member: *Valuation for Financial Reporting*, Appraisal Institute Seminar (2008)
Development Team Member: *Advanced Income Capitalization*, Appraisal Institute Course (2009-2010)
Contributing Editor to *Valuation in Challenging Markets*, Appraisal Institute Course (2011)
Contributing Editor to *International Financial Reporting Standards for Real Property Appraisers*, Appraisal Institute Course (2012)
Contributing Editor to *Applications in Litigation Valuation: A Pragmatist's Guide* (2012)
Contributing Editor to *Complex Litigation Case Studies*, Appraisal Institute Seminar (2012)
Contributing Editor to *International Valuation Standards Overview*, Appraisal Institute Seminar (2013)
Contributing Editor to *Advanced Income Capitalization, Parts A and B*, Appraisal Institute Seminars (2014-2015)
Contributing Editor to *Contract or Effective Rent: Finding the Real Rent*, Appraisal Institute Seminar (2014)
Contributing Editor to *Litigation Assignments for Residential Appraisers: Doing Expert Work on Atypical Cases*, Appraisal Institute Seminar (2015)

Exhibit No.

6 – Willis – 19

SHANNON L. CUTSINGER, MAI
WILLIAM N. PATTERSON, MAI, SRA
GALEN JUSTICE-BLACK
TREVOR C. HUBBARD, MAI, SRA
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ALISON E. ROACH

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ROBERT P. CARINGELLA, MAI, SRA
ROBERT N. JONES, MAI (RETIRED)
STEPHEN D. ROACH, MAI, SRA, AI-GRS

October 5, 2015

Mr. Ralph B Kalfayan, Attorney at Law
Krause Kalfayan Benink & Slavens, LLP
550 West C Street, Suite 530
San Diego, CA 92101

Re: *David Estrada, et al. Matter*

Dear Mr. Kalfayan:

At your authorization and request, I have analyzed the proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases dated March 4, 2015 (Santa Clara Case No. 1-05-CV-049053), and estimated whether its implementation would have a material negative impact on the market value of the subject properties. The 67,548 subject properties total 531,904 acres. This report is to be used by the client, Krause Kalfayan Benink & Slavens, LLP in conjunction with a proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases. The only other intended users are the owners of the subject properties. The effective date of the appraisal is September 28, 2015.

This is an appraisal report which is intended to comply with the reporting requirements set forth under Standard 2 of the *Uniform Standards of Professional Appraisal Practice* (USPAP). It presents summary discussions of the data, reasoning, and analyses that were used in the appraisal process. Supporting documentation concerning the data, reasoning, and analyses is retained in our workfile. The depth of discussion contained in this report is specific to the needs of the client and for the intended use stated herein. The appraisers are not responsible for unauthorized use of this report.

This appraisal was performed in conformance with the Appraisal Institute's Code of Professional Ethics and Professional Standards (which include USPAP). This appraisal is subject to certain assumptions and limiting conditions that are made a part of this report. Acceptance and use of this report by the client or any other party constitutes acceptance of these assumptions and limiting conditions.

Thank you for this opportunity to be of service.

Sincerely,



Stephen D. Roach, MAI, SRA, AI-GRS
AG002159

SUMMARY OF SALIENT FACTS AND CONCLUSIONS

PROPERTY LOCATIONS:	Antelope Valley, Los Angeles County, and Kern County, California
PROPERTY OWNERS:	According to the client, the subject properties total 531,904 acres, with 67,548 separate parcels. It is my understanding that these parcels represent the ownerships that are referred to as the Willis Class, and are outside of a public water service district. To the extent that the list of properties provided by the client includes any properties that are in a water service district and are receiving service, these properties are excluded from my analysis.
ASSESSOR'S PARCEL NO.:	The individual Assessor Parcel Numbers for each of the 67,548 properties have been retained in the appraiser's workfile.
SITE DESCRIPTION:	The subjects are 67,548 separate sites totaling 531,904 acres. It is my understanding that all these properties are raw, vacant parcels.
IMPROVEMENT DATA:	The subjects are vacant, unimproved land.
HIGHEST AND BEST USE:	Agriculture, rural residential, or hold for future use or development
ESTATE APPRAISED:	Fee simple interest
DATE OF VALUE:	October 5, 2015
DATE OF REPORT:	September 28, 2015
CONCLUSION OF ANALYSIS:	The proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases (Santa Clara Case No. 1-05-CV-049053) would have a material negative impact on this group of subject properties.

ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal is subject to the following extraordinary assumption, the use of which might have affected the assignment results:

1. This appraisal relies on the extraordinary assumption that the subject properties are as they have been described to the appraiser by the client and in legal documents.

This appraisal is subject to the following general assumptions and limiting conditions:

1. Information, estimates, and opinions furnished by others and contained in this report are assumed to be true, correct, and reliable. A reasonable effort has been made to verify such information; however, no responsibility for its accuracy is assumed by the appraiser.
2. No responsibility is assumed for matters legal in character, nor do we render an opinion as to title, which is assumed to be held in fee simple interest as of the date of valuation unless otherwise stated.
3. It is assumed that the property is readily marketable and free of all liens and encumbrances, except any specifically discussed in this report.
4. Photographs, plats, and maps furnished in this report are to assist the reader in visualizing the property. No survey of the property has been made, and no responsibility has been assumed in this matter.
5. A soils engineering study has not been provided for this appraisal. It is assumed that there are no hidden or unapparent conditions of the property such as subsoil conditions which would render it more or less valuable. No responsibility is assumed for such conditions or for engineering which might be required to discover such factors.
6. Possession of this report, or a copy thereof, does not carry with it the right of publication. Disclosure of the contents of this appraisal report is governed by the by-laws and regulations of the Appraisal Institute. Neither all nor any part of the contents of this report (especially reference to the Appraisal Institute or the MAI designation) may be disseminated to the public through advertising media, public relations media, news media, sales media, or any other public means of communications without prior written consent and approval of the appraiser.
7. This report may not be used for any purpose by anyone other than the party to whom it is addressed without the written consent of the appraiser.
8. The submission of this report constitutes completion of the services authorized. It is submitted on the condition that the client will provide the appraiser customary compensation relating to any subsequent required depositions, conferences, additional preparation, or testimony.

ASSUMPTIONS AND LIMITING CONDITIONS

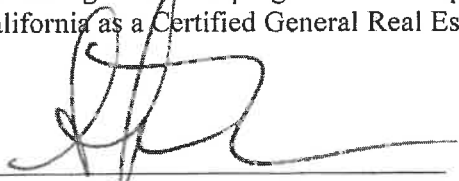
(Continued)

9. The date of value to which the opinions expressed in this report apply is set forth in the letter of transmittal. The appraisers assume no responsibility for economic or physical factors occurring at some later date which may affect the opinions herein stated.
10. No engineering survey has been made by the appraiser. Except as specifically stated, data relative to size and area were taken from sources considered reliable, and no encroachment of real property improvements is assumed to exist.
11. No opinion is expressed as to the value of subsurface oil, gas, or mineral rights and it is assumed that the property is not subject to surface entry for the exploration or removal of such materials except as is expressly stated.
12. The projections included in this report are utilized to assist in the valuation process and are based on market conditions as of the date of value, and anticipated short-term supply and demand factors.
13. Testimony or attendance in court or any other hearing is not required by reason of rendering this appraisal unless such arrangements are made a reasonable time in advance.
14. By acceptance and use of this report, the user agrees that any liability for errors, omissions, or judgment of the appraisers is limited to the amount of the fee charged for the appraisal. Anyone acting in reliance upon the opinions, judgments, conclusions, or data contained herein, who has the potential for monetary loss due to the reliance thereon, is advised to secure an independent review and verification of all such conclusions and/or facts. The user agrees to notify the appraiser of any error which could reasonably be determined from a thorough and knowledgeable review.

APPRAISER'S CERTIFICATE

I certify that, to the best of my knowledge and belief:

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
3. I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
4. I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
5. My engagement with this assignment was not contingent upon developing or reporting predetermined results.
6. My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
7. My analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Appraisal Institute's Code of Professional Ethics and Standards of Professional Practice (which include the Uniform Standards of Professional Appraisal Practice).
8. Stephen D. Roach, MAI, SRA, AI-GRS has not made a personal inspection of the property that is the subject of this report.
9. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
10. No one provided significant real property appraisal assistance to the person signing this certification.
11. I have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
12. As of the date of this report Stephen D. Roach, MAI, SRA, AI-GRS has met the requirements of the continuing education program of the Appraisal Institute and has received certification from the state of California as a Certified General Real Estate Appraiser.



Stephen D. Roach, MAI, SRA, AI-GRS
AG002159

October 5, 2015
Date

IDENTIFICATION OF THE PROPERTY

According to the client, the subject properties consist of 67,548 separate land parcels totaling 531,904 acres. The properties are located in the Antelope Valley in eastern Los Angeles County and southeastern Kern County, California.

LEGAL DESCRIPTION

Legal descriptions for the subject properties have not been made available to the appraiser.

EFFECTIVE DATE OF APPRAISAL

The effective date of this appraisal, also known as the date of value, is September 28, 2015.

INSPECTION

The subject properties were not inspected by the appraiser.

PURPOSE OF THE APPRAISAL

The purpose of this appraisal is to estimate whether implementation of the proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases dated July 13, 2011 (Santa Clara Case No. 1-05-CV-049053) would have a material impact on the market value of the subject properties. Market value is defined by the Office of the Comptroller of the Currency under 12 CFR, Part 34, Subpart C-Appraisals, 34.42 Definitions (g), as follows:

“Market value means the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- (1) buyer and seller are typically motivated;
- (2) both parties are well informed or well advised, and acting in what they consider their own best interests;
- (3) a reasonable time is allowed for exposure in the open market;

- (4) payment is made in terms of cash in U. S. dollars or in terms of financial arrangements comparable thereto; and
- (5) the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.”

The subject properties were appraised on the basis of cash; the exposure times for the properties were not estimated by the appraiser. This appraisal is subject to the assumptions and limiting conditions presented in this report.

DEFINITION OF PROPERTY RIGHTS APPRAISED

The property rights analyzed in this appraisal are the see simple estate. According to *The Dictionary of Real Estate Appraisal, Fifth Edition*, which was published by the Appraisal Institute in 2010, fee simple estate is defined as follows:

Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat.

CLIENT, INTENDED USERS, AND INTENDED USE

This appraisal and report is to be used solely by the client, Mr. Ralph B. Kalfayan, and the ownerships he represents (identified as the “Willis Class”), and only in conjunction with a proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases (Santa Clara Case No. 1-05-CV-049053). There are no other intended users or uses.

OWNERSHIP

There are reportedly 67,548 separate parcels in the Willis Class. The appraiser was not provided with the ownership details of each property.

PROPERTY HISTORY

The subject properties are located in the Antelope Valley in northeastern Los Angeles County. The properties are affected by pending litigation regarding the adjudication of groundwater

rights in the Antelope Valley Groundwater Basin. As part of several cases brought to the court, which began with Diamond Farming alleging that public entities had overburdened the groundwater basin and harmed their ownership, a solution has been requested to fairly adjudicate water rights to the landowners with access to the Antelope Valley Groundwater Basin.

The adjudication separated the various ownerships in the valley by the type of user. The subject ownerships, referred to as the Willis Class, also known as the Non-Pumper Class, are those ownerships that have never received water from the groundwater basin¹.

As part of the scope of work for this assignment, I have not researched recent sales or listings of the subject properties. This was deemed to be unnecessary to achieve credible results for this assignment given the appraisal question asked and the intended use of the assignment results.

SCOPE OF THE APPRAISAL

I conducted an appraisal that was limited in scope and which is communicated in this appraisal report as defined in Standards Rule 2-2(a) of the Uniform Standards of Professional Appraisal Practice (USPAP). It is my intent that the appraisal service be performed in such a manner that the conclusions be those of a disinterested third party. It is also my intent that all appropriate data deemed pertinent to the solution of the appraisal problem be collected, confirmed, and reported in conformity with the Standards of Professional Appraisal Practice published by the Appraisal Institute; these standards include USPAP.

The scope of the analysis is intended to be appropriate in relation to the significance of the appraisal problem. The purpose of this analysis was to determine if the Proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases would have a material effect on the values of the subject properties.

In preparing this appraisal, the following tasks were performed:

¹ It is my understanding that none of the 67,548 subject parcels are located within the service area of a public water service district. To the extent that the list of properties provided by the client includes any properties that are in a water service district and are receiving service, these properties are excluded from my analysis.

- I investigated the general physical, legal, and economic characteristics of the subjects, including discussions with the client and a review of the court documents relating to the pending adjudication; and
- I researched the impacts of the proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases and its possible affects on the Willis Class ownerships;

This appraisal report includes a very general description of the subject properties as well as discussions of the reasoning that resulted in my conclusions. This appraisal is subject to certain assumptions and limiting conditions that are made part of this report.

AREA DESCRIPTION

The Antelope Valley is located in northeastern Los Angeles County and southeastern Kern County, and is comprised of the westernmost portion of the Mojave Desert. The valley is bounded by the San Gabriel Mountains to the south and the Tehachapi Mountains to the west. The primary cities in the valley are Lancaster and Palmdale. Major uses in the area include the Edwards Air Force Base located east of Rosamond and the US Air Force Plant 42 in Palmdale, which houses several aerospace companies including Lockheed Martin and Boeing.

SITE DESCRIPTION - PHYSICAL CHARACTERISTICS

According to the client, the 67,548 subject properties total 531,904 acres. The number of ownerships that own less than five acres total 49,070, the number of ownerships with five to twenty acres total 14,157, the number of ownerships that own 20 to 100 acres total 3,683, and the number of ownerships with over 100 acres total 638. Individual parcel numbers were provided to the appraiser, as well as sizes for each parcel. This information has been retained in the appraiser's workfile. It is my understanding these properties are located throughout the Antelope Valley. In addition to differing sizes, it is assumed they reflect a range of physical characteristics, including access, topography and shape. It is my understanding the properties are primarily unused raw parcels.

It is unknown how many of the properties are served by any public utilities, although it is my understanding that none are served by an available public water supply or located within a district that provides public water. To the extent that the list of properties provided by the client includes

any properties that are in a water service district and are receiving service, these properties are excluded from my analysis. I was not provided with soils reports for the subject properties, and have assumed there are no problems associated with adverse soil conditions. I have likewise assumed there are no issues regarding hazardous waste or chemical contamination.

SITE DESCRIPTION - LEGAL CHARACTERISTICS

Preliminary title reports for the subject properties were not made available to the appraiser. The properties likely represent a range of legal characteristics, though the majority are believed to be zoned for rural uses and low-density residential. It is believed that low-impact agricultural uses would generally be permitted.

DESCRIPTION OF THE IMPROVEMENTS

It is my understanding that the subject properties are raw, vacant parcels.

DESCRIPTION OF THE PROPOSED PHYSICAL SOLUTION

The proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases dated March 4, 2015 is reportedly the result of an attempt to fairly adjudicate groundwater basin rights to the various ownerships in the Antelope Valley. The judgement would separate the various ownerships into classes based on the type of historic water use. The subject ownership class, the Willis Class, are those owners that have never utilized the water basin. The proposed physical solution divides the available groundwater rights among all ownership classes with the exception of the Willis Class, with no production rights whatsoever granted to this class of properties. The proposed judgement permanently allocates the entire annual native safe yield of 82,300 acre feet to Stipulating Parties, which excludes the Willis Class.

The proposed judgement does, however, include a procedure through which users could at least theoretically obtain new water production by use of an on-site well. The proposed judgement states that the applicant must establish the reasonableness of the new production in the context of all the users of the Antelope Valley Groundwater Basin and that the Watermaster Engineer will deny the new production or approve it on condition of a payment of a Replacement Water Assessment.

Requirements for the application are detailed in section 18.5.13.1 of the proposed judgement. An applicant would have to prepare a written application, which must include the following:

1. An application fee sufficient to recover all costs of the application review, field investigation; reporting, hearing, and all other costs incurred by the Watermaster and Watermaster Engineer in processing the application;
2. A written summary describing the proposed quantity, sources of supply, season of new production, purpose of new production, place of new production, manner of delivery, and all other pertinent information regarding the new production;
3. Maps identifying the location of the new production;
4. Copies of any well permits, specifications and well-log reports, pump specifications and testing results, and water meter specifications associated with the new production;
5. Written confirmation that the applicant has obtained all applicable Federal, State, County, and local land use entitlements and other necessary permits to commence new production;
6. Written confirmation the applicant has complied with laws and regulations including, but not limited to, the California Environmental Quality Act;
7. Preparation of a water conservation plan, approved by a licensed civil engineer, that indicates the new production will be consistent with California best water management practices;
8. Preparation of an analysis of the economic impact the new production will have on the groundwater basin;
9. Preparation of an analysis of the physical impact the new production will have on the groundwater basin;
10. A statement, signed by a licensed civil engineer, determining the new production will not cause material injury;
11. Written confirmation that the applicant agrees to pay the applicable Replacement Water Assessment for the new production; and
12. Any other pertinent information required by the Watermaster Engineer.

It is important to note that the well permit process described above is discretionary and requires a unanimous approval by the Watermaster Board. Further, there is no guarantee that any imported replacement water would be available in any given year. Finally, the potential cost of this water, even if available, is unknown.

By excluding the subject ownership class from adjudicated water rights, this proposed judgement severely limits the possible economic uses of the properties. The proposed judgement also notes in section 5.1.10 that any non-stipulating party shall be subject to procedural or legal objections by any stipulating party. Willis class members must still comply with the new production application procedures.

VALUATION METHODOLOGY

The purpose of this appraisal is to estimate whether imposition of the proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases would have a material impact on the market value of the subject properties. Included in this analysis is a consideration of the properties' uses and rights before this proposed physical solution, and any differences if the proposed solution were to be finalized in its current form.

Prior to valuation, the highest and best use of the subject properties was determined, based on the limited amount of property information provided to the appraiser. The purpose of the highest and best use analysis is to establish which use will result in the highest value; this analysis is helpful in determining whether the proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases would have a material impact on value.

HIGHEST AND BEST USE

Highest and best use is an important concept in real estate valuation as it represents the premise upon which value is based. As used in this report, highest and best use is defined on page 332 of *The Appraisal of Real Estate, 14th Edition* (2013) as follows:

"The reasonably probable use of property that results in the highest value."

This definition applies to vacant land or improved property. The determination of the highest and best use of a site, either improved or vacant, must consider four criteria. These criteria are that the highest and best use must be (1) physically possible, (2) legally permissible, (3) financially feasible, and (4) maximally productive. These criteria should be considered in that order because qualification under the latter tests does not matter if the property fails the earlier tests.

The highest and best use of a property is determined by social, economic, governmental, and environmental forces. The relative weight that any of these forces carries in determining the highest and best use of a property depends on the individual property. Social forces are exerted primarily by population characteristics. Specifically, the demographic composition of the population reveals the potential demand for real estate. Examples of social forces that influence real estate are population changes, rate of family formations and dissolutions, and age distributions.

Economic forces determine the supply and demand conditions influencing real estate. The desire and ability of the population to satisfy its demand for real estate, or those uses situated on the real estate, are determined by economic forces. Examples of economic forces influencing the demand for real estate are employment and wage levels, the economic base of the region and community, price levels, and the cost and availability of mortgage credit. Examples of economic forces influencing the supply of real estate are the stock of available improved properties, proposed development, occupancy rates, and price patterns of existing properties.

Governmental influences include a broad range of political and legal actions which influence the provision of public services, restrict the supply of real estate through zoning and planning ordinances, establish local, state, and national fiscal policies, and special legislation (e.g., a building moratorium) which may influence property values and availability.

Environmental conditions which may influence real estate include climatic conditions, topography and soil, biological or archaeological resources, transportation systems, and the nature and desirability of the immediate neighborhood surrounding a property. Environmental forces can be external to the subject property or can include characteristics of the property itself. While the four forces that influence value have been identified separately, they work in concert to affect property values. For a given property these forces will generally exert uneven influence on the value, with certain forces having greater impact on that property than others. The following analysis supports our conclusion of highest and best use.

Physically Possible

The unique physical characteristics of each parcel are unknown. The average property size is reportedly 7.87 acres, and the properties are raw, vacant parcels. A wide variety of uses would be physically possible on the subject properties.

Legally Permissible

The zoning and legal characteristics of each parcel are unknown, though they are likely zoned for rural uses and low density residential; as noted, it is believed that low-impact agricultural uses would be permitted land uses. It is my understanding that properties in the Valley have been used in the past to grow pumpkins, sweet corn, onions, carrots, and alfalfa.

Financially Feasible

There are likely few feasible uses for the subject sites beyond rural residential, low-impact agricultural, or to hold for future use or development.

Maximally Productive

The maximally productive use of a property is that use which results in the highest land value. Based on my analysis of the physical, legal, and economic characteristics of the subject properties, I have concluded that the highest and best use of the subjects falls in these categories.

ANALYSIS

By excluding the subject ownership class from any inherent water rights, the proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases would greatly diminish the potential economic uses and therefore materially impact the values of the properties. Additionally, the process available to the subject ownerships to achieve water rights is extremely rigorous, the cost of which could more than offset the value gain the properties would achieve with water. This process is also not a guaranteed path towards obtaining water, which could be denied for any number of reasons.

If the proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases is finalized, existing users will not have the burden of a water replacement fee, which is a material economic burden that would be imposed on the subject ownership class. The magnitude of the water replacement fee is unknown, and cannot be determined based on information in the proposed Judgement. This risk and uncertainty adversely impacts value.

Particularly for lower-value properties, the process set forth in the proposed Judgement to obtain permission to drill a well may be too demanding and expensive, and could remove any economic possibility of utilizing the property. Even ignoring the cost issues, approval of a well on the properties is not certain under the procedure set forth. There is also a potentially insurmountable dilemma for the Willis Class ownership: part of this proposed approval process requires the user to obtain a well permit from the county, yet the county will reportedly not issue a well permit without approval under this plan. The proposed physical solution does not address this potential issue.

Based on my analysis of the the proposed Judgement and Physical Solution for the Antelope Valley Groundwater Cases and my experience as an appraiser, I have concluded the proposed judgement would have a material negative impact on the value of the subject properties.

Stephen D. Roach, MAI, SRA, AI-GRS

Professional Experience

Principal - Jones, Roach & Caringella, Inc. (previously Jones & Roach, Inc.), since 1986

Appraiser/Consultant - Andrew A. Smith Co., 1979-1986

Mr. Roach has provided appraisal, appraisal review, and consulting services regarding properties located in the California counties of San Diego, Orange, Los Angeles, Riverside, Imperial, San Bernardino, Ventura, Santa Barbara, San Luis Obispo, Kern, San Mateo, Santa Clara, Alameda, Santa Cruz, and Contra Costa. In addition, Mr. Roach has provided such services regarding properties in more than 35 U.S. states, with recent experience in Pennsylvania, Nevada, Arizona, Nebraska, New York, Texas, Tennessee, Indiana, Connecticut, Ohio, and New Jersey.

Expert Witness, Mediation, Arbitration, and Court Experience

Extensive Deposition and Trial Experience

Qualified as Expert Witness:

Superior Court: San Diego, Los Angeles, Ventura, Riverside, Orange, and San Luis Obispo Counties, CA

Federal District Court: San Diego, CA

Federal Bankruptcy Court: San Diego, CA; Phoenix, AZ; New York, NY

Court of Federal Claims: San Diego, CA; Washington, DC

Judicial District Court: Dallas County, TX

Administrative Law Hearing: Los Angeles, CA

Arbitrator for Valuation Matters in San Diego County, CA; Orange County, CA; Los Angeles County, CA, and Honolulu, HI

Have testified in numerous mediations and arbitrations as an expert witness

Professional Affiliations

Member, Appraisal Institute (MAI No. 7490; SRA; AI-GRS)

Currently certified under Appraisal Institute continuing education program

San Diego Chapter Professional Standards/Ethics Education Committee Chair (1993-1995)

Member of Region VII Regional Committee (1993)

Director of San Diego Chapter (1989-1992) and Member of Admissions Committee (1988-1991)

Chief Course Reviewer for Appraisal Institute Courses 510, 700, 705, and 715 (2001-2009)

Chief Course Reviewer for Appraisal Institute Course 310 (1996-2001)

Course Content Expert Team member for Appraisal Institute courses General Appraiser Income Approach/Parts 1 and 2 (2010-current)

Course Content Expert Team member for Appraisal Institute courses The Appraiser as an Expert Witness: Preparation and Testimony, Condemnation Appraising: Principles and Applications, and Litigation Appraising: Specialized Topics and Applications (2010-current)

Chair of Curriculum Subcommittee, National Education Committee (1999-2001); Member (1996-2004)

Member of General Comprehensive Examination Panel (2002-current)

Member of Education Committee (1999-2001; 2006-2009) and Qualifying Education Committee (1999-2001)

Vice-Chair of Education Committee (2008-2009)

Chair of International Relations Committee (2010-2013); Vice-Chair of International Relations Committee (2010)

Member of Strategic Planning Committee (2010-current); Vice-Chair of Strategic Planning Committee (2014)

Member of 717 Qualifying Education Reorganization Project Team (2002-2009)

Member of Advanced Education Specification Team (2006-2007)

Chair of Core Competency Project Team (2008-2011)

Member of Governance Work Group (2013)

Trustee, Appraisal Institute Education Trust (2015)

California Certified General Real Estate Appraiser (No. AG002159)

Nevada Certified General Real Estate Appraiser (No. A.0206288-CG)

Arizona Certified General Real Estate Appraiser (No. 31475 - Expired)

Member, International Right-of-Way Association (Served as a Director of San Diego Chapter 11 from 1999-2007)

Member, Lamda Alpha International (Honorary Society for the Advancement of Land Economics) (2010-current)

Principal Member, Real Estate Counseling Group of America (2010-current)

Educational Background

B.S. degree in Real Estate, San Diego State University - 1978 (Graduated Summa Cum Laude; received 1978 Robert C. Hird II Memorial Scholarship in Real Estate)

Professional Courses Completed:

Capitalization Theory and Techniques	1979, 1986, 1988
Real Estate Investment Analysis	1982
Real Estate Appraisal Principles	1984
Basic Valuation Procedures	1984
Standards of Professional Practice	1984, 1987, 1992, 1999, 2003, 2005, 2007, 2008, 2011, 2013, 2015
Business Practices and Ethics	2008, 2013
Case Studies in Real Estate Valuation	1985
Valuation Analysis and Report Writing	1985
Fundamentals of Separating Real Property, Personal Property, and Intangible Business Assets	2012
International Financial Reporting Standards for the Real Property Appraiser	2012
Review Theory - General	2015

Seminars Attended:

Land Use	1980
Real Estate Risk Analysis	1983
Subdivision Analysis	1984
Appraising Commercial Properties	1985
Appraising for the Institutional Investor	1987
Subdivision Analysis	1987
Valuation of Lease Interests	1987
Faculty Training Seminar	1988
Appraising From Plans and Specifications	1988
Apartment Seminar	1990
Planning and Land Use	1990
Demographics and Feasibility Analysis	1990
Litigation Seminar	1984, 1986, 1989, 1990, 1992, 1994, 1996, 2007
State Licensing and Certification Seminar	1991
Understanding Limited Appraisals & Appraisal Reporting Options: General	1994
Understanding Environmental Contamination in Real Estate	1999
Fair Lending and the Appraiser	1994
OREA Federal and State Laws and Regulations	1995, 1999
Dynamics of Office Building Valuation	1995
Case Studies in Limited Partnership and Common Tenancy Valuation	2002
San Diego Economic Forecast	2006
Legal Aspects of Easements	1984
The Skills of Expert Testimony	1988
Easement Valuation	1990
The Comprehensive Appraisal Workshop	1989
Pan Pacific Congress of Valuers	2004 (Taiwan, R.O.C.), 2006 (USA), 2008 (S. Korea)
Uniform Appraisal Standards for Federal Land Acquisitions	2007
XXV Union of Pan American Associations of Valuers Congress	2010
Appraising for the IRS: What you Need to Know	2011
IRS Valuation Summit	2013
Case Studies in Marketability Analysis	2013
The Green Advisory Guide to Valuing High Performance Green Buildings (RECGA)	2013
Determinants of Building Level Returns and Cap Rates (RECGA)	2013
IRWA Annual Valuation Seminar	2014
Converting Income to Value (RECGA)	2014
Dockin' USA - A Spacial Hedonic Valuation of Waterfront Properties (RECGA)	2014
Valuation of Long Term Leased Fee Interests Under Major Buildings (RECGA)	2014
Subdivision Analysis in Southern California	2014
Using Social Media Data in Commercial Real Estate Models (RECGA)	2014
Conflicts of Interest, Complexity, and the Mortgage Crisis (RECGA)	2014
Shale Gas: An Energy Revolution (RECGA)	2014
Science Friction - An Exploration of Vacancy and Value (RECGA)	2014
Recent Trends in Institutional Real Estate and Public and Private Real Estate (RECGA)	2014
Two-Day Advanced Income Capitalization/A	2015
Land Grant System, Water Rights, and Indigenous Peoples (RECGA)	2015
Commercial Building Automation (RECGA)	2015

Seminars Attended (continued):

Overview of Bureau of Land Management (RECGA)	2015
Current Issues in Easements and Eminent Domain (RECGA)	2015
Appraisal of Southwest Art and Collectibles (RECGA)	2015
Going-Concern Gas Station Appraisals	2015
Intangibles Value - Unfinished Business in Need of Agreement	2015
Geo- and Data Visualization - Compelling Stories through the Smart Use of Graphical Tools	2015
Conservation Easement Appraisals for Tax Purposes - Special Problems and Liability Concerns	2015

Professional Honors

Awarded 2010 President's Award for outstanding service to the Appraisal Institute
Awarded 2009 Chapter Service Award for outstanding service to the San Diego Chapter of the Appraisal Institute
Awarded 2004 Chapter Service Award for outstanding service to the San Diego Chapter of the Appraisal Institute
Awarded 2003 Dr. William N. Kinnard, Jr., PhD Award for outstanding contributions to Appraisal Institute education
Awarded April 2015 Volunteer of Distinction Award for Appraisal Institute Region VII
Discussion Leader - 1993 Appraisal Institute Young Advisory Committee Meeting, Washington, DC
Invited Participant - 1991 and 1992 Appraisal Institute Young Advisory Committee Meetings

Other

Stephen D. Roach, MAI, SRA, AI-GRS has completed the Appraisal Institute's *Litigation Professional Development Program* and is listed on the Litigation Professional Development Program Registry on the Appraisal Institute's Web Page.
Stephen D. Roach, MAI, SRA, AI-GRS has completed the Appraisal Institute's *Valuation of the Components of a Business Enterprise Professional Development Program* and is listed on the Valuation of the Components of a Business Enterprise Professional Development Program Registry on the Appraisal Institute's Web Page.
Served on the selection committee for the Robert C. Hird II Memorial Scholarship in Real Estate (SDSU) - 2001-2012

Types of Appraisals/Properties Appraised

Agricultural	Leasehold and Leased Fee Interests	Residential Income Properties
Auto Dealerships	LLC Interests	Residential Subdivision Acreage
Commercial Condominiums	Master-Planned Communities	Restaurants
Contaminated Properties	Mineral Extraction Properties	Retail Centers
Easements	Mitigation and Open Space Land	Regional Malls
Farm and Ranch Land	Mobile Home Parks / Mobile Homes	Reviews
Fractional Interests	Office and Medical Office Buildings	Self Storage Facilities
Historical (Retrospective) Appraisals	Partial Acquisitions	Single Family Residences
Hotels/Motels/SRO Hotels	Partnership Interests	Tidelands Properties
Indian Reservations	Research and Development	Vacant Land
Industrial Properties	Residential Condominiums	Wetlands

Partial List of Clients - Developers and Investors

The Allen Group	General Growth Properties	Pardee Homes
American Assets, Inc.	Genstar Land Company	Phase One Development
American National Investments, Inc.	Griffin Properties	Premier Coastal Development
Bascom Group	Hearthstone Realty Advisors	Raintree Realty, LLC
BHA Properties	Home Capital Development Corp.	Red Mountain Retail Group
Boardwalk Development	Howard Hughes Heirs	Robinhood Development
Bosa Development	Hunt Building Corp.	Sammis Properties
Buie Corporation	Inland American Real Estate Trust	Seymour Lewis Development
Cornerstone Realty Advisors	Inland Western Retail Real Estate Trust	Southern California Financial Corp.
Century West Development	Intergulf Development	Starwood Development, LP
Citicorp Real Estate, Inc.	Janopaul + Block Co.	Sunroad Enterprises
ColRich Development	Kelwood Development Company	Thomas Enterprises
D.R. Horton	Kilroy Realty	Universal Medical Buildings
EastGroup	Legacy Commercial Partners	WAM Development Group
Extra Space Storage	The McMillin Companies	Westwind Development
Farmers and Merchants Trust Co.	Nexus Development Corporation	Western Devcon
Fenton Western Properties	Ocean Pacific Companies	Western Pacific Development
Garden Communities	Ohio State Teachers Retirement Fund	Westfield
Gatlin Development		

Partial List of Clients - Lenders

Bank of America NT&SA	Coast Federal Bank	NationsBank
Bank of California	East West Bank	San Diego National Bank
Bank of San Diego	First Interstate Bank	Security Pacific National Bank
California First Bank	Great American Bank	Union Bank
Century West Development	HomeFed Bank	Wells Fargo Bank
Citicorp Acceptance Company	Imperial Federal Savings Association	Western Financial Savings Bank
City National Bank	Lincoln Savings, F.A.	

Partial List of Clients - Public Agencies

California Dept. of Transportation	Clark County (NV)	San Diego Unified School District
Cardiff School District	Colton Joint Union School District	San Diego Unified Port District
Centre City Devel. Corp. (CCDC)	County of San Diego	Santa Clara Valley Transportation Authority
Chaffey Joint Union HS District	Cucamonga Valley Water District	Southeast Economic Devel. Corp.
City of Chula Vista	Elsinore Valley MWD	State of California
City of Corona	Fallbrook Union Elementary District	22nd District Agricultural Association
City of Coronado	Fallbrook Union High School District	United States Air Force
City of El Centro	Nevada Department of Transportation	United States Army Corps of Engineers
City of Escondido	North County Transit District	United States Bureau of Indian Affairs
City of Fontana	Oceanside Redevelopment Agency	United States Bureau of Reclamation
City of Lake Forest	Oceanside Unified School District	United States Department of Homeland Security
City of Moreno Valley	Orange County Trans. Authority	United States Department of Justice
City of Murrieta	Orange County Flood Control District	United States Forest Service
City of Oceanside	Rancho California Water District	United States Internal Revenue Service
City of Ontario	Regents of the University of California	United States Navy
City of Poway	Resolution Trust Corporation (RTC)	United States Postal Service
City of San Buenaventura	Rialto Unified School District	Western Municipal Water District
City of San Diego	Riverside County Transportation Commission	Western Riverside County Regional Conservation Authority
City of Santee	Riverside County Flood Control Dist.	
City of Thousand Oaks	San Diego Metropolitan Transit System	
City of Tustin		

Partial List of Clients - Corporations and Individuals

Ace Parking	Ford Motor Company	McDonalds Corporation
American Hardware Mutual Ins. Co.	Fraser Engineering Corporation	Mobil Oil Corporation
ARCO Petroleum Products Company	General Mills Restaurants, Inc.	Motorola, Inc.
Bob Baker Enterprises	Grace International Church	National Powersport Auctions
Carl Karcher Enterprises	Greyhound Corporation	Nissan Motors Acceptance Corporation
Century Life Church	Highland Capital Management L.P.	NV Energy
Chevron USA	Honey Baked Ham, Inc.	San Diego Gas & Electric Co.
Chicago Title Insurance Company	Insurance Company of the West	San Diego Harbor Excursion
Chinese Community Church	International Transportation Service	Science Applications International
Circle Line Statue of Liberty Ferry	John Burnham Company	Service Corporation International (SCI)
Coldwell Banker Realty Advisory Services	Judge Gilbert Harelson (Retired)	Southern California Edison
Columbia/HCA	Judge Frederic Link	Shell Oil
Consolidated Electrical Distributors	Judge Ross Tharpe (Retired)	Robert Sinclair
Cost Plus	Judge Robert C. Thaxton (Retired)	Texaco Oil
Crossword Christian Church	Kaiser Hospitals	Veterans of Foreign Wars (VFW)
First American Title Insurance Co.	La Salle Partners	Waste Management Corporation
Fleming Companies	Lucky Stores	YMCA

Partial List of Clients - Attorneys and Law Firms

Allen Matkins Leck Gamble Mallory & Natsis LLP
Arrache, Clark & Potter
Asaro, Keagy, Freeland & McKinley
Baker & McKinzie
Ballard Spahr LLP
Benjamin, Weill & Mazer
Berger & Norton
Best Best & Krieger
Law Offices of David Boss
Broad & Cassel
Brobeck, Phleger & Harrison
Bronson, Bronson & McKinnon
Burkhalter Kessler Clement & George
Wasserman, Comden, Casselman & Esensten, LLP
Chapman Law Firm
Cox, Castle & Nicholson LLP
Daley & Heft
Dentons US LLP
DLA Piper
Ducor Spradling & Metzger
Eischen & Associates
Enderman, Lincoln, Turek & Heater
Epsten & Grinnell
The Foldenauer Law Firm
Foley & Lardner
Glenn, Wright, Jacobs & Schell
Lou Goebel
Golub & Morales
Gordon & Holmes
Gordon & Rees
Grant, Genovese & Baratta, LLP
Greco Traficante Schulz & Brick
Gray, Cary, Ware & Friedenrich
Greenberg Traurig LLP
Grimm, Vranjes, McCormick & Graham
Guevara, Phippard & James
Haight, Brown & Bonesteel
Hart, King & Coldren
Hartnett Law Group
Higgs, Fletcher & Mack
Hillyer & Irwin
Hinchy, Witte, Wood, Anderson
Jennings, Engstrand & Henrikson
K&L Gates
Keeney Waite & Stevens
Kirby Noonan Lance & Hoge
Klinedist PC
Latham & Watkins
Lempres & Wulfsberg
Lewis, D'Amato, Brisbois & Bisgaard
Lobel, Winthrop & Broker
Lounsbury Ferguson
Luce, Forward, Hamilton & Scripps
McKenna & Cuneo
McKenna Long & Aldridge LLP
Meisenheimer Herron & Steele
Meyers & McConnell
Meyers Nave Riback Silver & Wilson
Miller & Giannini
Miller Barondess, LLP
Monaghan & Metz
Morris, Polich & Purdy
Munger Tolles & Olsen LLP
Murphy & Evertz
Musick Peeler & Garrett LLP
Neil Dymott Perkins Brown & Frank
Olmstead, Hughes & Garrett
Orrick, Herrington & Sutcliffe
Palmieri, Tyler, Wiener, Wilhelm & Waldron
Peterson Martin Reynolds LLP
Pettit Kohn Ingrassia & Lutz
Pillsbury Madison & Sutro
Terry Plummer, Attorney at Law
Procopio, Cory, Hargreaves & Savitch
Raffee Law Group
John H. Reaves, Attorney at Law
Reid Collins & Tsai LLP
Reid & Hellyer
Rockwood & Noziska
Rutan & Tucker LLP
Samuels, Green & Steel, LLP
Saxon, Dean, Mason, Brewer & Kincannon
Schaefer & Smith
Schall, Boudreau, Gore
Schwartz Semerdjian Haile Ballard & Cauley
Sean Schwerdtfeger, Attorney at Law
Seltzer Caplan McMahon Vitek
Sheppard, Mullin, Richter & Hampton
Sierra Club Legal Defense Fund
Silldorf Burdman
Solomon Ward Seidenwurm & Smith
Solomon Minton Cardinal, LLP
Songstad & Randall LLP
Sparber, Ferguson, Ponder & Ryan
Stutz Artiano Shinoff & Holtz
Sullivan Hill Lewin Rez & Engel
Sullivan, Workman & Dee, LLP
Wertz McDade Wallace & Moot
Thorsnes Bartolotta & McGuire
Treitler & Montisano
Turner & Williams
Valorem Law Group
Walker, Wright, Tyler & Ward
Mark Wasser, Attorney at Law
Wilke, Fleury, Hoffelt, Gould & Birney
Wood Smith Henning & Berman LLP
Worden, Williams
Worley, Schwartz, Garfield & Rice

Instructor Experience (Appraisal Institute Courses and Seminars)

Basic Income Capitalization

San Diego, CA: 11/91, 9/92, 10/93, 6/97, 7/03, 7/04, 6/05, 6/06
Los Angeles, CA: 3/91, 6/95
West Springfield, MA: 4/93
Orlando, FL: 5/94
Tuscaloosa, AL: 9/94
Pittsburgh, PA: 2/95
Phoenix, AZ: 2/96
Washington, D.C.: 8/96, 8/98
Chicago, IL: 6/97
West Palm Beach, FL: 8/99
Seoul, South Korea: 6/01
Seattle, WA: 3/07

General Appraiser Income Approach/Part 1

San Diego, CA: 6/08

General Appraiser Income Approach/Part 2

San Diego, CA: 2/07

Advanced Income Capitalization

San Diego, CA: 9/89, 11/91, 10/92, 6/99, 6/01, 6/07, 6/09, 6/10; 6/11; 6/12; 6/13; 6/14; 5/15
Las Vegas, NV: 9/05
Los Angeles, CA: 6/90, 4/94, 7/04
Phoenix, AZ: 4/03
Chapel Hill, NC: 7/91
Dallas, TX: 5/92
Orlando, FL: 10/92
Salt Lake City, UT: 11/97
Portland, OR: 10/01
Dublin, CA: 6/02
Seoul, South Korea: 6/03
Sacramento, CA: 5/06
Chicago, IL: 5/07; 7/10; 9/14
Seattle, WA: 8/09
Chongqing, China: 7/12

Two-Day Advanced Income Capitalization/B

Chicago, IL: 3/15

The Appraiser as an Expert Witness: Preparation and Testimony

San Diego, CA: 12/06, 4/09, 10/10, 6/13, 9/15
Chicago, IL: 5/08
San Jose, CA: 5/10, 7/12
Costa Mesa, CA: 3/12; 4/15
Las Vegas, NV: 4/12
Austin, TX: 5/13
Los Angeles, CA: 11/14
Pleasant Hill, CA: 6/15

Litigation Appraising: Specialized Topics and Applications

San Diego, CA: 6/02, 6/05, 10/08; 10/13; 3/15
Birmingham, AL: 4/03
San Jose, CA: 3/04
Las Vegas, NV: 10/04, 3/10, 6/12
Los Angeles, CA: 3/06
Portland, OR: 9/06
Chicago, IL: 5/08
Oakland, CA: 11/08
Tucson, AZ: 4/11
Costa Mesa, CA: 3/12
Austin, TX: 11/13
Ruidoso, NM: 10/14

Complex Litigation Appraisal Case Studies

San Diego, CA: 3/13
Ruidoso, NM: 9/13
Sacramento, CA: 5/15

Condemnation Appraising: Principles and Applications

Las Vegas, NV: 7/09; 9/12
San Diego, CA: 9/09, 8/11; 3/14
Sacramento, CA: 12/09
Costa Mesa, CA: 9/10
Orlando, FL: 10/10
Oakland, CA: 3/11
Austin, TX: 4/14
Pleasanton, CA: 1/15
Ontario, CA: 8/15

Condemnation Appraising: Basic Principles and Applications

Chicago, IL: 10/98, 10/00, 5/04, 8/06
San Diego, CA: 10/98, 6/00, 8/04
Portland, OR: 2/99
Los Angeles, CA: 5/99
Boulder, CO: 6/99
Phoenix, AZ: 5/00
Seattle, WA: 10/00, 9/03
Sacramento, CA: 3/01, 6/05
San Francisco, CA: 3/00, 11/03, 3/05

Condemnation Appraising: Advanced Topics and Applications

Portland, OR: 2/99
Los Angeles, CA: 5/99
Phoenix, AZ: 5/00
San Diego, CA: 6/00, 8/04
Sacramento, CA: 3/01, 6/05
Seattle, WA: 9/03
San Francisco, CA: 3/00, 11/03
Chicago, IL: 5/04, 8/06

**Litigation Assignments for Residential Appraisers: Doing
Expert Work on Atypical Cases**
Dallas TX: 7/15

Litigation Skills for the Appraiser: an Overview
Phoenix, AZ: 04/06
Las Vegas, NV: 10/06
Salt Lake City, UT: 2/07

**Rates and Ratios: Making Sense of GIMs, OARs, and
DCF**
Mission Viejo, CA: 9/03
Portland, OR: 5/04
Phoenix, AZ: 04/06
Las Vegas, NV: 07/07

Contract Rent or Effective Rent: Finding the Real Rent
San Diego, CA: 5/15

Appraisal Review - General
Mission Viejo, CA: 8/04
Las Vegas, NV: 10/06
San Diego, CA: 10/07

What Clients Want Their Appraisers to Know
Portland, OR: 9/06

Valuation in Challenging Markets
Washington, D.C.: 09/11

The Dynamics of Office Building Valuation
El Paso, TX: 10/95
Sacramento, CA: 1/96
San Diego, CA: 10/96
Phoenix, AZ: 5/97
Orange County, CA: 10/99
Buellton, CA: 9/01

Office Building Valuation: A Contemporary Perspective
Albuquerque, NM: 1/08
Sacramento, CA: 2/08
Las Vegas, NV: 3/08
Topeka, KS: 4/08
San Diego, CA: 10/08
Irvine, CA: 11/08

Instructor Experience (Other Courses, Seminars, Lectures, and Presentations)

Course Developer/Instructor - Expropriation Appraising: International Center for Land Policy Studies and Training; Taoyuan, Taiwan, Republic of China: 10/04, 10/05, 10/06, 9/07, 4/08, 4/09, 4/10

Course Developer/Instructor - Property Valuation for Property Tax Purposes: International Center for Land Policy Studies and Training; Taoyuan, Taiwan, Republic of China: 11/12, 10/13, 6/14, 6/15

Seminar Developer/Instructor - Expropriation Appraising (How Just is Just?): Taiwan Appraisal Institute, Taipei, Taiwan, Republic of China; 11/12

Guest Lecturer at National Taipei University, Taipei, Taiwan: 10/06, 9/07, 4/08, 4/09

Guest Lecturer at National Chengchi University, Taipei, Taiwan: 4/10, 11/12, 10/13, 6/14

Guest Lecturer at SDSU, UCSD, and Point Loma Nazarene University

Course Instructor - Valuation of Contaminated Properties (IR/WA Course 407): San Diego, CA: 11/99

Co-Instructor - The Comprehensive Appraisal Workshop: 1/90

Seminar Developer/Instructor - "Fast and Furious": 6/04

Seminar Instructor - "State Licensing and Certification": 8/91

Seminar Panel Member - "Discounted Cash Flow Analysis in the Homebuilding Industry": 3/93

Seminar Moderator/Panel Member - "The Impact of Hazardous Materials on Real Estate": 9/93

Seminar Panel Member - IR/WA Condemnation Seminar/Case Update: 9/94, 10/95, 6/05 (San Diego, CA); 5/11 (Sacramento, CA)

Seminar Panel Member - "Taking 'Special' out of Benefits": 9/97, 10/97, 1/98

Seminar Panel Member - "Eminent Domain in California", Oakland, CA: 12/05

Seminar Panel Member - "Law of Easements in CA: Legal Issues and Practical Considerations" (Lorman), San Diego, CA: 2/06

Co-Presenter - "Materialization of Protection of Property Rights" (Presentation to 24th Pan Pacific Congress), Seoul, South Korea: 8/08

Seminar Panel Member - "Public Interest Value" (Presentation to American Real Estate Society), Monterey, CA: 4/09

Seminar Panel Member - "Considerations for Effective Court Testimony", Appraisal Institute, Woodside, CA: 5/09

Seminar Panel Member - "Skills for Expert Witness Testimony", Federal Agency Update, Las Vegas, NV: 1/10

Seminar Panel Member - "Involuntary Acquisition of Property in a Down Market", Federal Agency Update, Las Vegas, NV: 1/10

Seminar Moderator/Panel Member - "Recognizing Uncertainty and Valuing Flexibility in Appraisals", XXV Union of PanAmerican Associations of Valuers (UPAV) Congress, Miami, FL: 11/10

Seminar Developer/Instructor - "Condemnation Appraising" (Presentation to China Institute of Real Estate Appraisers and Agents), Beijing, China: 7/11

Seminar Developer/Instructor - "Assessed Value as the Basis of Property Tax" (Presentation to China Institute of Real Estate Appraisers and Agents), Beijing, China: 7/11

Seminar Moderator/Panel Member - "The Quiet Giant: Explaining the Stability of Europe's Largest Real Estate Market" (Presentation to Appraisal Institute Annual Conference), San Diego, CA: 8/12

Co-Presenter - "Discounted Cash Flow Analysis using Discount Rates Loaded for Property Taxes" (Presentation to Real Estate Counseling Group of America), Nashville, TN: 5/13

Co-Presenter - "Mock Trial on a Hypothetical Gifting of Real Estate Matter before the US Tax Court" (Presentation at 2013 IRS Valuation Summit), Los Angeles, CA: 8/13

Seminar Developer/Instructor - "Expropriation Appraising: Specialized Issues and Procedures" Seoul, South Korea; Guangzhou, Peoples Republic of China; Tokyo, Japan; 9/13

Co-Presenter - "Hot Cases & Hot Topics in Condemnation Litigation" (Presentation at 2014 IRWA Annual Valuation Seminar), Montebello, CA: 4/14

Seminar Developer/Instructor - "Marketability Analysis; the Foundation of Highest and Best Use" (Presentation at National Chengchi University), Taipei, Taiwan, Republic of China; 6/14

Seminar Moderator/Panel Member - "Methodology and Discount Rates", Subdivision Analysis in Southern California (Appraisal Institute Seminar), Irvine, CA: 8/14

Seminar Developer/Instructor - "Appraiser Licensing and Regulation in the USA; The Good, The Bad, and The Ugly" (Presentation sponsored by Institute of Land Appraisal, Taiwan; Taipei Association of Real Estate Appraisers; and Land Administration Department of Taipei City), Taipei, Taiwan, Republic of China; 6/15

Developer/Instructor - "Is Excess Rent Intangible?" (Presentation at AI Connect), Dallas, TX: 7/15

Publications - Articles

- Co-Author: "Valuation of Long Term Leases" - *The Appraisal Journal*, Volume LVII, No. 4 (October 1989)
Co-Author: *Materialization of Protection of Property Rights*, Presented to 24th Pan Pacific Congress of Appraisers, Valuers, and Counselors, Seoul, South Korea (2008)

Publications - Books

- Contributing Editor to *Real Estate Valuation in Global Markets* (2010), Published by Appraisal Institute
Contributing Editor to *The Appraisal of Real Estate*, 11th Edition (1996), 12th Edition (2001), 13th Edition (2007-2008), and 14th Edition (2012-2013), published by Appraisal Institute
Contributing Editor to *The Dictionary of Real Estate Appraisal*, Fourth Edition (2002), Fifth Edition (2009), and Sixth Edition (Pending) published by Appraisal Institute
Contributing Editor to *Applications in Litigation Valuation: A Pragmatist's Guide* (2012)
Contributing Editor to *Review Theory and Procedures: A Systematic Approach to Review in Real Property Valuation* (2015)

Publications - Courses and Seminars

- Developer, *Condemnation Appraising: Basic Principals and Applications*, Appraisal Institute Course (1998)
Development Team Member: *Litigation Appraising: Specialized Topics and Applications*, Appraisal Institute Course (1999)
Contributing Editor to *Introduction to Conservation Easement Valuation*, Appraisal Institute Seminar (2009)
Contributing Editor to *Uniform Appraisal Standards for Federal Land Acquisitions: Practical Applications for Fee Appraisers*, Appraisal Institute Seminar (2002)
Contributing Editor to *Rates and Ratios: Making Sense of GIMs, OARs, and DCF*, Appraisal Institute Seminar (2002)
Contributing Editor to *Office Building Valuation: A Contemporary Perspective*, Appraisal Institute Seminar (2006)
Development Team Member: *General Appraiser Income Approach, Parts 1 and 2*, Appraisal Institute Courses, (2006-2007)
Contributing Editor to *Litigation Skills for the Appraiser: An Overview*, Appraisal Institute Seminar (2007)
Contributing Editor to *An Introduction to Valuing Green Buildings*, Appraisal Institute Seminar (2008)
Contributing Editor to *Capitalization Theory and Techniques Study Guide, Third Edition*, Appraisal Institute (2008)
Contributing Editor to *Condemnation Appraising - Principles and Applications*, Appraisal Institute Course (2008)
Development Team Member: *Valuation for Financial Reporting*, Appraisal Institute Seminar (2008)
Development Team Member: *Advanced Income Capitalization*, Appraisal Institute Course (2009-2010)
Contributing Editor to *Valuation in Challenging Markets*, Appraisal Institute Course (2011)
Contributing Editor to *International Financial Reporting Standards for Real Property Appraisers*, Appraisal Institute Course (2012)
Contributing Editor to *Applications in Litigation Valuation: A Pragmatist's Guide* (2012)
Contributing Editor to *Complex Litigation Case Studies*, Appraisal Institute Seminar (2012)
Contributing Editor to *International Valuation Standards Overview*, Appraisal Institute Seminar (2013)
Contributing Editor to *Advanced Income Capitalization, Parts A and B*, Appraisal Institute Seminars (2014-2015)
Contributing Editor to *Contract or Effective Rent: Finding the Real Rent*, Appraisal Institute Seminar (2014)
Contributing Editor to *Litigation Assignments for Residential Appraisers: Doing Expert Work on Atypical Cases*, Appraisal Institute Seminar (2015)