

Exhibit C

Betsy Wright

To: Craig A. Parton
Subject: RE: AVG--Ramp Down and Carry Over

From: Doug Evertz [mailto:DEvertz@murphyevertz.com]
Sent: Wednesday, December 20, 2017 4:21 PM
To: Craig A. Parton; Craig A. Parton
Cc: Keith Lemieux (klemieux@omlowlaw.com) (klemieux@omlowlaw.com); 'jeffrey.dunn@bbklaw.com'; 'eric.garner@bbklaw.com'; Warren Wellen; Wendy Wang
Subject: AVG--Ramp Down and Carry Over

Dear Craig,

I am following up on your recent communications with Keith Lemieux and in advance of our call tomorrow regarding the applicability of the Rampdown to the Public Water Suppliers and Carry Over of federal reserved rights. I represent the City of Lancaster and the Rosamond Community Services District.

RAMPDOWN

At the Phase 6 trial/prove up of the Judgment and Physical Solution ("Judgment"), several experts were called to discuss the mechanics of the physical solution. In the event you have not reviewed the testimony before the trial court in support of the Judgment, we wanted to provide you with the attached information. The first is the trial transcript of Dr. Dennis Williams. The Stipulating Parties were joint proponents of Dr. Williams' testimony. Critical portions of Dr. Williams' testimony are highlighted on pages 25380 and 25384-25385. This testimony corresponds to attached Exhibit numbers 543-44 through 543-46.

As you will see, these exhibits—presented to Judge Komar to graphically illustrate the mechanics of the Rampdown—all show that the Stipulating Parties fully contemplated, and presented uncontroverted evidence, that the Rampdown applies to all "Parties" including the Public Water Suppliers. Specific pumping figures are included for each group of pumpers during the period of the Rampdown. These figures show the Public Water Suppliers having a collective Pre-Rampdown pumping allocation of 40,450.02 afy, including the unused federal reserve right (543-44). In the first year of Rampdown, next year, the Public Water Suppliers are expected to collectively reduce their pumping to 36,807.79 (543-46). This number is reduced in each subsequent year until the Public Water Supplier pumping reaches 18,596.66, including the unused federal reserve right (Id; 543-45). This represents a more than 50% reduction in pumping by the Public Water Suppliers over 5 years.

Consideration of the gradual reduction of Public Water Supplier pumping during the Rampdown Period was a crucial unpinning of the Court's determination that the Rampdown would not harm the Basin. It is also important to note that these numbers were the only numbers presented to Judge Komar to support the Rampdown. There was no model presented that excluded the Public Water Supplier pumping from the Rampdown.

Further, this evidence belies the suggestion that the Public Water Supplier group had already ramped down prior to the settlement. As you can plainly see, the Public Water Suppliers will now need to reduce pumping from approximately 40k

afy to only 18 afy. In the case of Rosamond, it has to reduce current pumping from roughly 3000 afy all the way down to a post-Rampdown Production Right of only 404 afy – a reduction of approximately 85%.

I have also attached a series of exhibits presented by AVEK's counsel at trial marked 6-AVEK-2 in connection with the testimony of Stipulating Party expert Charles Binder. Slide 5 again shows the Rampdown applying to the Public Water Suppliers, and during his testimony Mr. Binder referenced the Exhibit 3 parties as part of his discussion of the Rampdown.

None of the Stipulating Parties, including, notably, the landowners or public overlyers, introduced any evidence whatsoever supporting the idea that the Public Water Suppliers are not entitled to a Rampdown. Nor did any of the Stipulating Parties object to, or present evidence rebutting, the aforementioned testimony and exhibits. To the contrary, this evidence was jointly presented on behalf of the Stipulating Parties.

Any interpretation of the Judgment will necessarily be based on the evidence that was before the Court. We are not aware of any evidence put before the Court that supports the idea now advanced for the first time that the Public Water Suppliers are not entitled to Rampdown. The Public Water Suppliers are concerned that having the Watermaster advance a "no ramp down" theory that controverts the only testimony used to support the Judgment could undermine the Judgment by supplying arguments to those parties that are still challenging the Judgment on appeal.

CARRY OVER

Additionally, Exhibits 543-45 and 6-AVEK-2, Slide 5 show the Parties' intention in stipulating to the physical solution to put the Native Safe Yield of the Basin to "the fullest extent of which they are capable." (Const., Art. X, §2.) Both Exhibits as well as Dr. Williams' testimony demonstrate the parties' and the Court's intent that the entirety of the Native Safe Yield be put to beneficial use. As set forth in Section 5.1.4 of the Judgment, the 7,600 afy of federal reserved water right is a portion of the Native Safe Yield. Allowing Public Water Suppliers to pump and carry over the unused federal reserved right would not harm the Basin as the evidence before the Court demonstrates and is consistent with the Constitutional mandate that the water resources of the State be put to beneficial use to the fullest extent of which they are capable.

The Public Water Supplier's right to carry over unused reserved rights is further supported by Section 5.1.4.1 of the Judgment, which provides that any unused federal reserved rights "will be allocated to the Non-Overlying Production Rights holders [e.g., PWS] . . . in the following Year, in proportion to Production Rights set forth in Exhibit 3." First, once the unused water has been "allocated" to the Public Water Suppliers, it is automatically subject to the carry over provision of Section 15.3 which permits carrying over by Public Water Suppliers of all "Production Right[s]." Production Right by definition includes federal reserved rights (i.e., all Native Safe Yield production rights not subject to assessment). (Judgment, §3.5.32.) Second, as a practical matter, all unused reserved rights are carried over, because neither the Watermaster nor the Federal Government would know what amount of reserved water remains unused until an accounting has been done "in the following Year." Carrying over the unused federal reserved right is necessary to allow the Watermaster and the Federal Government to account for the Federal Government's (lack of) water usage, and for the Public Water Suppliers to plan for their water supply. If unused federal reserved right waters are not allowed to be carried over, Section 5.1.4.1 would effectively be rendered null and void, which the law abhors.

For these reasons, the Public Water Suppliers respectfully request that you present this information to the Watermaster Board at its next regular meeting instead of presenting this matter to the Court.

We look forward to our call tomorrow.

Doug

Douglas J. Evertz

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COURT OF APPEAL OF THE STATE OF CALIFORNIA
FOURTH APPELLATE DISTRICT

COORDINATION PROCEEDING	)	JUDICIAL COUNCIL
SPECIAL TITLE (RULE 1550(B))	)	COORDINATED
	)	PROCEEDING
ANTELOPE VALLEY GROUNDWATER	)	CASE NO. 4408
CASES	)	
	)	APPEAL FILED:
	)	2/19/16, 2/25/16,
AND RELATED ACTIONS.	)	3/2/16 & 3/2/16
	)	

APPEAL FROM THE SUPERIOR COURT OF LOS ANGELES COUNTY

HONORABLE JACK KOMAR, JUDGE PRESIDING

REPORTERS' TRANSCRIPT ON APPEAL

SEPTEMBER 29, 2015

APPEARANCES:

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(APPEARANCES CONTINUED ON THE
NEXT PAGE.)

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25478-25600

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OFFICIAL REPORTER

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1 CASE NUMBER: JCCP4408
2 CASE NAME: ANTELOPE VALLEY GROUNDWATER
3 CASES PHASE SIX
4 LOS ANGELES, CALIFORNIA TUESDAY, SEPTEMBER 29, 2015
5 ROOM NO. 222 HON. JACK KOMAR, JUDGE
6 APPEARANCES: AS HERETOFORE MENTIONED
7 REPORTER: AUDREY L. MOLINAR, CSR #12462
8 TIME: 9:01 A.M.
9

10 (THE FOLLOWING PROCEEDINGS
11 WERE HELD IN OPEN COURT:)
12

13 THE COURT: GOOD MORNING. PLEASE BE SEATED. WE HAD
14 A COUPLE OF THINGS WE NEEDED TO REVIEW THIS MORNING IN
15 ADVANCE OF THE WITNESS. PLEASE.

16 MR. TOOTLE: GOOD MORNING, YOUR HONOR. JOHN TOOTLE
17 ON BEHALF OF CALIFORNIA WATER SERVICE COMPANY. WOULD THIS
18 BE AN APPROPRIATE TIME FOR US TO SUBMIT OUR GROUNDWATER
19 PUMPING DECLARATION?

20 THE COURT: YES.

21 MR. TOOTLE: YES. I'VE BROUGHT COPIES OF JOHN FOE'S
22 DECLARATION, WHICH WAS POSTED SEPTEMBER 21ST. AND IN THE
23 DECLARATION, HE BASICALLY STATES THAT HE'S PREPARED A
24 HISTORY OF GROUNDWATER PUMPING FOR CALIFORNIA WATER SERVICE
25 COMPANY BASED OFF PRODUCTION METER READS AND --

26 UNIDENTIFIED ATTORNEY: (VIA COURT CALL) YOUR HONOR,
27 I DON'T KNOW IF ANYONE ELSE ON COURT CALL CAN HEAR, AT
28 LEAST I CANNOT HEAR THE PERSON SPEAKING. HE'S GOING IN AND

1 OUT.

2 THE COURT: WE'RE DOING THE BEST WE CAN. I CANNOT
3 PROMISE YOU THAT YOU'LL HEAR EVERYTHING IF YOU'RE ON COURT
4 CALL.

5 MR. TOOTLE: JOHN FOE'S DECLARATION STATES THAT HE
6 HAS PREPARED A HISTORY OF GROUNDWATER PUMPING FROM 1965 TO
7 2014 BASED OFF OF PRODUCTION RECORDS, CALIFORNIA WATER
8 SERVICE COMPANY. HE ALSO DISCUSSES THAT WE'RE A PUBLICLY-
9 REGULATED COMPANY BY THE PUBLIC UTILITIES COMMISSION. AND
10 UNDER ARTICLE 5 OF THE PUBLIC UTILITIES CODE, WE ARE
11 REQUIRED TO FILE AN ANNUAL REPORT. THOSE ANNUAL REPORTS
12 ARE ALSO ATTACHED.

13 THE COURT: MR. TOOTLE, IT SEEMS TO ME THAT YOU HAVE
14 AN EXHIBIT YOU WISH TO OFFER.

15 MR. TOOTLE: YES.

16 THE COURT: LET'S MARK IT. AND THIS HAS NOT
17 PREVIOUSLY BEEN OFFERED; IS THAT CORRECT?

18 MR. TOOTLE: THAT IS TRUE.

19 THE COURT: AND THIS IS OFFERED IN CONJUNCTION WITH
20 THE PROPOSED SETTLEMENT AND GLOBAL SOLUTION -- PHYSICAL
21 SOLUTION; IS THAT CORRECT?

22 MR. TOOTLE: YES, YOUR HONOR.

23 THE COURT: ALL RIGHT. SO MARK IT NEXT IN ORDER FOR
24 CALIFORNIA WATER SERVICE.

25 MR. TOOTLE: IT WILL BE CALIFORNIA WATER SERVICE
26 PHASE 6 1-1. AND THAT'S THE HISTORICAL GROUNDWATER PUMPING
27 FROM 1965 THROUGH 2014. DO YOU WANT ME TO GO THROUGH ALL
28 THE EXHIBITS?

1 THE COURT: NO, I JUST WANT YOU TO TELL US WHAT --
2 GENERALLY, WHAT YOU'RE OFFERING AND WHAT THE NUMBERS ARE SO
3 THAT THE RECORD IS CLEAR AND ANYBODY WHO WANTS TO READ IT,
4 CAN. AND IF THEY WANT TO CALL YOUR CLIENT OR YOUR WITNESS
5 TO TESTIFY, THEY'LL BE ABLE TO DO THAT.

6 MR. TOOTLE: YES, YOUR HONOR. EXHIBIT CAL WATER
7 PHASE 6 2-1 IS THE HISTORICAL HISTORY OF ANTELOPE VALLEY
8 SYSTEM AND IT'S ADJUDICATION -- I MEAN, IT'S JURISDICTION
9 UNDER THE CALIFORNIA PUBLIC UTILITIES CODE, THE CERTIFICATE
10 OF PUBLIC CONVENIENCE AND NECESSITY ISSUED IN 1957.

11 THE COURT: OKAY. WHAT I'D LIKE YOU TO DO IS TO USE
12 SHORTHAND --

13 MR. TOOTLE: OKAY.

14 THE COURT: -- IN YOUR DESCRIPTION.

15 MR. TOOTLE: NO. CAL WATER 2 -- I'M SORRY -- 3-1
16 ETCETERA ARE THE ANNUAL REPORTS FROM 1965 FILED WITH THE
17 UTILITIES COMMISSION, STATE WATER BOARD SUBMITTAL FOR
18 PARTICULAR YEARS METER PRODUCTION RECORDS AND WELL RECORD
19 SHEETS. NO. 4 IS A HISTORY OF OWNERSHIP OF A PROPERTY ON
20 WHICH THE WELLS ARE LOCATED AND WE ALSO HAVE A SERVICE AREA
21 MAP OF THE RECOGNIZED SERVICE AREA FROM THE PUBLIC
22 UTILITIES COMMISSION. AND NO. 5 IS THE INTENT FOR CAL
23 WATER TO TAKE IMPORTED WATER IN THE FUTURE IN OUR
24 CONNECTION WITH AVEK. AND NO. 6 IS JOHN FOE'S
25 QUALIFICATIONS.

26 THE COURT: ALL RIGHT. THANK YOU.

27 MR. TOOTLE: AND THOSE ARE ALL CAL WATER PHASE 6 AND
28 THEN THAT NUMBER.

1 THE COURT: ALL RIGHT. THANK YOU.

2

3 (MARKED FOR IDENTIFICATION, EXHIBIT NOS. CAL
4 WATER PHASE 6-1 THROUGH 6-6, DOCUMENTS.)

5

6 MR. KALFAYAN: YOUR HONOR, WE REACHED A STIPULATION
7 OF FACTS ON THE WILLIS CLASS THAT I'D LIKE TO READ INTO THE
8 RECORD IF POSSIBLE.

9

THE COURT: STIPULATION WITH WHOM?

10

MR. KALFAYAN: WITH, I BELIEVE, THE PUBLIC WATER
11 SUPPLIERS, BUT SPECIFICALLY MR. DUNN.

12

THE COURT: ALL RIGHT.

13

MR. KALFAYAN: IF I MAY READ THEM INTO THE RECORD?

14

THE COURT: DO YOU HAVE A WRITTEN VERSION OF IT?

15

MR. KALFAYAN: I HAVE AN E-MAIL THAT REFLECTS IT,
16 ALTHOUGH IT'S NOT -- I DON'T HAVE IT IN WRITING, BUT IT'S
17 NOT ANYTHING MORE THAN THE NUMBERS OF THE -- REGARDING THE
18 SIZE OF THE WILLIS CLASS. AND BASICALLY THE WILLIS
19 CLASS -- THE STIPULATION IS AS FOLLOWS: THE WILLIS CLASS
20 HAS OVER 65,000 PARCELS COMPRISED OF THE FOLLOWING: 49,070
21 ARE FIVE ACRES AND LESS, 14,157 PARCELS ARE BETWEEN FIVE
22 AND 20 ACRES.

23

THE COURT: I'M SORRY. GIVE ME THAT AGAIN. 49,070
24 ARE WHAT?

25

MR. KALFAYAN: 49,070 ARE LESS THAN FIVE ACRES,
26 14,157 ARE BETWEEN FIVE AND 20 ACRES, 3,683 ARE BETWEEN 20
27 AND 100 ACRES AND THERE ARE 638 PARCELS THAT ARE OVER 100
28 ACRES. THERE ARE AT LEAST OVER 18,000 CLASS MEMBERS IN THE

1 WILLIS CLASS. AND MR. DAVID ESTRADA IS A CLASS
2 REPRESENTATIVE FOR THE WILLIS CLASS WHO OWNS REAL PROPERTY
3 WITHIN THE ANTELOPE VALLEY AREA OF ADJUDICATION.

4 THE COURT: TELL ME WHERE HIS PROPERTY IS AND HOW
5 MUCH IT IS.

6 MR. KALFAYAN: HE OWNS FIVE DIFFERENT PARCELS; FOUR
7 ARE 80 ACRES, ONE IS 160 ACRES, THREE PARCELS OVERLAP THE
8 AREA OF ADJUDICATION WITHIN THE BOUNDARIES OF THE
9 ADJUDICATION AND TWO ARE OUTSIDE. THE THREE THAT ARE
10 INSIDE THE AREA OF ADJUDICATION, ONE IS AT LEAST 90
11 PERCENT, IF NOT 100 PERCENT, IN THE AREA OF ADJUDICATION.
12 THE OTHER TWO ARE SLIGHTLY MORE THAN OR LESS THAN -- TAKE
13 THAT BACK. THE OTHER TWO THAT ARE WITHIN THE AREA OF
14 ADJUDICATION, I BELIEVE ONE IS ABOUT 20 PERCENT IN THE AREA
15 OF ADJUDICATION AND THE THIRD ONE IS A LITTLE BIT MORE THAN
16 HALF IN THE AREA OF ADJUDICATION.

17 THE COURT: NOW, THOSE ARE NOT STIPULATED FACTS,
18 THAT'S BASICALLY AN OFFER OF PROOF?

19 MR. KALFAYAN: YES.

20 THE COURT: ALL RIGHT.

21 MR. KALFAYAN: JUST AS TO THE LAST PORTION, YOUR
22 HONOR, BUT EVERYTHING ELSE WAS PART.

23 THE COURT: I GOT THAT. MR. DUNN, DO YOU SO
24 STIPULATE AS --

25 MR. DUNN: YES, WITH JUST AN EXPLANATION. THE
26 REASON WHY THIS STIPULATION IS BEING PRESENTED NOW TO THE
27 COURT IS THAT WE RECEIVED A REQUEST FROM THE WILLIS CLASS
28 FOR INFORMATION THAT HAS NOW BEEN PROVIDED TO THE COURT.

1 WE SERVED -- OUR LAW FIRM SERVED A -- SORT AS CLASS
2 ADMINISTRATOR WITH A NOTICE FOR THE WILLIS CLASS, SO
3 INFORMATION WHICH WAS WITHIN OUR POSSESSION BASED ON WHAT
4 WE CURRENTLY KNOW THESE NUMBERS APPEAR TO BE CORRECT. IF
5 IT LATER TURNS OUT THERE NEEDS TO BE AN ADJUSTMENT, WE'LL
6 ADVISE THE COURT BUT WE'LL STIPULATE THAT THERE ARE 65,000
7 PARCELS AND TO THE BREAKDOWN IN PARCEL ACREAGE AS INDICATED
8 BY MR. KALFAYAN. AND AGAIN, AS TO REGARDS TO MR. ESTRADA
9 AND HIS OWNERSHIP, WE'RE NOT -- THAT'S -- THAT IS NOT PART
10 OF THE STIPULATION. THANK YOU.

11 THE COURT: ALL RIGHT. THANK YOU.

12 MR. DUNN: OH, COUNSEL FOR THE WILLIS CLASS REMINDED
13 ME THAT THE AGREEMENT OR STIPULATION INCLUDES THE
14 REPRESENTATION BY MR. KALFAYAN THAT THERE ARE AT LEAST, AS
15 I WROTE IT DOWN, AT LEAST OVER 18,000 CLASS MEMBERS IN THE
16 WILLIS CLASS, YES, SO STIPULATION ON ACREAGE AND NUMBERS OF
17 CLASS MEMBERS.

18 THE COURT: ALL RIGHT. ARE WE READY TO PROCEED,
19 THEN, WITH A WITNESS?

20 MR. KALFAYAN: YOUR HONOR, DOES THE COURT WANT TO
21 ENTERTAIN THE MOTION IN LIMINE AT THIS TIME?

22 THE COURT: PROBABLY A GOOD IDEA. WHAT DID YOU
23 HAVE, MR. ZIMMER?

24 MR. ZIMMER: I HAD AN ISSUE WITH REGARD TO DR.
25 WILLIAMS' TESTIMONY, BUT THAT MAY BE BETTER TAKEN RIGHT
26 BEFORE THAT, SO I'LL YIELD TO MR. KALFAYAN'S PROPOSAL.

27 THE COURT: BEFORE WE DO THAT. COUNSEL?

28 MR. LENTON: I'M ROBERT LENTON. I'M THE PRESIDENT

1 OF THE WHITE FENCE FARMS NO. 3 MUTUAL WATER COMPANY.

2 THE COURT: I'M SORRY. I COULD NOT HEAR YOU.

3 MR. LENTON: I'M ROBERT LENTON; I'M THE PRESIDENT OF
4 THE BOARD OF THE WHITE FENCE FARMS NO. 3 MUTUAL WATER
5 COMPANY. WE ARE A VERY SMALL WATER COMPANY OF ONE SQUARE
6 MILE AND WE BUY ABOUT 390 ACRE FEET FROM AVEK --

7 THE COURT: WHY DON'T YOU STEP RIGHT OVER THERE AND
8 SPEAK INTO THAT MICROPHONE RIGHT IN THE CENTER OF THE
9 TABLE. SO START OVER.

10 MR. LENTON: I'M ROBERT LENTON, PRESIDENT OF THE
11 BOARD THE WHITE FENCE FARMS NO. 3 MUTUAL WATER COMPANY.
12 WE'RE ARE A VERY MUTUAL WATER COMPANY, ONE SQUARE MILE. WE
13 PURCHASE ABOUT 390 ACRE FEET FROM AVEK. WE PUMP ONLY ABOUT
14 EIGHT ACRE FEET AS WE'VE BEEN TRYING TO REHABILITATE OUR
15 TWO WELLS TO MEET STATE STANDARDS. IT'S MY UNDERSTANDING
16 THAT MR. WILSON WHO NOW REPRESENTS US CANNOT REPRESENT US
17 AND THAT I CANNOT REPRESENT OURSELVES, SO I'M ASKING FOR A
18 LITTLE BIT OF TIME SO WE CAN GET ANOTHER ATTORNEY.

19 THE COURT: HOW MUCH TIME DO YOU WANT?

20 MR. LENTON: HOW MUCH TIME DO I HAVE? TWO WEEKS? A
21 WEEK?

22 THE COURT: WELL, MR. WILSON'S GOING TO BE HERE IN
23 15 MINUTES SO --

24 MR. LENTON: SURE. I WANTED TO PUT THAT BEFORE YOU.

25 THE COURT: HE MIGHT GIVE YOU SOME ASSISTANCE IN
26 ANSWERING QUESTIONS OF HOW MUCH TIME YOU NEED.

27 MR. LENTON: GREAT. THANK YOU.

28 THE COURT: THANK YOU VERY MUCH.

1 MR. MCLACHLAN: YOUR HONOR, WE ALSO HAD THE NOTICED .
2 MOTION TODAY TO AMEND THE WILLIS CLASS JUDGMENT, WHICH
3 WOULD BE -- MR. O'LEARY IS GOING TO TAKE THE LEAD IN
4 ARGUING THAT. HE'S AT A DEPOSITION AT 10:00 A.M.

5 THE COURT: OKAY, THEN LET'S TAKE THAT UP NOW. THIS
6 WAS THE MOTION TO CORRECT THE CLASS DESCRIPTION IN THE
7 JUDGMENT.

8 MS. O'LEARY: GOOD MORNING, YOUR HONOR. DAN O'LEARY
9 FOR THE WOOD CLASS AND THE MOVING PARTY. NOT SURPRISINGLY
10 THIS CAME ABOUT WHEN WE WERE LOOKING AT THE WILLIS CLASS
11 COUNSEL MOTION TO WITHDRAW SIX OR EIGHT WEEKS AGO, BUT TWO
12 THINGS THAT I THINK THAT ARE SET OUT PRETTY CLEARLY IN THE
13 MOTION. NO. 1, THE CURRENT WILLIS CLASS JUDGMENT, THE LAST
14 SENTENCE OF THE CLASS DEFINITION HAS JUST A TYPOGRAPHICAL
15 BLUNDER IN IT. I'M SURE THE GOAL IN 2008 WAS NOT TO EXEMPT
16 THE KERN COUNTY ASSESSOR'S OFFICE ITSELF FROM THE CLASS,
17 BUT TO INCLUDE THE FULL SENTENCE FROM THE MAY 2008 ORDER
18 AMENDING THE CLASS DEFINITION.

19 THE SECOND ISSUE INVOLVES THE CHANGE IN THE WILLIS
20 CLASS DEFINITION BY WAY OF THIS COURT'S SEPTEMBER 2, 2008
21 ORDER. IN THAT SENTENCE THAT SAYS THE WILLIS CLASS SHALL
22 EXCLUDE ALL PERSONS TO THE EXTENT THEY OWN PROPERTIES
23 WITHIN THE BASIN IN WHICH THEY HAVE PUMPED WATER AT ANY
24 TIME. WE TALKED A LOT ABOUT THAT SENTENCE LAST MONTH WITH
25 THE MOTION TO WITHDRAW. BUT THE -- BUT THE CLASS JUDGMENT
26 ITSELF SAYS, THIS IS THE DEFINITION OF THE CLASS AS AMENDED
27 TWICE BY THE COURT. AND THEN WHAT'S PUT INTO THAT JUDGMENT
28 FRANKLY IS NOT THE DEFINITION OF THE WILLIS CLASS. IT

1 NEEDS THE TYPOGRAPHICAL ERROR FIX AND IT SHOULD HAVE THAT
2 QUALIFICATION ADDED AT SOME POINT. SO WHAT I -- I DON'T
3 KNOW WHY THIS WASN'T NOTICED IN 2011 WHEN THE WILLIS CLASS
4 JUDGMENT WAS ENTERED, BUT BE THAT AS IT MAY, HERE WE ARE.

5 THE COURT: I'M JUST TRYING TO REVIEW MY NOTES.
6 IT'S BEEN A WHILE SINCE I LOOKED AT THAT CONCERN. THERE
7 WAS AN OBJECTION TO PART OF THAT I THINK, ONLY A PART OF
8 IT.

9 MR. KALFAYAN: THAT'S RIGHT, YOUR HONOR.

10 MR. O'LEARY: I THINK EVERYBODY AGREES THAT THE
11 TYPOGRAPHICAL ERROR NEEDS TO BE FIXED.

12 THE COURT: YES. AND TELL US WHAT -- REMIND ME AS
13 TO WHAT THE OBJECTION IS AS TO THE OTHER SENTENCE.

14 MR. KALFAYAN: WELL, THE OBJECTION AS TO THE OTHER
15 SENTENCE, YOUR HONOR, IS IT JUST ADDS MORE CONFUSION TO THE
16 ACTUAL DEFINITION. THE COURT WORKED HARD IN GETTING THE
17 DEFINITION PUT IN PLACE. AND I THINK THE MORE YOU PUT IN
18 THE DEFINITION, THE MORE CONFUSING IT GETS. THE
19 INTERLINEATION, THE -- THE PART THAT WAS DELETED, I AGREE,
20 SHOULD BE ADDED. IT WAS THE PUBLIC WATER SUPPLIERS THAT,
21 WHEN THEY TOOK AND TRIED TO AMEND THE JUDGMENT, I THINK
22 THEIR WORD PROCESSOR INADVERTENTLY MAY HAVE DELETED AND
23 TRUNCATED ONE PORTION OF THE SENTENCE. SO AS TO THAT, WE
24 HAVE NO OBJECTION.

25 BUT AS TO THE ADDITIONAL LANGUAGE, I THINK THE
26 DEFINITION OF THE CLASS CLEARLY DEFINES WHO'S IN THE CLASS.
27 THIS JUDGMENT IS FOUR YEARS OLD, AND I THINK IT ADDS A
28 LAYER OF CONFUSION AND IT'S NOT NECESSARY AT THIS JUNCTURE.

1 AND I WOULD JUST ADD ONE OTHER THING, YOUR HONOR. IF WE'RE
2 GOING TO BE -- IF WE'RE GOING TO MAKE THAT MODIFICATION ON
3 THE TRUNCATED PORTION, I'D LIKE TO INCLUDE AS EXHIBIT 2 THE
4 STIPULATION OF SETTLEMENT. AND THAT WASN'T PRECLUDED SO IT
5 WILL JUST BE ONE SENTENCE THAT SAYS ATTACHED TO THE
6 JUDGMENT IS THE STIPULATION OF SETTLEMENT.

7 THE COURT: I'M STILL TRYING TO FOCUS ON THE
8 ADDITIONAL SENTENCE THAT YOU'RE CONCERNED ABOUT.

9 MR. KALFAYAN: SURE. WOULD YOU LIKE ME TO READ IT,
10 YOUR HONOR?

11 THE COURT: I'D LIKE TO FIND IT IN THE PAPERS. READ
12 IT.

13 MR. KALFAYAN: I BELIEVE THE SENTENCE THAT THEY WISH
14 TO ADD IS THIS: "THE CLASS SHALL [FURTHER] EXCLUDE ALL
15 PERSONS TO THE EXTENT THEY OWN PROPERTIES WITHIN THE BASIN
16 ON WHICH THEY HAVE PUMPED WATER AT ANY TIME." I THINK WE
17 WENT THROUGH THIS MULTIPLE TIMES BEFORE, YOUR HONOR, AND I
18 THINK THE DEFINITION IS CLEAR IN AND OF ITSELF WITHOUT
19 ADDING THAT LANGUAGE.

20 THE COURT: WELL, THAT HAPPENS TO BE AN ACCURATE
21 STATEMENT, HOWEVER. TRUE?

22 MR. O'LEARY: WELL, IT'S IN THE COURT'S SEPTEMBER 2,
23 2008 ORDER MODIFYING THE DEFINITION OF THE WILLIS CLASS.

24 MR. KALFAYAN: TO BE A LITTLE BIT MORE TECHNICAL,
25 YOUR HONOR, YOUR SEPTEMBER 2ND ORDER PROVIDED THAT THERE
26 SHALL BE NO OVERLAP. SO IT SAID THAT TO THE EXTENT THEY
27 OWN A PROPERTY INSTEAD OF PROPERTIES, SO THAT SEPTEMBER 2ND
28 ORDER, THE PURPOSE OF IT WAS TO MAKE SURE THAT THE TWO

1 CLASSES DID NOT OVERLAP. SO I THINK INJECTING THIS MIGHT
2 CREATE FURTHER UNCERTAINTY OR AMBIGUITY REGARDING THE
3 DEFINITION OF THE CLASS.

4 THE COURT: I'M NOT SURE I FOLLOW THAT, BUT IN ANY
5 EVENT, I'M GOING TO GRANT THE REQUEST TO MODIFY.

6 MR. KALFAYAN: YOUR HONOR, MAY I SUBMIT THE ACTUAL
7 JUDGMENT FOR THE COURT WITH THE INTERLINEATION --

8 THE COURT: YES.

9 MR. KALFAYAN: -- THAT WAS REQUESTED AND THE TWO
10 EXHIBITS? I'LL HAND THEM TO THE COURT. AND I'LL REPRESENT
11 TO THE COURT THAT I'VE MADE THE CHANGES THAT WERE REQUESTED
12 IN THE MOTION IN ADDITION TO ATTACHING THE STIPULATION OF
13 SETTLEMENT AS AN EXHIBIT 2.

14 THE COURT: I'M NOT SURE WE HAVE TO ADD THE COPY OF
15 THE STIPULATION SINCE IT'S ALREADY IN THE RECORD.

16 MR. KALFAYAN: IT'S REFERENCED IN THE JUDGMENT, BUT
17 IT'S NOT ATTACHED. AND IN THE FIRST JUDGMENT, IT WAS; IN
18 THE SECOND AMENDED JUDGMENT, IT WAS NOT.

19 THE COURT: BUT IT'S IN THE RECORD BECAUSE IT WAS
20 FILED.

21 MR. KALFAYAN: IN THE PAST, BUT --

22 THE COURT: NO, IT WAS FILED. IT'S PART OF THE
23 COURT RECORD AS TO THE STIPULATION.

24 MR. KALFAYAN: BUT, YOUR HONOR, THE DOCUMENT IS NOT
25 COMPLETE THEN BECAUSE IT REFERENCES A STIPULATION OF
26 SETTLEMENT AND IT DOESN'T ATTACH IT.

27 THE COURT: ALL RIGHT. I DON'T SEE ANY HARM IN
28 DOING IT.

1 MR. KALFAYAN: THANK YOU, YOUR HONOR. I'LL HAND IT
2 TO THE CLERK.

3 MR. O'LEARY: FOR WHAT IT'S WORTH, I AGREE
4 INTERLINEATION IS DONE PER MOTION.

5 THE COURT: ALL RIGHT. YOU'VE REVIEWED IT AND
6 APPROVED THE FORM?

7 MR. O'LEARY: YES.

8 MR. DUNN: YOUR HONOR, MAY I INQUIRE PROCEDURALLY AS
9 I UNDERSTAND IT, THIS -- I'M NOT SURE IF THIS IS A NUNC PRO
10 TUNC ORDER?

11 THE COURT: IT IS.

12 MR. DUNN: ALL RIGHT.

13 THE COURT: AND NOW --

14 MR. WILSON: GOOD MORNING, YOUR HONOR. WALTER
15 WILSON --

16 THE COURT: YES. YOUR FORMER CLIENT IS HERE. HE'S
17 REQUESTING ADDITIONAL TIME. WOULD YOU LIKE TO TALK TO HIM
18 AND DETERMINE WHETHER OR NOT YOU CAN BE OF ANY ASSISTANCE
19 TO HIM?

20 MR. WILSON: YOUR HONOR, THE ONLY THING THAT
21 PRECLUDES ME FROM ASSISTING HIM IS MY AGREEMENT WITH THE
22 STIPULATING PARTIES. THEY BELIEVE THAT THERE'S A CONFLICT
23 OF INTEREST BETWEEN MR. LENTON AND WHITE FENCE FARMS MUTUAL
24 WATER COMPANY NO. 3 AND THE STIPULATING PARTIES. HE HAS
25 VERY LIMITED WATER PRODUCTION. HE PUMPS ABOUT EIGHT ACRE
26 FEET A YEAR TO REHABILITATE THE PUMP BECAUSE THAT'S NOT
27 WORKING. HE BUYS 395 ACRE FEET FROM AVEK AND HAS FOR
28 YEARS. THAT'S ABOUT THE EXTENT OF HIS WATER USAGE.

1 THE COURT: WELL, AS I UNDERSTAND IT, YOU'RE -- IF
2 THERE'S A CONFLICT OF INTEREST, IT'S A VERY TECHNICAL
3 CONFLICT OF INTEREST. AND YOU'RE NOT GOING TO TALK TO HIM
4 ABOUT THE FACTS OR ADVISE HIM ADVERSELY, BUT HE DOES NEED
5 ASSISTANCE IN GETTING COUNSEL AND I THINK THAT YOU MIGHT BE
6 ABLE TO TALK TO HIM ABOUT HOW HE MIGHT ACCOMPLISH THAT AND
7 HOW MUCH TIME HE NEEDS TO DO THAT SO WE CAN HAVE HIM COME
8 BACK REPORT TO THE COURT WITH NEW COUNSEL.

9 MR. WILSON: WOULD THE COURT CONSIDER A TWO-WEEK
10 EXTENSION FOR HIM? OR ARE YOU LOOKING FOR SOMETHING
11 SHORTER?

12 THE COURT: HOW LONG?

13 MR. WILSON: TWO WEEKS.

14 THE COURT: YES.

15 MR. WILSON: THE COURT WOULD CONSIDER TWO WEEKS?

16 THE COURT: I WOULD. I'LL ORDER IT, IN FACT. I'LL
17 DO IT BEFORE YOU TALK TO HIM BECAUSE HE ASKED FOR A WEEK.
18 TWO WEEKS AND THAT'S -- I THINK IT COMES UP TO OCTOBER 8 --
19 NO, I'M SORRY. IT WILL BE OCTOBER 15. OCTOBER 15 HE
20 SHOULD REPORT IN WRITING TO THE COURT. I DON'T THINK WE'RE
21 GOING TO BE NECESSARILY IN SESSION THAT DAY.

22 MR. WILSON: I CAN HELP HIM WITH POSTING IF THERE'S
23 ANY DIFFICULTY WITH THAT, YOUR HONOR.

24 THE COURT: THANK YOU VERY MUCH.

25 MR. WILSON: THANK YOU, YOUR HONOR.

26 THE COURT: ALL RIGHT. MR. TOOTLE?

27 MR. TOOTLE: YOUR HONOR, SORRY. I FAILED TO MARK
28 THE DECLARATION ITSELF AS AN EXHIBIT, SO I'D LIKE TO MARK

1 THE DEPOSITION -- I MEAN, THE DECLARATION ITSELF AS CAL
2 WATER PHASE 6-7.

3 THE COURT: ALL RIGHT.

4 MR. TOOTLE: THANK YOU.

5

6 (MARKED FOR IDENTIFICATION, CAL WATER
7 EXHIBIT NO. 6-7, A DECLARATION.)
8

9

10 THE COURT: MAKE SURE --

11 MR. TOOTLE: THE DECLARATION OF JOHN R. FOE. I'LL
12 LET THE CLERK KNOW.

13 THE COURT: DID YOU HAND THE DECLARATION TO THE
14 CLERK?

15 MR. TOOTLE: SHE HAS IT.

16 THE COURT: ALL RIGHT. NOW WE CAN DO THE MOTION IN
17 LIMINE.

18 MR. DUNN: YOUR HONOR, SINCE WE'RE DEALING WITH THIS
19 ISSUE OR THIS MATTER FOR MR. TOOTLE, THE COURT CLERK
20 ADVISED US THIS MORNING THAT WE NEED TO -- OR LAST NIGHT --
21 NEED TO RENUMBER OUR EXHIBIT YESTERDAY FOR MR. ARIKI'S
22 DECLARATION. IT SHOULD BE NOW IDENTIFIED AS 6-D40-10.
23 THIS WAS THE DECLARATION THAT WE SUBMITTED AS LOS ANGELES
24 COUNTY WATER WORKS DISTRICT NO. 40, WHICH IS A DECLARATION
25 OF MR. ARIKI. IT CONTAINED JUST, FOR THE COURT'S
26 RECOLLECTION, A BOX OF DOCUMENTS THAT WERE EXHIBITS
27 ATTACHED TO THAT DECLARATION. SO THIS IS JUST TO CORRECT
28 THE IDENTIFICATION OF THE DECLARATION.

THE COURT: ALL RIGHT. ORDERED.

1 MR. DUNN: AND IF I CAN INDULGE THE COURT ON ONE
2 MORE MATTER OF HOUSEKEEPING, YESTERDAY THE COURT REQUESTED
3 THAT WITH REGARD TO THE EXHIBITS RELATING TO
4 DR. LITTLEFIELD'S TESTIMONY, THAT WE PREPARE A PROPOSED
5 ORDER. WE HAVE DONE THAT. WE HAVE SUBMITTED A PROPOSED
6 ORDER TO THE COURT AND POSTED THE PROPOSED ORDER ON THE
7 COURT'S WEBSITE THIS MORNING.

8 THE COURT: ALL RIGHT. THAT'S APPROVED AS WELL.
9 MR. BUNN?

10 MR. BUNN: GOOD MORNING, YOUR HONOR. THOMAS BUNN.
11 AS LONG AS WE'RE DOING THAT STUFF, THE COURT ALSO ASKED ME
12 TO SUBMIT A DECLARATION AUTHENTICATING CERTAIN NEWSPAPER
13 ARTICLES. I HAVE THAT. IT'S A DECLARATION OF DANIEL HENRY
14 AND I'D LIKE TO OFFER THAT. AND I GUESS THE EXHIBIT NUMBER
15 WOULD BE 6-PALMDALE WD-1.

16 THE COURT: OKAY. ALL RIGHT.

17 MR. BUNN: THANK YOU.

18 THE COURT: THANK YOU VERY MUCH.

19

20 (MARKED FOR IDENTIFICATION, EXHIBIT

21 NO. 6-PALMDALE WD-1, A DECLARATION.)

22

23 MR. WEEKS: BRAD WEEKS FOR THE QUARTZ HILL WATER
24 SYSTEM. LAST NIGHT I POSTED MY DECLARATIONS.

25 THE COURT: LAST NIGHT WHAT?

26 MR. WEEKS: LAST NIGHT I POSTED MY DECLARATION WITH
27 THE NEWSPAPER ARTICLES ATTACHED AS WE DISCUSSED YESTERDAY.

28 THE COURT: ALL RIGHT.

1 MR. WEEKS: THANK YOU, YOUR HONOR.

2 THE COURT: THAT'S ALREADY BEEN NUMBERED?

3 MR. WEEKS: YES, IT'S ALREADY BEEN.

4 THE COURT: OKAY. ALL RIGHT.

5 MR. LEMIEUX: GOOD MORNING, YOUR HONOR. KEITH
6 LEMIEUX, L-E-M-I-E-U-X, FOR LITTLE ROCK CREEK IRRIGATION
7 DISTRICT, ET AL. THIS MOTION COMES FROM, I GUESS, THE
8 WILLIS CLASS'S SORT OF UNIQUE POSITION AT THIS PHASE OF
9 TRIAL. AS THE COURT IS AWARE, AND I GUESS I DON'T NEED TO
10 REITERATE, THE WILLIS CLASS ONLY CAUSES OF ACTION AGAINST
11 THE PUBLIC WATER SUPPLIERS, THOSE CAUSES OF ACTION WERE
12 SETTLED AND THE PUBLIC WATER SUPPLIERS PAID SIGNIFICANT
13 ATTORNEY'S FEES BECAUSE THIS WAS DEEMED TO BE A FINAL
14 RESOLUTION OF THESE DISPUTES. THE SETTLEMENT AGREEMENT, I
15 THINK, ALLOWS FOR A VERY LIMITED ROLE FOR THE WILLIS CLASS
16 AT THIS POINT IN THE PROCEEDINGS. THE WAY THE SETTLEMENT
17 AGREEMENT WAS WRITTEN, IT UNDERSTOOD THAT WE WERE GOING TO
18 HAVE THESE PROCEEDINGS AND UNDERSTOOD THAT THERE WOULD BE A
19 PHYSICAL SOLUTION POTENTIAL FOR A TRIAL OR -- OR A HEARING
20 OR WHATEVER. AND IT SAYS VERY CLEARLY THAT THE WILLIS
21 CLASS -- WELL, LET ME STEP BACK FOR A SECOND. THE UNUSUAL
22 THING IS THAT EVEN THOUGH THERE WAS A FINAL SETTLEMENT IN
23 WHICH ATTORNEY'S FEES WERE PAID, THE COMPLAINT WASN'T
24 DISMISSED, IT WAS STAYED PENDING FINAL RESOLUTION OF THE
25 CASE. SO IT'S CLEAR THAT THEY'RE NOT COMPLETELY OUT OF
26 LINE BY BEING HERE PRESENT. BUT THE -- BUT THE SETTLEMENT
27 AGREEMENT LIMITED THEIR PARTICIPATION. IT SAID THAT IT WAS
28 UNDERSTOOD THAT THERE WOULD BE A -- A HEARING REGARDING

1 PHYSICAL SOLUTION AND THAT THERE WOULD BE -- IT WAS SORT OF
2 AGNOSTIC AS TO WHAT THE TERMS OF THE PHYSICAL SOLUTION
3 MIGHT BE. BUT IT SAID THAT -- IT SAID THAT ESSENTIALLY
4 THEY AGREED THAT THEY WOULD NOT CHALLENGE WHATEVER EVIDENCE
5 WAS PRESENTED AT THE TIME OF THE PHYSICAL SOLUTION TRIAL.

6 SO OUR MOTION IS DIRECTED TOWARDS LIMITING THEIR
7 INVOLVEMENT IN THIS PHASE OF TRIAL TO SIMPLY A -- WHATEVER
8 LEGAL CHALLENGE THAT THEY WANT TO MAKE TO THE PHYSICAL
9 SOLUTION BASED ON THE IDEA THAT THE SETTLEMENTS ARE
10 INCONSISTENT, ASSUMING THAT'S STILL A LIVE ISSUE AFTER THE
11 RULING. AND SPECIFICALLY, IT'S AIMED TOWARDS PREVENTING
12 THE WILLIS CLASS FROM PRESENTING -- AT THIS POINT, FROM
13 PRESENTING EVIDENCE OF AN ALTERNATIVE PHYSICAL SOLUTION
14 WHICH WE WOULD ARGUE -- WHICH I ARGUE IS CONTRARY TO THE
15 SETTLEMENT THEY ENTERED INTO.

16 THE COURT: ALL RIGHT.

17 MR. KALFAYAN: YOUR HONOR, AS JUST A MATTER OF
18 PROCEDURE, I THINK THE MOTION SHOULD HAVE BEEN BROUGHT AS A
19 NOTICED MOTION INSTEAD OF A MOTION IN LIMINE WHEN IT COMES
20 TO A STANDING ISSUE. SO I THINK AS A MATTER OF LAW, IT'S
21 IMPROPER. BUT TO THE MERITS, WHAT WE'RE DOING IN THIS
22 PROCEEDING -- WHAT THE WILLIS CLASS IS DOING IN THIS
23 PROCEEDING IS OPPOSING A PHYSICAL SOLUTION BECAUSE THE
24 STIPULATION OF SETTLEMENT THAT WAS REACHED WITH THE PUBLIC
25 WATER SUPPLIERS CLEARLY PROVIDED PARAGRAPH ROMAN NUMERAL
26 FIVE B THAT THE SETTLING PARTIES AGREE TO BE PART OF SUCH A
27 PHYSICAL SOLUTION TO THE EXTENT IT IS CONSISTENT WITH THE
28 TERMS OF THE SETTLEMENT AND TO BE SUBJECT TO COURT

1 ADMINISTERED RULES AND REGULATIONS CONSISTENT WITH
2 CALIFORNIA AND FEDERAL LAW AND THE TERMS OF THIS
3 STIPULATION.

4 SO THE WILLIS CLASS AGREED TO BE PART OF A PHYSICAL
5 SOLUTION, BUT NOT AN UNLIMITED PHYSICAL SOLUTION. IT'S A
6 PHYSICAL SOLUTION THAT HAS TO BE CONSISTENT WITH ITS
7 JUDGMENT. THEY'RE GOING TO MAKE HAY AND ARGUE THAT IT'S
8 ANY PHYSICAL SOLUTION BECAUSE OF SOME LANGUAGE IN THE
9 NOTICE. BUT THE AGREEMENT AND THE JUDGMENT THAT THIS COURT
10 DECREED SAID WE'RE GOING TO BE BOUND BY A PHYSICAL SOLUTION
11 PROVIDED IT'S CONSISTENT WITH THIS JUDGMENT.

12 SO WE'RE HERE IN THIS PHASE TO DEMONSTRATE TO THE
13 COURT THAT THE PHYSICAL SOLUTION THAT'S BEING PROPOSED BY
14 THE PARTIES IS NOT ONLY INCONSISTENT, BUT ALSO EXTREMELY
15 UNFAIR BECAUSE IT GIVES ZERO RIGHTS FROM THE NATIVE SAFE
16 YIELD TO THE NON PUMPING LAND OWNERS AND ALLOCATES IN
17 PERPETUITY ON A PERMANENT BASIS THE ENTIRE NATIVE SAFE
18 YIELD WHICH IS THE ONLY RELIABLE SUPPLY OF WATER FROM THE
19 BASIN. THE OTHER POINT THAT'S IMPORTANT --

20 THE COURT: YOU'RE DROPPING YOUR VOICE.

21 MR. KALFAYAN: THE OTHER POINT THAT IS IMPORTANT
22 WITH RESPECT TO REASONABLE -- IS WITH RESPECT TO REASONABLE
23 AND BENEFICIAL USE. THIS PROCEEDING IS RELATED TO THE
24 GROUNDWATER RIGHTS THAT EVERYONE IS ASSERTING AND TRYING TO
25 ASSERT IN THIS CASE. HOWEVER, THAT IS SUBJECT TO THE
26 CONSTITUTIONAL MANDATE ARTICLE 10 SECTION 2 THAT ALL WATERS
27 BE PUT TO REASONABLE AND BENEFICIAL USE. AND THAT IS A
28 FACT BASED INQUIRY THAT THE COURT HAS TO DIVE IN AT LEAST

1 FOUR DIFFERENT COMPONENTS THAT THE CITY OF BARSTOW
2 DESCRIBED, ONE OF WHICH IS METHODS OF USE WHICH REQUIRES AN
3 EXPERT TO HELP. TWO, AT A MACRO LEVEL, WHETHER OR NOT IT'S
4 REASONABLE AND BENEFICIAL TO GROW ALFALFA IN THE DESSERT.
5 THREE, CONSERVATION MEASURES. THE CALIFORNIA CONSTITUTION
6 CLEARLY SAYS CONSERVATION IS PARAMOUNT AND IMPORTANT.
7 JOSLIN, CITY OF BARSTOW -- TWO CASES ARTICULATED THAT
8 PRINCIPLE. THE THIRD IS FAIRNESS. WE'RE HERE IN ORDER TO
9 ENSURE THAT THE PHYSICAL SOLUTION IS FAIR TO THE WILLIS
10 CLASS. AND IT CAN BE MADE FAIR. THE ONLY WAY WE CAN SHOW
11 THE COURT IS BY GIVING THE COURT AN ALTERNATIVE, AN
12 ALLOCATION, IF YOU WILL, TO THE WILLIS CLASS SO THAT WHEN
13 THEY DO COME IN ONLINE THERE'S AN AVAILABLE SUPPLY OF WATER
14 THAT THEY CAN DRAW UPON AND MAKE THEIR PROPERTY
15 DEVELOPABLE.

16 NEXT, YOUR HONOR, THE STIPULATION OF THE SETTLEMENT
17 DOES PROVIDE IN PARAGRAPH ROMAN NUMERAL SEVEN -- I TAKE
18 THAT BACK -- ROMAN NUMERAL EIGHT, B, LAST SENTENCE OF THE
19 SECOND FULL PARAGRAPH SAYS, "NOR SHALL THIS STIPULATION
20 PRECLUDE SETTLING PLAINTIFFS FROM PARTICIPATING IN ANY
21 FURTHER PROCEEDINGS THAT MAY AFFECT THEIR RIGHTS." UNDER
22 THE CITY OF LOWDI THE COURT SHOULD ENTERTAIN AND ADMIT
23 EVIDENCE AND DETERMINE WHAT IS FAIR AND --- AND EQUITABLE
24 FOR EVERYONE IN THIS BASIN. THE PROPOSAL THAT'S IN FRONT
25 OF THE COURT IS A ZERO ALLOCATION OF THE NATIVE SAFE YIELD
26 TO THE WILLIS CLASS. NO LAWYER IN THIS ROOM WILL DISAGREE
27 WITH THAT. AND IT FORCES THE CLASS TO RELY UPON THE
28 POTENTIAL FOR FINDING IMPORTED WATER. YOU'RE GOING TO HEAR

1 FROM DR. WILLIAMS THAT IMPORTED WATER FOR THE LAST TWO
2 YEARS AVERAGED 12-AND-A-HALF PERCENT OF THE STATE WATER
3 CONTRACTOR'S TABLE "A" AMOUNT AND THE RETURN FLOWS FROM
4 THAT WERE MEAGER. SO THE WILLIS CLASS MAY CONCEIVABLY NOT
5 HAVE SOURCE -- A SUPPLY OF WATER IN ORDER TO DEVELOP THEIR
6 PROPERTY IN THE FUTURE IF THE COURT ADOPTS THIS PHYSICAL
7 SOLUTION. THAT'S ALL, YOUR HONOR.

8 THE COURT: OKAY.

9 MR. LEMIEUX: WELL, IT SOUNDED A LITTLE BIT LIKE WE
10 WERE ARGUING THE MERITS OF THIS INCONSISTENCY ARGUMENT.
11 WE -- I CAN -- WE CAN SEE, OR AT LEAST I CAN SEE THAT THEY
12 HAVE A RIGHT TO BE HERE AND ARGUE THAT THE SETTLEMENTS ARE
13 INCONSISTENT. AND THAT'S A LEGAL ARGUMENT SIGNIFICANTLY,
14 BUT THAT -- THERE'S NO DISPUTE ABOUT THAT. WHAT I'M
15 TALKING ABOUT AND WHAT I'M DIRECTING THE COURT'S ATTENTION
16 TO IS THE IDEA THAT THEY INTRODUCE A -- EVIDENCE OF AN
17 ALTERNATIVE PHYSICAL SOLUTION, WHICH I BELIEVE GOES BEYOND
18 THE BOUNDS OF WHAT WE'VE AGREED TO IN THE SETTLEMENT
19 AGREEMENT. IT -- THE SETTLEMENT AGREEMENT ALSO SAYS THAT
20 THE WILLIS CLASS AGREES NOT TO CHALLENGE OR OTHERWISE
21 CONTEST THE NATIVE SAFE YIELD PROPOSED BY SETTLING
22 DEFENDANTS AS LONG AS IT'S AT LEAST 82,300 ACRE FEET PER
23 YEAR.

24 THE SETTLING PARTIES UNDERSTAND AND AGREE THAT IN
25 THE ABSENCE OF STIPULATION BY ALL PARTIES IN THE
26 COORDINATED ACTION, THE COURT WILL DECIDE THE BASIN'S
27 NATIVE SAFE YIELD FOLLOWING TRIAL AND THE SETTLING PARTIES
28 AGREE TO BE BOUND BY THE COURT'S DETERMINATION IN THAT

1 REGARD EVEN IF SOME OR ALL OF THEM DO NOT PARTICIPATE IN
2 SUCH A TRIAL. IT SEEMS TO ME THAT THEY UNDERSTOOD THAT
3 THAT
4 WAS -- THAT WE WOULD HAVE THIS TRIAL AND THERE WOULD BE
5 SOME KIND OF PROPOSAL, POTENTIALLY, OR STIPULATION THAT
6 WOULD COME FORWARD AND THEY AGREED TO BE BOUND BY THAT AT
7 THE END. SO THAT -- BASICALLY, THE WAY I'M LOOKING AT THAT
8 IT DOESN'T SEEM TO ALLOW THEM TO COME IN AND PROPOSE AN
9 ALTERNATIVE VERSION FOR THE COURT'S CONSIDERATION.

10 THE COURT: OKAY.

11 MR. LEMIEUX: SO WE WOULD ASK -- AGAIN, JUST FOR
12 CLARITY, WE WOULD ASK THAT THE COURT LIMIT THE WILLIS CLASS
13 INVOLVEMENT TO THE ISSUE OF THE INCONSISTENCIES OF --
14 ALLEGED INCONSISTENCIES BETWEEN THE SETTLEMENT AT WHICH CAN
15 BE RESERVED, WE THINK, AS A LEGAL ISSUE OR MAYBE IT HAS
16 ALREADY BEEN.

17 THE COURT: ALL RIGHT. FIRST OF ALL, MOTIONS IN
18 LIMINE, AND THIS IS APPROPRIATELY A MOTION IN LIMINE, IS
19 MERELY A RULING IN ADVANCE ON AN OBJECTION TO EVIDENCE.
20 AND THE -- ANY RULING ON A MOTION IN LIMINE IS LIKELY TO BE
21 TENTATIVE BECAUSE YOU REALLY DON'T KNOW WHETHER OR NOT THE
22 OBJECTION'S GOING TO BE SUSTAINED, EXCEPT IN RARE CASES,
23 UNTIL YOU HEAR THE EVIDENCE. IN THIS CASE, WE'RE TALKING
24 ABOUT WHETHER OR NOT YOU SHOULD BE ABLE TO PRODUCE EVIDENCE
25 AND MAKES ME GO BACK TO WHAT THE WHOLE PURPOSE OF THIS
26 PARTICULAR PHASE OF TRIAL IS.

27 AND THERE ARE SEVERAL THINGS. ONE IS THE QUESTION
28 OF DEFAULTING PARTIES AND CLAIMS OF PRESCRIPTION AGAINST

1 THOSE PARTIES. THAT CLEARLY IS SOMETHING THAT IS OF NO
2 INTEREST TO THE WILLIS CLASS AND YOU WOULD HAVE NO RIGHTS
3 WITH REGARD TO THOSE CLAIMS. THE SECOND PART OF THIS IS TO
4 DETERMINE WHETHER OR NOT THE COURT IS GOING TO APPROVE A
5 GLOBAL SETTLEMENT. THAT IS A YES OR NO ANSWER. IT IS NOT
6 AN OPPORTUNITY TO HEAR EVIDENCE CONCERNING OTHER TYPES OF
7 PROPOSALS THAT MIGHT BE DIFFERENT. THE COURT HAS REVIEWED
8 THIS PROPOSED GLOBAL SETTLEMENT AND THE COURT IS EITHER
9 GOING TO APPROVE IT OR DISAPPROVE IT. THAT'S A SOLE ISSUE
10 WITH REGARD TO THAT QUESTION AND IT INVOLVES TWO
11 SETTLEMENTS. IT INVOLVES THE WOOD CLASS, AS WELL AS THE
12 PROPOSED GLOBAL SETTLEMENT, SO-CALLED, THAT HAS BEEN
13 ENTERED INTO BY VIRTUALLY EVERY LAND OWNER, PRODUCER AND
14 PUBLIC WATER PROVIDER IN THE VALLEY. SO -- AND THERE ARE
15 ONLY FOUR PARTIES, AS I UNDERSTAND IT, WHO ARE STILL ARE --
16 WHO ARE NOT IN AGREEMENT TO THE STIPULATION, BUT THEY MAY
17 BE.

18 SO TO THIS EXTENT, I'M GOING TO SUSTAIN THE
19 OBJECTION AS TO THE PRODUCTION OF WITNESSES TESTIFYING TO
20 ALTERNATIVE PROPOSALS. THE COURT IS EITHER GOING TO GRANT
21 OR DENY THE GLOBAL SETTLEMENT AND THE NEW WOOD CLASS
22 SETTLEMENT. THE COURT HAS ALREADY TENTATIVELY AGREED TO
23 APPROVE THE WOOD CLASS SETTLEMENT. SO THE ONLY ONE LEFT
24 REALLY IS GOING TO BE WHETHER OR NOT THE GLOBAL
25 SETTLEMENT'S APPROVED. IF IT'S DISAPPROVED, THE WOOD CLASS
26 SETTLEMENT GOES BACK TO ZERO AND THE SAME WOULD BE TRUE AS
27 TO GLOBAL SETTLEMENT. AND WE WOULD THEN SET THIS MATTER
28 FOR TRIAL WITH REGARD TO THE CLAIMS THAT EACH OF THE

1 PARTIES, WHO ARE EXTANT, STILL HAVE IN THIS PROCEEDING IN
2 THE ABSENCE OF A SETTLEMENT OF THOSE CLAIMS.

3 IN EVERY REAL SENSE, THE WILLIS CLASS DOES HAVE THE
4 RIGHT TO PROTECT WHAT IT THINKS IS ITS CLAIMS AND RIGHTS
5 UNDER THE JUDGMENT. MR. LEMIEUX MENTIONS THAT THE
6 COMPLAINT IS STAYED. WELL, THE COMPLAINT'S REALLY NOT
7 STAYED. THE JUDGMENT'S BEEN ENTERED. THE COMPLAINT IS NO
8 LONGER VIABLE. THE ONLY THING WE HAVE IS THE STIPULATED
9 SETTLEMENT IN THE WILLIS CLASS AND THE JUDGMENT APPROVING
10 THAT. SO -- AND I WILL TELL YOU THAT THERE'S SOME -- SOME
11 LANGUAGE USAGES IN THIS PROPOSED GLOBAL SETTLEMENT THAT ARE
12 A LITTLE BIT PERPLEXING BECAUSE OF THEIR PHRASEOLOGY.
13 WE'LL GET INTO THAT WHEN WE START TALKING ABOUT WHETHER OR
14 NOT THE COURT'S GOING TO GRANT IT OR DENY APPROVAL OF THAT.

15 AT THIS POINT, WE'RE STILL HEARING EVIDENCE
16 CONCERNING IT AND I GUESS DR. WILLIAMS IS THE FIRST WITNESS
17 AND I DON'T WANT TO KEEP HIM WAITING ANY LONGER SO I WANT
18 TO PROCEED TO HEAR THAT. NOW MR. ZIMMER, YOU HAD SOMETHING
19 YOU WANTED TO RAISE?

20 MR. ZIMMER: YES, YOUR HONOR. YOUR HONOR, AT THE
21 END OF THE DAY YESTERDAY, THERE WERE SOME COMMENTS BETWEEN
22 MR. DUNN AND MR. BRUNICK THAT RELATED TO THE TESTIMONY OF
23 DR. WILLIAMS. AND SO I THINK IT'S A GOOD IDEA THAT THE
24 COURT AT LEAST UNDERSTANDS WHAT THAT'S ABOUT SO WE DON'T
25 END UP IN OBJECTIONS WHILE DR. WILLIAMS IS TESTIFYING. AS
26 THE COURT KNOWS, ALL THE PARTIES THAT HAVE STIPULATED ARE
27 RESERVING THEIR OBJECTIONS ACROSS THE BOARD INTER SE.
28 THIS -- THIS CASE HAS BEEN GOING ON SINCE 2000 AND I DON'T

1 THINK I COULD COUNT THE NUMBER OF TIMES THAT WE HAVE
2 DISCUSSED SETTLEMENT THROUGHOUT THAT TIME. TO THE CREDIT
3 OF ALL THE PARTIES THAT ARE SEATED IN THIS ROOM, A
4 SETTLEMENT HAS BEEN REACHED WHICH REDUCES, THROUGH A LOT OF
5 PAIN AND VERY HARD FOUGHT NEGOTIATIONS, REDUCES THE OVERALL
6 PUMPING TO BELOW OR AT WHAT THE COURT DETERMINED THE SAFE
7 YIELD TO BE. AND IT IS THAT GLOBAL REDUCTION TO THE SAFE
8 YIELD WHICH IS AT THE HEART OF THE STIPULATED JUDGMENT AND
9 PHYSICAL SOLUTION. THAT, AS THE COURT IS -- CAN PROBABLY
10 IMAGINE, A LOT OF THE PARTIES HAD VARIOUS CONCERNS ABOUT
11 HOW THAT WOULD ALL WORK OUT. BUT IN A CONSISTENT WAY TO
12 WHAT THE COURT HAS ARTICULATED IN THE PAST, THAT THERE
13 WOULD BE SOME MECHANISM SET UP TO MANAGE THIS BASIN IN THE
14 FUTURE IN CONJUNCTION WITH REDUCTION TO THE SAFE YIELD,
15 THAT THERE WOULD BE THIS MECHANISM TO MANAGE THE BASIN,
16 THAT THE BASIN WOULD THEN BE PROTECTED AND THAT WAS THE
17 BASIS OF THE SETTLEMENT. HOW THAT WOULD BE DONE, YOU CAN
18 IMAGINE THERE WOULD BE A LOT OF DISAGREEMENT AS TO EXACTLY
19 HOW THAT WOULD BE DONE BUT THE PROCEDURE CERTAINLY IS SET
20 FORTH IN THE STIPULATED JUDGMENT.

21 THE COUNTY HAS DONE SOME ADDITIONAL WORK IN WORKING
22 ON A MODEL THAT TALKS ABOUT VARIOUS SCENARIOS ABOUT WHAT --
23 HOW THE PHYSICAL SOLUTION COULD BENEFIT THE BASIN. THE --
24 THE PARTIES, LAND OWNERS HAVE NOT ALL AGREED TO THE MODEL
25 AS THE WAY TO DO THAT IN THE FUTURE AS THE MANAGEMENT TOOL,
26 BUT ALL THE LAND OWNERS AGREE THAT A MODEL CAN BE A VERY
27 EFFECTIVE TOOL IN THE FUTURE TO DO THAT. THE PARTIES, I
28 ALSO THINK, AGREE THAT THE MODEL THAT'S BEING PRESENTED BY

1 THE COUNTY IS THEIR VIEW OF HOW THIS PHYSICAL SOLUTION WILL
2 BENEFIT THE BASIN AND NONE OF THE LAND OWNER PARTIES ARE
3 OBJECTING TO THAT BEYOND RESERVING THE RIGHTS TO CHALLENGE
4 A MODEL, IF NECESSARY IN THE FUTURE, TO HAVE CONTRIBUTION
5 TO A MODEL IN THE FUTURE, TO HAVE A MODEL IN THE FUTURE
6 VETTED WHICH WILL BE USED FOR PURPOSES OF ULTIMATE -- WHICH
7 WILL BE THE ULTIMATE MODEL THAT'S USED.

8 SO PUTTING THAT ASIDE, MR. DUNN AND I HAVE TALKED
9 ABOUT THIS BRIEFLY AND THERE MAY BE SOME DIFFERENCES IN
10 PHRASEOLOGY BUT WHAT HAS BEEN AGREED IS DR. WILLIAMS'
11 TESTIMONY WILL NOT BE OBJECTED TO BY THE LAND OWNERS FOR
12 EXPEDIENCY, AND BECAUSE THOSE RIGHTS ARE RESERVED THE
13 PARTIES HAVE AGREED THAT THIS PRESENTATION OF THIS PHYSICAL
14 SOLUTION IS FOR THE PURPOSE OF SHOWING HOW A MODEL COULD
15 HELP THE BASIN UNDER THIS OVERALL MANAGEMENT PROCESS OF
16 REDUCING THE SAFE YIELD THAN HAVING A PROCEDURE IN PLACE IN
17 THE FUTURE TO WORK OUT THE DETAILS, WHICH OBVIOUSLY AS THE
18 COURT HAS EXPRESSED MANY TIMES WOULD BE INFLUX AND WILL
19 HAVE TO BE DEALT WITH IN THE FUTURE. SO THEY'VE AGREED
20 THAT THAT'S WHAT THE PURPOSE IS. IT'S NOT FOR PURPOSES OF
21 MANAGEMENT, IT'S NOT FOR PURPOSES OF SELECTING A WATER
22 MASTER. THE MODEL WILL NOT BE INTRODUCED IN EVIDENCE AND
23 THE SLIDES WILL NOT BE INTRODUCED INTO EVIDENCE, BUT WILL
24 BE USED FOR DEMONSTRATIVE PURPOSES ONLY AS TO UNDERSTANDING
25 DR. WILLIAMS' TESTIMONY.

26 THE COURT: ALL RIGHT.

27 MS. AILIN: JUNE AILIN FOR PHELAN PINON HILLS
28 COMMUNITY SERVICES DISTRICT. YOUR HONOR, IN RULING ON THE

1 MOTION IN LIMINE, YOU REFERRED SEVERAL TIMES TO A GLOBAL
2 SETTLEMENT AND I JUST HAVE TO POINT OUT THAT IT IS NOT
3 QUITE GLOBAL BECAUSE MY CLIENT HAS NOT SIGNED ONTO IT.

4 THE COURT: YOU NOTICED I USED THE WORD "SO-CALLED."

5 MS. AILIN: NO, I ACTUALLY DID NOT, BUT I APPRECIATE
6 THAT.

7 THE COURT: WELL, I DID.

8 MS. AILIN: AND IN RESPONSE TO MR. ZIMMER'S COMMENTS
9 FOR OUR PURPOSES DR. WILLIAMS' TESTIMONY HAS A VERY
10 DIFFERENT EFFECT. AT LEAST PART OF IT APPARENTLY IS GOING
11 TO GO TO MY CLIENT'S IMPACT ON THE ADJUDICATION AREA SO IT
12 IS REALLY NOT JUST DEMONSTRATIVE IN THAT SENSE.

13 MR. ZIMMER: YOUR HONOR, JUST TO BRIEFLY RESPOND TO
14 MS. AILIN'S POINT AND ALSO TO MR. KALFAYAN'S, TO A CERTAIN
15 EXTENT. THE TESTIMONY IS NOT BEING INTRODUCED, AS I
16 UNDERSTAND IT, MR. DUNN COULD HIGHLIGHT THIS, TO SHOW
17 THAT'S EXACTLY HOW IT WILL HAPPEN IN THE FUTURE, SO I THINK
18 SOME OF THESE COMMENTS ABOUT HOW EXACTLY THEY WILL BE
19 IMPACTED WOULD BE PREMATURE.

20 THE COURT: DO I UNDERSTAND CORRECTLY THIS IS A
21 HYPOTHETICAL EXAMPLE? IS THAT WHAT THE MODEL IS?

22 MR. DUNN: AND I APPRECIATE MR. ZIMMER'S COMMENTS
23 AND CONCUR. WHAT I'D LIKE TO ADD IS, FIRST OF ALL, ANSWER
24 THE COURT'S QUESTION. WHEN WE COME BEFORE THE COURT TO
25 PROVE UP A PHYSICAL SOLUTION, A PHYSICAL SOLUTION TO BE
26 SUCCESSFULLY PROVED UP WOULD SHOW THAT, OVER TIME, IF
27 IMPLEMENTED, THE PHYSICAL SOLUTION WILL SOLVE A PROBLEM AND
28 THE PROBLEM HERE IS A LONG STANDING OVERDRAFT. SO IT

1 DOESN'T HAPPEN INSTANTANEOUSLY, IT TAKES PLACE OVER TIME.
2 AND WHAT DR. WILLIAMS' TESTIMONY WILL SHOW IS THAT THIS
3 PHYSICAL SOLUTION IS IN FACT A PHYSICAL SOLUTION. HE HAS
4 DEVELOPED A MODEL, WHICH CAN BE USED TO SHOW OVER TIME HOW
5 THE PHYSICAL SOLUTION WILL IMPACT THE BASIN. AND IT SHOULD
6 BE NO SURPRISE COMING FROM US THAT WE'RE OFFERING THIS TO
7 SHOW THAT IT IS IN FACT A PHYSICAL SOLUTION. SO YES, IT
8 DOES SHOW, OVER TIME, HOW THE BASIN WILL RESPOND.

9 THE COURT: BUT MR. DUNN, THE PURPOSE OF OUR
10 PROCEEDINGS HERE IS TO DETERMINE WHETHER OR NOT THE COURT
11 IS GOING TO APPROVE THE SETTLEMENT. THE COURT IS GOING TO
12 EVALUATE THE SETTLEMENT BOTH IN TERMS OF THE IMPACT ON THE
13 PARTIES TO THE SETTLEMENT, THE IMPACT ON THE FUTURE, THE --
14 AND IN PARTICULAR, THE PUBLIC INTEREST WHICH INCLUDES, BY
15 THE WAY, COUNSEL, EVERYBODY THAT IS IN AREA OF THE VALLEY
16 DOES NOT INCLUDE EVERYBODY EXCEPT THE WILLIS CLASS. I -- I
17 DO NOT UNDERSTAND WHERE THAT LANGUAGE CAME FROM. YOU DON'T
18 HAVE TO TELL ME NOW, EITHER, BUT I FIND IT NONSENSICAL WHEN
19 THE COURT TALKS ABOUT THE PUBLIC INTEREST, THAT YOU THINK
20 IT EXCLUDES SOMEBODY. SO IF THE COURT WERE TO SAY THE
21 COURT FINDS THAT THE PROPOSED PHYSICAL SOLUTION IS A GOOD
22 ONE, IT'S EFFECTIVE BUT THE TERMS OF THE GLOBAL SETTLEMENT
23 AND THE IMPACT ON THE PUBLIC INTEREST ARE NOT EXACTLY IN
24 THE PUBLIC INTEREST AND SHOULD BE MODIFIED, THE COURT WILL
25 BE ONLY ABLE TO TELL YOU THAT YOUR MOTION TO APPROVE IS
26 DENIED. I DO NOT HAVE BEFORE ME, AND NOBODY HAS PRESENTED
27 IT TO ME IN THIS FASHION, THAT THE COURT MAY FIND THAT
28 THERE IS A GOOD PHYSICAL SOLUTION BUT THE TERMS OF THE

1 AGREEMENT ARE NOT APPROVED. SO I'M GOING TO GO AHEAD AND
2 APPROVE THE PHYSICAL SOLUTION AS I SEE IT AND I'M GOING TO
3 DENY YOUR SETTLEMENT IN TERMS OF THE TERMS. THAT'S NOT
4 BEFORE ME. I DON'T BELIEVE I CAN DO THAT AS MUCH AS I
5 MIGHT LIKE TO.

6 SO AT THIS POINT, WE'RE DEALING WITH THE GLOBAL
7 SETTLEMENT, SO-CALLED, MS. AILIN, AND WE ARE GOING TO
8 DETERMINE WHETHER OR NOT IT AND THE TERMS AND CONDITIONS OF
9 THE SETTLEMENT AGREEMENT CAN BE APPROVED.

10 MR. DUNN: OKAY.

11 THE COURT: THAT'S ALL THAT'S BEFORE US WITH REGARD
12 TO THAT EXCEPT FOR THE DEFAULTING PARTIES.

13 MR. DUNN: YES.

14 THE COURT: TRUE?

15 MR. DUNN: YES, YOUR HONOR.

16 THE COURT: OKAY. THEN WITH THAT IN MIND, LET'S
17 HEAR THE EVIDENCE. MR. MCLACHLAN?

18 MR. MCLACHLAN: MICHAEL MCLACHLAN FOR RICHARD WOOD
19 AND SMALL PUMPER CLASS. I WAS A LITTLE SLOW TO STAND UP
20 EARLIER. I WANTED TO JUST PUT A COUPLE OF COMMENTS ON THE
21 RECORD REALLY BRIEFLY REGARDING THE MOTION IN LIMINE. I
22 DIDN'T GET A CHANCE TO DO THAT AND I'LL TRY TO BE SUCCINCT.
23 WHILE I DO, LIKE MOST OF THE OTHER SO-CALLED GLOBAL
24 STIPULATORS, DISAGREE WITH MR. KALFAYAN AND MS. BRENNAN'S
25 LEGAL POSITION, I DO HAVE SOME LEVEL OF SYMPATHY FOR THE
26 TASK THEY HAVE IN HAND. AND MY CONCERN MORE GLOBALLY, AND
27 I THINK THIS MOTION IN LIMINE WE'RE GOING TO SEE THIS COME
28 UP IN A FEW DIFFERENT AREAS, I MAY BE WRONG, BUT I THINK

1 IT'S GOING TO COME UP AND THE -- THE NOTION THAT THIS --
2 POSED BY THIS MOTION IN LIMINE IN TERMS OF WHAT
3 MR. KALFAYAN CAN AND CANNOT DO IN -- IN OPPOSING THE
4 PROPOSED PHYSICAL SOLUTION, I WOULD URGE THE COURT TO BE A
5 BIT CAREFUL. AND MY CONCERNS ARE MORE WHAT HAPPENS AT THE
6 APPELLATE LEVEL, SO I WOULD LIKE TO SEE US BE NOT OVERLY
7 TRUNCATE HIS ABILITY TO DEFEND HIMSELF IN THE TRIAL COURT
8 LEVEL. I DON'T KNOW WHERE THAT LINE EXACTLY STANDS AND
9 THANKFULLY I DON'T WEAR THE ROBE. I HAVE SOME -- I ALSO
10 HAVE SOME SYMPATHY FOR YOUR HONOR BECAUSE IT IS A TOUGH
11 CALL. BUT AS A CLASS LAWYER, WE HAVE A BODY OF LAW OUT
12 THERE THAT STATES THAT YOU HAVE UNIQUE POST JUDGMENT DUTIES
13 TO PROTECT THE INTEREST OF A CLASS, AND CLEARLY THOSE ARE
14 IMPLICATED HERE VIS-À-VIS THAT SETTLEMENT WHEN THIS
15 PHYSICAL SOLUTION WAS CONTEMPLATED.

16 AND SO WHILE I WILL VERY VIGOROUSLY OPPOSE
17 MR. KALFAYAN, I'D LIKE TO DO IT ON A LEVEL PLAYING FIELD
18 AND I'D LIKE TO MAKE SURE WE TAKE REALLY GOOD CONSIDERATION
19 ABOUT LETTING HIM PUT ON THE CASE HE NEEDS TO PUT ON.
20 THAT'S ALL I HAD TO SAY.

21 THE COURT: YOU'RE OPPOSING THE MOTION IN LIMINE, IS
22 THAT WHAT I'M HEARING?

23 MR. MCLACHLAN: IN PART. THE MOTION IN LIMINE
24 SEEMED TO BE ORALLY TRUNCATED A LITTLE BIT BECAUSE IT
25 DISCUSSED -- IT SAID THE THREE REMEDIES THAT HE SHOULD NOT
26 BE ABLE TO CHALLENGE THE PUMPING. I WOULD AGREE AS TO 2011
27 AND 2012, AS TO ALL OTHER PUMPING I SAY NO, THAT'S WRONG,
28 THAT HE SHOULD BE ALLOWED TO CHALLENGE THAT IF HE NEEDS TO.

1 I THINK THE COURT DISCUSSED THAT YESTERDAY. THE -- THE
2 CONCERN I HAVE IS THAT YOU'RE LOOKING AT TWO SIDES OF THE
3 SAME COIN HERE. YOU HAVE OUR PROPOSED PHYSICAL SOLUTION
4 AND THEN MR. KALFAYAN WANTS TO PUT ON A PROPOSED
5 ALTERNATIVE. WELL, I AGREE THAT HE -- THAT IT'S NOT
6 NOTICED, IT'S NOT BEFORE THE COURT, BUT THERE ARE CONCEPTS
7 WITHIN THAT, POTENTIALLY, THAT HE MAY WANT TO RAISE AND
8 SAY, WELL, LOOK THIS PORTION OF THE PROPOSED GLOBAL --
9 SO-CALLED GLOBAL STIPULATION IS INCONSISTENT WITH OUR PRIOR
10 SETTLEMENT AND THIS IS THE WAY IT SHOULD BE FIXED AND
11 HANDLED. AND I DON'T THINK HE SHOULD BE, YOU KNOW,
12 PROHIBITED FROM ARGUING THAT. AND TO THE EXTENT THAT THE
13 COURT DEEMS NECESSARY ESTABLISHING THAT IT'S -- ACTUALLY,
14 WE CAN PICK A HYPOTHETICAL, BUT I WON'T -- IT'S SUCH AND
15 SUCH CONCEPT IS PHYSICALLY POSSIBLE. FOR EXAMPLE, IF HE
16 HAD TO PUT ON AN EXPERT TO PROVE THAT, I WOULD -- YOU KNOW,
17 I WOULD PROBABLY LEAN TOWARDS ALLOWING HIM TO DO IT. OF
18 COURSE THIS IS A CASE-BY-CASE ISSUE AND I DON'T HAVE TO
19 MAKE THOSE DECISIONS BUT --

20 THE COURT: WELL, MR. MCLACHLAN, TO EASE YOUR
21 CONCERNS IN THAT AREA, THE ONLY THING I'VE DONE IS THAT
22 I -- I GRANTED THE MOTION AS A TENTATIVE SUSTAINING OF AN
23 OBJECTION TO THE PRESENTATION OF EVIDENCE. AS THE
24 CIRCUMSTANCES EVOLVE, THAT COULD EASILY CHANGE. BUT AT
25 THIS POINT, THERE'S ONLY ONE THING THAT I'M CONCERNED ABOUT
26 AND THAT IS WHETHER OR NOT I'M GOING TO APPROVE OR
27 DISAPPROVE THE GLOBAL SETTLEMENT WHICH HAS, AS PART OF IT,
28 A PHYSICAL SOLUTION. THAT'S ONLY PART OF IT. MR. KALFAYAN

1 HAS BEEN TOLD THAT HE CAN PROVIDE EVIDENCE,
2 CROSS-EXAMINATION OF THE WITNESSES WHO HAVE TESTIFIED TO
3 THE UNDERLYING FACTS, AND I SHOULD SAY YES -- AND TESTIFY
4 TO THE UNDER LYING FACTS EVEN THOUGH HE CHOSE NOT TO
5 PARTICIPATE IN THE PHASE FOUR TRIAL WHERE THE COURT MADE A
6 DETERMINATION OF WHAT THE PUMPING WAS AT THAT TIME. BUT
7 THAT'S ONLY PART OF IT, SO...

8 MR. MCLACHLAN: THANK YOU, YOUR HONOR.

9 THE COURT: I WANT TO HEAR THE WITNESS. I DON'T
10 WANT TO HEAR ANYMORE, MR. KALFAYAN. I MADE MY RULING ON
11 THE MOTION IN LIMINE.

12 MR. KALFAYAN: THEN I'LL JUST MAKE MY POINT BRIEF.

13 THE COURT: WHEN I SAID I DON'T WANT TO HEAR
14 ANYMORE, WHAT DOES THAT MEAN?

15 MR. KALFAYAN: WELL, YOUR HONOR, YOU KNOW, HE MAKES
16 POINTS AND THE COURT RULES -- I JUST --

17 THE COURT: MR. KALFAYAN, PLEASE SIT DOWN.

18 MR. KALFAYAN: -- REAL BRIEF. THERE'S A DUTY --

19 THE COURT: MR. KALFAYAN --

20 MR. KALFAYAN: I WILL STAND DOWN.

21 THE COURT: I KNOW YOUR POSITION, OKAY? I WANT TO
22 HEAR THE WITNESS. HE'S SITTING HERE. CALL YOUR WITNESS.

23 MR. DUNN: THANK YOU. PUBLIC WATER SUPPLIER CALLS
24 DR. DENNIS WILLIAMS.

25

26 DENNIS WILLIAMS,

27 CALLED AS A WITNESS, WAS SWORN AND TESTIFIED FOLLOWS:

28 THE CLERK: DO YOU SOLEMNLY STATE THAT THE TESTIMONY

1 YOU MAY GIVE IN THE CAUSE NOW PENDING BEFORE THIS COURT
2 SHALL BE THE TRUTH, THE WHOLE TRUTH, AND NOTHING BUT THE
3 TRUTH, SO HELP YOU GOD?

4 THE WITNESS: I DO.

5 THE CLERK: THANK YOU. PLEASE BE SEATED. SIR,
6 WOULD YOU PLEASE STATE AND SPELL YOUR NAME FOR THE RECORD?

7 THE WITNESS: DENNIS WILLIAMS; D-E-N-N-I-S,
8 W-I-L-L-I-A-M-S.

9 THE CLERK: THANK YOU.

10 THE COURT: GOOD MORNING, DR. WILLIAMS.

11 THE WITNESS: GOOD MORNING.

12 THE COURT: ALL RIGHT. PROCEED.

13

14 DIRECT EXAMINATION

15 BY MR. DUNN:

16 Q. THANK YOU, YOUR HONOR.

17 DR. WILLIAMS, BEFORE WE ASK FOR YOUR OPINIONS, I
18 WOULD LIKE TO ASK YOU FOR YOUR BACKGROUND, YOUR EDUCATIONAL
19 BACKGROUND.

20 A. I HAVE A -- MY EDUCATION, I HAVE UNDERGRADUATE
21 DEGREE IN GEOLOGY AND A MASTER'S IN PH.D. IN GROUNDWATER
22 HYDROLOGY. I'M A REGISTERED CALIFORNIA GEOLOGIST,
23 CERTIFIED CALIFORNIA HYDRO GEOLOGIST AND CERTIFIED
24 GROUNDWATER HYDROLOGIST WITH THE AMERICAN INSTITUTE OF
25 HYDROLOGY.

26 Q. AND DR. WILLIAMS, WHAT IS YOUR PROFESSION?

27 A. I AM A CONSULTING GROUNDWATER HYDROLOGIST.

28 Q. AND FOR HOW LONG HAVE YOU BEEN A CONSULTING

1 GROUNDWATER HYDROLOGIST?

2 A. OVER 40 YEARS.

3 Q. ARE YOU EMPLOYED? OR WHERE DO YOU WORK?

4 A. I HAVE A COMPANY CALLED GEOSCIENCE SUPPORT
5 SERVICES IN LA VERNE, CALIFORNIA.

6 Q. AND FOR HOW LONG HAVE YOU BEEN ASSOCIATED WITH
7 GEOSCIENCE?

8 A. I FORMED IT 37 YEARS AGO.

9 Q. AND WHAT IS YOUR CURRENT POSITION WITHIN
10 GEOSCIENCE?

11 A. PRESIDENT.

12 Q. ARE YOU ALSO THE PRINCIPAL GEOHYDROLOGIST?

13 A. YES.

14 Q. AND BRIEFLY, CAN YOU DESCRIBE GEOSCIENCE IN
15 TERMS OF ITS EMPLOYEE SIZE?

16 A. WE HAVE ABOUT 30 PEOPLE AND A NUMBER OF
17 PROFESSIONALS -- REGISTERED PROFESSIONAL HYDRO GEOLOGIST,
18 GEOLOGIST, ENGINEERING GEOLOGIST, CIVIL ENGINEERS. WE ARE
19 CONSULTANTS TO MOST OF THE MAJOR WATER DISTRICTS
20 MUNICIPALITIES ON GROUNDWATER DEVELOPMENT AND MANAGEMENT.

21 Q. IN CALIFORNIA?

22 A. WELL, YEAH, IN CALIFORNIA, BUT WE ALSO DO SOME
23 WORLDWIDE WORK, NOT AS MUCH AS WE USED TO BUT MOSTLY IN
24 CALIFORNIA.

25 Q. AND DO YOU DO ANY TEACHING?

26 A. YES. I'M A RESEARCH PROFESSOR AT UNIVERSITY OF
27 SOUTHERN CALIFORNIA AND I'VE BEEN TEACHING ADVANCED
28 GRADUATE LEVEL CLASSES IN GROUNDWATER MODELING AND

1 GEOHYDROLOGY SINCE 1980.

2 Q. AND DO YOU DO ANY RESEARCH ON GROUNDWATER
3 MODELING AT THE UNIVERSITY OF SOUTHERN CALIFORNIA?

4 A. YES. I'M A RESEARCH PROFESSOR. WE HAVE A
5 LABORATORY THAT'S IN CLAREMONT, CALIFORNIA WHERE WE DO
6 RESEARCH ON WELLS AND AQUIFERS AND OTHER GROUNDWATER
7 RELATED PROBLEMS.

8 Q. I TAKE IT YOU ARE THE AUTHOR OF PUBLICATIONS IN
9 GROUNDWATER?

10 A. YES, I'M A MAJOR AUTHOR IN HANDBOOK OF
11 GROUNDWATER DEVELOPMENT AND THE EDITOR -- CHIEF EDITOR
12 REVIEWER OF THE AMERICAN SOCIETY OF CIVIL ENGINEER BOOK
13 THAT CAME OUT LAST YEAR ON HYDRAULIC WELLS. I'M ALSO AN
14 AUTHOR OF A CHAPTER IN ANOTHER BOOK REGARDING SUB SURFACE
15 INTAKES FOR DESALINATION PLANTS USING SLANT WELLS. AND
16 THEN I'M ALSO -- I'VE AUTHORED ABOUT 50 OTHER PUBLICATIONS
17 RELATED TO GROUNDWATER.

18 Q. I TAKE IT OVER THE LAST 40 YEARS, THAT YOU HAVE
19 BEEN AN EXPERT WITNESS IN COURT PROCEEDINGS?

20 A. YES. I'VE BEEN AN EXPERT WITNESS A NUMBER OF
21 TIMES. I'VE TESTIFIED IN 15 TRIALS.

22 Q. HOW MANY TIMES IN CALIFORNIA?

23 A. I THINK MOST OF THEM WERE IN CALIFORNIA. I
24 WAS -- TESTIFIED IN FEDERAL COURT IN NEW MEXICO,
25 INTERNATIONAL CHAMBER OF COMMERCE IN PARIS, FRANCE TWO
26 TIMES.

27 MR. DUNN: AND YOUR HONOR, WE'D LIKE TO MARK AS
28 PUBLIC WATER SUPPLIER EXHIBIT 542, THE CURRENT CURRICULUM

1 VITAE OR RESUME OF DR. WILLIAMS.

2 THE COURT: VERY WELL.

3

4 (MARKED FOR IDENTIFICATION EXHIBIT

5 NO. PWS 542, CURRICULUM VITAE.)

6

7 MR. DUNN: AND OFFER DR. WILLIAMS AS A HYDROLOGIST
8 QUALIFIED TO OFFER AN OPINION ON GROUNDWATER.

9 THE COURT: IS THERE ANY VOIR DIRE BY ANY PARTY?

10 THE COURT FINDS THAT THE WITNESS IS QUALIFIED AND MAY SO
11 TESTIFY.

12 Q. BY MR. DUNN: DR. WILLIAMS, YOU'RE TESTIFYING
13 IN THE ANTELOPE VALLEY GROUNDWATER ADJUDICATION CASE.
14 YOU'RE AWARE OF THAT?

15 A. YES.

16 Q. CAN YOU DESCRIBE TO THE COURT YOUR FIRST
17 INVOLVEMENT WITH THIS CASE?

18 A. YES. I WAS ASKED BACK IN 2008 BY BEST, BEST &
19 KRIEGER TO GET INVOLVED IN THE CASE. AND THEN THE FIRST
20 TASK WAS REALLY TO PEER REVIEW THE EXPERT REPORT -- PROBLEM
21 STATEMENT THAT LED TO THE EXPERT REPORT IN 2010 WHILE IT
22 WAS BEING DEVELOPED. SO I REVIEWED THE DIFFERENT WORK THAT
23 WAS GOING ON. I ALSO WAS INVOLVED IN THE PREPARATION OF
24 WORK FOR THE PHASE TWO TRIAL, WHICH HAD TO DO WITH THE
25 HYDRAULIC CONTINUITY WITHIN THE ANTELOPE VALLEY. I DIDN'T
26 TESTIFY, BUT I DID GIVE A DEPOSITION. AND THEN I WAS
27 INVOLVED IN PHASE THREE. I GAVE A DEPOSITION ON THE RETURN
28 FLOWS AND SO ON, BUT NEVER TESTIFIED EITHER. AND THEN THE

1 MORE RECENTLY, IN 2014, I WAS -- GAVE A DEPOSITION ON THE
2 PHELAN ISSUE -- THE PHELAN PINON HILLS COMMUNITY SERVICES
3 DISTRICT AND THEN MOST RECENTLY WITH REGARD TO THIS PHASE
4 SIX PHYSICAL SOLUTION.

5 Q. THANK YOU, DR. WILLIAMS. WHAT WERE YOU ASKED
6 TO DO FOR THIS PHASE SIX PROCEEDINGS?

7 A. I WAS ASKED TO LOOK AT THE PHYSICAL SOLUTION
8 AND SEE IF IT MADE HYDROLOGIC SENSE. IN OTHER WORDS, THE
9 BASIN HAS BEEN IN OVERDRAFT, WHETHER THE PHYSICAL SOLUTION
10 WOULD IN FACT PRESENT A SOLUTION WHICH COULD BRING THE
11 BASIN BACK INTO BALANCE.

12 Q. WERE YOU ASKED TO DO ANYTHING ELSE IN THE PHASE
13 SIX? FOR EXAMPLE, ANYTHING WITH REGARDS TO PHELAN PINION
14 HILLS COMMUNITY SERVICE DISTRICT?

15 A. YES, I WAS. I WAS ASKED TO LOOK AT THE IMPACT
16 OF PHELAN PINION HILLS COMMUNITY SERVICES DISTRICT WELL 14,
17 WHICH LIES WITHIN THE BOUNDARIES OF THE ANTELOPE VALLEY
18 AREA OF ADJUDICATION. I WAS ASKED TO LOOK AT THOSE
19 IMPACTS.

20 Q. WE'LL SPEND THE REST OF THE TIME TALKING ABOUT
21 THE WORK THAT YOU DID. BUT DID YOU FORM OPINIONS?

22 A. YES, I DID. BASICALLY, TWO OPINIONS: THAT THE
23 PHYSICAL SOLUTION WILL BRING THE BASIN BACK IN BALANCE.
24 THE PHYSICAL SOLUTION ESSENTIALLY CONSISTS OF THREE MAIN
25 PARTS. ONE WAS A REDUCTION IN PUMPING, WHICH IS
26 GENERICALLY CALLED -- IT'S SHOWN ON THE SCREEN HERE --
27 GENERALLY CALLED A RAMP DOWN, SO TO THE NATIVE SAFE YIELD
28 VALUE OF 82,300. THE SECOND MAIN PART WOULD BE IMPORTATION

1 OF SUPPLEMENTAL WATER TO MEET DEMAND. THE THIRD MAIN PART
2 WOULD BE MONITORING AND MANAGING THE GROUNDWATER BASIN
3 USING A MANAGEMENT PLAN UNDER THE GUIDANCE OF A COURT-
4 APPOINTED WATER MASTER.

5 MR. DUNN: AND ON THE SCREEN THAT YOU REFER TO, YOUR
6 HONOR, WE WOULD MARK AS PUBLIC WATER SUPPLIER EXHIBIT 543,
7 A SERIES OF THE DEMONSTRATIVE SLIDES TO BE USED BY
8 DR. WILLIAMS DURING HIS TESTIMONY. FOR THE RECORD, HE'S
9 REFERRED TO PAGE 1 OF THAT EXHIBIT 543, PUBLIC WATER
10 SUPPLIER.

11 THE COURT: ALL RIGHT. NOW YOU SAY THEY'RE SLIDES.
12 THERE'S ALSO A HARD COPY; IS THAT CORRECT?

13
14 (MARKED FOR IDENTIFICATION, EXHIBIT
15 NO. PWS 543, SLIDES.)
16

17 MR. DUNN: I STAND CORRECTED. YES, THERE ARE --
18 THERE IS AN ACTUAL EXHIBIT. IT IS 543 PUBLIC WATER
19 SUPPLIER. IT'S A PRINTOUT OF THE SLIDES THAT WILL BE USED
20 TODAY BY DR. WILLIAMS.

21 THE COURT: PURELY DEMONSTRATIVE?

22 MR. DUNN: YES, ALL DEMONSTRATIVE WITH ONE
23 QUALIFICATION AND I'LL YIELD HERE TO MR. KUHS, BUT SOME OF
24 THE SLIDES ARE IN FACT EXHIBITS THAT HAVE BEEN PREVIOUSLY
25 ENTERED INTO THE CASE.

26 THE COURT: OKAY.

27 MR. KUHS: MY ONLY QUESTION WAS TO MR. DUNN AND THAT
28 WAS WHETHER OR NOT THE SLIDE PRESENTATION WAS AVAILABLE,

1 COULD BE MADE AVAILABLE IN THE COURT'S WEBSITE.

2 MR. DUNN: YES. YES. THANK YOU. MY CO-COUNSEL,
3 MS. WANG, INFORMS ME THAT THESE SLIDES WERE MADE AVAILABLE
4 DURING -- OF COURSE, YES, THEY WERE POSTED ON THE COURT'S
5 WEBSITE LAST NIGHT. THESE ARE THE SLIDES THAT HE USED
6 DURING HIS DEPOSITION.

7 THE COURT: OKAY.

8 MR. DUNN: AND AGAIN, JUST SO I WAS CLEAR, SOME OF
9 THE SLIDES ARE NOT DEMONSTRATIVE, THEY ARE EXHIBITS
10 ADMITTED, I BELIEVE, IN PHASE THREE THAT ARE BEING NOW USED
11 AS PART OF DR. WILLIAMS' TESTIMONY.

12 THE COURT: RIGHT. THERE SHOULD BE A PAPER COPY
13 THAT IS PART OF THE RECORD SO THAT YOU HAVE A COMPLETE
14 RECORD ON APPEAL SO THAT APPELLATE JUDGES AREN'T REQUIRED
15 TO LOOK AT SLIDES AND GET SLIDE PROJECTORS.

16 MR. DUNN: YES. AND WE FILED THAT PAPER COPY WITH
17 THE COURT CLERK THIS MORNING. THERE SHOULD BE A -- FOR THE
18 COURTESY OF THE COURT, A COPY FOR THE COURT'S USE AND WE'LL
19 DISPLAY THEM ON THE BIG SCREEN HERE FOR EVERYONE ELSE.

20 THE COURT: THANK YOU.

21 MR. DUNN: FOLKS ON THE PHONE WILL BE ABLE TO ACCESS
22 THESE SLIDES THROUGH THE COURT WEBSITE NOW.

23 THE COURT: THANK YOU. SO THE EXHIBIT IS 5 --

24 MR. DUNN: THIS IS 543 -- PUBLIC WATER SUPPLIER 543.
25 AND THEN WITHIN THAT EXHIBIT, WE'LL -- THE PAGES ARE
26 INDIVIDUALLY MARKED STARTING WITH 1.

27 THE COURT: THANK YOU.

28 MR. DUNN: SO THE SLIDE BEFORE THE COURT NOW IS PAGE

1 1.

2 THE COURT: OKAY.

3 Q. BY MR. DUNN: THIS IS DEMONSTRATIVE. OKAY.

4 DR. WILLIAMS, I APOLOGIZE. I DON'T KNOW IF WE HAD
5 YOU FINISH YOUR -- STATING YOUR OPINIONS.

6 A. THE -- YES, I -- THE FIRST OPINION HAD TO DO
7 WITH EVALUATION OF PHYSICAL SOLUTION PROVIDING THE
8 HYDROLOGIC BALANCE. THE SECOND OPINION HAD TO DO WITH
9 PHELAN PINION HILLS COMMUNITY SERVICES DISTRICT WELL 14
10 PUMPING AT 1200 ACRE FEET PER YEAR AND IT HAVING A DECREASE
11 IN STORAGE OF 700 ACRE FEET PER YEAR WITHIN THE ANTELOPE
12 VALLEY AREA.

13 Q. ALL RIGHT. WE'RE GOING TO GO NOW THROUGH THE
14 WORK THAT YOU DID TO REACH THESE OPINIONS, BUT LET'S START
15 WITH THE FIRST OPINION. WHAT IS THE BASIS FOR YOUR FIRST
16 OPINION OR OPINION NO. 1?

17 A. WELL, IF YOU CAN GO TO THE NEXT SLIDE, IT
18 SUMMARIZES IT VERY WELL. BASICALLY THE BASIS FOR THE
19 OPINION ONE OR THE PHYSICAL SOLUTION REALLY IS TO LOOK AND
20 SEE IF IT'S STABILIZED IN RECOVERY OF THE GROUNDWATER
21 LEVELS AND SUBSIDENCE. AND WE USED A TOOL THAT WE USE IN
22 HYDROLOGY AND BASIN MANAGEMENT CALLED A GROUNDWATER MODEL.
23 SO WE LOOKED AT THE WATER LEVELS AND THE SUBSIDENCE BECAUSE
24 MOST OF THOSE ARE IMPORTANT IN BRINGING THE BASIN BACK INTO
25 BALANCE. BASICALLY, IT'S JUST A SIMPLE -- THE RECHARGE IS
26 GREATER THAN EQUAL TO THE EXTRACTION. AND AS THE RESULT,
27 THE BASIN WILL BE IN HYDROLOGIC BALANCE OR IN A STATE OF
28 RECOVERY. IN OTHER WORDS, IT COULD BE REFILLING THE

1 STORAGE, WHICH IS DEPLETED NOW, COULD -- WITH PHYSICAL
2 SOLUTION WOULD -- COULD REFILL THAT ALSO.

3 Q. AND DR. WILLIAMS, I FORGOT TO ASK YOU THIS UP
4 FRONT: THE PHYSICAL SOLUTION THAT YOU WERE ASKED TO
5 EVALUATE, WHERE DID YOU SEE THAT OR HOW DID YOU OBTAIN
6 THAT?

7 A. WELL, THAT WAS THE PHYSICAL SOLUTION IN THE
8 STIPULATION OF SETTLEMENT. IT WAS OUTLINED, BUT IT'S THE
9 PHYSICAL SOLUTION THAT I THINK I DISCUSSED PRIOR WITH
10 MR. JOE SCALMANINI ALSO.

11 Q. BUT THE DOCUMENT ITSELF WAS AN EXHIBIT TO THE
12 WOOD CLASS PROPOSAL -- OR EXCUSE ME -- MOTION FOR APPROVAL
13 OF THE WOOD CLASS SETTLEMENT AGREEMENT?

14 A. YES, IT WAS.

15 Q. OKAY. THAT'S WHERE YOU FOUND IT?

16 A. YES.

17 Q. AND YOU OBTAINED THAT FROM BEST, BEST &
18 KRIEGER?

19 A. I DID.

20 Q. ALL RIGHT. AND THIS SLIDE THAT YOU REFER TO IS
21 MARKED AS PAGE NO. 2, FOR THE RECORD. LET'S GO NOW TO WHAT
22 YOU TALKED ABOUT WITH THE ANTELOPE VALLEY GROUNDWATER
23 MODEL. CAN YOU EXPLAIN WHAT THAT FOR US, PLEASE?

24 A. YES. SINCE WE -- THE PHYSICAL SOLUTION REALLY
25 IS A HYDROLOGIC BUDGET OR BALANCE. IN OTHER WORDS, THE
26 INFLOWS AN OUTFLOWS CHANGE IN STORAGE. YOU COULD -- THE
27 MODELS THAT WE USE NOW ARE CALLED DISTRIBUTED PARAMETER
28 MODELS COMPARED TO, SAY, A LUMPED PARAMETER MODEL. BEFORE

1 WE HAD COMPUTERS, WE HAD TO TREAT THE BASINS LIKE GIANT
2 BATHTUBS, SO YOU HAD AN INFLOW AND OUTFLOW AND THEN YOU
3 SUBTRACTED THAT TO GET YOUR STORAGE CHANGE. NOW WE CAN DO
4 THAT ON A LOT FINER GRID NETWORK. WE OVERLAY A MESH OR
5 GRADE OVER THE BASIN. WE DIVIDE THE BASIN UP IN LAYERS AND
6 WE CAN PERFORM THAT HYDROLOGIC BALANCE ON EACH ONE OF
7 THOSE. THEY'RE CALLED MODEL CELLS. AND SO THE MODEL THAT
8 WE USE WAS DEVELOPED ORIGINALLY BY U.S. GEOLOGICAL SURVEY
9 AND THAT WAS CALLED THE ORIGINAL MODEL WHICH WAS DEVELOPED
10 IN 2003. THAT MODEL WAS MODIFIED BY THE U.S. GEOLOGICAL
11 SURVEY IN 2012 AND WE CALL THAT MOD-1. THEY BASICALLY MADE
12 THE CELLS FINER FROM A MILE ON A SIDE TO ABOUT 3,281 FEET
13 ON A SIDE, 1,000 METERS. THEY ALSO ADDED FOUR MODEL LAYERS
14 TO ACCOUNT FOR THE LAKE BED AND ANOTHER MODEL FOR
15 SUBSIDENCE. WE USED THE USGS 2012 MODEL, THE MOD-1, AND
16 FURTHER RECALIBRATED THAT TO WHAT WE FELT WAS A MORE
17 ACCURATE REPRESENTATION OF THE HISTORICAL PUMPING. SO IT'S
18 THIS MOD-2 WHICH IS BASICALLY THE U.S. GEOLOGICAL SURVEY
19 MODEL THAT WE RECALIBRATED TO DO WHAT WE FELT WAS A MORE
20 ACCURATE REPRESENTATION OF PUMPING THAT WE USED TO TEST THE
21 PHYSICAL SOLUTION.

22 Q. NOW DR. WILLIAMS, JUST FOUNDATIONAL QUESTIONS,
23 HOW DID YOU OBTAIN A COPY OF THE USGS MODEL?

24 A. WE -- WE GOT ORIGINALLY FROM -- THROUGH THE
25 ATTORNEYS AND -- WHICH I THINK WATER WORKS 40, ONE OF THE
26 BEST, BEST & KRIEGER'S CLIENTS GAVE IT TO THEM.

27 Q. ALL RIGHT. AND DOES THE MODEL, AS USED BY THE
28 USGS AND OTHERS, DOES IT HAVE A COMMON NAME?

1 A. IT'S CALLED MOD FLOW. MOD FLOW IS A NAME OF
2 THE USGS SERIES OF THE MODELS THAT WERE DEVELOPED BACK IN
3 THE 1980'S.

4 Q. WHEN YOU SAY YOU RECEIVED A COPY OF THE MODEL,
5 WHAT -- GENERALLY, FOR A LAYPERSON, WHAT DOES THAT MEAN?
6 WHAT ARE YOU GETTING WHEN YOU RECEIVE A COPY OF THE MODEL?

7 A. WELL, IT'S SIMILAR TO LIKE IF YOU WERE TO USE
8 ONE OF THE WORD PROCESSING PROGRAMS, YOU WOULD BUY WORD OR
9 EXCEL OR WHATEVER, BUT YOU THEN WOULD GET THE DATA THAT YOU
10 NEED TO PROCESS IT THE SAME WAY WE DO. EVERYONE CAN BUY
11 MOD FLOW FROM A SUPPLIER, BUT WHAT WE GOT FROM THE U.S.
12 GEOLOGICAL SURVEY WAS ALL THE INPUT DATA AND OUTPUT DATA.

13 Q. AND THEN YOU TALKED ABOUT HOW YOU MADE SOME
14 MODIFICATIONS TO THAT DATA; IS THAT CORRECT?

15 A. THAT'S CORRECT. AND THE REASON WE MADE
16 MODIFICATIONS AT MR. SCALMANINI'S FIRM, LOU SCALMANINI FELT
17 THE PUMPING WAS UNDERESTIMATED AND WE DID THAT. AND IF YOU
18 WANT TO GO -- IF YOU COULD FLIP TO PAGE 6, I THINK.

19 Q. ALL RIGHT. LET'S DO THAT, PLEASE.

20 A. WELL, YOU CAN GO BACK ONE MORE, JUST ONE. LOOK
21 AT ONE MORE. GO BACK TO SLIDE 6, PLEASE. THERE. YEAH,
22 THIS SHOWS -- SEE IF I CAN USE MY POINTER -- SHOWS THE
23 ANTELOPE VALLEY AREA OF ADJUDICATION AND IT SHOWS BASICALLY
24 THE AREA OF THE GROUNDWATER MODEL. WHAT'S CALLED ACTIVE
25 CELLS IS THE YELLOWISH AREA, AND THE GRAY AREA'S
26 INACCURATE. BUT YOU CAN SEE THE MODEL IS NOTHING MORE AND
27 SOLVES THE HYDROLOGIC BALANCE INFLOW, OUTFLOW CHANGE IN
28 STORAGE. IT JUST SOLVES UP ON EVERY ONE OF THESE THOUSAND

1 METER CELLS AND FOR EACH LAYER. SO NOW IF YOU CAN GO
2 FORWARD TO SLIDE 15, WHICH LOOKS AT THE HISTORICAL PUMPING.

3 Q. I'M SORRY, DR. WILLIAMS, CAN WE GO BACK TO THAT
4 FIRST -- THE PREVIOUS SLIDE, SLIDE NO. 6? I WOULD LIKE TO
5 ASK YOU SOME QUESTIONS. THE RECTANGULAR AREA THAT IS SHOWN
6 IN -- I'LL CALL IT GRAY AND THEN WITH A YELLOW HIGHLIGHTED
7 AREA WITHIN THE ADJUDICATION AREA, I THINK YOU EXPLAINED
8 SOME CELLS ARE ACTIVE AND SOME CELLS ARE INACTIVE; IS THAT
9 CORRECT?

10 A. THE GROUNDWATER MODEL IS THIS BIG SQUARE HERE.
11 IT'S MUCH MORE OF AN AREA OF THE ANTELOPE VALLEY. HOWEVER,
12 ALL OF THESE ARE TURNED OFF, SO THEY DON'T HAVE ANY FLOW
13 GOING ON. THE YELLOW AREA IS THE ANTELOPE VALLEY AREA OF
14 ADJUDICATION, PRIMARILY THE ALLUVIAL SEDIMENTS, WHICH WE
15 WERE LOOKING AT IN HERE. SO THIS WAS THE AREA THAT -- THAT
16 THE MODEL WAS CONSIDERING THE PHYSICAL SOLUTION FOR. AND
17 IN ADDITION TO THE BOUNDARIES, YOU SEE SOME OTHER LITTLE
18 LINES HERE. THESE ARE FAULTS WHICH TRANSECT DIFFERENT
19 AREAS OF THE BASIN.

20 Q. NOW, IN THE UPPER RIGHT-HAND CORNER OF THIS
21 SLIDE NO. 6 OF THIS EXHIBIT, THERE'S A DEPICTION GENERALLY
22 SHOWING FOUR LAYERS GOING FROM LAYER 1 THROUGH 4. CAN YOU
23 DESCRIBE?

24 A. YES. THIS IS JUST A LITTLE CARTOON OF THE --
25 ONE THE MODEL CELLS CONSISTING OF THE FOUR LAYERS. AND THE
26 UPPER LAYER -- I THINK ANOTHER SLIDE IS -- SHOWS IT CLEARER
27 THERE. IF YOU GO TO -- IF YOU GO TO SLIDE 13, IT SHOWS IT
28 REALLY CLEAR THERE. THE UPPER LAYER OF THIS BLOCK REALLY

1 SHOWS THE LAKE BED DEPOSITS AND THAT'S ONE OF THE
2 MODIFICATIONS THE USGS DID. AND THERE'S DIFFERENT OTHER
3 LAYERS THAT GO DOWN ONE, TWO, THREE AND FOUR WHICH
4 REPRESENT THE DIFFERENT ALLUVIAL LAYERS IN THE BASIN. AND
5 THEY'VE BEEN DELINEATED, THE LAYERS, BASED ON VARIOUS
6 THINGS, USUALLY STRATEGICALLY WHICH IS GEOLOGIC CHANGES OR,
7 IN THIS CASE, SPECIFICALLY THE MOD-1 VARIATION OR ADDITION
8 BY THE USGS WAS TO PUT IN THE LAKE BED IN THE CENTRAL
9 PORTION OF THE VALLEY.

10 Q. OKAY. AND NOT TO DWELL TOO MUCH LONGER ON
11 SLIDE NO. 6, BUT YOU MENTION THAT CELLS ARE TURNED OFF OR
12 ON. WHO DOES THAT?

13 A. WELL, THE MODEL THAT WE GOT FROM USGS TURNED
14 ALL THESE CELLS OFF BECAUSE THEY WEREN'T INTERESTED INFLOW
15 OUTSIDE THE ANTELOPE VALLEY AREA OF ADJUDICATION, SO
16 THEY -- THE USGS TURNED THEM OFF.

17 Q. ALL RIGHT. SO THE PURPOSE OF YOUR WORK IS TO
18 EVALUATE THE ANTELOPE VALLEY ADJUDICATION AREA, CORRECT?

19 A. THAT'S CORRECT.

20 Q. LET'S TAKE A LOOK AT SLIDE NO. 7 IF YOU WOULD,
21 PLEASE.

22 A. OKAY.

23 Q. WAS THIS SLIDE PREPARED BY YOU? OR WHERE DID
24 YOU GET -- I'M SORRY. WHERE DID YOU GET THIS SLIDE OR ITS
25 INFORMATION?

26 A. THIS SLIDE WAS OUT OF THE SETTLEMENT AND IT
27 SHOWS THE USGS.

28 Q. I'M SORRY. YOU SAID THE SETTLEMENT?

1 A. THE -- THE STIPULATED SETTLEMENT.

2 Q. OKAY.

3 A. AND IT BASICALLY SHOWS THE ANTELOPE VALLEY AREA
4 OF ADJUDICATION. IT ALSO SHOWS THE FIVE DIFFERENT SUBBASIN
5 AREAS, THE SUB AREAS. THERE'S THE WEST, THE CENTRAL AND
6 THEN THE ROGERS -- LET'S SEE. THAT'S UP HERE IN THE -- UP
7 IN THE NORTHWEST, AND THESE DIFFERENT AREAS ARE ROGERS --
8 AND SO ON SOUTHEAST, THEY'RE USUALLY DELINEATED BASED ON
9 EITHER HYDROLOGIC OR GEOLOGIC CONSIDERATIONS. AND, FOR
10 EXAMPLE, THIS IS THE VERY BEDROCK RIDGE WHICH SEPARATES THE
11 WEST FROM THE CENTRAL. THERE'S SOME FAULTS THAT SEPARATE
12 THE SOUTHEAST FROM THE CENTRAL. THERE'S ALSO FAULTS UP IN
13 THE ROGERS LAKE AREA.

14 Q. NOW, WHY ARE WE LOOKING AT THIS, AT THE SUB
15 MANAGEMENT AREAS? OR WHY DO WE HAVE THIS SLIDE?

16 A. WELL, THOSE ARE JUST AREAS THAT THE BASIN --
17 THEY'RE REPRESENTATIVE OF THE DIFFERENT GEOLOGIC AND
18 HYDROLOGIC REGION, BUT THE BASIN IS IN HYDRAULIC CONTINUITY
19 WITH ALL OF THESE SUB AREAS. IT -- ACTUALLY GROUNDWATER
20 FLOWS, HISTORICALLY IT USED TO FLOW SOUTH FROM THE SAN
21 GABRIELS AND THE TEHACHAPIS FROM THE SOUTHWEST TO THE
22 NORTHEAST AND FROM THE NORTHWEST TO THE SOUTHEAST ALL
23 TOWARD THERE. AND THERE'S SOME SLIDE OUTFLOW IN THE
24 SOUTHEAST OVER TO EL MIRAGE.

25 Q. AND CAN WE GO TO THE NEXT SLIDE, PLEASE? AND
26 THIS IS SLIDE NO. 8.

27 A. YES, THIS IS -- THIS IS THE SAME. IT'S JUST A
28 MORE GEOLOGIC. THE CENTRAL AREA -- THE MAIN CENTRAL

1 PORTION IS WHERE ALL OF THE SUBSIDENCE OR MOST OF
2 SUBSIDENCE OCCURRED. A LOT OF FINE GRAIN LAKE BEDS IN HERE
3 AND THAT'S WHY THAT LAYER WAS ADDED IN THE -- ONE OF THE
4 USGS MODIFICATIONS. SO THIS JUST SHOWS -- ALL THESE LINES
5 REPRESENT FAULTS. FAULTS ARE NOT TOTAL BARRIERS, THEY'RE
6 WHAT WE CALL LEAKY BARRIERS, IN OTHER WORDS, GROUNDWATER
7 CAN FLOW ACROSS THESE FAULTS. IT MAY HAVE WATER LEVEL
8 DIFFERENCES AND IT MAY IMPEDE THE FLOW, BUT IT DOESN'T STOP
9 IT. SO THE ENTIRE AREA OF THE ANTELOPE VALLEY AREA OF
10 ADJUDICATION IS IN WHAT WE CALL HYDRAULIC CONTINUITY.

11 Q. AND WHERE DID YOU GET THE INFORMATION OR WHERE
12 DID YOU GET THIS SLIDE?

13 A. WELL, THIS IS OUT OF THE -- ONE OF THE USGS
14 MODELING REPORTS.

15 Q. OKAY. AND THE NAME THERE IS ONE OF THE
16 AUTHORS?

17 A. YES, SIADÉ.

18 Q. AND YOU REFERENCED THAT THERE WAS SUBSIDENCE
19 THAT'S DEPICTED ON THIS SLIDE NO. 8?

20 A. WELL, THIS IS THE AREA OF LAND SUBSIDENCE THAT
21 HAS HAPPENED OVER THE -- OVER A NUMBER OF DECADES.

22 Q. WE HAVE TO MAKE A CLEAR RECORD. YOU'RE
23 POINTING TO WHERE, DR. WILLIAMS?

24 A. THE CENTRAL PORTION OF THE AREA AROUND
25 LANCASTER. ROSAMOND IS UP HERE.

26 Q. IT'S A SHADED AREA?

27 A. YES, SHADED AREA IN THE CENTRAL PORTION.

28 Q. ALL RIGHT. NOW, AS PART OF THE WORK THAT YOU

1 DO IN TERMS OF EVALUATING THE PHYSICAL SOLUTION, DID YOU
2 CONSIDER SORT OF A GEOLOGIC CONDITIONS OF THE BASIN? FOR
3 EXAMPLE, LET'S TAKE A LOOK ADD SLIDE NO. 9.

4 A. WELL, THAT'S WHY YOU HAVE TO START WITH AN ANY
5 TYPE OF A BASIN MANAGEMENT. YOU HAVE TO GET THE GEOLOGY
6 RIGHT. YOU HAVE TO GET THE CONCEPTUAL GEOLOGY RIGHT AND
7 THEN YOU LAYER ON THE WATER OR THE HYDROLOGY. SO THE
8 GEOLOGY -- THIS IS JUST A CROSS SECTION FROM THE PALMDALE
9 AREA ON THE LEFT UP TO THE ROGERS LAKE UP IN THE NORTH,
10 MURDOCK BASIN. AND IT SHOWS EXISTENCE OF THESE CLAYS,
11 THESE LAKE BEDS. IT SHOWS WHERE THE UPPER AQUIFER IN THE
12 MODEL IS AND THE MIDDLE AQUIFER AND THE LOWER AQUIFER.
13 THEN THIS LOWER GRADE PORTION IS ALL BEDROCK, SO YOU CAN
14 SEE HERE YOU'VE GOT BEDROCK WHICH IS BASICALLY GRANITE
15 EXTENDS UP THROUGH THE ALLUVIUM A NUMBER OF PLACES. ON THE
16 WEST, WE HAVE THAT BURIED BEDROCK RIDGE, IN THE SOUTHEAST
17 WE HAVE SOME IMBUED AREAS, BUT SO THE BASIN IS VERY, VERY
18 COMPLEX AS ALLUVIUM HAS FINE GRAIN LAKE BEDS, IT HAS
19 SHALLOW BEDROCK AND THEN IT HAS DIFFERENT BOUNDARY
20 CONDITIONS.

21 Q. OKAY. NOW, DR. WILLIAMS YOU'VE ALREADY
22 INDICATED THAT THE MODEL THAT YOU USE FOR YOUR ANALYSIS
23 HAVE WHAT WE CALL LAYERS. WE'RE SORT OF TALKING ABOUT A
24 VERTICAL EVALUATION; IS THAT CORRECT?

25 A. YES, STRATIFICATION, THE UPPER LAYER, LAYER 1
26 IS THE CLAY AND THEN THE ALLUVIUM IS DIVIDED INTO THREE
27 MORE LAYERS.

28 Q. CAN WE GO TO THE NEXT SLIDE PLEASE, NO. 10?

1 THIS SLIDE IS LABELED DEPTH TO BASEMENT. CAN YOU DESCRIBE
2 WHAT DEPTH TO BASEMENT IS?

3 A. BASEMENT IS THE GRANITE AND SO YOU CAN SEE, AND
4 BY THE COLOR CHART ON THE LEFT HERE, THE DARK BLUE IS VERY
5 DEEP, LIKE THE DARK -- THE DARKEST BLUE IS ABOUT A MILE
6 DEEP SO THERE'S SOME VERY DEEP AREAS IN THE BASIN OVER ON
7 THE WESTERN PORTION, SOME IN THE CENTRAL PORTION UNDERNEATH
8 THE LAKE BEDS. SO THIS IS JUST DEPTH TO BASEMENT FROM THE
9 LAND SURFACE TO THE DEPTH OF THE GRANITIC BASEMENT ROCK.

10 Q. NOW, AS PART OF YOUR ANALYSIS, DO YOU TAKE INTO
11 ACCOUNT HISTORICAL GROUNDWATER CONDITIONS?

12 A. YES.

13 Q. CAN WE GO TO THE NEXT SLIDE, PLEASE? WAS THIS
14 SLIDE -- CAN YOU DESCRIBE WHERE THE INFORMATION CAME FROM
15 FOR THE USE IN THIS SLIDE?

16 A. YES, THIS CAME FROM ONE OF MR. DURBIN'S
17 FIGURES. HE WAS ONE OF THE MEMBERS THAT HELPED PREPARE THE
18 EXPERT REPORT. BUT IT SHOWS 1915 GROUNDWATER LEVELS BY
19 THESE CONTRA LINES, BUT WHAT MR. DURBIN DREW ON TOP OF
20 THOSE WAS ARROWS REPRESENTING GROUNDWATER FLOW, SO YOU CAN
21 SEE BACK BEFORE DEVELOPMENT STARTED THE HISTORICAL
22 GROUNDWATER FLOW WAS FROM THE SOURCES OF RECHARGE WHICH
23 WERE THE SAN GABRIELS AND THE TEHACHAPIS FROM THE SAN
24 GABRIELS TO THE NORTH-NORTHWEST FROM THE TEHACHAPIS, PRETTY
25 MUCH EASTERLY AND SOUTH EASTERLY. SO THE WHOLE -- WHOLE
26 FLOW -- AND THIS FLOW WENT ACROSS ANY FAULT BARRIERS. THE
27 BARRIERS MAY IMPEDE THE FLOW, BUT IT DON'T STOP IT. AND
28 THEN FINALLY THE FLOW FLOWED UP TO THE NORTH TOWARD ROGERS

1 LAKE. HOWEVER, MORE RECENT CONDITIONS, BECAUSE OF THE OVER
2 DRAFT HAVE SHOWN A LARGE PUMPING DEPRESSION IN THE CENTRAL
3 PORTION AND ACTUALLY REVERSAL OF FLOW FROM THE ROGERS LAKE
4 TO THE LANCASTER AREA.

5 Q. ALL RIGHT.

6 THE COURT: TWO THINGS: FIRST OF ALL, THIS IS SLIDE
7 11. YOU DIDN'T SAY THAT.

8 MR. DUNN: I'M SORRY. THIS IS SLIDE 11.

9 THE COURT: SECONDLY, IT'S 10:30. WE'VE BEEN AT
10 THIS FOR AN HOUR AND A HALF. I'M GOING TO GIVE THE
11 REPORTER A 15-MINUTE BREAK.

12

13 (A SHORT RECESS WAS TAKEN.)

14

15 THE COURT: ALL RIGHT.

16 MR. GRAHAM: YOUR HONOR, I'M HERE ON BEHALF OF A
17 VERY, VERY MINOR PARTY WHO WAS NOT A PARTICIPANT IN PHASE
18 FOUR --

19 THE COURT: STATE YOUR NAME FOR THE --

20 MR. GRAHAM: I'M ARNOLD GRAHAM.

21 THE COURT: GET OVER HERE NEXT TO THAT MIC SO
22 EVERYBODY CAN HEAR YOU, PLEASE. THANK YOU, COUNSEL.

23 MR. GRAHAM: ARNOLD GRAHAM. I REPRESENT DEFENDANT
24 WEST VALLEY COUNTY WATER DISTRICT. WEST VALLEY WAS NOT A
25 PARTICIPANT IN PHASE FOUR. THE COURT ASKED IN JUNE TO
26 SUBMIT A DECLARATION, WE DID, AND SUPPLEMENTAL DECLARATION.
27 I HAVE THE ADDITIONAL DECLARATION HERE BEFORE THE COURT TO
28 SHOW THE PROPERTY THE USAGE THE PUMPING HISTORY. IT'S ALL

1 BOUND UP. I'VE GIVEN THE CLERK AN INDICATION OF WHAT EACH
2 OF THE EXHIBITS IS AND I'D LIKE TO SUBMIT THEM TO THE
3 COURT.

4 THE COURT: OKAY. MARK IT WHATEVER THE NEXT --

5 MR. GRAHAM: I'VE GIVEN THE COURT THE EXHIBIT
6 NUMBER.

7 THE COURT: ALL RIGHT. SO THE RECORD SHOWS WHAT IT
8 IS, WHAT IS THE NUMBER?

9 MR. GRAHAM: WEST VALLEY 1, WEST VALLEY 2, WEST
10 VALLEY 3, WITH ATTACHMENTS TO EACH ONE.

11 THE COURT: THANK YOU VERY MUCH.

12 MR. GRAHAM: THANK YOU, YOUR HONOR.

13

14 (MARKED FOR IDENTIFICATION, WEST VALLEY
15 EXHIBIT NOS. 1 THROUGH 3, DECLARATIONS.)

16

17 MR. WILSON: YOUR HONOR, I HAVE SIMILAR THINGS FOR
18 ANTELOPE VALLEY MOBILE ESTATES AND DESERT BREEZE. DID YOU
19 WANT TO WAIT UNTIL WE'RE DONE WITH THE WITNESS?

20 THE COURT: DO IT RIGHT NOW.

21 MR. WILSON: ANTELOPE VALLEY 1 OF 4, THE DECLARATION
22 WITH EXHIBITS, DESERT BREEZE MHP LLC, NO. 1 FOR THE
23 DECLARATION WITH EXHIBITS. I WILL SET FORTH ON PAPER THE
24 LISTING OF EXHIBITS IF THAT'S SATISFACTORY.

25 THE COURT: YES, IT IS THANK YOU.

26 ///

27 ///

28

1 (MARKED FOR IDENTIFICATION ANTELOPE
2 VALLEY EXHBIIT NO. 1 OF 4 AND DESERT
3 BREEZE MHP LLC NO. 1, DECLARATIONS.)
4

5 MR. KALFAYAN: FOR THE RECORD, THE WILLIS CLASS
6 OBJECTS TO ALL THE OVERLYING LAND OWNERS' DECLARATIONS
7 THAT'S MARKED OR WILL BE INTRODUCED INTO EVIDENCE AS
8 HEARSAY.

9 THE COURT: ALL RIGHT.

10 MR. WILSON: YOUR HONOR, I WILL ALSO GIVE TO
11 MR. KALFAYAN HARD COPIES OF THE DOCUMENTS. ANTELOPE
12 VALLEY'S IS POSTED AS 10960 AND DESERT BREEZE WAS FILED
13 TODAY. IT'S POSTED AS 10997.

14 THE COURT: THANK YOU. AND THOSE PARTIES'
15 DECLARANTS ARE AVAILABLE FOR EXAMINATION?

16 MR. WILSON: YES, YOUR HONOR.

17 THE COURT: BY THE COUNSEL -- IF COUNSEL WISHES TO
18 DO SO --

19 MR. WILSON: WE'LL SCHEDULE WHEN COUNSEL'S READY.

20 THE COURT: THANK YOU. GO AHEAD.

21 Q. BY MR. DUNN: THANK YOU, YOUR HONOR.

22 DR. WILLIAMS, WE'RE STILL ON SLIDE NO. 12 OF THIS EXHIBIT.
23 I'M SORRY NO. 11. I STAND CORRECTED ON NO. 11. COULD YOU
24 TALK FOR A MOMENT ABOUT THE ARROWS?

25 A. YEAH, THE ARROWS JUST REPRESENT THE DIRECTION
26 OF GROUNDWATER FLOW. THE LINES -- THE BLACK LINES ARE
27 WHAT'S KNOWN AS GROUNDWATER ELEVATION LINES AND THE FLOW
28 ARROWS ARE PERPENDICULAR TO THEM. IT'S MUCH LIKE IF YOU'RE

1 ON A SKI SLOPE, YOU POINT STRAIGHT DOWN HILL SO THESE HAVE
2 TO BE PERPENDICULAR. SO THIS WAS PREPARED BY MR. TIM
3 DURBIN WHO'S PART OF THE -- PREPARING THE PROBLEM STATEMENT
4 THE EXPERT REPORT. THIS IS FROM ONE OF HIS REPORTS, WHICH
5 I BELIEVE IS IN EVIDENCE. AND IT SHOWS BASICALLY, THE
6 DIRECTION OF GROUNDWATER FLOW PREDEVELOPMENT IN 1915 FROM
7 THE SAN GABRIELS FROM THE SOUTHEAST TO THE NORTHWEST AND
8 TEHACHAPIS PRETTY MUCH EASTERLY AND SOUTH EASTERLY.

9 Q. OKAY. NOW, DR. WILLIAMS, IN JUST A MOMENT
10 WE'RE GOING TO TALK ABOUT THE TERM CALIBRATION THAT YOU
11 USED THIS MORNING IN YOUR TESTIMONY, BUT WHEN WE -- WHY IS
12 IT THAT WE LOOK AT HISTORICAL GROUNDWATER LEVELS WHEN WE'RE
13 GOING TO EVALUATE A PHYSICAL SOLUTION?

14 A. WELL, GROUNDWATER LEVELS WILL TELL YOU THE
15 WELLS OF THE BASIN. IF THE GROUNDWATER LEVEL IS MEASURED
16 IN MONITORING WELL NETWORK, THE TIME SERIES OF GROUNDWATER
17 LEVELS IS KNOWN AS A HYDROGRAPH. SO IF WE LOOK AT A BUNCH
18 OF WELL HYDROGRAPHS OVER TIME, IT WILL TELL YOU IF THE
19 BASIN IS EITHER GAINING WATER OR LOSING WATER. SO THAT'S A
20 VERY GOOD INDICATOR OF AREAS THAT HAVE MORE EXTRACTION THAN
21 RECHARGE. SO THE GROUNDWATER LEVELS ARE WHAT WE CALIBRATE
22 OR WE MAKE OUR MODELS MATCH AND -- IN OTHER WORDS, WE
23 DEVELOP OUR GROUNDWATER MODELS, WHICH I'LL EXPLAIN IN A
24 MINUTE, BUT THEN WE TEST THEM OVER THE LONG TERM HYDROGRAPH
25 RECORDS. IN THIS CASE, WE LOOKED AT 124 WELLS AND SOME
26 5,000 MEASUREMENTS.

27 Q. ALL RIGHT. NOW, YOU ALSO MENTION THAT AS PART
28 OF YOUR ANALYSIS -- DID YOU LOOK AT SUBSIDENCE?

1 A. YES. THE -- GO TO THE SLIDE -- NEXT SLIDE,
2 PLEASE. THIS IS ALSO A SLIDE FROM THE PLATE FROM THE U.S.
3 GEOLOGICAL SURVEY MODELING REPORT. THE GROUNDWATER MODEL
4 ALSO MODELS SUBSIDENCE AS WELL AS WATER LEVELS BECAUSE
5 THEY'RE CLOSELY RELATED. WHAT WE KNOW ABOUT SUBSIDENCE
6 FROM LONG-TERM HISTORY IN THE CENTRAL BASIN, CENTRAL VALLEY
7 AND OTHERS IS THAT IN CERTAIN TYPES OF AREAS WHERE YOU HAVE
8 FINE GRAIN DEPOSITS LIKE THE LAKE BED CLAYS, IF YOU LOWER
9 GROUNDWATER LEVELS A SUBSTANTIAL AMOUNT OVER A LONG ENOUGH
10 PERIOD OF TIME, THESE CLAY LAYERS WILL COMPRESS AND THEY
11 WILL COMPACT AND THAT'S CALLED NONRECOVERABLE COMPACTION OR
12 SUBSIDENCE. SO THIS SHOWS THE NONRECOVERABLE COMPACTION OR
13 THE SUBSIDENCE BETWEEN 1930 AND 1992. AND IN THE CENTRAL
14 PORTION HERE AROUND THE LANCASTER AREA, IT HAS SUBSIDENCE
15 OF FOUR, FIVE, SIX FEET IN SOME OF THAT. SO THE LAND
16 SURFACE HAS GONE DOWN SUBSTANTIALY IN CERTAIN AREAS OF THE
17 ANTELOPE VALLEY WHICH IS A REFLECTIVE OF OVERDRAFT
18 CONDITION.

19 Q. ALL RIGHT. AND SO WE'RE CLEAR ON THE RECORD,
20 THIS IS SLIDE NO. 12 WHICH IS ENTITLED, QUOTE, "LAND
21 SUBSIDENCE 1930-1992." AND I THINK YOU SAID THIS, BUT YOU
22 OBTAINED THIS FROM THE USGS. THIS WAS DONE BY MR. ADAM
23 SIADDE?

24 A. YES. THIS WAS PART OF THEIR USGS MODEL REPORT
25 IN 2014.

26 Q. I TAKE IT THE INFORMATION IS MADE AVAILABLE
27 FROM USGS IS THE TYPE OF INFORMATION THAT AN EXPERT LIKE
28 YOURSELF CAN REASONABLY RELY UPON IN FORMING THE OPINIONS

1 IN THIS CASE?

2 A. YES, IT IS.

3 Q. ALL RIGHT. LET'S GO BRIEFLY TO THE NEXT SLIDE
4 BECAUSE I BELIEVE THIS IS SLIDE 13. IT'S ENTITLED,
5 "GROUNDWATER MODEL LAYERS." AND WE'VE ALREADY TAKEN A LOOK
6 AT THIS BEFORE, BUT THIS SLIDE ALSO CONTAINS WHAT ARE
7 DEPICTED AS HYDROGRAPHS. CAN YOU EXPLAIN THOSE FOR US,
8 PLEASE?

9 A. YEAH, YOU SEE A NUMBER IN THIS SLIDE WHICH IS
10 ENTITLED GROUNDWATER MODEL LAYERS. YOU SEE A NUMBER OF
11 SMALL PANELS, ACTUALLY EIGHT -- FOUR ON THE LEFT, FOUR ON
12 THE RIGHT -- AND THEY HAVE VARIOUS LINES. THIS WAS THE
13 USGS'S CALIBRATION AND IT'S HARD TO SEE BUT IT WENT --

14 Q. DR. WILLIAMS, YOU'LL HAVE TO DESCRIBE WHEN YOU
15 SAY, THIS IS THE CALIBRATION. ARE YOU REFERRING TO A LINE
16 ON ONE OF THE HYDROGRAPHS?

17 A. YEAH, I WAS TRYING TO READ THE THING. IT'S
18 ACTUALLY 19 -- THE BOTTOM GOES FROM ABOUT 1915 TO 2003.
19 AND THESE ARE WATER LEVELS IN VARIOUS AREAS OF THE BASIN
20 THAT WERE ACTUALLY PREDICTED BY THE USGS IN THEIR MODEL.
21 AND PLOTTED AS CIRCLES WITHIN THE PLOTS ARE THE ACTUAL
22 MEASUREMENTS FROM WELLS. SO THE WHOLE PURPOSE OF
23 CALIBRATION IS TO MAKE THE MODEL MATCH, AS BEST AS
24 POSSIBLE, THE ACTUAL MEASURED HISTORICAL DATA WHETHER IT'S
25 WATER LEVELS OR SUBSIDENCE.

26 Q. SO CAN YOU EXPLAIN FOR US -- YOU KNOW, LET'S
27 USE THE HYDROGRAPH IN THE UPPER LEFT-HAND CORNER. WHAT ARE
28 THE COLORED LINES THERE IN THE CIRCLES?

1 A. WELL, ONE OF THEM IS THE LAND SURFACE AT THE
2 TOP AND THEN THESE ARE THE GROUNDWATER PREDICTED WATER
3 LEVELS. AND THE CIRCLES ARE MEASURED -- HISTORICALLY
4 MEASURED WATER LEVELS IN WELLS IN THIS. THIS IS THE WELL
5 NAME.

6 Q. NOW LET'S GO TO THE NEXT SLIDE AND TALK ABOUT
7 MODEL CALIBRATION FOR A MOMENT, OKAY. FIRST OF ALL, WHY
8 DOES -- LET'S TALK ABOUT CALIBRATION. WHAT IS CALIBRATION?

9 A. CALIBRATION IS HAVING THE MODEL AS REFINED AS
10 POSSIBLE BASED ON THE AVAILABLE DATA. NOW, THE MODELS THAT
11 WE USE ARE CONTINUALLY GETTING BETTER AND BETTER. AS MORE
12 DATA BECOMES AVAILABLE, YOU REFINE THE MODELS, BUT THE
13 CALIBRATION THAT'S SHOWN ON HERE BY THE USGS AND WHAT WE
14 DID WAS BETWEEN 1915 AND 2005, SO IT'S A LONG PERIOD OF
15 RECORD. IT HAS WET SEASONS, DRY SEASONS, AVERAGE SEASONS.
16 SO THE CALIBRATION INCLUDED MATCHING, AS BEST AS POSSIBLE,
17 THE WATER LEVEL VARIATIONS THROUGHOUT THE ANTELOPE VALLEY
18 AND THE SUBSIDENCE THAT WAS MEASURED. SO THE MODEL IS
19 FORCED BY VARYING THE DIFFERENT HYDROLOGIC PARAMETERS
20 WITHIN ACCEPTABLE LIMITS TO BEST FIT THE ACTUAL MEASURED
21 DATA, WHETHER IT'S WATER LEVELS OR SUBSIDENCE. AND AS MORE
22 INFORMATION BECOMES AVAILABLE AND THE FUTURE MODELS ARE
23 REFINED AND THIS IS AN ONGOING PROCESS SO THAT -- AND WE DO
24 IT IN A NUMBER OF OTHER BASINS WHERE IT'S COMPLETELY -- IT
25 GETS REFINED. THE MODEL GETS MORE ACCURATE AS MORE
26 INFORMATION IS AVAILABLE.

27 Q. GENERALLY, IF I UNDERSTAND IT, MODEL
28 CALIBRATION IS TO TAKE A LOOK AT ACTUAL MEASUREMENTS IN

1 HYDROGRAPHS; IS THAT CORRECT?

2 A. THAT'S CORRECT.

3 Q. AND THEN MATCH THAT AGAINST HOW THE MODEL
4 SIMULATES RECHARGE AND OUTFLOW IN THE BASIN; IS THAT
5 CORRECT?

6 A. RIGHT. THE HYDROGRAPHS ARE WELL, WHICH IS A
7 POINT SOMEWHERE IN THE BASIN. THE MATCH IS PICKING A MODEL
8 CELL. NOW THESE CELLS ARE 3,000 FEET BY 3,000 WHERE THAT
9 WELL IS AND MAKING THE MODEL SIMULATE THAT.

10 Q. OKAY. AND FOR A MODEL TO CALIBRATE, WHAT WOULD
11 YOU SEE IN TERMS OF WHAT THE MODEL GENERATES VERSUS THE
12 HISTORICAL MEASUREMENTS?

13 A. WE HAVE A STATISTICAL PARAMETER THAT'S ACCEPTED
14 IN THE GROUNDWATER MODELING INDUSTRY, IT'S CALLED RELATIVE
15 ERROR. AND WE LOOK AT THE DIFFERENCE BETWEEN THE MODEL
16 PREDICTED WATER LEVEL AND THE ACTUAL MEASURED WATER LEVEL,
17 AND THIS IS CALLED THE RESIDUAL. IT'S A DIFFERENCE. AND
18 WE LOOK AT THE STANDARD DEVIATIONS OF THESE RESIDUALS
19 DIVIDED BY THE RANGE OF RESIDUALS. IT'S CALLED THE
20 RELATIVE ERROR. AND IF THE RELATIVE ERROR IS LESS THAN TEN
21 PERCENT, THE MODEL IS CONSIDERED WELL CALIBRATED.

22 Q. OKAY. AND DID YOU ESTIMATE OR CALCULATE THE
23 RELATIVE ERROR FOR THE MODEL THAT YOU EMPLOYED FOR YOUR
24 ANALYSIS?

25 A. YES, WE DID. AND THAT -- THAT'S SHOWN ON --
26 LET ME SEE IF I CAN FIND IT HERE. I'M SKIPPING AHEAD.

27 Q. I BELIEVE IT'S SLIDE 29.

28 A. THANK YOU. YEAH, THIS IS THE SUMMARY. IT

1 SHOWS MODEL CALIBRATION RESULTS FOR THE WATER LEVELS AND IT
2 SHOWS WHAT THE USGS MODEL THAT WE IMPROVED UPON AND IN THE
3 CALIBRATION RELATIVE ERROR OF 3.25 PERCENT. OUR
4 CALIBRATION USING THE UPDATED PUMPING RECORDS IS 2.27
5 PERCENT, SO THEY'RE WELL WITHIN THE ACCEPTABLE GOOD
6 CALIBRATION OF TEN PERCENT.

7 Q. OKAY.

8 A. AND SIMILARLY, IF YOU GO TO THE NEXT SLIDE,
9 SUBSIDENCE, WE DID BETTER THAN THE USGS DID, BUT IN OUR
10 CALIBRATION FOR SUBSIDENCE IT'S 8.76 PERCENT.

11 Q. OKAY. NOW, DR. WILLIAMS, IN ORDER TO CALIBRATE
12 THE MODEL YOU NEED PUMPING INFORMATION, CORRECT?

13 A. WELL, YOU NEED -- YOU NEED PUMPING INFORMATION
14 WITH TIME, YOU NEED WATER LEVEL INFORMATION WITH TIME, YOU
15 NEED LAND SURFACE MEASUREMENTS WITH TIME.

16 Q. OKAY. LET'S GO BACK TO SLIDE NO. 15, IF WE
17 WOULD PLEASE. THIS IS ENTITLED, "ADJUSTMENT OF PUMPING IN
18 MOD-2."

19 A. YES. WHEN WE -- WHEN WE RECEIVED THE USGS
20 MODEL IN -- I THINK IT WAS 2012, MR. SCALMANINI'S COMPANY
21 FELT THAT THE ESTIMATE OF PUMPING BY THE USGS WAS TOO LOW
22 AND SO IT'S SHOWN HERE. THEY HAD AN ESTIMATION OF -- ON
23 AVERAGE BETWEEN 1946 AND 2005, THEY HAD ON AVERAGE AN
24 ESTIMATION OF 210,400.

25 Q. THAT'S SHOWN HOW? IN WHAT COLOR?

26 A. THAT'S SHOWN IN THE BLUE. AND THE EXPERT
27 SUMMARY REPORT TOOK EXCEPTION WITH THAT AND THEY FOUND
28 THAT -- IT'S SHOWN IN RED. THEY FELT THAT THE AVERAGE --

1 ANNUAL AVERAGE WAS 247,100.

2 Q. SO WHAT SLIDE NO. 15 SHOWS IS THE DIFFERENCE IN
3 THE MEASUREMENTS OR ESTIMATES OF HISTORICAL GROUNDWATER
4 PUMPING BETWEEN THE USGS MODEL AND WHAT THE TECHNICAL
5 COMMITTEE OR HAD FOUND IN THEIR EXPERT SUMMARY REPORT; IS
6 THAT CORRECT?

7 A. THAT'S CORRECT. AND SO THEN THIS PUMPING WAS
8 REVISED TO REFLECT WHAT THE EXPERT REPORT SUMMARIZED AS
9 THE -- WHAT THEY FELT WAS THE ACTUAL PUMPING AND WENT
10 THROUGH A SERIES OF LOOKING AT LAND USES AS EARLY AS 1947,
11 LOOKING AT CROPPING PATTERNS AND URBAN DEVELOPMENT AND SO
12 ON. AND THEN THEY REFINED THE PUMPING ESTIMATE, WHICH WE
13 USED IN OUR CALIBRATION OF MOD-2.

14 Q. OKAY. SO LET'S GO TO THE NEXT SLIDE, SLIDE
15 NO. 16.

16 A. THIS IS AN EXAMPLE. IT SHOWS THE ANTELOPE
17 VALLEY AND IT SHOWS SOME GREEN AREA, WHICH IS THE IRRIGATED
18 AGRICULTURE IN 1947. AND THEN BASED ON THAT, ESTIMATES OF
19 PUMPING WERE MADE LOOKING AT THE DIFFERENT LAND USE TYPES.
20 AND THE NEXT SERIES OF SLIDES JUST PAGES FORWARD IN TIME.

21 Q. SO LET'S GO TO SLIDE NO. 17.

22 A. SLIDE 17 IS THE SAME, BUT THE -- IT HAS BOTH
23 GREEN, WHICH IS THE IRRIGATED AGRICULTURE AND IT HAS A
24 YELLOW, WHICH IS URBAN AREAS. SO YOU'LL SEE, AS YOU GO
25 FORWARD IN TIME, THE AGRICULTURE IS LESS AND LESS AND THE
26 URBAN AREAS INCREASE. SO THIS -- THIS SLIDE 17 IS LAND USE
27 IN 1961 AND SLIDE 18 IS LAND USE IN 1972. AND THEN YOU
28 KEEP GOING FORWARD. THE NEXT ONE IS SLIDE 19 IS '86 --

1 SHOULD BE LAND USE IN 1986. AND THEN SLIDE 20 IS LAND USE
2 IN '89 AND '90 AND THEN IT CONTINUES ON THE NEXT SLIDE. 21
3 IS LAND USE IN '99 AND 2000 AND FINALLY, LAND USE -- NO. 22
4 IS LAND USE IN 2005. AND THERE IS A NOTABLE INCREASE IN
5 THE URBANIZED AREA. AND ALL THESE FACTORS WERE INCLUDED IN
6 THE REVISION OF THE PUMPING VALUES THAT WE USED IN THE
7 MOD-2 VERSION OF THE USGS MODEL.

8 Q. AND JUST FOR THE RECORD, SLIDE 16 THROUGH 22
9 WERE USED BY MR. SCALMANINI IN HIS TESTIMONY IN THIS CASE;
10 IS THAT CORRECT?

11 A. YES.

12 Q. LET'S GO TO SLIDE 23. NOW DR. WILLIAMS, IN
13 ORDER FOR THE MODEL TO CALIBRATE, YOU LOOK AT HISTORICAL
14 MEASUREMENTS AS SHOWN BY VARIOUS WELLS' HYDROGRAPHS; IS
15 THAT CORRECT?

16 A. THAT'S CORRECT.

17 Q. AND DOES SLIDE NO. 23 DEPICT THE WELLS THAT
18 WERE USED FOR CALIBRATION OF THE MODEL?

19 A. YES. THERE WERE 124 WELLS THAT WE USED FOR
20 WATER LEVEL CALIBRATION BETWEEN 1915 AND 2005. AND OF
21 THOSE 124 WELLS THERE'S A TOTAL OF 5,918 MEASUREMENTS SO
22 THERE WAS TIME SERIES MEASURES WITH THE WELLS. AND SO WE
23 USE THAT TO FORCE THE MODEL OR REFINE THE MODEL TO MATCH
24 THOSE AS BEST WE COULD. AND WE DID -- WE DID A SIMILAR
25 CALIBRATION WITH THE SUBSIDENCE, BUT THIS SHOWS THE
26 LOCATION OF THE WELLS THROUGHOUT THE MODEL AREA THAT WERE
27 USED FOR CALIBRATION.

28 Q. AND LET'S TAKE A LOOK AT THE HYDROGRAPHS ON THE

1 NEXT SLIDE, PLEASE, WHICH IS SLIDE 24.

2 A. SLIDE 24 SHOWS SELECTED HYDROGRAPHS THAT WERE
3 USED, WHICH SHOWED THE MODEL GENERATOR WATER LEVELS AS WELL
4 AS THE MEASURED ONES. I THINK SLIDE 25 HAS A BLOWUP OF
5 ONE. IT'S EASIER TO SEE. THIS IS ONE OF THE WELLS SHOWING
6 THE OBSERVED WATER LEVELS SHOWN AS THE BLACK DOTS AND THE
7 MODEL GENERATED WATER LEVEL SHOWN AS THE SOLID LINE. SO
8 YOU CAN SEE THERE'S A VERY GOOD MATCH IN THIS AREA. SO YOU
9 TRY TO GET THESE -- THE MODEL TO MATCH THE HYDROGRAPHS AS
10 GOOD AS YOU CAN GET. AND WE ACHIEVED A GOOD CALIBRATION
11 WITH BOTH THE WATER LEVEL AND THE SUBSIDENCE IN THIS MODEL.

12 Q. ALL RIGHT. LET'S GO BACK JUST TO THE PREVIOUS
13 SLIDE, PLEASE, SLIDE 24. DID GEOSCIENCE, YOUR ENGINEERING
14 FIRM, PREPARE THIS SLIDE?

15 A. YES, WE PREPARED IT. IT HAS OUR LOGO DOWN
16 THERE ON THE BOTTOM. BUT THIS IS JUST SOME SELECTED
17 HYDROGRAPHS SHOWING HISTORICAL DATA AS WELL AS MODEL
18 GENERATED DATA FOR VARIOUS POINTS WITHIN THE ANTELOPE
19 VALLEY AREA OF ADJUDICATION.

20 Q. AND I TAKE IT FOR EACH OF THOSE ONE, TWO,
21 THREE, FOUR, FIVE, SIX, SEVEN, EIGHT, NINE, TEN, ELEVEN
22 HYDROGRAPHS, THE LOCATION OF EACH WELL IS DEPICTED ON SLIDE
23 24?

24 A. YES. THERE'S LINES GOING FROM THE HYDROGRAPH
25 INSET TO THE POINT ON -- IN THE BASIN WHERE THE CALIBRATION
26 WAS PERFORMED.

27 Q. NOW, YOU TALKED ABOUT THE RELATIVE ERROR FOR
28 CALIBRATION. HOW WOULD YOU, IN LAYPERSON TERMS,

1 CHARACTERIZE THE CALIBRATION OF YOUR GROUNDWATER MODEL IN
2 THIS CASE?

3 A. WELL, FIRST OF ALL, WITHIN THE INDUSTRY
4 STANDARD OF TEN PERCENT, WE HAVE CALIBRATION OF LESS
5 THAN -- YOU KNOW, A LITTLE BIT ABOVE TWO PERCENT.
6 BASICALLY IT MEANS THAT YOUR MODEL IS GENERATING WHAT WAS
7 MEASURED IN THE PAST. SO YOU WANT TO HAVE A LONG ENOUGH
8 CALIBRATION PERIOD. AND THIS -- THIS IS QUITE A LONG
9 CALIBRATION PERIOD BETWEEN 1915 AND 2005 SO THAT NOW YOU
10 CAN FEEL COMFORTABLE PREDICTING INTO THE FUTURE. SO YOU
11 CAN'T -- IT'S NOT GOOD PRACTICE, FOR EXAMPLE, TO HAVE A
12 CALIBRATION PERIOD OF FIVE YEARS THEN TRY TO PREDICT 30
13 YEARS IN THE FUTURE. IT'S MUCH BETTER TO DO WHAT THIS IS,
14 SO 91 YEARS, I THINK, OF HISTORICAL RECORDS.

15 Q. AND I TAKE IT, JUST A CASUAL OBSERVATION OF THE
16 HYDROGRAPHS HERE WITH THE BLUE LINE OF THE MODEL, BY ALL
17 ACCOUNTS, WOULD SHOW A FAIRLY CLOSE CALIBRATION OR
18 RELATIONSHIP?

19 A. YEAH, THESE ARE GOOD FITS. SO THE STATISTICAL
20 METHOD RELATIVE ERROR LOOKS AT THE DIFFERENCE FOR EVERY
21 SINGLE ONE OF THESE POINTS BETWEEN WHAT'S MEASURED
22 HISTORICALLY AND WHAT THE MODEL PREDICTED, AND THAT'S
23 CALLED THE RESIDUAL. IT ADDS ALL THOSE UP, TAKES THE
24 STANDARD DEVIATION, WHICH IS A MEASURE OF HOW FAR APART YOU
25 ARE AND THEN DIVIDES BY THE RANGE OF LEVELS THAT ARE SHOWN
26 IN HERE. AND AGAIN, THAT RELATIVE ERROR IS WHAT'S USED IN
27 THE GROUNDWATER -- OF THE METHODS IN THE GROUNDWATER
28 MODELING COMMUNITY AS A MEASURE OF HOW WELL IT'S

1 CALIBRATED. AND SO YOU CAN SEE THE TEN PERCENT IS WHAT'S
2 GENERALLY ACCEPTED AS GOOD CALIBRATION AND THIS IS A LITTLE
3 OVER TWO PERCENT, SO IT'S A GOOD -- WE CAN FEEL IT'S A GOOD
4 CALIBRATION.

5 Q. DR. WILLIAMS, ARE THE 11 HYDROGRAPHS DEPICTED
6 ON SLIDE 24 THE ONLY HYDROGRAPHS THAT WERE USED TO
7 CALIBRATE THE MODEL?

8 A. WELL, THE HYDROGRAPHS ARE JUST FOR YOUR
9 BENEFIT. THE MODEL CALIBRATES ACCORDING TO DATA AND SO WE
10 JUST -- THIS IS JUST TO DISPLAY. WE CAN DISPLAY ANY -- ANY
11 CELL ON HERE. WE -- THIS IS JUST A REPRESENTATIVE SAMPLE
12 OF A FEW WELLS JUST FOR ILLUSTRATION.

13 Q. NOW EARLIER IN YOUR TESTIMONY YOU DESCRIBED
14 WHAT'S COMMONLY CALLED A LUMP SUM VERSUS A DISTRIBUTED
15 PARAMETER MODEL. CAN YOU EXPLAIN THE DIFFERENCE BETWEEN
16 THE TWO HERE?

17 A. WELL, IF THIS -- IF THE ANTELOPE VALLEY WAS
18 CONSIDERED AS A LUMP SUM, YOU WOULD JUST TAKE THE ANTELOPE
19 VALLEY AREA OF ADJUDICATION, YOU WOULD LOOK AT ALL OF THE
20 PUMPING THAT WENT INTO THERE, ALL OF THE RECHARGE THE
21 PUMPING THAT WAS EXTRACTED AND THEN YOU MIGHT JUST AVERAGE
22 WATER LEVELS FROM EVERYWHERE. AND BECAUSE THERE'S NO WAY
23 -- IN A LUMP SUM MODEL YOU CAN'T BREAK IT ANY FINER THAN
24 THE ENTIRE BASIN, SO IT'S LIKE A GIANT BATHTUB.

25 Q. ALL RIGHT. SO -- ALL RIGHT. AND HOW IS THAT
26 DIFFERENT FROM WHAT YOU -- DID YOU USE A PARAMETER
27 DISTRIBUTED MODEL HERE?

28 A. IT'S CALLED A DISTRIBUTED PARAMETER MODEL. AND

1 THESE MODELS STARTED IN THE '70S AND '80S WHEN COMPUTERS
2 BECAME MORE POWERFUL AND COULD DO THE CALCULATIONS SO WE
3 COULD DIVIDE THE BASINS UP INTO CELLS AND PERFORM THE
4 HYDROLOGIC BUDGET, NOT ON A BASIN LINE BASIS, BUT ON THE
5 SMALL MODEL CELLS. SO WE DID IT FOR ALL OF THESE MODEL
6 CELLS AS WELL AS OVER A LONG TIME PERIOD.

7 Q. OKAY. LET'S MOVE NOW TO SLIDE NO. 26. NOW, I
8 DON'T WANT TO SPEND A LOT OF TIME ON SLIDE NO. 26 BECAUSE
9 YOU'VE PREVIOUSLY TESTIFIED AS TO HOW SUBSIDENCE OCCURS
10 WITHIN THE GROUNDWATER ADJUDICATION AREA. DOES THIS SLIDE
11 ILLUSTRATE SUBSIDENCE AND HOW IT OCCURS?

12 A. YES, IT DOES.

13 Q. OKAY. SO THIS IS JUST ILLUSTRATIVE OF YOUR
14 TESTIMONY?

15 A. WELL, IT SHOWS THE COMPRESSIBLE CLAYS LIKE
16 THERE BEING THE LAKE BEDS IN THE CENTRAL AREA. AND IF
17 WATER LEVELS LOWER OVER A LONG PERIOD OF TIME, WHICH THEY
18 DID, SOME CLAYS WILL COMPRESS AND THEY WON'T REBOUND WHEN
19 YOU STOP PUMPING. AND IF YOU GET BEYOND A CERTAIN ELASTIC
20 LIMIT, THEY'LL JUST STAY COMPRESSED AND NO MATTER HOW MUCH
21 YOU STOP PUMPING, THEY'LL NEVER INCREASE IN THICKNESS AND
22 THE LAND SURFACE FOLLOWS IT. SO, FOR EXAMPLE, IN THE
23 SOUTHERN SAN JOAQUIN VALLEY THERE WAS 30 FEET OF LOWERING
24 LAND, IN SAN JOSE WAS 13 FEET, SO -- AND ANTELOPE VALLEY IS
25 AROUND SIX FEET SO THE LAND ACTUALLY WENT DOWN.

26 Q. NOW, DR. WILLIAMS, I DON'T WANT TO GO BACK INTO
27 YOUR BACKGROUND, BUT DO YOU HAVE EXPERIENCE MODELING FOR --
28 FOR LAND SUBSIDENCE?

1 A. YES, WE DO. SINCE USGS HAS ADDED A SUBSIDENCE
2 MODULE. WHAT MOD FLOW MEANS, IT MEANS MODULAR FLOW
3 PACKAGE. AND ONE OF THE MODULES THEY HAVE IS A SUBSIDENCE
4 MODULE, SO THE MODEL -- THE WAY IT WORKS IS THE MODEL WILL
5 CALCULATE THE WATER LEVEL CHANGES OVER TIME AND THEN IT
6 WILL CALL THE SUBSIDENCE MODULE WHICH WILL THEN CALCULATE
7 SUBSIDENCE BASED ON THE PARAMETERS THAT IT NEEDS.

8 Q. AND OTHER THAN YOUR WORK HERE IN THE ANTELOPE
9 VALLEY, HAVE YOU EVALUATED SUBSIDENCE WITH A MODEL
10 ELSEWHERE IN CALIFORNIA?

11 A. YES. WE'VE DONE IT IN A NUMBER OF OTHER AREAS,
12 RANCHO CALIFORNIA WATER DISTRICT, AND OTHER AREAS WE'VE
13 MODELED THE SUBSIDENCE.

14 Q. ALL RIGHT. LET'S TAKE A LOOK THEN AT THE NEXT
15 SLIDE. YOU'VE TALKED ABOUT MODEL CALIBRATION AS IT RELATES
16 TO GROUNDWATER LEVELS. DOES A MODEL CALIBRATE OR NEED TO
17 CALIBRATE AS TO LAND SUBSIDENCE AS WELL?

18 A. YES, IT DOES. AND THIS -- THIS SLIDE DEPICTS A
19 NUMBER OF SUBSIDENCE PLOTS VERSUS TIME, SO IT SHOWS HERE
20 AGAIN, IF WE CAN SWITCH TO THE NEXT SLIDE, IT'S A BLOWUP
21 BECAUSE IT'S EASIER TO SEE. THIS ONE SHOWS AT A CERTAIN
22 BENCHMARK, WHICH IS IN THE JUST NORTH EASTERN AREA OF THE
23 BASIN WHERE THE LAKE BEDS ARE THICK AND WHERE MOST OF THE
24 SUBSIDENCE HAPPENED. SO BETWEEN 1915 AND 2005, THE LAND
25 WENT DOWN ALMOST SIX-AND-A-HALF FEET. SO WHAT WE'RE
26 LOOKING AT HERE, THE DOTS ARE ACTUAL BENCHMARKS. THEY'RE
27 SURVEYED ELEVATIONS OF THE LAND SURFACE AT THIS POINT. AND
28 THE SOLID LINE IS WHAT THE MODEL PREDICTED AS SUBSIDENCE.

1 SO YOU CAN SEE IT'S A VERY GOOD FIT BETWEEN THE OBSERVED
2 DATA AND THE MODEL GENERATED DATA.

3 Q. AND THIS IS SLIDE NO. 28, CORRECT?

4 A. YES.

5 Q. AND WHERE DID YOU OBTAIN THE BENCHMARK DATA?

6 A. WELL, THE BENCHMARK DATA WAS PART OF THE DATA
7 SET WE GOT FROM THE U.S. GEOLOGICAL SURVEY.

8 Q. LET'S GO TO SLIDE NO. 29. WE LOOKED AT THIS
9 SLIDE PREVIOUSLY, BUT WHAT DOES IT DEPICT HERE IN SUMMARY
10 FASHION?

11 A. WELL, THIS IS -- SUMMARIZES THE FACT. IT'S A
12 MODEL CALIBRATION RESULTS, A STATISTICAL ANALYSIS OF
13 RELATIVE ERROR THAT THERE WAS 124 WELLS USED, 5,918
14 MEASUREMENTS OF THOSE 124 WELLS AND A NUMBER OF OTHER
15 CALCULATIONS. BUT BASICALLY THE BOTTOM IS THE RELATIVE
16 ERROR WHICH IS 2.27 PERCENT WHICH IS GOOD CALIBRATION.

17 Q. OKAY. NOW LET'S LOOK AT THE NEXT SLIDE, SLIDE
18 NO. 30, PLEASE.

19 A. THIS IS THE SAME TYPE OF STATISTICS BUT FOR
20 SUBSIDENCE, SO YOU CAN SEE WE HAVE 32 BENCHMARKS WE USED.
21 WITHIN THOSE 32 BENCHMARKS THERE WAS 268 MEASUREMENTS AND
22 THEN THE RELATIVE ERROR WAS 8.76 PERCENT.

23 Q. OKAY. NOW, THIS SLIDE IS -- HAS A TITLE MODEL
24 CALIBRATION RESULTS-LAND SUBSIDENCE. THE FIRST COLUMN IS
25 WHAT WAS DONE BY THE USGS?

26 A. YES. MOD-1 WAS THE USGS MODEL AND MOD-2 IS OUR
27 MODEL AFTER THE PUMPING WAS REEVALUATED.

28 Q. AND THERE'S A SLASH BETWEEN GEOSCIENCE AND

1 LSCE?

2 A. YES. LOU SCALMANINI CONSULTING ENGINEERS LSCE
3 DID THE CALCULATIONS OF THE UPDATED PUMPING THAT WAS USED
4 IN THIS MODEL, MOD-2.

5 Q. NOW, LET'S MOVE NOW INTO SORT OF THE
6 GROUNDWATER BUDGETS FOR THE MODEL. GROUNDWATER BUDGET IS
7 WHAT, DR. WILLIAMS?

8 A. IT'S -- IT'S SIMPLY -- IT'S -- BASICALLY,
9 GROUNDWATER BUDGET IS A HYDROLOGIC BALANCE. WE CALL IT THE
10 EQUATION OF THE EQUILIBRIUM. IT SUMMARIZES THE INFLOW,
11 OUTFLOW AND CHANGE IN STORAGE TERMS. SO THIS IS THE RESULT
12 OF A GROUNDWATER BUDGET FOR THE HISTORICAL PERIOD OF 1915
13 TO 2005. AND IT'S PRESENTED IN A CARTOON FASHION FOR THE
14 ENTIRE ANTELOPE VALLEY AND IT'S SUMMED ALL OF THE
15 GROUNDWATER PUMPING WAS 213,300 ACRE FEET PER YEAR ON
16 AVERAGE. AND THEN YOU HAVE VARIOUS OTHER OUTFLOW TERMS AND
17 INFLOW TERMS, BUT AT THE -- THE IMPORTANT THING TO LOOK AT
18 HERE IS THAT THE -- THE CHANGE IN STORAGE FOR THIS
19 HISTORICAL PERIOD, 1915 TO 2005, WAS A DECLINE IN STORAGE
20 OF 103,600 ACRE FEET A YEAR.

21 Q. LET'S MOVE TO THE NEXT SLIDE.

22 A. SO THE PHYSICAL SOLUTION WAS THE NAME OF THE
23 SOLUTION TO -- TO BALANCE THIS BASIN, WHICH IS CERTAINLY,
24 AS THE PREVIOUS SLIDE SHOWED, WAS IN PRETTY SERIOUS
25 OVERDRAFT FOR THIS HISTORICAL PERIOD. SO THE PHYSICAL
26 SOLUTION INCLUDED, LOOKING AT THE NATURAL RECHARGE THIS WAS
27 FROM THE EXPERT SUMMARY REPORT OF 60,000, THE NATIVE SAFE
28 YIELD OF 82,300 AND THEN THERE WAS A SUPPLEMENTAL SAFE

1 YIELD DETERMINED OF 27,700, SO A TOTAL SUSTAINABLE YIELD OF
2 110,000. SO THE PHYSICAL SOLUTION WAS TO REDUCE THE
3 PUMPING TO THE NATIVE SAFE YIELD, IMPORT TO SUPPLEMENTAL
4 SUSTAINABLE YIELD OF 27,000 SO THAT THE TOTAL SUSTAINABLE
5 YIELD WOULD NOT BE EXCEEDING THE 110,000. SO WHAT WE DID,
6 WE USED THE INPUT DATA TO THE MODEL TO --

7 Q. DR. WILLIAMS, LET ME JUST STOP YOU FOR A
8 MOMENT. WILL YOU EXPLAIN LATER IN YOUR TESTIMONY THE
9 NATURAL RECHARGE OF 60,000 ACRE FEET A YEAR AND THE NATIVE
10 SAFE YIELD OF 82,300, HOW THOSE TWO COMPARE?

11 A. YEAH, YOU CAN GO TO THE NEXT SLIDE. IT
12 SHOWS -- YES, THIS -- THIS CAME OUT OF THE EXPERT SUMMARY
13 REPORT. PRIMARILY THERE WAS A NUMBER OF ESTIMATES WATER
14 BALANCE METHOD THAT DURBIN DID: CHLORIDE MASS BALANCE,
15 PRECIPITATION YIELD MODELING AND WILDERMUTH WATER BALANCE.
16 BUT ON AVERAGE, ALL OF THOSE NATURAL RECHARGE ESTIMATES
17 FROM THE EXPERT REPORT WAS ABOUT 60,000 ACRE FEET A YEAR.
18 AND SO THE NATIVE SAFE YIELD OF 82,300 WAS CALCULATED BY --
19 IT WAS IN THE EXPERT REPORT, I THINK, IN APPENDIX F WHERE
20 THEY USED DIFFERENT TIME PERIODS OF MIX USE WHERE YOU HAD
21 BOTH AGRICULTURE RETURN FLOWS AS WELL AS M & I RETURN
22 FLOWS. BUT ON AVERAGE, THE 82,300 IS THE NATIVE
23 SUSTAINABLE YIELD.

24 Q. NOW, DID YOU ALSO GET -- I DON'T KNOW IF YOU
25 WANT TO CALL IT CONFIRMATION OR THE TOTAL SUSTAINABLE YIELD
26 NUMBER, THE NATIVE SAFE YIELD NUMBER OF 82,300 AND THEN THE
27 SUSTAINABLE -- EXCUSE ME -- SUPPLEMENTAL SAFE YIELD NUMBER
28 27,700, DID YOU GET THAT FROM LEGAL COUNSEL? IN OTHER

1 WORDS YOU WERE TOLD THAT THESE WERE THE NUMBERS THAT YOU
2 SHOULD USE AS WELL FOR THE MODEL?

3 A. WELL, YES, IT WAS, BUT THOSE ARE ALSO IN THE
4 EXPERT SUMMARY REPORTS IN PHASE THREE.

5 Q. ALL RIGHT. SO IF I UNDERSTAND YOUR TESTIMONY
6 CORRECTLY, WHAT -- WHAT YOU DO IS YOU'RE GOING TO -- FOR
7 MODEL PHYSICAL SOLUTION, YOU'RE GOING TO CALCULATE HOW MUCH
8 WATER RECHARGES THE BASIN, BOTH FROM NATIVE AND
9 SUPPLEMENTAL SUPPLIES; IS THAT CORRECT?

10 A. CORRECT.

11 Q. AND THEN YOU'RE GOING TO INPUT INTO THE MODEL
12 THE OUTFLOW DATA WHICH WOULD PRIMARILY HERE CONSIST OF
13 PUMPING; IS THAT CORRECT?

14 A. YES. WE PUT IN THE EXTRACTION.

15 Q. OKAY. AND YOU PUT IN, IT SAYS HERE, EXISTING
16 PUMPING 2011, 2012?

17 A. THAT'S CORRECT. THAT'S FROM THE PHASE FOUR
18 TRIAL.

19 Q. ALL RIGHT. AND WHAT DO YOU MEAN BY RAMP DOWN
20 PUMPING TO NATIVE SAFE YIELD?

21 A. WELL, THE -- THE CURRENT PUMPING IS MUCH MORE
22 THAN THE YIELD THE BASIN CAN SUSTAIN, SO THERE IS -- HAS TO
23 BE A REDUCTION IN PUMPING. AND THIS RAMP DOWN IS A PART OF
24 THE PHYSICAL SOLUTION WHICH TAKES THE EXISTING PUMPING
25 WHICH IS APPROXIMATELY 160,000 ACRE FEET A YEAR AND RAMPS
26 THAT DOWN TO THE NATIVE SAFE YIELD.

27 Q. SO YOU TOOK THE PHYSICAL SOLUTION DOCUMENT --
28 THE PROPOSED PHYSICAL SOLUTION THAT HAS BEEN PRESENTED TO

1 THE COURT, YOU TOOK THE ALLOCATIONS OF PUMPING THAT ARE
2 CONTAINED IN IT AND THAT'S THE RAMP DOWN TO THE NATIVE SAFE
3 YIELD?

4 A. THAT'S CORRECT. AND WE'LL GET LATER INTO THE
5 RAMP DOWN AS TWO YEARS OF PRE-RAMP DOWN AND FIVE YEARS OF
6 RAMP DOWN AND THEN FINALLY PREDICTION OF 50 YEARS INTO THE
7 FUTURE AT PUMPING THE NATIVE SAFE YIELD. AND THERE'S FOUR
8 SCENARIOS THAT WE -- AND WE'LL GET INTO THAT -- THAT WE DID
9 TO LOOK AT THE VARIABILITY OF EITHER -- YOU KNOW, JUST SAY
10 CONTINUING THE EXISTING PUMPING BUT BRINGING IN
11 SUPPLEMENTAL WATER OR RAMPING DOWN WITH, YOU KNOW, MINIMAL
12 SUPPLEMENTAL WATER OR RAMPING DOWN THE SUPPLEMENTAL SAFE
13 YIELD WATER 277.

14 Q. ALL RIGHT. WE'LL GET INTO THAT IN A MOMENT.
15 LET'S MOVE NOW TO THE NEXT SLIDE, WHICH IS SLIDE 33.
16 THAT'S "ENTITLED NATURAL RECHARGE INDEPENDENT WATER SHED
17 ANALYSIS."

18 A. YEAH, THESE ARE -- THESE ARE SOME OF THE
19 EXAMPLES FROM THE -- THIS IS FROM MR. SCALMANINI'S
20 TESTIMONY -- THE NATIVE SAFE YIELD -- I'M SORRY, THE
21 NATURAL RECHARGE. IT'S MR. SCALMANINI'S EXHIBIT 86 WHERE
22 THERE WAS A NUMBER OF ESTIMATES DONE IN THE EXPERT SUMMARY
23 REPORT WHICH CAME UP WITH ESTIMATES OF THE NATURAL RECHARGE
24 THAT OCCURS TO THE BASIN.

25 Q. OKAY.

26 A. AND ON AVERAGE THOSE ESTIMATES WERE AVERAGE
27 ABOUT 60,000. THERE WAS A NUMBER OF THEM.

28 Q. LET'S GO TO SLIDE 34, PLEASE.

1 A. YEAH, THERE WAS A NUMBER OF ESTIMATES BY
2 DIFFERENT INVESTIGATORS PARTICIPATING IN THE EXPERT SUMMARY
3 REPORT. MR. DURBIN DID CALCULATE VARIOUS ONES: 55,000,
4 58,000, 56,400, 57,000. BUT ON AVERAGE THAT EXPERT REPORT
5 SUMMARIZES ABOUT 60,000 ACRE FEET PER YEAR AS THE NATURAL
6 RECHARGE.

7 Q. THEN LET'S MOVE TO THE NEXT SLIDE, WHICH IS
8 NO. 35. IT'S ENTITLED "NATIVE SAFE YIELD."

9 A. YEAH, THE NATIVE SAFE YIELD WAS ALSO CALCULATED
10 FOR SEVERAL DIFFERENT TIME PERIODS, BUT ESSENTIALLY IT
11 WAS -- IT WAS HOW MUCH YOU COULD PUMP AND HAVE THE WATER
12 LEVELS BE STEADY SO THAT YOU DIDN'T EXCEED WHAT WAS COMING
13 IN. IN OTHER WORDS, THE EXTRACTIONS WERE EQUAL TO THE
14 RECHARGE SO THE BASIN WOULD BE IN BALANCE IF THE NATIVE
15 SAFE YIELD WAS PUMPED. AND THAT WAS -- IF YOU LOOK AT THE
16 NEXT SLIDE, THAT WAS CALCULATED. THIS IS MR. SCALMANINI'S
17 EXHIBIT 93. THERE'S -- THERE'S ACTUALLY FOUR DIFFERENT
18 TIME PERIODS AND THE EARLY AGRICULTURE WHICH ASSUMED THAT
19 THE LAND USE WAS ALL AGRICULTURE AND THEN '95 AND '99
20 AND -- WAS A DIFFERENT USE OF LAND BETWEEN AG AND M & I AND
21 THEN '96 TO '05 WAS ANOTHER EXAMPLE AND THEN 2005. SO IF
22 YOU GO THROUGH THE ARITHMETIC OF THESE SLIDES WITH THE
23 NATURAL RECHARGE OF 60,000 AND THEN YOU GET -- IF YOU'RE
24 PUMPING SAY 80,000, YOU'LL HAVE SOME RETURN FLOW. AND ALL
25 OF THESE DIFFERENT SCENARIOS SHOW THAT IF YOU PUMP, FOR
26 EXAMPLE, ON AVERAGE 82,300, THERE WILL BE SOME RETURN FLOW
27 GO BACK BUT THE BASIN WILL BE IN BALANCE. AND THAT WAS THE
28 ESSENCE OF CALCULATING THE NATIVE SAFE YIELD, WAS A PUMPING

1 AMOUNT TO 82,300 THAT WOULD NOT CAUSE THE BASIN LEVELS TO
2 PERMANENTLY DECLINE.

3 Q. JUST IF WE CAN GO BACK FOR A BRIEF MOMENT TO
4 SLIDE 35, THIS WAS ALSO A SCALMANINI EXHIBIT AS WELL,
5 CORRECT?

6 A. IT'S EXHIBIT 92, YES.

7 Q. ALL RIGHT. SO LET'S GO, THEN, TO EXHIBIT
8 NO. 37.

9 A. YES. EXHIBIT 37, IT WAS ALSO A SCALMANINI
10 EXHIBIT 94, WHICH HAS -- IS ENTITLED "SUPPLEMENTAL SAFE
11 YIELD." SO IT SHOWS ON THE LEFT SIDE OF THIS CARTOON
12 SKETCH THERE'S THE NATIVE SAFE YIELD THAT WE TALKED ABOUT.
13 AND THEN ON THE RIGHT SIDE IT ASSUMES THAT THERE'S SOME
14 SUPPLEMENTAL IMPORT OF SUPPLEMENTAL WATER. SOME OF THIS
15 WATER IS USED DIRECTLY AND AS A RETURN FLOW COMPONENT.
16 SOME OF THIS SUPPLEMENTAL WATER THAT IS RECHARGE IS PUMPED
17 BACK UP AND IT RETURNS. SO ON AVERAGE, IF YOU GO TO THE
18 NEXT SLIDE, FOR THREE DIFFERENT TIME PERIODS OF MIXED LAND
19 USE, MR. SCALMANINI IN HIS EXHIBIT 95 CALCULATED, ON
20 AVERAGE, 27,700 ACRE FEET A YEAR WOULD BE THE SUPPLEMENTAL
21 SAFE YIELD.

22 Q. SO THIS IS SLIDE NO. 38. IT'S -- IT HAS A
23 TITLE "SUPPLEMENTAL SAFE YIELD."

24 A. THAT'S CORRECT.

25 Q. ALL RIGHT. SO IN ESSENCE -- WELL, WHAT YOU DID
26 IS YOU TOOK THE NATIVE YIELD TO THE BASIN OF 82,300 PLUS
27 THE SUPPLEMENTAL SAFE YIELD AS CALCULATED BY MR. SCALMANINI
28 IN HIS TESTIMONY OF THE 27,000 -- I'M SORRY. MY MATH IS

1 NOT THAT GOOD, BUT TOGETHER THEY TOTALLED 110,000.

2 A. YEAH. IF YOU GO TO THE NEXT SLIDE, IT SHOWS
3 THAT. SO THIS IS MR. SCALMANINI'S EXHIBIT 96, JUST WHAT
4 YOU SAID, IF YOU ADD THE NATIVE SAFE YIELD AND THE
5 SUPPLEMENTAL SAFE YIELD FOR FOUR DIFFERENT TIME PERIODS AND
6 YOU GET, ON AVERAGE, FOR THE MIX LAND USES ABOUT 110,000
7 AND THAT WAS THE -- THE NUMBER FOR THE TOTAL SUSTAINABLE
8 YIELD THAT WE'VE USED.

9 Q. RIGHT. AND IT WAS REPRESENTED TO YOU BY LEGAL
10 COUNSEL THAT WAS THE COURT'S TOTAL SAFE YIELD FROM THE
11 PHASE THREE TRIAL AS WELL, THE 110,000 ACRE FEET?

12 A. THAT'S CORRECT.

13 Q. ALL RIGHT. NEXT SLIDE PLEASE, NO. 40.

14 A. SO TO TEST THE PHYSICAL SOLUTION OR EVALUATE
15 WHETHER THIS WATER BALANCE -- TO TEST BASICALLY THE INFLOW,
16 OUTFLOW CHANGE IN STORAGE IN WATER LEVELS AS WELL AS
17 SUBSIDENCE, WE CREATED FOUR DIFFERENT SCENARIOS THAT WE RAN
18 THE MODEL. THEY ALL -- SCENARIO 1, FIRST OF ALL, THE MODEL
19 RAN FOR 50 YEARS INTO THE FUTURE. AND SCENARIO 1 WAS USING
20 THE AVERAGE 2011, 2012 PUMPING. AND THEN WE USED SOME
21 SUPPLEMENTAL WATER, BUT THE SUPPLEMENTAL WATER FOR THE LAST
22 TWO YEARS, 2014 AND 2015, WHICH WE CONSIDERED A SEVERE
23 DROUGHT CONDITION.

24 Q. SO LET ME STOP YOU RIGHT THERE. SO SC-1 IS A
25 MODEL RUN TAKING THE 2011, 2012 PUMPING DATA AND MATCHING
26 THAT WITH THE -- WITH THE YIELD, BEING THE NATIVE YIELD,
27 PLUS WHAT IS GENERALLY CURRENT IN THE DROUGHT WITH HOW MUCH
28 SUPPLEMENTAL WATER CAME IN FOR 2014 AND 2015?

1 A. THAT'S CORRECT.

2 Q. SO THIS, IN GENERAL TERMS, IS THE CURRENT
3 SITUATION?

4 A. YES. IT'S THE EXISTING PUMPING FOR 2011 AND
5 2012, BUT WITH SUPPLEMENTAL WATER BROUGHT IN AS IT WAS,
6 WHICH WAS ACTUALLY 12-AND-A-HALF PERCENT OF THE TABLE EIGHT
7 FOR THE LAST TWO YEARS. SO THIS WAS KIND OF ONE END OF OUR
8 SCENARIOS.

9 Q. SO WHAT THIS MODEL RUN WOULD SHOW, I TAKE IT,
10 IS WHAT WOULD THE BASIN POTENTIALLY LOOK LIKE IN 50 YEARS
11 IF CURRENT CONDITIONS REMAINED THE SAME? IN OTHER WORDS,
12 THERE'S NO REDUCTION IN PUMPING, THE DROUGHT CONDITIONS
13 CONTINUE AND WHAT WOULD THE BASIN LOOK LIKE; IS THAT
14 CORRECT?

15 A. THAT'S CORRECT.

16 Q. THEN WHAT IS THE NEXT SC-1A?

17 A. WELL, SCENARIO 1A IS ALSO RUNNING THE MODEL FOR
18 50 YEARS BUT AVERAGE 2011 AND 2012 PUMPING, BUT IMPORTED --
19 IMPORTED WATER DELIVERIES EQUAL TO THE SUSTAINABLE SAFE
20 YIELD. IN OTHER WORDS THE 27,700.

21 Q. SO IF I UNDERSTAND YOUR TESTIMONY, SC-1A IS THE
22 MODEL RUN FOR 50 YEARS WITH CURRENT PUMPING, BUT AT THE
23 TOTAL SUSTAINABLE SAFE YIELD OF 110,000?

24 A. NO, IT'S THE SUPPLEMENTAL -- WE ADDED THE
25 SUPPLEMENTAL SUSTAINABLE. WE ASSUMED THAT WE COULD BRING
26 IN IMPORTED WATER -- STATE PROJECT WATER UP TO 27,700,
27 WHICH IS PART OF THE 110. THE 110 IS 823 PLUS THE 277, SO
28 THAT'S WHAT 1A IS. IT'S STILL EXISTING PUMPING, BUT ASSUME

1 YOU CAN STILL BRING IN 27,700 IMPORTED WATER.

2 Q. ALL RIGHT.

3 A. I'M SORRY. IT'S -- IT'S THE RECHARGE FROM
4 IMPORTED WATER THE 27,700.

5 Q. ALL RIGHT. AND THEN SC-2.

6 A. YEAH, THE SCENARIO 2 RUNS WERE -- WERE
7 DIFFERENT THAN THE SCENARIO 1 RUNS IN THAT THERE WAS A RAMP
8 DOWN IN PUMPING FROM THE 160,000 TO THE 82,300, WHICH IS A
9 RAMP DOWN TO THE NATIVE SAFE YIELD. AND SCENARIO 2 IS A
10 SUPPLEMENTAL WATER UNDER DROUGHT CONDITIONS.

11 Q. THAT WE CURRENTLY HAVE?

12 A. THAT WE CURRENTLY HAVE BETWEEN 2014 AND 2015.
13 AND THEN SCENARIO 2A IS A RAMP DOWN TO NATIVE SAFE YIELD
14 PLUS IMPORTATION OF SUFFICIENT STATE PROJECT WATER TO HAVE
15 A SUPPLEMENTAL SAFE YIELD OF 27,700. SO WE FELT THAT THESE
16 SCENARIOS, SCENARIO 1 ON ONE END, WHICH IS CURRENT PUMPING,
17 AND SCENARIO 2A ON THE OTHER END, WHICH IS THE RAMP DOWN,
18 WE FELT THIS WAS A GOOD EVALUATION OF HOW THE PHYSICAL
19 SOLUTION WOULD WORK.

20 Q. OKAY. SO LET'S THEN TAKE A LOOK AT HOW IT
21 WORKS. LET'S GO TO SLIDE 41. AND YOU SHOW NATIVE SAFE
22 YIELD AND ADJUSTED NATIVE SAFE YIELD. WHAT ARE YOU TRYING
23 TO EXPLAIN HERE?

24 A. WELL, THIS SHOWS THE DIFFERENT -- ACCORDING TO
25 THE SMALL PUMPER CLASS STIPULATION OF SETTLEMENT, IT SHOWS
26 A NUMBER OF THINGS HERE. OF COURSE THE NATIVE SAFE YIELD
27 OF 82,300 AND THEN THERE'S DIFFERENT PRODUCTION WHICH TOTAL
28 THE 82,300. IF YOU LOOK AT THE SMALL PUMPER CLASS, FEDERAL

1 RESERVE, STATE OF CALIFORNIA AND SO ON, PUBLIC WATER
2 SUPPLIERS, THEN YOU GET THE PUMPING WHICH IS DOWN TO CLOSE
3 TO 82,300 SO THIS -- THIS REPRESENTS THE RAMP DOWN AMOUNT.

4 Q. SO IN SORT OF A DIFFERENT WAY OF EXPLAINING IT
5 WOULD BE THAT YOU WERE PROVIDED A COPY OF THE PROPOSED
6 PHYSICAL SOLUTION; IS THAT CORRECT?

7 A. THAT'S CORRECT.

8 Q. AND THAT WAS PART OF THE SMALL PUMPER CLASS
9 MOTION FOR COURT APPROVAL OF ITS SETTLEMENT AGREEMENT,
10 CORRECT?

11 A. RIGHT. YES.

12 Q. AND IN THAT PROPOSED PHYSICAL SOLUTION, YOU
13 HAVE THE NATIVE SAFE YIELD OF 82,300; IS THAT CORRECT?

14 A. YES.

15 Q. AND THEN WITHIN THAT PROPOSED PHYSICAL
16 SOLUTION, THERE'S AN ALLOCATION OF WATER FOR THE SMALL
17 PUMPER CLASS; IS THAT CORRECT?

18 A. YES.

19 Q. AND THAT NUMBER IS?

20 A. 3806.4.

21 Q. NOW, THERE'S REFERENCE HERE TO A FEDERAL
22 RESERVE RIGHT. DID YOU TAKE THAT ALSO FROM THE PROPOSED
23 PHYSICAL SOLUTION?

24 A. I DID.

25 Q. OKAY. AND THAT'S REFERENCED IN THE PROPOSED
26 PHYSICAL SOLUTION OF 7,600 ACRE FEET?

27 A. YES.

28 Q. AND THEN FINALLY FOR THE STATE OF CALIFORNIA,

1 DOES THE PROPOSED PHYSICAL SOLUTION HAVE AN ALLOCATION OF
2 270 ACRE FEET FOR THE STATE?

3 A. YES.

4 Q. NOW, IT SAYS SUB TOTAL 5.1.3 PLUS 5.1.4 PLUS
5 5.1.5. WHAT ARE YOU REFERRING TO THERE WITH THE 5.1.3 TO
6 THE 5.1.5?

7 A. WELL, THAT'S JUST A SUM OF THE SMALL PUMPER
8 CLASS PRODUCTION RIGHTS PLUS FEDERAL RESERVE RIGHT PLUS
9 STATE OF CALIFORNIA. AND IT DOES ADD UP TO 11,613.4 AND
10 THAT IS SUBTRACTED FROM THE 82,300 TO GET AND ADJUSTED
11 NATIVE SAFE YIELD.

12 Q. BUT DOES THE 5.1.3, 5.1.4 AND 5.1.5 REFER TO
13 PARAGRAPHS IN THE PROPOSED PHYSICAL SOLUTION? IS THAT
14 WHERE YOU TOOK THE DATA?

15 A. YES.

16 Q. ALL RIGHT. NOW THE ADJUSTED NATIVE SAFE YIELD
17 THAT YOU JUST DESCRIBED, IT IS TAKING THE NATIVE SAFE YIELD
18 OF 82,300 AND THEN SUBTRACTING THE DEFINED AMOUNTS THAT ARE
19 REFERENCED ABOVE THERE FOR THE SMALL PUMPER CLASS, THE
20 FEDERAL RESERVE RIGHT AND THE STATE OF CALIFORNIA?

21 A. YES, IT IS. IT'S DESCRIBED UNDER 3.5.2 IN THE
22 STIPULATION OF SETTLEMENT.

23 Q. OKAY. AND THEN FROM THAT YOU COME UP WITH A
24 FIGURE OF ADJUSTED NATIVE SAFE YIELD OF 70,686.6 ACRE FEET?

25 A. YES.

26 Q. THERE'S A REFERENCE TO EXHIBIT 3 FOR PUBLIC
27 WATER SUPPLIERS AND A NUMBER REFERENCE THERE. WHAT DOES
28 THAT REFER TO?

1 A. WELL, THEN THE PUBLIC WATER SUPPLIER PRODUCTION
2 IS 12,345 AND THE LAND OWNER IS 58,322. SO IF YOU ADD ALL
3 OF THOSE UP, YOU WILL GET THE NATIVE SAFE YIELD.

4 Q. OKAY. SO AGAIN SO WE'RE CLEAR, DR. WILLIAMS,
5 ON WHAT THIS SLIDE SHOWS, EXHIBIT 3 IS AN EXHIBIT 3 TO THE
6 PROPOSED PHYSICAL SOLUTION; IS THAT CORRECT?

7 A. YES.

8 Q. AND THAT HAS AN ALLOCATION OF WATER THAT'S
9 PROPOSED FOR THE PUBLIC WATER SUPPLIERS OF 1 -- EXCUSE
10 ME -- 12,345 ACRE FEET ANNUALLY?

11 A. RIGHT.

12 Q. AND THEN EXHIBIT 4 HAS SMALL FOOTNOTE 2. DO
13 YOU SEE THAT?

14 A. YES, I DO.

15 Q. AND WHAT DID YOU -- WHAT DOES THAT FOOTNOTE
16 REFER TO?

17 A. WELL, IT REFERS TO THE REVISED SECOND EXHIBIT 4
18 FOR THE SECOND AMENDED STIPULATION FOR ENTRY INTO THE
19 JUDGMENT. BUT ALL OF THESE ARE VARIOUS VALUES OR
20 SPREADSHEETS THAT SUM UP THE DIFFERENT PUMPING THAT WAS
21 USED IN THE MODEL.

22 Q. WE'RE GOING TO GET INTO THE DETAIL HERE IN A
23 MOMENT. LET'S MOVE FROM SLIDE 41 THAT WE CURRENTLY HAVE
24 BEFORE US TO THE NEXT SLIDE, SLIDE 42. THIS IS ENTITLED
25 "PUMPING ASSUMPTIONS FOR PREDICTIVE SCENARIOS 1 AND 1A."
26 WHAT ARE YOU ATTEMPTING TO SHOW HERE, DR. WILLIAMS?

27 A. WELL, THIS IS THE VALUE OF THE EXISTING PUMPING
28 THAT GOES INTO THE SCENARIO 1 AND 1A AND IT SHOWS --

1 Q. SO -- LET ME STOP YOU. SO THIS IS PUMPING
2 BEFORE ANY RAMP DOWN; IS THAT CORRECT?

3 A. THAT'S CORRECT.

4 Q. CURRENT CONDITIONS?

5 A. YES.

6 Q. ALL RIGHT.

7 A. I'M SORRY. IT'S 2011 AND 2012.

8 Q. THANK YOU.

9 A. SO THIS SHOWS THE VARIOUS CLASS -- SMALL PUMPER
10 CLASS, FEDERAL, STATE, PUBLIC WATER SUPPLIERS, LAND OWNERS,
11 CITY OF LANCASTER AND PHELAN PINION HILL SO THE TOTAL
12 PUMPING, IF THERE WAS NO RAMP DOWN, THE VALUE WE USE FOR
13 SIMULATION WAS 160,997.07.

14 Q. AND SO YOU HAVE A COLUMN TO THE RIGHT
15 INDICATING SOURCES. DO YOU SEE THAT?

16 A. YES.

17 Q. AND DO THOSE ENTRIES THERE REFLECT THE SOURCE
18 OF THE INFORMATION FOR YOUR PUMPING?

19 A. YES, THEY DO.

20 Q. ALL RIGHT. LET'S FOCUS ON THE NEXT SLIDE,
21 NO. 43, WHICH IS ENTITLED "CURRENT PUMPING FROM SMALL
22 PUMPERS." DO YOU SEE THAT?

23 A. YES.

24 Q. WHAT DO WE HAVE HERE?

25 A. THIS WAS AN INFORMATION FROM GSI WATER
26 SOLUTIONS REPORT.

27 Q. ALL RIGHT. LET ME STOP YOU. IT'S YOUR
28 UNDERSTANDING THAT WAS THE COURT-APPOINTED EXPERT WITNESS?

1 A. YES.

2 Q. REGARDING THE SMALL PUMPER CLASS?

3 A. YES.

4 Q. ALL RIGHT.

5 A. AND THAT REPORT CONTAINED A NUMBER OF -- IN THE
6 DIFFERENT COLUMNS, FOR EXAMPLE, THE GROUNDWATER USE PER
7 HOUSEHOLD RANGING FROM 0 UP TO 12 PLUS ACRE FEET PER YEAR.
8 THERE WAS CALCULATION DONE. THERE WAS ACTUALLY 117
9 PARTICIPATING IN THIS ESTIMATE. AND SO BASED ON THIS, THE
10 SECOND COLUMN AND THIRD COLUMN FOR 2011, 2012 BASICALLY IS
11 THAT THE CUMULATIVE PERCENTAGES OF HOW MUCH PEOPLE USED AND
12 SO ON. BUT AT THE END, THE RESULT OF THIS ANALYSIS WAS THE
13 HOW MUCH GROUNDWATER WAS USED BY THE SMALL PUMPERS WHICH
14 WAS 9,747.55 ON AVERAGE FOR 2011 AND 2012.

15 Q. AGAIN, ALL THIS INFORMATION COMES FROM THE GSI
16 WATER SOLUTION, INC. REPORT DATED JULY 2015?

17 A. THEY PROVIDED THE INFORMATION, WE ACTUALLY DID
18 THE -- THE CALCULATION, BUT WE USED THEIR INFORMATION ON
19 THE NUMBER OF HOUSEHOLDS AND HOW MUCH EACH HOUSEHOLD USED
20 AND THE NUMBER OF PEOPLE PARTICIPATING IN THIS CLASS.

21 Q. AND SO THIS REFLECTS, AGAIN, WHAT YOU ESTIMATE
22 THE CURRENT OR THE 2011 2012 PUMPING FOR MEMBERS OF THE
23 SMALL PUMPER CLASS?

24 A. THAT'S CORRECT.

25 Q. ALL RIGHT. LET'S GO AHEAD AND LOOK AT THE NEXT
26 SLIDE, PLEASE.

27 A. OKAY. YEAH, THIS -- THIS SLIDE SHOWS THE RAMP
28 DOWN CONSISTS OF A PRE-RAMP DOWN PERIOD OF TWO YEARS AND

1 THEN FIVE YEAR RAMPING DOWN UNTIL YOU GET TO THE NATIVE
2 SAFE YIELD. AND THEN --

3 Q. SO DR. WILLIAMS, LET ME STOP YOU. FIRST OF
4 ALL, THIS IS SLIDE 44. IT'S CALLED "PRE-RAMPDOWN PUMPING
5 ASSUMPTIONS FOR SC-2 AND SC-2A." SO THESE ARE PUMPING
6 ASSUMPTIONS FOR THE MODEL RUNS THAT YOU LABEL SC-2 AND
7 SC-2A?

8 A. YES. THIS IS THE SCENARIOS THAT INCLUDED THE
9 RAMP DOWN, THE REDUCTION FROM CURRENT PUMPING TO THE NATIVE
10 SAFE YIELD.

11 Q. AND YOU TOOK THAT INFORMATION FROM THE PROPOSED
12 PHYSICAL SOLUTION; IS THAT CORRECT?

13 A. YES.

14 Q. AND IT'S YOUR UNDERSTANDING THAT AS PART OF
15 THAT RAMP DOWN FOR YEARS ONE AND TWO, YOU CALL IT A
16 PRE-RAMP DOWN WHICH MEANS WHAT?

17 A. WELL, BASICALLY THESE ARE THE VALUES THAT WERE
18 AGREED UPON THAT WOULD BE PUMPED FOR THOSE FIRST TWO YEARS.
19 AND THEN BETWEEN THE YEARS -- THE NEXT FIVE YEARS THROUGH
20 YEAR SEVEN WOULD BE RAMPING DOWN OF THIS PUMPING TO THE
21 82,300 OR CLOSE TO IT.

22 Q. SO IS IT YOUR UNDERSTANDING THAT IN THIS
23 SEVEN-YEAR TIME PERIOD AND PROPOSED PHYSICAL SOLUTION,
24 YEARS ONE AND TWO, THERE ARE NO REDUCTIONS IN PUMPING AND
25 THEN EQUAL REDUCTIONS IN PUMPING FOR YEARS THREE THROUGH
26 SEVEN TO GET TO THE FINAL ALLOCATIONS OF THE RAMP DOWN
27 NUMBERS; IS THAT CORRECT?

28 A. THAT'S CORRECT.

1 Q. ALL RIGHT. AND AGAIN, JUST FOR -- TO MOVE THIS
2 ALONG, THE SOURCES FOR THE MODEL YEARS ONE AND TWO
3 PRE-RAMPDOWN ARE INDICATED HERE ON SLIDE 44?

4 A. THEY ARE, YES.

5 Q. SO AGAIN, FOR THE SMALL PUMPER CLASS, THE
6 INFORMATION CAME FROM THE COURT-APPOINTED EXPERT; IS THAT
7 CORRECT?

8 A. THE GSI WATER SOLUTIONS.

9 Q. FOR THE FEDERAL RESERVE RIGHT THAT COMES FROM
10 THE -- THEIR AVERAGE OF 2011 AND 2012 PUMPING?

11 A. YEAH, BASED ON THE PHASE FOUR AMENDED STATEMENT
12 OF PARTIAL DECISION.

13 Q. FROM THE COURT?

14 A. YES.

15 Q. STATE OF CALIFORNIA IS AN AVERAGE OF 2011 AND
16 2012 PUMPING?

17 A. YEAH, THAT WAS AN E-MAIL FROM NOAH
18 GOLDEN-KRASNER ON THE 29TH OF JUNE WHERE HE EXPLAINED THE
19 WELLS AND HOW MUCH THEY'RE PUMPING, SO WE JUST DID THE
20 CALCULATION TO GET THE 27946.

21 Q. I TAKE IT WHEN YOU RECEIVED THAT INFORMATION
22 FROM THE STATE OF CALIFORNIA THROUGH ITS LEGAL COUNSEL, YOU
23 CONSIDERED THAT SUFFICIENTLY RELIABLE FOR YOUR ANALYSIS?

24 A. YES, I DO.

25 Q. ALL RIGHT. PUBLIC WATER SUPPLIERS IS LISTED AS
26 40,450.02?

27 A. YES.

28 Q. AND THAT'S TAKEN FROM WHERE?

1 A. WELL, IT'S TAKEN FROM THE STATEMENT OF THE
2 PARTIAL DECISION AND HISTORICAL PUMPING RECORDS BY WEST
3 VALLEY COUNTY WATER DISTRICT.

4 Q. ALL RIGHT. AND THEN ON THE LAND OWNERS,
5 THERE'S A REFERENCE THERE OF 105,892.63 ACRE FEET?

6 A. YES.

7 Q. AND WHERE IS THAT INFORMATION FROM?

8 A. WELL, IT'S A COMBINATION OF THINGS. IT'S FROM
9 THE PHASE FOUR DECISION AND THEN IT MR. KUNEY HAD A
10 SPREADSHEET THAT HE CIRCULATED, LOOKED AT THAT, THEN HE HAD
11 SOME EXPLANATIONS SO WE -- AND WITH RECOMMENDATIONS OF
12 WHICH NUMBERS WOULD BE BEST TO USE, AND WE LOOKED AT THE
13 PHASE FOUR NUMBERS AS WELL AS THE MR. KUNEY'S SPREADSHEET
14 AND HIS EXPLANATIONS TO COME UP WITH THAT.

15 Q. OKAY. AND IT'S BEEN EXPLAINED TO YOU THAT THE
16 INFORMATION FROM MR. KUNEY WHO ACTS AS A LIAISON COUNSEL
17 FOR LAND OWNER PARTIES WAS PROVIDED TO YOU AS MORE UPDATED
18 OR CURRENT INFORMATION ON PUMPING?

19 A. YES.

20 Q. ONE MOMENT, PLEASE. AND I APOLOGIZE,
21 DR. WILLIAMS, I THINK I CONFUSED YOU. IF YOU LOOK AT, FOR
22 EXAMPLE, SLIDE 42, THERE'S A NUMBER THERE FOR LAND OWNERS
23 AS 113,872.82 WITH A REFERENCE THERE, MATERIALS PROVIDED BY
24 MR. KUNEY. I BELIEVE THAT'S MATERIAL. THAT'S THE NUMBER
25 THAT REFLECTS THE INFORMATION RECEIVED FROM MR. KUNEY; IS
26 THAT CORRECT?

27 A. YES, THAT'S -- YES, THERE WAS THE -- THE
28 ORIGINAL PHASE FOUR NUMBERS AND THEN MR. KUNEY PREPARED A

1 SPREADSHEET AND THEN COMMENTS TO THAT SPREADSHEET THAT WE
2 LOOKED AT HIS -- TOOK HIS COMMENTS AND MADE THE ADJUSTMENT.

3 Q. OKAY. AND THE -- GOING BACK TO SLIDE 44, THIS
4 IS WHERE I MADE THE MISTAKE. THE LAND OWNER NUMBER THAT'S
5 REFERENCED THERE RE-RAMP DOWN OF 105,892.63 ACRE FEET, THAT
6 COMES FROM THE --

7 A. SECOND REVISION, EXHIBIT 4.

8 Q. AND DOES NOT INCLUDE THE ADJUSTMENTS THAT WERE
9 PROVIDED TO YOU FROM MR. KUNEY; IS THAT CORRECT?

10 A. NO, THEY DO NOT.

11 Q. OKAY. SO FOR THE CITY OF LANCASTER, YOU HAVE
12 AN AMOUNT THERE?

13 A. YEAH, THOSE WERE IN THE PHASE FOUR -- PHASE
14 FOUR ORDER TABLE IN THERE, 2011, 2012. WE JUST TOOK THE
15 AVERAGE FOR 2011, 2012 FROM THAT ORDER.

16 Q. YEAH, NOW DR. WILLIAMS, I'M GOING TO CALL YOUR
17 ATTENTION TO WHAT YOU HAVE THOUGH HERE ON THE SCREEN. IT
18 SAYS ON THE SOURCE, IT'S BASED ON SECTION 5.17 OF THE
19 JUDGMENT PHYSICAL SOLUTION. IS THAT WHERE THE 500 ACRE
20 FEET COMES FROM?

21 A. I'M SORRY. WHICH ARE YOU --

22 Q. CITY OF LANCASTER ON SLIDE 44.

23 A. I'M LOOKING AT THE WRONG SLIDE. YES, THAT'S
24 CORRECT.

25 Q. AND THEN FINALLY FOR PHELAN PINON HILLS
26 COMMUNITY SERVICES DISTRICT, THERE'S A NUMBER 1,200 ACRE
27 FEET SHOWN?

28 A. YES.

1 Q. WHERE DID THAT COME FROM?

2 A. THAT WAS ALSO SECTION 6.4.1.2 OF THE JUDGMENT
3 IN PHYSICAL SOLUTION.

4 Q. OKAY. NOW DR. WILLIAMS, WE HAVE AS THE NEXT
5 SLIDE IN ORDER, SLIDE NO. 45, IT HAS THE TITLE, "RAMP DOWN
6 PUMPING ASSUMPTIONS FOR SC-2 AND SC-2A." IS GENERALLY
7 WHAT'S SHOWN HERE IS THE NUMBER TO WHAT THE PHYSICAL --
8 PROPOSED PHYSICAL SOLUTION WOULD HAVE AS THE RAMP DOWN
9 NUMBER?

10 A. YES, THAT'S CORRECT. THIS WOULD BE THE NUMBER
11 AFTER THE TWO YEAR PRE-RAMP DOWN AND THE FIVE-YEAR RAMP
12 DOWN. THIS WOULD BE THE NUMBER THAT WE WOULD THEN SIMULATE
13 INTO THE FUTURE.

14 Q. SO ALL OF THESE FIGURES COME FROM THE PROPOSED
15 PHYSICAL SOLUTION DOCUMENT; IS THAT CORRECT?

16 A. THEY DO, YES.

17 Q. AND THEN MOVING TO THE NEXT SLIDE, NO. 46,
18 PLEASE. THIS IS TITLED "PUMPING ASSUMPTIONS FOR PREDICTIVE
19 SCENARIOS 2 AND 2A. WHAT DOES THIS SHOW?

20 A. WELL, THE FIRST COLUMN, THE MODEL YEARS 1 AND 2
21 THE PRE-RAMP DOWN WE DISCUSSED ON THE PREVIOUS SLIDES. AND
22 THEN THAT VALUE FOR EACH ONE OF THE PUMPERS WOULD BE
23 LINEARLY RAMPED DOWN IN MODEL YEARS THREE, FOUR, FIVE, SIX
24 AND SEVEN. SO WE HAVE ONE, TWO, THREE, FOUR -- THE
25 FIVE-YEAR RAMP DOWN AND THEN SO THAT WE START PREDICTING IN
26 YEARS EIGHT TO 50 AT THE NATIVE SAFE YIELD VALUE.

27 Q. SO -- AND WHAT THIS SLIDE ILLUSTRATES IS HOW
28 THE PROPOSED PHYSICAL SOLUTION WOULD OPERATE AS TO EACH OF

1 THE GENERAL PARTIES OR SPECIFIC PARTIES LISTED THERE; IS
2 THAT CORRECT?

3 A. THAT'S CORRECT.

4 Q. SO YOU START WITH THE CURRENT -- OR EXCUSE
5 ME -- THE 2011 2012 PUMPING NUMBER THAT --

6 A. YES.

7 Q. -- THAT YOU WOULD DERIVE FROM VARIOUS SOURCES
8 AND THEN WHAT IT SHOWS IS HOW THE MODEL WOULD TAKE INTO
9 ACCOUNT THE RAMP DOWN AS PROVIDED FOR THE PHYSICAL SOLUTION
10 SO THAT BY THE END OF THE PHYSICAL SOLUTION FOR EACH OF THE
11 PARTIES OR GROUP OF PARTIES SHOWN THERE, THE ALLOCATED
12 NUMBER WOULD BE IN PLACE?

13 A. THAT'S CORRECT.

14 Q. OKAY. AND THEN LET'S GO TO THE NEXT SLIDE, 47,
15 PLEASE.

16 A. YES, SLIDE 47 IS A GRAPHIC OF -- SHOWING THE
17 PRE-RAMP DOWN PRODUCTION THEN THE LINEAR RAMP DOWN TO
18 NATIVE SAFE YIELD, AND THEN STARTING IN YEAR EIGHT THE
19 NATIVE SAFE YIELD PRODUCTION UP TO YEAR 50. SO THIS IS
20 WHAT WAS SIMULATED BY THE MODEL FOR THE PHYSICAL SOLUTION.

21 Q. AND THIS IS SLIDE NO. 47. IT'S CALLED "PUMPING
22 ASSUMPTIONS FOR PREDICTIVE SCENARIOS 2 AND 2A." SO MOVING
23 FROM LEFT TO RIGHT, WE SEE WHAT?

24 A. WELL, YOU SEE A PUMPING IN THOUSANDS OF ACRE
25 FEET PER YEAR ON THE LEFT AXIS, THE Y AXIS. SO YOU SEE
26 STARTING PRE-RAMP DOWN IS AROUND 160,000 ACRE FEET A YEAR
27 AND THEN THAT GOES ON FOR ABOUT TWO YEARS. AND THEN
28 THERE'S A FIVE YEAR RAMP DOWN THROUGH THE END OF THE FIFTH

1 YOU'RE AT THE NATIVE SAFE YIELD WHICH IS SHOWN BY THE
2 LIGHTER SHADE. AND THEN THAT IS -- THAT NATIVE SAFE YIELD
3 PRODUCTION THEN CONTINUED UNTIL THE END OF YEAR 50.

4 Q. SO THIS -- DOES THIS ILLUSTRATE WHAT THE MODEL
5 DOES IN -- IN ITS ANALYSIS OF THE PHYSICAL SOLUTION? IN
6 OTHER WORDS, RAMPING DOWN TO THE NATIVE SAFE YIELD?

7 A. YEAH, THE MODEL TAKES -- EXACTLY RIGHT. THE
8 MODEL HAS WHAT'S CALLED YEARLY STRESS PERIODS OR YEARLY
9 TIME STEP. SO EVERY YEAR IT WILL DO A HYDROLOGIC BALANCE
10 CALCULATION ON EVERY CELL IN THE MODEL AND FOR EVERY LAYER
11 IN THE MODEL. AND IT JUST -- THE MODEL'S VERY SIMPLE. IT
12 JUST CALCULATES THE INFLOW, OUTFLOW AND CHANGE IN STORAGE.
13 BUT IT DOES IT FOR SO MANY CELLS AND THEN OVER A LONG TIME
14 PERIOD, SO IT DOES DO A HYDROLOGIC BALANCE. AND THIS IS
15 THE -- SHOWS THE TIME PERIOD AND THE PUMPING STRESSES THAT
16 WE WOULD USE IN THAT.

17 Q. OKAY. NOW FOR NO. 48, LET'S TAKE A LOOK AT
18 THAT, PLEASE, SLIDE NO. 48. AND IT HAS A TITLE, "AVAA LAND
19 OWNERS' WELLS." WHAT ARE YOU SHOWING HERE, DR. WILLIAMS?

20 A. THIS -- THE BLACK DOTS ARE THE LOCATION OF LAND
21 OWNER WELLS.

22 Q. OKAY. SO LET ME MAKE SURE WE UNDERSTAND WHAT
23 YOU'RE SAYING HERE. WHAT YOU DID, FOR PURPOSES OF YOUR
24 ANALYSIS, YOU TOOK THE MODEL AND INSTEAD OF TREATING THE
25 BASIN AS A BATHTUB, YOU ACTUALLY DID A DISTRIBUTED
26 PARAMETER RUN TO SHOW WHERE ACTUAL PUMPING TAKES PLACE IN
27 THE ADJUDICATION AREA; IS THAT CORRECT?

28 A. YEAH. FOR EACH ONE OF THESE WELLS, THERE WAS

1 VALUES THAT WE USED AND WE -- WE PUT IN THE VALUES FOR THE
2 MODEL.

3 Q. SO YOU TOOK THE INFORMATION THAT YOU RECEIVED
4 REGARDING LAND OWNER WELLS, TOOK BOTH THEIR LOCATION; IS
5 THAT CORRECT?

6 A. THAT'S RIGHT.

7 Q. YOU TOOK THE AMOUNT OF WATER THEY PUMPED; IS
8 THAT CORRECT?

9 A. YES.

10 Q. AND YOU INPUT THAT INTO YOUR MODEL?

11 A. YES.

12 Q. LET'S GO TO THE NEXT SLIDE, SLIDE 49.

13 A. THIS SHOWS, IN A GRAPHIC FORM, HOW MUCH
14 RELATIVELY THE LAND OWNER'S PUMPINGS WERE. THE LARGEST
15 CIRCLE IS 1,500 TO 1,905 ACRE FEET PER YEAR AND THE SMALL
16 YELLOW CIRCLES ARE 0 TO 500. SO THIS ILLUSTRATES AREAS
17 WHERE THERE'S MORE PUMPING AND LESS PUMPING DISTRIBUTED
18 AMONG THE LAND OWNER WELLS.

19 Q. DR. WILLIAMS, IS THIS THE AMOUNT OF PUMPING
20 SHOWN HERE AFTER THE RAMP DOWN OR BEFORE? I CAN'T TELL.

21 A. NO, THIS IS AFTER THE RAMP DOWN.

22 Q. ALL RIGHT. THANK YOU. LET'S GO TO SLIDE
23 NO. 50.

24 A. SLIDE 50 IS -- SHOWS WHERE THE RETURN FLOWS
25 WENT INTO THE MODEL CELLS FOR THE LAND OWNERS.

26 Q. OKAY. SO THAT WE'RE CLEAR ON THE RECORD, WHEN
27 YOU'RE USING THE TERM RETURN FLOWS, YOU'RE NOT REFERRING TO
28 STATE WATER PROJECT RETURN FLOWS; IS THAT CORRECT?

1 A. THAT'S CORRECT THIS IS WHEN WATER'S PUMPED OUT
2 OF THE GROUND, IF IT'S USED ON AGRICULTURAL LAND, 25
3 PERCENT GOES BACK DOWN. AND IF IT'S MUNICIPAL AND
4 INDUSTRIAL USE, 28.1 PERCENT. SO THIS JUST SHOWS THE
5 LOCATIONS WHETHER WE USED IN THE MODEL TO SIMULATE RETURN
6 FLOWS.

7 Q. AND THIS WOULD BE RETURN FLOWS FROM NATIVE
8 YIELD PUMPING, CORRECT?

9 A. YES.

10 Q. AND THIS -- THIS SLIDE, IN CASE I DIDN'T MARK
11 OR IDENTIFY IT ALREADY, IS AVAA LAND OWNERS RETURN FLOW
12 LOCATIONS SLIDE NO. 50. LET'S GO TO THE NEXT SLIDE. NOW,
13 IN ADDITION TO INPUTTING INTO THE MODEL THE LOCATION AND
14 AMOUNTS OF LAND OWNER PUMPING, DID YOU DO THE SAME FOR
15 PUBLIC WATER SUPPLIER GROUNDWATER PUMPING?

16 A. YES, WE DID.

17 Q. AND THIS SLIDE, SLIDE NO. 51, IS ENTITLED "AVAA
18 PUBLIC WATER SUPPLIER WELLS"?

19 A. YEAH, THE BLACK DOTS SHOW WHERE THE PUMPING
20 WATER SUPPLIERS ARE THE -- THE LEGEND -- THE COLOR LEGEND
21 ON THE LEFT SHOWS WHERE THE AREAS -- DISTRIBUTION AREAS USE
22 OF THE WATER OR THE VARIOUS PUBLIC WATER SUPPLIERS.

23 Q. LET'S GO TO THE NEXT SLIDE, SLIDE 52, PLEASE.

24 A. THIS SHOWS THE PRODUCTION RIGHTS. AND AGAIN,
25 IT SHOWS RELATIVE PRODUCTION AS CIRCLES -- COLORED CIRCLES.
26 THE SMALLEST BEING 0 TO 500 ACRE FEET, THE LARGEST BEING
27 1500 TO 1905 ACRE FEET.

28 Q. NOW, THE SLIDE NO. 52 IS ENTITLED "AVAA PUBLIC

1 WATER SUPPLIERS PRODUCTION RIGHTS," THEN IT GOES ON FROM
2 THERE. THERE'S SOME NUMBERS USED THERE IN THE TITLE,
3 DR. WILLIAMS. THERE'S A REFERENCE TO THE 12,345 ACRE FEET
4 ANNUALLY AND THEN IT SAYS PLUS 6,251.66 ACRE FEET A YEAR
5 FEDERAL UNUSED WATER RIGHTS.

6 A. YES.

7 Q. CAN YOU EXPLAIN THAT, PLEASE?

8 A. YEAH, THE -- THE FEDERAL WATER RIGHTS WAS 7,600
9 BUT THAT -- ALL OF THAT ISN'T USED AND THIS SHOWS THE
10 UNUSED PORTION OF THAT.

11 Q. SO IT WAS EXPLAINED TO YOU THAT UNDER THE
12 PROPOSED PHYSICAL SOLUTION, TO THE EXTENT THAT THE FEDERAL
13 GOVERNMENT'S ALLOCATION IS NOT BEING USED, IT WOULD BE
14 AVAILABLE FOR PUBLIC WATER SUPPLIERS TO PROVIDE FOR PUBLIC
15 WATER SUPPLY; IS THAT CORRECT?

16 A. THAT'S CORRECT.

17 Q. NEXT SLIDE, PLEASE, 53. NOW THIS SLIDE IS
18 LABELED, "AVAA PUBLIC WATER SUPPLIERS RETURN FLOW
19 LOCATION." AGAIN, DR. WILLIAMS, ARE YOU TALKING ABOUT
20 RETURN FLOWS FROM STATE WATER PROJECT WATER USE?

21 A. NO, THIS IS -- THIS IS RETURN FLOWS FROM
22 PUMPING.

23 Q. OKAY. AND THIS SLIDE DEPICTS THE LOCATION OR
24 DEPICTS THE SERVICE AREAS FOR THE VARIOUS PUBLIC WATER
25 SUPPLIERS IN THE ANTELOPE VALLEY AREA OF ADJUDICATION?

26 A. THAT'S CORRECT.

27 Q. OKAY. AND I TAKE IT WHAT YOU DID, FOR PURPOSES
28 OF THE MODEL ANALYSIS, IS THAT WHEN A PARTICULAR PUBLIC

1 WATER SUPPLIER HAS AN ALLOCATION OF GROUNDWATER PUMPING OF
2 THE NATIVE YIELD AND USES THAT AMOUNT, IT'S DISTRIBUTED
3 EVENLY OVER THAT PARTICULAR SERVICE AREA?

4 A. THAT WAS OUR ASSUMPTION, YES.

5 Q. NEXT SLIDE PLEASE, SLIDE 54. THIS ONE IS
6 ENTITLED "AVAA FEDERAL WELLS." IT'S SLIDE 54. WHAT IS
7 SHOWN HERE, DR. WILLIAMS?

8 A. WELL, IT SHOWS THE LOCATION OF THE WELLS THAT
9 THE FEDERAL GOVERNMENT IS USING, AIR FORCE PLANT 42. YOU
10 SEE FOUR WELLS IN THE LOWER CENTRAL AREA AND THEN SOME
11 WELLS UP IN THE EDWARDS AIR FORCE BASE.

12 Q. AND I TAKE IT THE BROWN SOLID LINE IN THE UPPER
13 RIGHT-HAND PORTION OF THIS EXHIBIT REFLECTS THE BOUNDARIES
14 OF EDWARDS AIR FORCE BASE; IS THAT CORRECT?

15 A. THAT'S CORRECT.

16 Q. AND THEN YOU MADE EARLIER REFERENCE TO AIR
17 FORCE PLANT 42, THAT'S SHOWN MORE IN THE CENTER, MAYBE A
18 LITTLE BIT TO THE BOTTOM RIGHT OF THE CENTER?

19 A. YES, IT'S LOWER CENTRAL AREA.

20 Q. AND THIS IS INFORMATION THAT WAS PROVIDED TO
21 YOU BY THE UNITED STATES?

22 A. YES.

23 Q. OKAY. AND YOU CONSIDERED THAT TO BE
24 SUFFICIENTLY RELIABLE FOR YOUR USE?

25 A. I DO.

26 Q. ALL RIGHT. SO LET'S TAKE A LOOK NOW AT SLIDE
27 55.

28 THE COURT: WHY DON'T WE DO THAT AFTER LUNCH.

1 MR. DUNN: OKAY.

2 THE COURT: OKAY. BACK AT 1:30.

3

4 (THE LUNCH RECESS WAS TAKEN.)

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1 CASE NUMBER: JCCP4408
2 CASE NAME: ANTELOPE VALLEY GROUNDWATER
3 CASES PHASE SIX
4 LOS ANGELES, CALIFORNIA TUESDAY, SEPTEMBER 29, 2015
5 ROOM NO. 222 HON. JACK KOMAR, JUDGE
6 APPEARANCES: AS HERETOFORE MENTIONED
7 REPORTER: AUDREY L. MOLINAR, CSR #12462
8 TIME: 1:29 P.M.
9

10 (THE FOLLOWING PROCEEDINGS
11 WERE HELD IN OPEN COURT.)
12

13 THE COURT: GOOD AFTERNOON. THE WITNESS IS ON THE
14 STAND, STILL UNDER OATH.

15 MR. DUNN: YOUR HONOR, JUST ONE HOUSEKEEPING MATTER.
16 MY FORMER COLLEAGUE AND FRIEND, MR. QUASS IS HERE
17 REPRESENTING ONE OF THE LAND OWNER PARTIES. AND INSTEAD OF
18 KEEPING HIM WAITING THIS AFTERNOON, HE'D LIKE TO PRESENT A
19 DECLARATION OR EXHIBIT, IF THE COURT WOULD PERMIT.

20 THE COURT: DECLARATION AND EXHIBITS.

21 MR. LUCAS: YES. I REPRESENT -- THANK YOU. MY NAME
22 IS LUCAS QUASS; I REPRESENT CLAN KEITH REAL ESTATES AND ITS
23 MOBILE HOME PARK, 211 UNITS. AND I HAVE DECLARATIONS THAT
24 I'D LIKE TO ADMIT AT EVIDENCE. THE FIRST DECLARATION WILL
25 BE 1-LL-1. IT IS A DECLARATION FROM CHARLES KEITH, THE
26 OWNER OF THE PROPERTY WITH SUPPORTING BUSINESS RECORDS
27 APPROVING OWNERSHIP AND GOOD BUSINESS STATUS. THE SECOND
28 EXHIBIT IS 1-LL-2, DECLARATION OF JERRY DELUCA. HE'S A

1 WELL SYSTEMS OPERATOR AND IT INCLUDES WELL RECORDS AND
2 REPORTS AND OTHER USE OF REASONABLE USE OF GROUNDWATER.

3 THE COURT: VERY WELL. MARK IT AND BE ADMITTED.
4 OBVIOUSLY IF THERE'S ANY OBJECTION, YOU'LL HAVE TO PROVIDE
5 THE PARTY FOR EXAMINATION.

6
7 (MARKED FOR IDENTIFICATION AND ADMITTED
8 INTO EVIDENCE, CLAN KEITH REAL ESTATE'S
9 EXHIBIT NOS. 1-LL-1 AND 1-LL-2, DECLARATIONS.)

10

11 MR. LUCAS: OKAY.

12 MR. KALFAYAN: SAME OBJECTION, YOUR HONOR; HEARSAY
13 AND RESERVE THE RIGHT TO CROSS-EXAMINE.

14 THE COURT: WELL, IT'S A BUSINESS RECORDS EXCEPTION,
15 ISN'T IT?

16 MR. LUCAS: THAT'S WHAT I THOUGHT IT WAS.

17 MR. KALFAYAN: DECLARATION.

18 MR. LUCAS: THANK YOU, YOUR HONOR.

19 MR. DUNN: ONE MORE WITNESS SCHEDULING HOUSEKEEPING
20 MATTER. WE HAVE MR. BEEBY HERE. HE'S PRESENT IN COURT.
21 WHERE ARE YOU MR. BEEBY? HE RESIDES IN SANTA BARBARA.
22 HE'S DRIVEN DOWN HERE TODAY TO BE PART OF THIS TO
23 POTENTIALLY TESTIFY. MR. BEEBY HAD HIP REPLACEMENT SURGERY
24 THIS MONTH. HIS MOBILITY IS SOMEWHAT IMPERATIVE INCLUDING
25 HIS ABILITY TO DRIVE. WE -- AND THIS IS PROBABLY MY
26 FAULT -- DID NOT HAVE HIM PREPARE TO SPEND THE NIGHT HERE
27 IN LOS ANGELES. HE SAYS HE WILL DRIVE HOME TONIGHT IF HE
28 NEEDS TO AND THEN RETURN. IN SORT OF LOOKING WHERE WE'RE

1 GOING THIS AFTERNOON, MY SENSE IS WE'LL CONTINUE WITH
2 DR. WILLIAMS. THERE MAY BE OTHER LAND OWNER ADMISSION OF
3 EVIDENCE. WHAT I'D LIKE TO AVOID IS KEEPING MR. BEEBY HERE
4 THE AFTERNOON, NOT HAVING HIM FINISH HIS TESTIMONY ONLY TO
5 FIGHT THE TRAFFIC BACK TO SANTA BARBARA AND THEN GET UP
6 VERY EARLY TOMORROW MORNING AND COME BACK. I WOULD LIKE
7 TO, IF IT WOULD PLEASE THE COURT, CONTINUE WITH
8 DR. WILLIAMS. THERE WILL BE, I'M SURE, SOME
9 CROSS-EXAMINATION OF HIM BY BOTH PHELAN AND POTENTIALLY BY
10 THE WILLIS CLASS POSSIBLY. AND THEN I AM INFORMED BY -- I
11 DON'T WANT TO SPEAK FOR ANY LAND OWNERS, BUT I'M INFORMED
12 SOME OF THEM OR ALL OF THEM MAY WANT TO DO SOME -- BRING
13 INTO COURT THEIR PUMPING HISTORY. AND I ANTICIPATE THAT
14 THAT MAY TAKE UP POTENTIALLY THE WHOLE AFTERNOON, MAYBE NOT
15 THE ENTIRE AFTERNOON. BUT I WOULD LIKE TO EITHER LET MR.
16 BEEBY GO, IF IT WOULD -- IT'S OKAY WITH THE COURT NOW SO HE
17 GO HOME TO SANTA BARBARA, BE BACK HERE AT 9:00 A.M. OR
18 POTENTIALLY FINISH THE DIRECT EXAMINATION OF DR. WILLIAMS
19 AND THEN PUT MR. BEEBY ON THE STAND.

20 THE COURT: WANT TO INTERRUPT AND TAKE MR. BEEBY?

21 MR. DUNN: I WOULD LIKE TO DO THAT, IF IT WOULD BE
22 ACCEPTABLE TO THE COURT.

23 THE COURT: WHATEVER IS FOR THE CONVENIENCE OF THE
24 WITNESSES AND THE PARTIES, I'M CERTAINLY AMENABLE TO DOING.
25 THAT SOUNDS REASONABLE TO ME. BUT BEFORE I ANSWER THE
26 QUESTION COMPLETELY, LET ME ASK: WHAT'S HAPPENING WITH
27 DEPARTMENT 3? WE'LL FIND OUT WHETHER WE'RE GOING TO HAVE A
28 COURTROOM. IT WILL OBVIOUSLY BE OTHER THAN THIS ONE

1 TOMORROW MORNING, AS I'VE INDICATED, SO LET'S WAIT FOR A
2 FEW MOMENTS AND SEE HOW THINGS ARE AND WE WILL -- MY
3 INCLINATION IS TO GO AHEAD AND INTERRUPT THIS WITNESS AND
4 LET MR. BEEBY TESTIFY. I DON'T KNOW HOW LONG HIS TESTIMONY
5 IS GOING TO BE, BUT YOU'LL HAVE TO CONTEND WITH COMPLETING
6 YOUR DIRECT AND PERMITTING CROSS-EXAMINATION IF THERE IS
7 ANY.

8 MR. DUNN: YES. WE ANTICIPATE IT WILL BE MUCH
9 SHORTER THAN THE TWO PREVIOUS WITNESSES. MR. WEEKS WILL BE
10 DOING THE DIRECT EXAMINATION OF MR. BEEBY.

11 THE COURT: OKAY. I'M SURE MR. WEEKS WILL BE BRIEF.

12 MR. WEEKS: YES, YOUR HONOR.

13 THE COURT: ALL RIGHT. SO PROCEED WITH THIS
14 WITNESS.

15 MR. ZIMMER: JUST ONE ISSUE, YOUR HONOR. WE HAVE
16 NO -- AS FAR AS I KNOW, THE LAND OWNERS DON'T HAVE ANY
17 OBJECTION TO THIS.

18 THE COURT: JUST ONE SECOND. WERE YOU THROUGH?

19 MR. DUNN: YES, YOUR HONOR. THANK YOU.

20 THE COURT: I DIDN'T HEAR YOU SAY THAT.

21 MR. ZIMMER: HE WASN'T THROUGH WITH HIS DIRECT --

22 MR. DUNN: NOT OF DR. WILLIAMS, NO.

23 THE COURT: SO YOU WANT TO PUT MR. BEEBY ON NOW?

24 MR. DUNN: IF IT WOULD BE FINE, SURE.

25 THE COURT: ALL RIGHT. SURE. DR. WILLIAMS, SORRY
26 TO DO THIS TO YOU, BUT DUE TO THE EXTENT OF THE
27 CIRCUMSTANCES DICTATED --

28 DR. WILLIAMS: NO PROBLEM.

1 THE COURT: SO NOW --

2 MR. ZIMMER: WHAT I WANT TO RAISE, YOUR HONOR, IS
3 THERE HAVE BEEN MANY REFERENCES TO THE LAND OWNER PUMPING.
4 AND BECAUSE MR. BEEBY IS NOW TAKING THE STAND, I WANTED TO
5 MAKE CLEAR THAT THE LAND OWNER PUMPING WAS PROVIDED TO THE
6 COURT, POSTED ONLINE, PROVIDED TO ALL PARTIES. IT WAS
7 REFERENCED BY MR. DUNN IN THE DIRECT EXAMINATION OF
8 DR. WILLIAMS. ALL THAT INFORMATION IS AVAILABLE ONLINE AND
9 THEN IT WAS PLACED ON A THUMB DRIVE BY MR. KUNEY AND THAT
10 WAS WHAT DR. WILLIAMS HAD. SO ALL THIS LAND OWNER PUMPING
11 AS REQUESTED BY THE COURT WHICH DEALT WITH 2011, 2012 AND
12 2000 TO 2004 IS CURRENTLY BEFORE THE COURT.

13 AND I DO APOLOGIZE, BY THE WAY. I WANTED TO
14 APOLOGIZE FOR WALKING IN LATE AT THE FIRST RECESS AND TO
15 APOLOGIZE FOR ALL THE LAWYERS. IT WAS CERTAINLY MEANT WITH
16 NO DISRESPECT TO YOUR HONOR. AS THE COURT CAN IMAGINE,
17 WE'RE OUT IN THE HALLWAY TRYING TO FIGURE OUT HOW TO
18 EXPEDITE THIS PROCESS ALONG. WHAT WE'RE DOING AS LAND
19 OWNERS, BOTH PUBLIC AND PRIVATE, IS TO OFFER ALL THAT
20 INFORMATION THAT WAS NOT ONLY POSTED ONLINE BUT PROVIDED TO
21 THE COURT AT THE COURT'S REQUEST FOR 2011, 2012, 2000 TO
22 2004. THE LAND OWNERS ARE OFFERING ALL THAT, BOTH PUBLIC
23 AND PRIVATE, INTO EVIDENCE. IT STANDS ON ITS OWN AS
24 ADMISSIBLE EVIDENCE AND IT WILL BE REFERRED TO BY MR. BEEBY
25 IN HIS TESTIMONY AND POTENTIALLY BY MR. WAGNER IN HIS
26 TESTIMONY AS WELL.

27 THE COURT: SO IT'S OFFERED FOR TWO PURPOSES?

28 MR. ZIMMER: CORRECT, YOUR HONOR.

1 THE COURT: ONE TO SUPPORT THE BASIS FOR THE OPINION
2 OF THE WITNESS AND INDEPENDENTLY?

3 MR. ZIMMER: YES, YOUR HONOR. AND FOR TIME
4 PURPOSES, THE SIMPLEST WAY TO DO IT.

5 THE COURT: I INDICATED THE EFFECT OF ANY PARTY WHO
6 WISHES TO CROSS-EXAMINE HAS THE ABILITY TO DO THAT, IF THEY
7 HAVE GOOD CAUSE.

8 MR. ZIMMER: THANK YOU, YOUR HONOR.

9 MS. BRENNAN: I NEED TO STATE AN OBJECTION ON THE
10 RECORD, YOUR HONOR.

11 THE COURT: THERE'S NOTHING FOR YOU TO SAY. THERE'S
12 NOTHING BEFORE THE COURT. WE JUST HAD A LAWYER EXPLAINING
13 SCHEDULING ISSUES AND APOLOGIZING FOR BEING LATE. WE SEEM
14 TO GET IN THE HABIT OF EVERY TIME SOMEBODY SAYS SOMETHING,
15 SOMEBODY HAS TO SAY SOMETHING ELSE AND THAT'S NOT IN
16 ACCORDANCE OF ANY RULES OR PROCEDURES THAT I'M FAMILIAR
17 WITH. IF THERE'S A MOTION AND THE COURT IS PREPARED TO
18 MAKE A RULING ON SOMETHING, THEN THAT IS THE APPROPRIATE
19 TIME TO OPPOSE IT. BUT JUST BECAUSE SOMEBODY SAYS
20 SOMETHING, DOESN'T MEAN THAT EVERYBODY ELSE WHO DOESN'T
21 AGREE WITH THAT HAS TO SAY SOMETHING ELSE. SO I WANT TO
22 PROCEED WITH THE WITNESS. I'M GOING TO DO IT RIGHT NOW.

23 MS. BRENNAN: YOUR HONOR, MAY I PLEASE STATE
24 SOMETHING ON THE RECORD?

25 THE COURT: NO. CALL THE WITNESS.

26 MR. WEEKS: GOOD AFTERNOON, YOUR HONOR. BRAD WEEKS
27 FOR QUARTZ HILL WATER. I CALL ROBERT BEEBY.

28

1 ROBERT BEEBY,
2 CALLED AS A WITNESS, WAS SWORN AND TESTIFIED AS FOLLOWS:
3 THE COURT: LET THE CLERK SWEAR YOU BEFORE YOU SIT
4 DOWN.
5 THE CLERK: DO YOU SOLEMNLY STATE THAT THE TESTIMONY
6 YOU MAY GIVE IN THE CAUSE NOW PENDING BEFORE THIS COURT
7 SHALL BE THE TRUTH, THE WHOLE TRUTH, AND NOTHING BUT THE
8 TRUTH, SO HELP YOU GOD?
9 THE WITNESS: YES, I DO.
10 THE CLERK: PLEASE BE SEATED. SIR, WOULD YOU PLEASE
11 STATE AND SPELL YOUR NAME FOR THE RECORD?
12 THE WITNESS: ROBERT BEEBY, B-E-E-B-Y.
13 MR. WEEKS: YOUR HONOR, I'M GOING TO BE DISCUSSING
14 EXHIBITS 521 -- PWS 521 THROUGH 541. ALL OF THESE EXHIBITS
15 HAVE BEEN PREVIOUSLY POSTED AND FILED.
16 THE COURT: ALL RIGHT.
17
18 DIRECT EXAMINATION
19 BY MR. WEEKS:
20 Q. MR. BEEBY, I'M SHOWING YOU ON THE SCREEN HERE
21 EXHIBIT 521. WHAT IS THIS EXHIBIT?
22 A. THIS IS AN EXHIBIT OF MY CURRICULUM VITAE OR
23 RESUME.
24 Q. AND HOW LONG HAVE YOU BEEN IN THE BUSINESS OF
25 REVIEWING CROP WATER DUTIES?
26 A. PROBABLY SINCE AT LEAST 1980, ALTHOUGH I'VE
27 BEEN IN AGRICULTURAL ENGINEERING PRIOR TO THAT.
28 Q. WOULD YOU PLEASE POINT OUT ONE PIECE OF RECENT

1 EXPERIENCE YOU HAD REGARDING OFFERING OPINIONS REGARDING
2 CROP WATER DUTIES?

3 A. THAT WOULD PROBABLY BE MY INVOLVEMENT IN THE
4 MOJAVE ADJUDICATION -- MOJAVE WATER ADJUDICATION.

5 Q. YOU TESTIFIED IN PHASE THREE OF THIS MATTER,
6 DIDN'T YOU?

7 A. I DID, YES.

8 Q. AND THE CROP -- AND THE COURT'S QUALIFIED YOU
9 AS AN EXPERT IN PHASE THREE?

10 A. YES.

11 MR. WEEKS: YOUR HONOR, SINCE THIS COURT HAS
12 PREVIOUSLY QUALIFIED MR. BEEBY TO BE AN EXPERT, I'D LIKE
13 HIM TO BE QUALIFIED FOR THIS PURPOSE AS WELL.

14 THE COURT: ANY PARTY WISH TO VOIR DIRE THE WITNESS?
15 HEARING NONE, THE WITNESS IS QUALIFIED AND CONTINUES TO BE
16 QUALIFIED AND MAY TESTIFY.

17 Q. BY MR. WEEKS: MR. BEEBY, IS IT -- AS A GENERAL
18 MATTER, FARMERS -- THEY WILL WATER THEIR CROPS IN AN EFFORT
19 TO MAXIMATE THEIR ECONOMIC RETURNS?

20 A. THAT'S MY UNDERSTANDING, YES.

21 Q. WHY IS THAT?

22 A. BECAUSE OBVIOUSLY THEY DON'T WANT TO BE IN A
23 BUSINESS THAT WOULD NOT BE PROFITABLE. SO CONSEQUENTLY,
24 THEY HAVE TO TAKE CARE OF ALL THE VARIOUS PARAMETERS THAT
25 ARE INVOLVED IN GROWING A CROP INCLUDING IRRIGATION AND
26 BALANCE THEIR COST VERSUS THEIR REVENUES. AND HOPEFULLY AT
27 THE END OF ALL THAT, THEY COME UP WITH A NET PROFIT.

28 Q. AND THE AMOUNT OF WATER THAT THE FARMERS WILL

1 WATER THEIR CROPS, IS THAT CALLED A WATER DUTY?

2 A. YES.

3 Q. AND WHAT IS SOME OTHER COMMON TERMINOLOGY FOR
4 THAT FUNCTION?

5 A. APPLIED WATER, APPLIED WATER DEMAND ARE ALSO
6 CALLED WATER DUTIES.

7 Q. AND APPLIED WATER DEMAND, APPLIED WATER DUTIES,
8 THOSE ARE ALL AREAS THAT ARE WITHIN YOUR EXPERTISE?

9 A. YES, THEY ARE.

10 Q. ARE YOU FAMILIAR WITH THE FACTORS OR THE
11 CRITERIA NECESSARY TO CALCULATE OR TO DETERMINE THE FACT
12 APPLIED WATER DUTIES FOR THE ANTELOPE VALLEY?

13 A. YES, I THINK SO.

14 Q. WHAT ARE SOME OF THOSE FACTORS?

15 A. IN GENERAL TERMS, IT'S CLIMATOLOGICAL FACTORS:
16 WIND, TEMPERATURE. IT ALSO HAS TO DO WITH THE CROP GROWING
17 SEASON, HOW MANY MONTHS OR YEARS THE CROP'S IN THE GROUND,
18 HAS TO DO WITH ROOT DEPTH, SOIL CONDITIONS, YIELDS, THOSE
19 KIND OF THINGS.

20 Q. HAVE YOU CONSIDERED THOSE FACTORS AND PROBABLY
21 A FEW OTHERS REGARDING THE NECESSARY CROP WATER DUTIES OF
22 ANTELOPE VALLEY?

23 A. YES.

24 Q. AND ARE YOU -- HAVE YOU REVIEWED THE ALLOCATED
25 SHARES IN THE SETTLEMENT AGREEMENT FOR THE SETTLING
26 PARTIES?

27 A. IF YOU'RE REFERRING TO THE SETTLEMENT, EXHIBIT
28 4, YES, I'VE REVIEWED THOSE FIGURES.

1 Q. ARE YOU PREPARED TODAY TO EXPRESS AN OPINION
2 REGARDING WHETHER THOSE -- WHETHER THOSE ALLOCATED AMOUNTS
3 MAKE SENSE TO YOU?

4 A. YES.

5 Q. WHAT IS THAT OPINION?

6 A. MY OPINION IS THEY DO MAKE SENSE TO ME.

7 Q. WOULD YOU PLEASE TURN TO EXHIBIT 522. YOU'VE
8 SEEN THIS EXHIBIT BEFORE TODAY?

9 A. YES. I PREPARED THIS EXHIBIT.

10 Q. AND DID YOU PREPARE ALL OF THE COLUMNS ON THIS
11 EXHIBIT?

12 A. NO, I STARTED WITH -- WITH -- I GUESS IT'S
13 CALLED -- WELL, IT'S AN EXCEL FILE THAT WAS PROVIDED TO ME
14 ON A JUMP DRIVE BY YOUNG, WOOLDRIDGE, PAULDEN AND SELF.

15 Q. WHO IS YOUNG WOOLDRIDGE?

16 A. YOUNG WOOLDRIDGE IS AN ATTORNEY INVOLVED IN
17 THIS CASE.

18 Q. THANK YOU.

19 A. IT'S A LAW FIRM, I SHOULD SAY, INVOLVED IN THIS
20 CASE.

21 Q. IT'S MR. KUNEY'S LAW FIRM?

22 A. YES, SCOTT KUNEY, SPECIFICALLY.

23 Q. OKAY.

24 A. SO I WAS PROVIDED THIS EXCEL SPREADSHEET AND
25 THEN I MODIFIED IT IN ORDER TO DO MY ANALYSIS. SO THE
26 THINGS I MODIFIED WAS I PUT ROW NUMBERS, WHICH ARE DOWN THE
27 LEFT-HAND SIDE, AND I PUT COLUMN NUMBERS ACROSS THE TOP IN
28 ANTICIPATION THAT WE MIGHT HAVE TO TALK ABOUT A SPECIFIC

1 NUMBER THAT WAS EASIER TO REFER TO ROW AND COLUMN NUMBER
2 AND THEN BY PARTY OR PRODUCER. I ALSO ADDED THREE COLUMNS
3 TO AID IN MY ANALYSIS AND THOSE WOULD BE COLUMNS N, O AND
4 P. COLUMN N IS ENTITLED "AVERAGE PUMPING," COLUMN O IS
5 ENTITLED "MINIMUM UNIT OVERLYING PRODUCTION RIGHTS IN ACRE
6 FEET PER ACRE," AND COLUMN P IS "MAXIMUM UNIT OVERLYING
7 PRODUCTION RIGHTS IN ACRE FEET PER ACRE." THE REASON I HAD
8 PUT BOTH A MAXIMUM AND MINIMUM WAS BECAUSE PART OF THE DATA
9 THAT WERE PROVIDED ON THE EXCEL SPREADSHEET HAD A COLUMN,
10 WHICH IS COLUMN E AND COLUMN F, MINIMUM AND MAXIMUM
11 ACREAGES. BUT THE MINIMUM AND MAXIMUM ACREAGES WERE NOT
12 SPECIFICALLY DEFINED AS TO WHAT THAT MEANT, SO I ASSUMED
13 THAT WAS MINIMUM FARM ACREAGE AND MAXIMUM FARM ACREAGE.

14 Q. THAT ASSUMPTION IS BASED UPON YOUR KNOWLEDGE,
15 EXPERTISE IN THIS INDUSTRY?

16 A. YES.

17 Q. WOULD YOU -- I WANT TO DIRECT YOUR ATTENTION TO
18 COLUMN B WHICH IS TITLED "PRE-RAMP DOWN PRODUCTION."

19 A. YES.

20 Q. AND ALSO DRAW YOUR ATTENTION TO THE MINIMUM,
21 MAXIMUM ACREAGE WHICH HAS BEEN LABELED IN THIS EXHIBIT
22 COLUMNS E AND COLUMNS F. DO YOU SEE THOSE?

23 A. YES.

24 Q. WAS ONE OF THE FIRST TASKS YOU PERFORMED WHEN
25 YOU STARTED TO WORK ON THIS OPINION WAS AN ANALYSIS OF
26 COLUMN B AND COLUMN E AND COLUMN F?

27 A. YES, BECAUSE THAT WOULD GIVE ME AN INDICATION
28 OF WHAT HISTORICALLY HAD BEEN PUMPED IN UNIT VALUES OF ACRE

1 FEET PER ACRE.

2 Q. AND DID THE PRE-RAMP DOWN PRODUCTION, COLUMN B,
3 DID THAT MAKE SENSE TO YOU WHEN YOU REVIEWED THIS IN
4 COMPARISON TO COLUMN E AND COLUMN F?

5 A. YES.

6 Q. WOULD YOU PLEASE GIVE THE COURT AN EXAMPLE OF
7 WHAT IT MAY HAVE LOOKED LIKE IF IT DIDN'T MAKE SENSE TO
8 YOU?

9 A. IT WOULDN'T HAVE MADE SENSE IF WHEN YOU DIVIDE
10 THE PRE-RAMP DOWN PRODUCTION BY THE ACRE, EITHER THE
11 MAXIMUM OR MINIMUM, IF THAT UNIT VALUE HAD EXCEEDED
12 SIX-AND-A-HALF ACRE FEET PER ACRE, WHICH IS THE MAXIMUM --
13 SORRY -- THE APPLIED WATER DEMAND OF ALFALFA, WHICH IS THE
14 MAJOR WATER USING CROP IN THE ANTELOPE VALLEY.

15 Q. SO ANOTHER WAY OF PUTTING THAT, IF SOMEONE
16 CLAIMED TO BE USING MORE THAN THE ALFALFA, THAT WOULD BE A
17 CLAIM THAT WOULD MERIT ADDITIONAL REVIEW?

18 A. YES.

19 Q. DID YOU FIND ANYONE ON THIS SHEET WHO MERITED
20 ADDITIONAL REVIEW OR DIDN'T MAKE SENSE IN YOUR LANGUAGE?

21 A. NO.

22 Q. OKAY. SO NOW I WANT TO DRAW YOUR ATTENTION TO
23 COLUMNS O AND P. DO YOU SEE THOSE BEFORE YOU?

24 A. YES.

25 Q. NOW, HOW WOULD THE NUMBERS -- WHAT IS THE
26 SIGNIFICANCE BETWEEN COLUMNS O AND P? O IS TITLED "MID
27 UNIT OVERLYING PRODUCTION RIGHTS" AND P IS TITLED "MAX UNIT
28 OVERLYING PRODUCTION RIGHTS."

1 A. BOTH THOSE COLUMNS ARE THE RESULT OF DIVIDING
2 THE OVERLYING PRODUCTION RIGHT, I.E., THE MINIMUM OR THE
3 MAXIMUM ACREAGE. IF YOU TAKE THE OVERLYING PRODUCTION
4 RIGHT, WHICH IS COLUMN C, AND DIVIDE THAT BY THE MAXIMUM
5 ACREAGE SHOWN ON THIS SHEET, YOU'RE GOING TO GET A LOWER
6 NUMBER IN ACRE FEET PER ACRE THAN IF YOU DIVIDE BY THE
7 MINIMUM NUMBER. SO I THOUGHT IT WAS IMPORTANT, AT LEAST IN
8 TERMS OF MY ANALYSIS, TO TAKE A LOOK AT BOTH MINIMUMS AND
9 MAXIMUMS.

10 Q. SO IF WE'RE LOOKING AT THE FIRST ROW -- SO THIS
11 WILL BE ROW 2 FOR COLUMNS O AND P, WHAT THAT SHOWS US IS
12 THAT PARTY IS USING .35 ACRE FEET PER ACRE?

13 A. THAT'S CORRECT, BECAUSE THEIR MAXIMUM AND
14 MINIMUM ACREAGE WERE IDENTICAL.

15 Q. AND WHY DID YOU CHOOSE TO CALCULATE THIS --
16 THESE TWO COLUMNS IN YOUR ANALYSIS?

17 A. AGAIN, IT WAS TO HELP ME ANALYZE WHETHER IT
18 MADE SENSE FOR THE LAND OWNER TO HAVE A UNIT WATER DEMAND
19 THAT WAS IN A BALLPARK, I SHOULD SAY, OF WHAT IT WOULD TAKE
20 TO GROW A CROP OR SUPPORT OF DOMESTIC USE, FOR EXAMPLE.

21 Q. SO AFTER YOU FINISHED CALCULATING COLUMNS O AND
22 P, DID YOU LOOK TO SEE IF SOMETHING JUMPED OUT AT YOU?

23 A. YES.

24 Q. AND WHAT SPECIFICALLY DID YOU LOOK TO SEE THAT
25 MIGHT JUMP OUT AT YOU?

26 A. WELL, THE MAIN THING I WAS LOOKING FOR WAS THE
27 UNIT APPLIED WATER DEMAND IN ACRE FEET PER ACRE IN BOTH
28 THOSE COLUMNS. SO ANY TIME THE UNIT APPLIED ACRE FEET WAS

1 GREATER THAN SIX OR EVEN APPROACHING SIX, THEN I WOULD GO
2 FURTHER INTO THAT PARTICULAR PRODUCER'S DATA TO SEE IF IT
3 ALSO MADE SENSE.

4 Q. AND DID ANY OF THE ITEMS THE PARTIES ON THIS
5 EXHIBIT 522 ON COLUMNS O AND P, DID ANY OF THOSE JUMP OUT
6 AT YOU?

7 A. NO.

8 Q. SO DOES THAT INDICATE TO YOU THAT NO ONE ON
9 COLUMNS O AND P WERE USING OVER SIX ACRE FEET PER ACRE?

10 A. YES. AND NOT ONLY THAT, BUT THEY ALL HAD LOWER
11 OVERLYING PRODUCTION RIGHT THAN THEIR HISTORICAL PUMP USAGE
12 AND THEIR PRE-RAMP DOWN. SO BY HAVING A LOWER OVERLYING
13 PRODUCTION RIGHT, THAT MEANS THEY'RE REDUCING THE PUMPAGE
14 ON THE BASIN, WHICH THEN WOULD HELP IT BRING INTO BALANCE.

15 Q. AFTER YOU HAD TAKEN THIS REVIEW OF COLUMNS O
16 AND P TO SEE IF SOMETHING JUMPED OUT IN FRONT OF YOU, DID
17 YOU THEN COMPARE THE WATER USE ON THESE TWO COLUMNS ACRE
18 FEET PER ACRE VERSUS THE HISTORICAL CROPS THAT WERE GROWN
19 BY THOSE PARTIES? AND IF THEY WERE A FARM OF THE
20 HISTORICAL CROPS, GROWN BY THOSE PARTIES?

21 A. YES. AT THIS POINT, WE SHOULD PROBABLY TALK
22 ABOUT THE LAST COLUMN ON THIS TABLE, COLUMN T.

23 Q. YES.

24 A. ENTITLED "NOTES." THOSE NOTES WERE INCLUDED IN
25 THE ORIGINAL EXCEL SPREADSHEET AND INDICATE BASICALLY THREE
26 TYPES OF ITEMS. ONE, BENEFICIAL USE AND IF THE BENEFICIAL
27 USE WERE FOR AN AGRICULTURAL PRODUCT, WHAT THE AGRICULTURAL
28 PRODUCT WOULD BE. AND THEN C, WHETHER THE DATA FOR

1 HISTORICAL PUMPAGE OR WHAT WAS THE SOURCE OF THAT DATA. SO
2 THOSE NOTES WERE SOMETHING THAT ALSO CONTRIBUTED TO MY
3 ASSESSMENT AS TO WHETHER IT MADE SENSE OR NOT TO END UP
4 WITH A PARTICULAR UNIT APPLIED WATER AND ACRE FEET PER
5 ACRE.

6 Q. IN A GENERAL SENSE, WHY IS IT IMPORTANT THE
7 TYPE OF CROP GROWN ON ANY PARTICULAR PARCEL? LET ME
8 RESTATE IT. DO SOME CROPS USE MORE WATER THAN OTHER CROPS?

9 A. YES. AS I STATED, THE ALFALFA USES THE MOST.

10 Q. SO FOR EXAMPLE, WE SEE ITEM B, ITEM 1, BARLEY
11 VEG OATS, THEY HAVE A DIFFERENT CROP WATER DUTY THAN THE
12 ONE RIGHT BELOW IT, CARROTS?

13 A. YES.

14 Q. AND THEN CARROTS HAS DIFFERENT WATER CROP DUTY
15 THAN ONIONS?

16 A. YES.

17 Q. AND THEY VARY, BUT YOU REVIEWED THE TYPE OF
18 WATER USE, HISTORICALLY, AND THEN YOU COMPARED IT AGAINST
19 THE ALLOCATED AMOUNT OF WATER USE THAT WOULD HAVE ON ACRE
20 FEET PER ACRE?

21 A. YES. BUT TO CLARIFY, I DIDN'T DO IT CROP BY
22 CROP. IN OTHER WORDS, IF IN COLUMN R, WHICH IS THE
23 AGRICULTURAL PRODUCT, IF A USER ONLY SHOWED NO. 5, WHICH
24 WOULD MEAN ALFALFA, THEN I WOULD LOOK PARTICULARLY AT THAT
25 ONE TO MAKE SURE IT DID NOT EXCEED THE SIX AND A HALF. BUT
26 IF IT WAS A MIX OF CROPS, THEN I WOULD EXPECT IT TO BE LESS
27 THAN ALFALFA. BUT I DID NOT LOOK SPECIFICALLY IF THE CROP
28 WAS JUST CARROTS, FOR EXAMPLE, WHETHER THAT MADE SENSE OR

1 NOT, JUST SO LONG AS IT WAS BELOW THE ALFALFA USE.

2 Q. LET'S TAKE THREE EXAMPLES ON THIS SHEET. SO
3 WE'RE GOING TO START WITH NO. 18, ROW 18, WHICH IS
4 BOLTHOUSE PROPERTIES, LLC, AND I SEE ON COLUMN O AND P WE
5 HAVE A CROP WATER DUTY ON O OF 1.47 AND P OF 2.65. DO YOU
6 SEE THAT?

7 A. YES.

8 Q. NOW, YOU ALSO SEE WHAT TYPE OF CROPS THAT THEY
9 HISTORICALLY GREW IN COLUMN R?

10 A. YES.

11 Q. SO COMPARED TO THE HISTORICAL CROPS THAT
12 BOLTHOUSE GREW, ARE -- DOES THAT REFLECT A CUTBACK, O AND
13 P?

14 A. CERTAINLY IT WOULD IF THEY FARMED THE MAXIMUM
15 ACREAGE. THE 2.6 IS FAIRLY CLOSE TO WHAT THE APPLIED WATER
16 DEMAND FOR CARROTS WOULD BE. AS I SAID, I DIDN'T LOOK AT
17 IT SPECIFICALLY CROP BY CROP.

18 Q. AND 1.47, IS THAT LESS THAN THE APPLIED WATER
19 DEMAND?

20 A. YES, FOR CARROTS.

21 Q. FOR CARROTS. SO WHAT --- WHAT WILL BOLTHOUSE
22 PROPERTIES HAVE TO DO AFTER THIS ALLOCATION IS IMPLEMENTED?

23 MS. BRENNAN: OBJECTION; VAGUE.

24 Q. BY MR. WEEKS: WHAT WOULD BOLTHOUSE PROPERTIES
25 HAVE TO DO TO CONTINUE TO FARM ON THESE PARCELS AFTER THIS
26 ALLOCATION IS IMPLICATED?

27 A. IF WE LOOK BACK AT COLUMN O WHERE THE 1.47 ACRE
28 FEET PER ACRE WAS DERIVED, THAT WAS DERIVED FROM TAKING THE

1 OVERLYING PRODUCTION RIGHT DIVIDED BY THEIR MAXIMUM ACREAGE
2 OF 6,700 ACRES, PLUS OR MINUS. SO IN ORDER TO CONTINUE TO
3 FARM CARROTS, THEY WOULD HAVE TO FARM LESS THAN THEY HAD
4 FARMED UNDER A MAXIMUM CONDITION.

5 Q. BY FARM LESS, YOU MEAN FALLOW LAND?

6 A. IT WOULD BE UP TO THEM WHAT THEY DID WITH IT.
7 THEY CAN EITHER FARM LESS LAND TO STAY WITHIN THEIR
8 OVERLYING PRODUCTION RIGHT, OR AS I UNDERSTAND THE PHYSICAL
9 SOLUTION, THEY CAN PURCHASE WATER TO IRRIGATE THE EXTRA
10 PORTION.

11 Q. WILL BOLTHOUSE PROPERTIES BE ABLE TO FARM THE
12 AMOUNT OF LAND THEY HISTORICALLY FARMED? OR WOULD IT BE
13 POSSIBLE FOR BOLTHOUSE PROPERTIES TO FARM THE LAND THEY
14 HISTORICALLY FARMED WITH THESE ALLOCATIONS, ASSUMING THEY
15 DIDN'T PURCHASE ADDITIONAL WATER?

16 MS. BRENNAN: OBJECTION; LACKS FOUNDATION.

17 THE COURT: OVERRULED.

18 THE WITNESS: I DON'T HAVE INFORMATION ON WHAT THEY
19 HISTORICALLY FARMED IN TERMS OF ACREAGE DURING THIS TIME
20 PERIOD THAT IS SHOWN ON THIS CHART. THE ONLY THING I HAVE
21 IS THE MAXIMUM ACREAGE THEY FARMED AND I ASSUME THAT'S WHAT
22 THEY FARMED AND THE MINIMUM ACREAGE. SO IT WOULD DEPEND ON
23 WHAT AREA THEY WERE FARMING IN YEAR AND YOU'D HAVE TO
24 COMPARE THAT WITH THE OVERLYING PRODUCTION RIGHT TO ANSWER
25 THAT QUESTION.

26 Q. BY MR. WEEKS: IF BOLTHOUSE FARMS WANTED TO
27 FARM THEIR MAXIMUM ACREAGE, WOULD THEY BE ABLE TO DO THAT
28 WITH 1.47 ACRE FEET PER ACRE FOR THOSE CROPS?

1 A. I DON'T THINK SO, NO.

2 Q. BECAUSE IF A CROP DOESN'T GET ENOUGH WATER,
3 THEN IT WON'T EITHER SURVIVE OR IF IT DOES SURVIVE, IT
4 WON'T YIELD ENOUGH?

5 A. TYPICALLY THAT'S WHAT HAPPENS, YES.

6 Q. NOW TURN YOUR EXAMPLE TO -- OR SECOND
7 EXAMPLE -- TURN YOUR ATTENTION TO A SECOND EXAMPLE WE'RE
8 GOING TO USE. IT'S NO. 32 ON THE CHART, IT'S TITLED
9 "DIAMOND FARMING CO. LLC CRYSTAL ORGANIC LLC." DO YOU SEE
10 THAT?

11 A. YES, I DO.

12 Q. AND THEY HAVE BEEN ALLOCATED IN COLUMN C,
13 1986 --

14 A. CORRECT.

15 Q. -- ALLOCATION. AND YOU SEE FOR THIS THEY HAVE
16 A MINIMUM OF 1.44 AND A MAXIMUM 3.75?

17 A. THAT'S CORRECT.

18 Q. AND THEN YOU ALSO SEE, ON COLUMN R, THEIR
19 HISTORICAL CROPPING?

20 A. YES.

21 Q. THE -- DOES THE ALLOCATION THAT THEY HAVE
22 RECEIVED, DOES THAT REFLECT A CUTBACK?

23 A. THE OVERLYING PRODUCTION RIGHT, YES.

24 Q. I'M SORRY. THE OVERLYING PRODUCTION RIGHT,
25 DOES THAT REFLECT A SIGNIFICANT CUTBACK FOR DIAMOND FARMING
26 AND CRYSTAL ORGANIC?

27 A. COMPARED TO THE HISTORICAL, YES.

28 Q. WOULD DIAMOND FARMING OR CRYSTAL ORGANIC BE

1 ABLE TO GROW THE CROPS THEY'VE HISTORICALLY GROWN WITH
2 1.44?

3 A. NO.

4 Q. AND THAT'S BECAUSE THAT WOULDN'T BE SUFFICIENT
5 WATER FOR THOSE CROPS?

6 A. AGAIN, ASSUMING THEY FARM THE COMPLETE ACREAGE
7 THAT THEY OWN, RIGHT.

8 Q. TURN YOUR ATTENTION TO OUR THIRD EXAMPLE, WHICH
9 IS NO. 50 ON THIS SHEET, GAYLAND W. KYLE AND JULIE KYLE.

10 A. YES, I SEE IT.

11 Q. OKAY. SO WE SEE THAT HISTORICALLY THEY HAVE,
12 IN COLUMN B, THEY PUMPED 9,75?

13 A. YES.

14 Q. AND NOW AFTER THE ALLOCATION, THEY'RE RECEIVING
15 3,670?

16 A. YES.

17 Q. THE KYLES, WE SEE FROM COLUMN T, ALL THEY EVER
18 PUMPED WAS ALFALFA. LET ME RESTATE THAT. ALL THEY EVER
19 FARMED WAS ALFALFA.

20 A. THAT'S CORRECT, BASED ON THESE CHARTS.

21 Q. SO WHAT IS THE CROP -- WATER CROP DUTY FOR
22 ALFALFA?

23 A. AS I SAID BEFORE, IT'S 6.5 ACRE FEET PER YEAR.

24 Q. WHAT IS THE CROP WATER DUTY -- WHAT IS THE
25 APPLIED WATER THAT OR THE ALLOCATED WATER THAT THE KYLES
26 ARE RECEIVING UNDER THE SETTLEMENT?

27 A. AGAIN, UNDER THIS CALCULATION AS SHOWN IN
28 FIGURE O AND P, IT WOULD BE 3.68 ACRE FEET PER ACRE.

1 Q. SO THE KYLES ARE GOING FROM 6.5 TO 3.68?

2 A. I WOULDN'T SAY IT THAT WAY BECAUSE I DON'T KNOW
3 IF HISTORICALLY THEY PUMPED 6.5. I'D HAVE TO DO THAT
4 CALCULATION. BUT THEY ARE GOING FROM THEIR HISTORICAL
5 PUMPAGE OF -- SORRY -- THEIR PRE-RAMP DOWN PRODUCTION OF
6 9,275, THEY'RE BEING CUT BACK TO 3,670. AND IF YOU DIVIDE
7 THAT OUT BY THEIR ACREAGE, WHICH IS JUST ABOUT 1,000 ACRES,
8 THAT GETS YOU TO THE 3.68 ACRE FEET PER ACRE, WHICH IS NOT
9 SUFFICIENT TO GROW ALFALFA ON THE ENTIRE ACREAGE.

10 Q. SO THE KYLES -- WHAT CHOICES WILL THE KYLES
11 HAVE GOING FORWARD TO FARM THIS ACREAGE?

12 MS. BRENNAN: OBJECTION; LACKS FOUNDATION; VAGUE;
13 CALLS FOR SPECULATION.

14 THE COURT: OVERRULED. YOU CAN DISCUSS OPTIONS,
15 HYPOTHETICALLY.

16 THE WITNESS: THE KYLES CAN REDUCE THE AMOUNT OF
17 ALFALFA ACREAGE THAT THEY'RE FARMING, THAT'S ONE OPTION.
18 OR THEY CAN PURCHASE WATER, TO THE EXTENT IT'S AVAILABLE,
19 AS I UNDERSTAND, UNDER THE PHYSICAL SOLUTION. OR THEY CAN
20 CHANGE THEIR CROP PATTERN AND NOT GROW ALFALFA AND INSTEAD
21 GROW SOMETHING THEY CAN GROW UNDER 3.68 ACRE FEET PER ACRE.

22 Q. BY MR. WEEKS: I WOULD LIKE YOU TO TAKE --
23 CONSIDERING WATER USE AS A WHOLE AS EXPRESSED BY THIS
24 EXHIBIT, ARE THE FARMERS GOING TO HAVE TO CHANGE THEIR
25 HISTORICAL FARMING PRACTICES WITH THE NEW ALLOCATIONS
26 THEY'RE GOING TO RECEIVE?

27 A. WHEN YOU SAY HISTORICAL FARMING PRACTICES,
28 THAT'S A KIND OF A BROAD TERM TO ME. WHAT IT WOULD MEAN TO

1 ME IS THEY WOULD HAVE TO REDUCE THE AMOUNT OF ACREAGE THEY
2 FARMED, WHICH WOULD NOT NECESSARILY CHANGE THEIR PRACTICES,
3 IT WOULD JUST CHANGE THEIR AMOUNT, OR THEY WOULD HAVE TO
4 CHANGE CROP PATTERN. SO A FARMER THAT WOULD BE GROWING
5 ALFALFA WOULD MAYBE AFTERWARDS HAVE TO CHANGE HIS CROP
6 PATTERN, GROW MOSTLY ROW CROPS -- VEGETABLES, ONIONS,
7 CARROTS, THOSE KIND OF THINGS -- IN ORDER TO STAY WITHIN
8 HIS ALLOCATED AMOUNT OF WATER.

9 Q. ARE THESE FARMERS GOING TO BE ABLE TO CONTINUE
10 BUSINESS AS USUAL AFTER THEY HAVE TO LIVE WITH THESE
11 ALLOCATIONS?

12 MS. BRENNAN: OBJECTION; OUTSIDE THE SCOPE OF HIS
13 EXPERTISE.

14 THE COURT: SUSTAINED.

15 Q. BY MR. WEEKS: ARE THE FARMERS GOING TO BE ABLE
16 TO CONTINUE THE HISTORICAL FARMING PRACTICES GOING FORWARD
17 WITH THESE NEW ALLOCATIONS?

18 MS. BRENNAN: SAME OBJECTION.

19 THE WITNESS: THEY'RE GOING TO HAVE TO MAKE CHANGES.

20 THE COURT: OVERRULED.

21 MR. WEEKS: IT WAS OVERRULED?

22 THE COURT: I OVERRULED.

23 Q. BY MR. WEEKS: THANK YOU. NOW MR. BEEBY, I'M
24 GOING TO TURN YOUR ATTENTION TO ANOTHER AREA NOW. YOU WERE
25 PREPARED TO EXPRESS AN OPINION REGARDING THE TAPIA'S TODAY?

26 A. YES, I AM.

27 Q. AND DID YOU TAKE A REVIEW OF THE TAPIA'S
28 FARMING PRACTICES?

1 A. I REVIEWED THE -- I THINK IT WAS A DECLARATION
2 OR DEPOSITION, I'M NOT SURE WHICH, BUT IT WAS PROVIDED TO
3 ME BY BEST, BEST & KRIEGER. I REVIEWED THAT AND EVALUATED
4 THEIR CLAIMS FOR PUMPAGE, THEIR CLAIMS FOR AREA FARMED AND
5 ALSO WHAT CROPS THEY FARMED.

6 Q. WHAT IS YOUR OPINION REGARDING THE TAPIA'S
7 WATER USE?

8 A. MY OPINION IS THAT THE TAPIA WATER USE, AS
9 STATED IN THE DECLARATION, IS OVERSTATED. IT'S FAR IN
10 EXCESS OF WHAT THEY CAN USE BASED ON THE CROPS THEY
11 REPORTEDLY GREW.

12 Q. WOULD YOU TURN TO EXHIBIT PWS 523?

13 A. I HAVE IT.

14 Q. AND WHAT SIGNIFICANCE ON THAT BOX ABOUT THE
15 MIDDLE OF THE PAGE IT SAYS, "RGP OPINION APPLIED WATER
16 DEMAND." WOULD YOU EXPLAIN THAT, PLEASE?

17 A. YES, THAT'S KIND OF THE KEY. THE COURT MAY
18 RECALL THAT SWEET CORN AND PUMPKINS WERE NOT ONE OF THE
19 CROPS THAT WERE ORIGINALLY EVALUATED BY THE TECHNICAL
20 COMMITTEE. SO CONSEQUENTLY, I HAD TO COME UP WITH SOME
21 NUMBERS OF APPLIED WATER DEMAND FOR SWEET CORN AND FOR
22 PUMPKINS. AND BASED ON AN EXHIBIT THAT WE'LL TALK ABOUT A
23 LITTLE LATER, I HAD VARIOUS SOURCES THAT LED ME TO CONCLUDE
24 THAT FOR SWEET CORN, THE APPLIED WATER DEMAND PER ACRE IS
25 2.2 ACRE FEET AND FOR PUMPKINS IT'S 2.6. AND I SHOULD ALSO
26 STATE THAT APPLIED WATER DEMAND IS THE TOTAL APPLIED WATER
27 DEMAND FACTORING IN IRRIGATION EFFICIENCY AND THOSE KINDS
28 OF THING.

1 Q. AND SWEET CORN -- IS THAT THE CORN WE FIND IN
2 SUPER MARKETS?

3 A. YES, AS OPPOSED TO FIELD CORN THAT IS USUALLY
4 FED TO ANIMALS.

5 Q. AND FIELD CORN AND SWEET CORN HAVE DIFFERENT
6 APPLIED WATER DEMANDS?

7 A. YES, THEY DO.

8 Q. WOULD YOU PLEASE EXPLAIN TO THE COURT THE
9 SIGNIFICANCE OF THE BOX IMMEDIATELY BELOW THE RGB OPINION
10 ON EXHIBIT 523?

11 A. YES, THAT BOX INDICATES WHAT I THINK WOULD HAVE
12 BEEN THEIR APPLIED WATER DEMAND BASED ON THE AREA THAT THEY
13 ACTUALLY FARMED AND THE APPLIED WATER DUTY OF SWEET CORN
14 AND PUMPKINS ABOVE.

15 Q. SO WE HAVE A COLUMN TO THE RIGHT THERE IT SAYS
16 TOTAL, DO YOU SEE THAT?

17 A. YES.

18 Q. IS THAT TOTAL COLUMN YOUR OPINION REGARDING THE
19 HISTORICAL WATER USE BY TAPIA?

20 A. NO, IT'S NOT.

21 Q. WHAT IS YOUR -- FOR 2000, WHAT IS YOUR
22 CALCULATION OF THE HISTORICAL WATER USE?

23 A. FOR 2000, WHAT THAT CHART SHOWS, IS THAT THEY
24 GREW CORN, SWEET CORN AND THE SWEET CORN HAD AN APPLIED
25 WATER DEMAND OF 99.9 ACRE FEET. IN THAT SAME YEAR, THEY
26 DIDN'T GROW PUMPKINS, SO THE SUM OF 99 PLUS ZERO RESULTS IN
27 THE TOTAL AND THEIR TOTAL APPLIED WATER DEMAND FOR YEAR
28 2000 NOW WOULD BE 99.9 ACRE FEET.

1 Q. WE SEE THE COLUMNS FROM 2001 THROUGH 2012.

2 A. YES.

3 Q. SAME ANALYSIS FOR THOSE ROWS AS WELL?

4 A. YES. I MIGHT POINT OUT IN 2001, THEY DID GROW
5 BOTH CORN AND PUMPKINS IN THE SAME YEAR, NOT NECESSARILY IN
6 THE SAME PLACE ON THEIR PROPERTY, BUT IN THE SAME YEAR. SO
7 GOING THROUGH THE SAME CALCULATION BY ESTIMATING THE
8 ACREAGE OF SWEET CORN TIMES THE APPLIED WATER DEMAND OF
9 SWEET CORN, THE RESULT IS 61.6 ACRE FEET. DOING THE SAME
10 ANALYSIS FOR THE PUMPKINS, THEY ENDED UP WITH 109.2 ACRE
11 FEET FOR THE PUMPKINS AND ADDING THOSE TWO TOGETHER RESULTS
12 IN TOTAL APPLIED WATER OF 120 ACRE FEET .8 -- I'M SORRY,
13 IT'S 170.8.

14 Q. AND THAT WAS FOR THE YEAR 2001?

15 A. YES.

16 Q. NOW, DID THE TAPIA'S USE IMPORTED WATER FOR THE
17 YEARS 2000 THROUGH 2004?

18 A. I THINK SO.

19 Q. SO WHEN WE'RE DISCUSSING THESE APPLIED WATER
20 DEMANDS, YOU'RE NOT SAYING THEY USED GROUND WATER TO MEET
21 THESE DEMANDS, AT LEAST FOR 2000 THROUGH 2003?

22 A. IT'S MY UNDERSTANDING, FROM THEIR DECLARATION,
23 THAT FROM 2000 TO 2004 -- OR SORRY -- 2003 THEY DID NOT
24 HAVE LARGE CAPACITY OF WELL ON THEIR PROPERTY. AND FOR
25 THOSE YEARS, 2000 THROUGH 2003, THEY PURCHASED WATER FROM
26 AVEK, ANTELOPE VALLEY-EAST KERN WATER AGENCY. FOR 2011 AND
27 '12, THEY USED A WELL THAT, AS I UNDERSTAND IT FROM THEIR
28 DECLARATION, WAS CONSTRUCTED IN 2008 AND OPERATED IN 2009.

1 SO FOR 2011 AND '12, I ALSO UNDERSTAND THAT NO WATER WAS
2 AVAILABLE FROM AVEK, SO THE 2011 AND '12 FIGURES WOULD BE
3 TOTALLY PUMPED GROUND WATER.

4 Q. AND WHY DOES THE ROW 2004 SAY ND?

5 A. ND INDICATED NO DATA TO ME. AND AGAIN, BASED
6 ON MY READ OF THE TAPIA DECLARATION, THERE WAS SOME KIND OF
7 A LAND SWAP IN THERE AND I DID NOT HAVE ANY DATA WITH
8 REGARD TO CROP PATTERN OR PUMPAGE.

9 Q. IF YOU'LL TAKE A LOOK AT THE TOP OF EXHIBIT PWS
10 523, PLEASE EXPLAIN TO THE COURT THE SIGNIFICANCE OF THIS
11 UPPER RECTANGLE.

12 A. ALL RIGHT. THAT'S -- THAT'S ESSENTIALLY MY
13 DERIVATION OF THE AREA IRRIGATED BY CROP. AND I WAS ALSO
14 ASKED TO LOOK AT THE PERIOD FROM 1993 THROUGH 1997, WHICH,
15 OF COURSE, THEN I SEPARATED BY A LINE. AND THEN REMAINING
16 YEARS 2000 THROUGH 2004 AND 2011 AND 2012 WERE THE MAIN
17 AREAS WHERE I FOCUSED MY ATTENTION. SO SECOND COLUMN OVER
18 ENTITLED, "TOTAL IRRIGATED AREA" WAS DERIVED USING LAND SAT
19 PHOTOGRAPHY AND A SOFTWARE PROGRAM CALLED ARCVIEW TO
20 COMPUTE ACREAGES. SO FROM THE LAND SAT PHOTOGRAPHY YOU
21 COULD DETERMINE THE AREA THAT WAS IRRIGATED ON THEIR
22 PARTICULAR PARCEL. YOU CAN'T TELL WHAT CROP TYPE IT WAS,
23 BUT YOU COULD TELL WHAT THE TOTAL AREA IRRIGATED WAS. SO
24 TO GET TO THE CROP TYPE, THEN IN THE FAR RIGHT-HAND COLUMN
25 I HAD ACCESS TO THE KERN COUNTY PESTICIDE PERMITS, WHICH
26 ARE REQUIRED WHEN YOU APPLY PESTICIDES. AND THE SWEET CORN
27 IS FOR HUMAN CONSUMPTION SO THE KERN COUNTY PESTICIDE
28 PERMIT INDICATED THAT THE TAPIA'S HAD APPLIED FOR A 40 ACRE

1 CORN -- SORRY -- 40 ACRES OF CORN FOR THE PESTICIDE PERMIT
2 NONETHELESS I SAID OKAY, WELL, 45.4 IS THE ACREAGE THEY HAD
3 SO I ASSUMED IT WAS 45.4 FOR CORN. THEY HAD NO PESTICIDE
4 FOR PUMPKINS IN 2000, SO I ASSUMED THEY ONLY GREW CORN IN
5 THAT YEAR. AND I DID THE SAME THING ALL THE WAY DOWN
6 THROUGH 2004. 2011 AND '12 PRESENTED A SLIGHTLY DIFFERENT
7 ISSUE BECAUSE I DID NOT HAVE PESTICIDE REPORTS FROM KERN
8 COUNTY AGRICULTURAL COMMISSIONER, SO I RELIED ON TAPIA'S
9 DEPOSITION WHERE HE SAID THAT HE FARMED ABOUT HALF CORN AND
10 HALF PUMPKINS. SO I TOOK THE TOTAL IRRIGATED ACREAGE FOR
11 2011, WHICH WAS 79.4, AND 2012, WHICH WAS 24, I DIVIDED
12 THOSE BY TWO TO CALCULATE HOW MANY ACRES OF CORN AND HOW
13 MANY ACRES OF PUMPKINS. AND SO THE ACREAGE FIGURES THAT
14 YOU SEE ARE THE RESULT OF THAT ARITHMETIC.

15 Q. AND YOU USE THOSE FIGURES TO DETERMINE THE
16 SQUARE IN THE BOTTOM LEFT-HAND CORNER OF EXHIBIT 523?

17 A. YES. I WOULD THEN TAKE THE TOTAL IRRIGATED
18 ACRES OF CORN BY YEAR AND COMPUTE THE APPLIED WATER DEMAND,
19 WHICH IS IN THE LOWER BOX ON THE LEFT-HAND SIDE OF THE
20 EXHIBIT.

21 Q. WOULD YOU BRIEFLY LOOK THROUGH PWS 526 THROUGH
22 539?

23 A. YES.

24 Q. AND WHAT ARE THOSE EXHIBITS?

25 A. THOSE ARE LAND SAT PHOTOGRAPHS WHICH MEASURE
26 THE REFLECTIVE SPECTRUM. AND SUPER IMPOSED ON TOP OF THAT
27 IS A RED SORT OF A BOX WITH A LOWER LEFT-HAND CORNER
28 MISSING. THE RED BOUNDARY INDICATES THE 137 PLUS ACRES OF

1 TAPIA'S PARCEL. AND THE -- THE SHADING UNDERNEATH, WHICH
2 IS THE LAND SAT PHOTO, WOULD INDICATE THAT NO AREA WAS
3 IRRIGATED IN 1993. AGAIN I'M LOOKING AT 526001.

4 Q. AND ARE THOSE THE LAND SAT PHOTOS YOU
5 PREVIOUSLY MENTIONED WHEN YOU WERE DISCUSSING EXHIBITS 523?

6 A. YES.

7 Q. WOULD YOU PLEASE TURN TO EXHIBIT 525?

8 A. I HAVE IT.

9 Q. WHAT IS THIS? PLEASE DESCRIBE FOR THE COURT
10 WHAT THIS INFORMATION REPRESENTS.

11 A. THIS IS A SPREADSHEET THAT I PREPARED. THE TOP
12 BOX -- WELL, IT'S ENTITLED "AV CASES EVALUATION OF TAPIA
13 APPLIED WATER CLAIMS." AND FROM THE TAPIA DECLARATION -- I
14 THINK IS THE CORRECT THING -- I GOT THE LOCATION AND THE
15 AMOUNT OF ACRE FEED OF AVEK WATER DELIVERED EACH YEAR FOR
16 THE YEARS SHOWN 2000 THROUGH 2004, THEN 2011 AND '12. THAT
17 INFORMATION CAME FROM A DECLARATION PROVIDED BY TAPIA.

18 Q. I'M SORRY FOR INTERRUPTING. PROCEED.

19 A. AND THE FIRST COLUMN IS THE LOCATION WHERE
20 APPARENTLY THE AVEK WATER WAS DELIVERED, SO NOT KNOWING
21 WHETHER THAT LOCATION WAS ON THE TAPIA PARCEL OR NOT, MY
22 ONLY OPTION WAS TO ADD UP THE TOTAL AVEK DELIVERIES, WHICH
23 ARE IN TOTAL ROW -- SO FOR 2000, FOR EXAMPLE, HE RECEIVED
24 903.9 ACRE FEET OF WATER FROM AVEK. AND IN 2011 AND '12,
25 THOSE DATA WERE FROM WELL PUMPING AND THOSE WERE DATA
26 PROVIDED BY POWER RECORDS SUPPLIED ALSO BY MR. TAPIA AND
27 DERIVED USING KILOWATT HOURS PER ACRE FEET.

28 Q. YOU DID THE SAME CALCULATIONS FROM 2001 TO 2004

1 AS YOU JUST DESCRIBED FOR 2000?

2 A. YES, CORRECT.

3 Q. SO THE TOTAL ACRE FEET SHOWN ON THIS EXHIBIT
4 525 IS THE TOTAL ACRE FEET DELIVERED, AS ACCORDING TO
5 MR. TAPIA?

6 A. YES.

7 Q. AND DID THAT MAKE SENSE TO YOU, THAT ALL THAT
8 ACRE FEET WOULD BE USED ON MR. TAPIA'S LAND?

9 A. WELL, AT THAT POINT, I WASN'T CERTAIN, SO WHAT
10 I DID WAS I LOOKED AT HIS DECLARATION AND FOUND THAT OF HIS
11 TOTAL 137 ACRE PARCEL, HE SAID THAT 130 ACRES WERE FARMED.
12 SO I ASSUMED THAT WAS WHAT HE FARMED AND I DIVIDED THE
13 ACRE -- THE TOTAL ACRE FEET DELIVERY BY HIS CLAIM OF 130
14 ACRES FARMED TO DETERMINE THE UNIT APPLIED WATER, WHICH IS
15 THE LINE JUST BELOW THE ACREAGE NUMBER. SO FOR 2000, FOR
16 EXAMPLE, IF YOU TAKE THE 903.9 AND DIVIDE THAT BY THE 130
17 NET ACRES, YOU GET SEVEN ACRE FEET PER ACRE.

18 Q. SO TO COMPARE THAT TO THE BOLTHOUSE FARMS ACRE
19 FEET PER ACRE WE LOOKED AT IN EXHIBIT 522, BOLTHOUSE FARMS
20 RECEIVED, AT LEAST ON THE MINIMUM UNIT USE, 1.47 BUT
21 MR. TAPIA FOR 2000 IS CLAIMING SEVEN?

22 MS. BRENNAN: OBJECTION; ARGUMENTATIVE; LEADING.

23 THE COURT: YOU CAN LEAD AN EXPERT. OVERRULED.

24 THE WITNESS: THAT'S A LITTLE BIT LIKE COMPARING
25 APPLES AND ORANGES BECAUSE WHEN YOU COMPARE THE NUMBERS ON
26 BOLTHOUSE, WE'RE COMPARING THE OVERLYING PRODUCTION RIGHT.
27 AND HERE WE'RE COMPARING ACTUAL -- I SHOULDN'T SAY ACTUAL,
28 BUT THE DELIVERIES THAT WERE CLAIMED BY MR. TAPIA. SO FOR

1 EXAMPLE, IF I LOOK AT THE -- AND JUST SPEAKING OF THE YEAR
2 2000, IF I LOOK AT SEVEN ACRE FEET PER ACRE AND KNOWING
3 WHAT HIS CROPPING PATTERN WAS, THAT'S WAY IN EXCESS OF WHAT
4 WOULD BE NEEDED FOR EITHER PUMPKINS OR CORN. SO THAT AGAIN
5 DID NOT MAKE SENSE TO ME.

6 Q. BY MR. WEEKS: DID ANY OF THE APPLIED WATER
7 FROM 2000 THROUGH 2012 AS SHOWN IN THE CHART MAKE SENSE TO
8 YOU?

9 A. WELL, AGAIN, IT'S HARD TO SAY BECAUSE THE UNIT
10 ACRE FEED NUMBER THAT I GOT WAS BASED ON THE ASSUMPTION
11 THAT THE FULL 130 ACRES WERE FARMED. AND MY REVIEW OF THE
12 LAND SAT PHOTOS INDICATED THAT THAT WAS IN FACT NOT THE
13 CASE. SO I THINK THE ANSWER TO YOUR QUESTION IS NO, IT
14 DIDN'T MAKE SENSE BECAUSE HE NEVER DID FARM 130 ACRES.

15 Q. SO DID YOU DO FURTHER INVESTIGATION TO
16 MR. TAPIA'S CLAIMS?

17 A. THAT IS --

18 Q. LET ME REINSTATE THE QUESTION. ARE YOU AWARE
19 THAT MR. TAPIA HAS CLAIMED CERTAIN AMOUNT OF WATER IN THIS
20 LITIGATION?

21 A. YES. I READ FROM HIS DECLARATION THAT HE IS
22 BASING IT ON HIS 2011 AND '12 PUMPAGE AND THAT HE IS
23 REQUESTING AN AVERAGE OF 5 34.5 ACRE FEET ANNUALLY.

24 Q. IS THAT THE NUMBER THAT WE SEE REFLECTED ON
25 EXHIBIT 525?

26 A. YES. IN THE LOWER BOX, THERE'S A LINE ENTITLED
27 "TAPIA CLAIM." I DIDN'T KNOW WHAT ELSE TO CALL THAT.

28 Q. DID YOU THEN CALCULATE THE APPLIED WATER DUTY

1 FOR THAT CLAIM?

2 A. I DID, BUT THE DIFFERENCE HERE IS THAT I HAVE
3 THAT TOP LINE ENTITLED "MAXIMUM AREA OF FARMED DETERMINED
4 BY THE LAND SAT ANALYSIS." AND AGAIN THOSE ARE THE TOTAL
5 ACREAGES THAT I DETERMINED THAT WERE IRRIGATED BY EACH --
6 FOR EACH OF THOSE YEARS. SO WHEN YOU START DIVIDING OUT
7 THE ACTUAL OR THE MAXIMUM FARMED AREA FROM THE LAND SAT
8 PHOTOS DIVIDED BY THE TAPIA CLAIM, YOU GET UNIT APPLIED
9 WATER DEMANDS THAT ARE FAR EXCESS OF ANYTHING THAT DID MAKE
10 SENSE.

11 Q. ARE THOSE UNIT APPLIED WATER DEMANDS GREATER
12 THAN WOULD BE NEEDED FOR EVEN ALFALFA?

13 A. YES.

14 Q. NOW TURNING BACK TO THE LAND SAT PARCELS, HOW
15 CAN YOU TELL BY LOOKING AT THE SATELLITE ANALYSIS IF A
16 PARCEL IS IRRIGATED OR NOT IRRIGATED? SO JUST BY WAY OF
17 EXAMPLE, WE CAN START WITH 526.

18 A. 526 ARE THE LAND SAT PHOTOS FOR 1993 MONTHLY
19 AND THERE IS NO GREEN AREA SHOWN. NOW FOR A LAND SAT
20 PHOTO, IF THE CROP IS IRRIGATED AND FARMED, THEY WOULD SHOW
21 UP AS A GREEN AREA, AND I THINK WE'LL SEE THAT IN
22 SUBSEQUENT EXHIBITS.

23 Q. COULD YOU GIVE THE COURT AN EXAMPLE OF ONE
24 WHERE IT WOULD SHOW FARMED? FOR EXAMPLE 533, PERHAPS
25 533-2.

26 A. YES, 533, WHICH IS FOR THE YEAR 2002, ARE THE
27 LAND SAT PHOTOS MONTHLY. AND SO FOR THE -- PAGE 1 IS FOR
28 JANUARY AND FEBRUARY AND YOU SEE THERE'S NO GREEN AREA

1 SHOWN. NOW FOR '02, YOU SEE MARCH, PROBABLY NO GREEN AREA,
2 BUT IN APRIL IN THE UPPER LEFT-HAND CORNER, YOU START TO
3 SEE SOME GREEN SHADE. THAT BECOMES MORE INTENSE ON 533 FOR
4 THOSE, FOR MAY. AND THEN IF YOU LOOK AT THE NEXT PAGE,
5 WHICH IS 5330004 FOR JULY AND AUGUST, YOU SEE THAT THE
6 GREEN AREA IN THE UPPER LEFT-HAND PORTION HAS NOW PROBABLY
7 BEEN HARVESTED, IS WHAT I WOULD CONCLUDE. BUT HE'S PLANTED
8 IN THE LOWER RIGHT-HAND CORNER SOME OTHER CROP AND THAT
9 ALSO SHOWS UP AS GREEN.

10 Q. AND IS -- IN YOUR INDUSTRY, IS THIS A
11 METHODOLOGY USED BY EXPERTS IN INDUSTRY TO DETERMINE
12 CROP -- CROPPING?

13 A. HISTORICALLY IT WAS USED TO DETERMINE WHETHER
14 THE LAND WAS IRRIGATED OR NOT. MORE RECENTLY, IT'S BECOME
15 SOPHISTICATED ENOUGH, ALTHOUGH THESE AREN'T THAT LEVEL OF
16 SOPHISTICATION THAT YOU CAN ACTUALLY TELL WHAT THE CROP
17 WAS. BUT HISTORICALLY, ALL YOU COULD TELL WHETHER IT WAS
18 IRRIGATED OR NOT IRRIGATED.

19 Q. WOULD YOU TURN TO EXHIBIT 537?

20 A. I HAVE IT.

21 Q. AND WHAT IS THE SIGNIFICANCE OF WHAT IS SHOWN
22 IN 537?

23 A. 5370001, THE FIRST ONE, SHOWS THE TAPIA PARCEL
24 OUTLINED IN RED. AND THEN IT SHOWS THE AREA THAT WAS
25 DETERMINED TO BE IRRIGATED USING ARCVIEW, WHICH IS A
26 COMPUTER SOFTWARE PROGRAM THAT CAN DETERMINE AREAS BASED ON
27 THE OUTLINES OF THE IRRIGATED AREA. SO AS YOU CAN SEE, THE
28 UPPER LEFT-HAND CORNER IS INDICATED TO BE 9.1 AND MANY

1 DECIMAL POINTS, WHICH IS SILLY, BUT ANYWAY THAT'S HOW THESE
2 COMPUTER THINGS WORK. AND THEN SO THAT WAS WHAT WAS SHOWED
3 IN, I THINK, MARCH. AND THEN IF WE LOOK DOWN IN THE LOWER
4 RIGHT-HAND CORNER, WE SEE A BIG BOX, 33.1 ACRES, AND THEN
5 UNDER THAT 3.1 ACRES. SO TO COMPUTE THE TOTAL IRRIGATED
6 ACREAGE, I WOULD HAVE ADDED THOSE TWO -- THOSE THREE BOXES
7 TOGETHER TO GET THE TOTAL. AND THEN I WOULD HAVE USED THE
8 AGRICULTURAL PESTICIDE REPORTS TO DETERMINE WHAT THE CROP
9 PATTERN WAS.

10 Q. AND WOULD YOU TURN TO 5372? AND IS THIS 5372
11 AN EXAMPLE OF CALCULATING 70 ACRES WERE FARMED?

12 A. YES. AND THIS IS FOR YEAR 2001.

13 Q. OKAY. AND THE SUBSEQUENT EXHIBITS ON 537, THEY
14 REFLECT THE SAME SOURCE OF INFORMATION?

15 A. YES.

16 Q. SO TURNING YOUR ATTENTION BACK TO 525 -- PWS
17 525, AFTER YOU TOOK A LOOK AND DETERMINED THAT MR. TAPIA'S
18 CLAIMS DIDN'T MAKE SENSE TO YOU, THEN WHAT -- THEN DID YOU
19 DECIDE TO CALCULATE FOR YOURSELF WHAT THE CROP WATER DUTIES
20 WERE? LET ME RESTATE THAT QUESTION. AFTER YOU DETERMINED
21 THAT MR. TAPIA'S CLAIMS DIDN'T MAKE SENSE, WHAT STEPS DID
22 YOU TAKE NEXT?

23 A. WELL, THE FIRST STEP WAS TO DETERMINE WHAT AREA
24 WAS ACTUALLY IRRIGATED AND THAT'S WHAT WE'D JUST GONE
25 THROUGH AND THAT'S HOW I GOT THE ACREAGE TOTALS. THE NEXT
26 STEP WAS THEN TO DETERMINE WHAT CROP WAS GROWN ON THE AREA
27 THAT WAS IRRIGATED. AND IF YOU RECALL FROM YEAR 2001, I
28 THINK IT WAS, THERE WERE CROPS GROWING IN THE UPPER

1 LEFT-HAND CORNER AND THE RIGHT-HAND CORNER, BUT THAT WOULD
2 HAVE SHOWN AT DIFFERENT TIMES OF THE YEAR. SO IN ANY
3 EVENT, WHAT WE DID, WE TOOK THE TOTAL -- OR WHAT I DID, I
4 TOOK THE TOTAL IRRIGATED ACREAGE USED THE KERN COUNTY
5 AGRICULTURAL COMMISSIONER'S PESTICIDE REPORTS TO DETERMINE
6 THE CROPPING PATTERN.

7 Q. IF I CAN INTERRUPT YOU THERE. WOULD YOU TURN
8 TO PWS 538 AND 539?

9 A. YES, I HAVE IT.

10 Q. AND WHAT ARE THOSE?

11 A. THOSE ARE COPIES OF THE DATA THAT WE GOT FROM
12 THE KERN COUNTY AGRICULTURAL COMMISSIONER FOR THE PESTICIDE
13 REPORT.

14 Q. SO THOSE WERE THOSE PESTICIDE REPORTS YOU JUST
15 MENTIONED?

16 A. CORRECT. SO THOSE WOULD BE FOR TAPIA, YEAR
17 2000, WHICH YOU CAN SEE IN THE UPPER LEFT-HAND CORNER. AND
18 THEN THE AREA CROSS HATCHED IS THE AREA FOR WHICH HE
19 APPLIED FOR A PERMIT. AND IF YOU LOOK DOWN IN THE BOX ON
20 THE RIGHT-HAND SIDE, YOU'LL SEE THAT THE "COMM" IS THE TYPE
21 OF CROP AND IT SAYS CORN FOR HUMAN CONSUMPTION, THAT'S
22 SWEET CORN. AND THEN DOWN AT THE BOTTOM IT SAYS, ACREAGE
23 PERMITTED, 40 ACRES. SO THAT WAS THE BASIC DATA THAT I
24 USED IN ORDER TO BREAK DOWN EACH YEAR BY CROP AND BY AREA.

25 Q. SO AFTER YOU TOOK A LOOK AT THOSE PERMITTING
26 PESTICIDE REPORTS, WHAT NEXT STEP DID YOU TAKE?

27 A. WELL, THE NEXT STEP WAS TO INTEGRATE THE
28 PESTICIDE REPORT TO GET ME THE CROP PATTERN BACK INTO

1 EXHIBIT 523.

2 Q. AND HOW DID YOU DETERMINE THE CROP WATER DUTY
3 FOR SWEET CORN AND PUMPKINS?

4 A. I DID A DOCUMENT REVIEW OF THE VARIOUS FILES
5 THAT I HAVE ON CONSUMPTIVE USE AND EVAPOTRANSPIRATION
6 DESIGN PLANS. AND THE PUBLICATIONS THAT I HAD ARE LISTED
7 HERE: UNIVERSITY OF FLORIDA, VIRGINIA COOPERATIVE, NEW
8 SOUTH WALES, LAND USE AND WATER. THESE ARE JUST KIND OF AN
9 OVERALL LISTING OF THE VARIOUS DOCUMENTS THAT I REVIEWED
10 AND I GOT VARIOUS VALUES OFF OF THOSE DOCUMENTS. THE ONE
11 FOR NEW SOUTH WALES WAS INTERESTING BECAUSE THEY -- THEY
12 GAVE THE NUMBER IN MEGA LITERS PER HECTARE, SO I HAD TO
13 CONVERT THAT TO ACREAGE WHICH WAS A TEST OF MY CONVERSION
14 SKILLS. BUT ANYWAY, IN NEW SOUTH WALES, WHICH IS 32
15 DEGREES SOUTH LATITUDE, ABOUT AS FAR SOUTH OF THE EQUATOR
16 AS CALIFORNIA IS NORTH, THAT WOULD INDICATE A VERY SIMILAR
17 CLIMATIC CONDITION, AND BECAUSE IT IS A COASTAL STATE AS
18 WELL AS INLAND, THEY GAVE A RANGE OF -- I WON'T NOT USE THE
19 MEGA LITERS, BUT 1.3 ACRE FEET PER ACRE TO 2.6 ACRE FEET
20 PER ACRE, WHICH IS ON THE FAR RIGHT-HAND SIDE THERE UNDER
21 THAT PARTICULAR BOX. AND SO I FIGURED THE 1.3 WAS PROBABLY
22 NOT GOING TO BE TYPICAL OF THE ANTELOPE VALLEY, PROBABLY BE
23 MORE COASTAL, SO I USED THE 2.6 FOR THE PUMPKINS THERE.

24 AND THEN IN CORN, I HAD QUITE A LOT OF
25 INFORMATION -- I SHOULDN'T SAY A LOT, BUT I HAD SOME
26 INFORMATION FROM THE ARIZONA COOPERATIVE EXTENSION SERVICE
27 AT MESA AND THEY GIVE A CONSUMPTIVE USE FOR CORN OF 19.6.
28 AND I'M NOW LOOKING AT THE FIFTH BOX DOWN WHERE THERE'S A

1 BIG -- WHERE IT SAYS SWEET CORN, 19.6, THAT'S INCHES. AND
2 THEN I ADDED A COLUMN MYSELF, I.E., MEANING IRRIGATION
3 EFFICIENCY WHICH WOULD GET IT UP TO 26.1 INCHES WHICH
4 CONVERTS TO 2.2 ACRE FEET. AND THAT WOULD, AGAIN, BE MY
5 OPINION OF THE APPLIED WATER DEMAND FOR SWEET CORN IN THE
6 ANTELOPE VALLEY. NOW, THIS WAS ALL WHAT WE CALL DRY LAB
7 WORK, MEANING I JUST DID RESEARCH AND LOOKED AROUND AND
8 FOUND WHAT I COULD.

9 SO THEN I CALL THE UCD EXTENSION FOLKS AND --
10 UNIVERSITY OF CALIFORNIA AT DAVIS EXTENSION FOLKS AND
11 TALKED TO BEN FABER. AND HE'S THE EXTENSION SPECIALIST FOR
12 VENTURA COUNTY AND HE GAVE ME SOME VALUES ALSO FOR VENTURA
13 COUNTY, BUT WHEN I TOLD HIM THOSE WERE WAY LOW COMPARED TO
14 WHAT I WAS PLANNING TO USE FOR THE ANTELOPE VALLEY, HE SAID
15 THAT'S RIGHT. THE ANTELOPE VALLEY HAS A DIFFERENT CLIMATE
16 THAN VENTURA COUNTY. SO AS A RESULT OF ALL THAT
17 INFORMATION, MY CONCLUSION WERE FOR SWEET CORN I WOULD USE
18 2.2 ACRE FEET AND FOR PUMPKINS, 2.6. I ALSO FACTORS INTO
19 THE FACT THAT SWEET CORN IS IN THE GROUND FOR A SHORTER
20 PERIOD OF TIME THAN PUMPKINS. IT'S A 10 TO 15 WEEKS
21 GROWING SEASON AND PUMPKINS ARE TYPICALLY FROM 13 TO 15
22 WEEKS. IT ALL MADE SENSE THAT PUMPKINS WOULD HAVE A HIGHER
23 UNIT WATER DEMAND THAN CORN.

24 Q. SO THE RESULT OF ALL THAT EFFORT JUST DESCRIBED
25 WAS THAT SWEET CORN WOULD USE 2.2 ACRE FEET PER ACRE ON
26 MR. TAPIA'S LAND AND PUMPKINS WOULD USE 2.6 ACRE FEET PER
27 ACRE ON MR. TAPIA'S LAND?

28 A. I WOULDN'T CONSTRAIN IT TO MR. TAPIA, I WOULD

1 SAY THE ANTELOPE VALLEY.

2 Q. THE ANTELOPE VALLEY. BUT MR. TAPIA'S LAND IS
3 IN THE ANTELOPE VALLEY?

4 A. CORRECT.

5 Q. SO AFTER DOING THAT WORK, YOU MULTIPLIED THE
6 AMOUNT OF FARMED ACRES BY MR. TAPIA TO COME TO THE TOTAL
7 AMOUNTS HE USED HISTORICALLY AND THAT'S WHAT WE SEE ON 523,
8 PWS 523?

9 A. YES, THAT'S CORRECT.

10 MR. WEEKS: NO FURTHER QUESTIONS, YOUR HONOR.

11 THE COURT: ALL RIGHT. CROSS-EXAMINATION?

12 MS. BRENNAN: I WOULD LIKE TO CROSS EXAMINE, YOUR
13 HONOR.

14 MR. WEEKS: YOUR HONOR, IF I COULD OBJECT, IF
15 MR. TAPIA'S COUNSEL IS HERE, I WOULD LIKE --

16 THE COURT: WHAT WOULD YOU LIKE?

17 MR. WEEKS: -- TO CROSS EXAMINE.

18 MS. BRENNAN: DID HE HAVE NOTICE THAT THE EXPERT WAS
19 GOING TO BE ON THE STAND?

20 THE COURT: I AM HAPPY TO HAVE ANY COUNSEL WHO
21 WISHES TO CROSS-EXAMINE HIS COUNSEL OR OTHERWISE, BUT
22 SOMEBODY'S GOT TO STAND UP AND SAY, I WANT TO
23 CROSS-EXAMINE.

24 MR. WEEKS: THANK YOU, YOUR HONOR.

25 THE COURT: SO FAR I'M ONLY HEARING ONE, SEEING ONE.

26 ///

27 ///

28 ///

CROSS-EXAMINATION

BY MS. BRENNAN:

Q. THANK YOU, YOUR HONOR.

GOOD AFTERNOON, MR. BEEBY.

A. GOOD AFTERNOON.

Q. I'M GOING TO START WITH SOME QUESTIONS RELATING TO YOUR TESTIMONY REGARDING TAPIA, IF THAT'S ALL RIGHT, JUST THE TESTIMONY YOU JUST GAVE.

A. YES.

Q. ALL RIGHT. NOW, IT WAS YOUR OPINION THAT MR. TAPIA OVERSTATED HIS -- THE AMOUNT OF WATER THAT HE WAS ACTUALLY USING; IS THAT CORRECT?

A. IT SEEMS NOT TO MAKE SENSE TO ME THAT THE ACREAGE -- THE AMOUNT OF WATER THAT HE REPORTEDLY PAID FOR FROM AVEK WAS ALL USED ON HIS 130 ACRES AND ONLY A PORTION OF WHICH WAS FARMED.

Q. ALL RIGHT. AND YOU MENTIONED THAT YOU ANALYZED THE TAPIA DECLARATION WITH RESPECT TO YOUR ANALYSIS?

A. THAT'S WHAT -- THAT WAS MY STARTING POINT. I THINK IT WAS A DECLARATION.

Q. OKAY. AND DID YOU HAVE TO USE YOUR EXPERTISE TO ANALYZE THE TAPIA DECLARATION?

A. WELL, I THINK SO, YES. HOW -- I DON'T KNOW HOW ELSE I WOULD HAVE EVALUATED IT.

Q. OKAY. AND TO ARRIVE AT YOUR OPINION THAT TAPIA OVERSTATED HIS WATER USAGE, DID YOU HAVE TO USE YOUR SKILLS AND KNOWLEDGE AS AN EXPERT?

THE COURT: COUNSEL, I DON'T THINK THAT WAS THE

1 TESTIMONY. I THINK WHAT HE SAID WAS THAT THE AMOUNT OF
2 WATER INDICATED WOULD NOT BE NECESSARY FOR THE CROP THAT HE
3 UNDERSTOOD WAS BEING PLANTED. I DON'T THINK HE OPINED
4 CONCERNING MR. TAPIA'S CREDIBILITY OR ANYTHING ELSE OF THAT
5 NATURE, SO YOU MIGHT FOCUS ON WHAT HE ACTUALLY TESTIFIED TO
6 HERE.

7 MS. BRENNAN: OKAY. WELL, THANK YOU, YOUR HONOR.
8 THEN I MISUNDERSTOOD. I THOUGHT IT WAS YOUR OPINION, BASED
9 ON WHAT HE TESTIFIED AT HIS DEPOSITION AND HERE IN COURT,
10 THAT MR. TAPIA OVERSTATED FAR IN EXCESS OF WHAT HE ACTUALLY
11 GREW.

12 MR. ZIMMER: RELEVANCE -- OBJECTION; RELEVANCE.

13 THE COURT: I'M GOING TO SUSTAIN THAT. THE QUESTION
14 IS WAS THE -- IN THIS EXPERT'S OPINION, WHEN HE EVALUATED
15 THE MATERIALS THAT WERE AVAILABLE TO DETERMINE HOW MUCH
16 WATER WAS REQUIRED FOR THE CROPS THAT THIS WITNESS
17 UNDERSTOOD WERE BEING PLANTED, WHETHER IT WAS IN EXCESS OF
18 WHAT WAS NEEDED.

19 Q. BY MS. BRENNAN: ALL RIGHT. I'LL MOVE ON,
20 THEN, YOUR HONOR. COULD AN ATTORNEY WITHOUT YOUR EXPERTISE
21 HAVE CONDUCTED THE ANALYSIS YOU DID WITH RESPECT TO TAPIA'S
22 CLAIMED WATER USAGE?

23 MR. WEEKS: OBJECTION; CALLS --

24 THE COURT: SUSTAINED.

25 Q. BY MS. BRENNAN: HOW MANY HOURS DID YOU SPEND
26 ANALYZING THE TAPIA DATA?

27 MR. ZIMMER: OBJECTION; RELEVANCE. TAPIA IS NOT
28 PART OF THE PHYSICAL SOLUTION AT THE PRESENT TIME.

1 MS. BRENNAN: YOUR HONOR, THIS GOES TO THE WEIGHT OF
2 THE TESTIMONY.

3 THE COURT: WHAT DID YOU SAY, MR. ZIMMER?

4 MR. ZIMMER: I SAID, OBJECTION; RELEVANCE. TAPIA'S
5 NUMBERS, AT THIS POINT, HAVE NOTHING TO DO WITH PHYSICAL
6 SOLUTION OR THE STIPULATED JUDGMENT.

7 MR. LEMIEUX: I WOULD ALSO OBJECT, YOUR HONOR, ALONG
8 THOSE LINES BASED ON STANDING CONSISTENT WITH THE MOTION IN
9 LIMINE.

10 MS. BRENNAN: OFFER OF PROOF, YOUR HONOR.

11 THE COURT: WELL, SINCE THE COURT HAS MADE NO
12 FINDING AND THERE'S NO OFFER FROM ANYBODY THAT -- THAT THE
13 TAPIA CLAIM, AT THIS POINT, HAS BEEN ACCEPTED BY ANYBODY,
14 IT'S NOT PART OF ANY PHYSICAL SOLUTION THAT I'M AWARE OF
15 THAT'S BEING PRESENTED HERE, SO I'LL SUSTAIN THE OBJECTION.

16 MS. BRENNAN: YOUR HONOR, I'M GOING INTO THIS LINE
17 OF QUESTIONING SO IT CAN BE COMPARED TO THE ANALYSIS THAT
18 THIS EXPERT DID, MR. BEEBY, IN CONNECTION WITH 140 LAND
19 OWNERS AS COMPARED TO THE EFFORT AND EXPERTISE HE APPLIED
20 TO THE TAPIA DATA.

21 THE COURT: I'M GOING TO SUSTAIN THE OBJECTION.

22 Q. BY MS. BRENNAN: NOW, YOU ANALYZED EXHIBIT 4 TO
23 THE PROPOSED PHYSICAL SOLUTION, CORRECT?

24 A. CORRECT.

25 Q. AND DO YOU HAVE ANY WAY OF KNOWING IF ANY PARTY
26 LISTED ON EXHIBIT 4 MISREPORTED THEIR PRODUCTION AMOUNT AS
27 TAPIA DID, IN YOUR OPINION?

28 MR. KUHS: OBJECTION, YOUR HONOR; THAT MISSTATES

1 TESTIMONY.

2 THE COURT: DO YOU UNDERSTAND THAT QUESTION?

3 THE WITNESS: NOT EXACTLY BECAUSE TAPIA'S NOT ON
4 EXHIBIT 4, AS FAR AS I KNOW.

5 THE COURT: ALL RIGHT.

6 Q. BY MS. BRENNAN: OKAY, I HAVE HIS ANSWER FROM
7 HIS DEPOSITION, BUT I CAN TRY TO RESTATE IT IF YOU DON'T
8 UNDERSTAND IT RIGHT NOW. YOU ANSWERED THAT SAME QUESTION
9 AT YOUR DEPOSITION IF YOU RECALL.

10 THE COURT: WELL, ADMISSIBLE EVIDENCE IS DIFFERENT
11 THAN DEPOSITION TESTIMONY, MS. BRENNAN.

12 Q. BY MS. BRENNAN: OKAY. IS THERE -- THERE WAS
13 AN OBJECTION, THEN? LET ME JUST START OVER, PLEASE.

14 THE COURT: THERE WAS AN OBJECTION.

15 Q. BY MS. BRENNAN: DO YOU HAVE ANY WAY OF KNOWING
16 WHETHER ANY PARTY LISTED ON EXHIBIT 4 MISREPORTED THEIR
17 PRODUCTION AMOUNT TO YOU?

18 A. AS I TESTIFIED WITH REGARD TO EXHIBIT 4, I
19 LOOKED AT THE MAXIMUM AND MINIMUM ACREAGES, I LOOKED AT
20 THEIR PREPRODUCTION RIGHT, I LOOKED AT THEIR OVERLYING
21 GROUND WATER RIGHT, AND I LOOKED AT THEIR HISTORICAL
22 PRODUCTION AND THERE WAS NOTHING THAT JUMPED OUT AT ME AS
23 NOT MAKING SENSE AND I DESCRIBED AS NOT MAKING SENSE IF
24 THERE WAS SOMETHING THAT WAS UNUSUALLY HIGH IN TERMS OF
25 UNIT WATER DEMANDS THAT WOULD NOT MAKE SENSE. BUT IN TERMS
26 OF SPECIFIC EVALUATION OF EACH INDIVIDUAL LAND OWNER'S
27 ACREAGE CLAIM OR PUMPED WATER CLAIM, I DID NOT INDIVIDUALLY
28 LOOK AT THOSE.

1 Q. RIGHT. OKAY. SO YOU DID NOT INDEPENDENTLY
2 INVESTIGATE THE ACCURACY OF THE HISTORICAL NUMBERS THAT
3 WERE ON THE EXHIBIT 4 CHART, CORRECT?

4 MR. WEEKS: OBJECTION; ARGUMENTATIVE. THIS WITNESS
5 JUST ANSWERED THAT QUESTION AND SAID -- DESCRIBED WHAT HE
6 DID.

7 THE COURT: IT IS ARGUMENTATIVE.

8 Q. BY MS. BRENNAN: HAVE YOU REVIEWED THE PROPOSED
9 PHYSICAL SOLUTION IN THIS CASE OTHER THAN EXHIBIT 4?

10 A. NO.

11 THE COURT: THE QUERY ON EXHIBIT 4, IS THAT
12 CONSISTENT WITH THE COURT'S STATEMENT OF DECISION, PARTIAL
13 STATEMENT OF DECISION IN PHASE FOUR, IF YOU KNOW?

14 THE WITNESS: I'M NOT SURE I KNOW. I -- I KNOW THE
15 OBJECTIVE OF THE ADJUDICATION IS TO REDUCE GROUND WATER
16 PUMPING AND TO BRING THE BASIN INTO BALANCE. AND TO THE
17 EXTENT OVERLYING PRODUCTION RIGHT IS LESS THAN HISTORICAL
18 AVERAGE PUMPING, THAT WOULD BE CONSISTENT WITH THAT.

19 THE COURT: WELL, THE COURT MADE A FINDINGS OF FACT
20 AS TO HOW MUCH PUMPING WAS OCCURRING BASED UPON THE
21 DOCUMENTS THAT WERE SUBMITTED, DECLARATIONS AND
22 STIPULATIONS OF COUNSEL. AND THOSE BECAME FACTUAL, AS FAR
23 AS THIS PROCEEDING IS CONCERNED. AND I'M JUST WONDERING IF
24 THOSE NUMBERS ARE THE SAME NUMBERS THAT YOU STARTED WITH IN
25 EVALUATING THE PUMPING OF THE VARIOUS FARMERS OR LAND
26 OWNERS.

27 MR. WEEKS: IF I MIGHT?

28 THE COURT: YES.

1 MR. WEEKS: MY UNDERSTANDING IS THAT THE DATA ON THE
2 SPREADSHEET WE DISCUSSED, THAT'S THE DATA ON THE
3 SPREADSHEET WAS COMPRISED MOSTLY IN THE SENSE THAT SOME
4 PEOPLE CAME ON AFTER PHASE FOUR DECISION FROM THE PHASE
5 FOUR AND THAT WAS GOT FROM MR. KUNEY'S LAW.

6 MR. ZIMMER: THAT'S CORRECT, YOUR HONOR. ALL OF THE
7 INFORMATION THAT WAS PRODUCED IN PHASE FOUR, AND THAT THE
8 COURT MADE FINDINGS OF FACT ON IS INCLUDED ON THE THUMB
9 DRIVE THAT WAS NOT ONLY PRODUCED TO ALL COUNSEL AND POSTED
10 ON THE COURT'S WEBSITE, BUT PROVIDED TO MR. KUNEY AND IT
11 WAS INCLUDED ON THE THUMB DRIVE THAT WENT TO HIS WITNESS.

12 THE COURT: AND THE ANSWER TO MY SPECIFIC QUESTION
13 WAS THAT INFORMATION WAS GIVEN TO MR. BEEBY?

14 MR. ZIMMER: YES.

15 MR. WEEKS: YES.

16 THE COURT: AND THAT'S WHAT HE BASES HIS ANALYSIS
17 ON; IS THAT RIGHT? SO THE AMOUNT CLAIMED TO HAVE BEEN
18 PRODUCED IS THE AMOUNT THAT THE COURT FOUND, AT THAT TIME,
19 AS HAVING BEEN PRODUCED?

20 MS. BRENNAN: YOUR HONOR, THAT'S NOT WHAT THE
21 TESTIMONY WILL SHOW.

22 MR. WEEKS: THAT IS MY UNDERSTANDING. I -- THERE
23 COULD BE SOME ADDITIONAL PARTIES THAT WERE ADDED AFTER THE
24 PHASE.

25 THE COURT: OTHER THAN -- OTHER THAN THOSE PARTIES
26 WHO WERE NOT PRESENT FOR THE PHASE FOUR PROCEEDING.

27 MR. WEEKS: MY UNDERSTANDING IS THAT THE DATA GIVEN
28 BY THE LAND OWNER ATTORNEYS IS CONSISTENT WITH PHASE FOUR

1 AND THE DECLARATIONS THAT WERE FILED, SO IT'S MY
2 UNDERSTANDING.

3 THE COURT: ALL RIGHT.

4 Q. BY MS. BRENNAN: SO MR. BEEBY, DID YOUR
5 ANALYSIS GO BEYOND THE YEARS 2011 AND 2012 AS FAR AS AMOUNT
6 OF PRODUCTION OF THE PARTIES LISTED ON EXHIBIT 4?

7 A. BEYOND? I DON'T THINK SO. YOU MEAN FORWARD OR
8 BACKWARD OR?

9 Q. ANY OTHER YEARS OTHER THAN THOSE TWO YEARS?

10 A. NO.

11 Q. SO YOU DID NOT RELY AT ALL ON ANY YEARS FROM
12 2000 AND 2004 AS FAR AS INFORMATION PROVIDED BY THE PARTIES
13 IN EXHIBIT 4 IN REACHING YOUR CONCLUSION IN THIS CASE?

14 A. I ONLY RELIED ON THE DATA THAT WERE IN EXHIBIT
15 4. AND THE ONLY THING I DID TO EXHIBIT 4 WERE TO ADD THOSE
16 COLUMNS THAT I DISCUSSED.

17 Q. RIGHT, BUT IS IT YOUR TESTIMONY THAT YOUR
18 ANALYSIS WAS BASED SOLELY ON THE YEARS 2011 AND 2012 AS TO
19 THE REASONABLENESS OR WHETHER IT MADE SENSE TO YOU AS FAR
20 AS HOW MUCH WATER THE PARTIES WERE CLAIMING TO HAVE USED?

21 A. NO. I THINK I TESTIFIED PREVIOUSLY THAT I TOOK
22 AN AVERAGE PUMPAGE FOR ALL THE PERIOD THE 2000 THROUGH 2004
23 AND INCLUDED 2011 AND '12 IN THAT AVERAGE NUMBER.

24 Q. SO YOUR AVERAGE NUMBER INCLUDED SEVEN YEARS,
25 CORRECT?

26 A. CORRECT.

27 Q. ALL RIGHT. AND DID YOU INDEPENDENTLY VISIT OR
28 VERIFY THE ACTUAL LOCATION AND THE TYPE OF CROP THAT WAS

1 BEING USED BY EACH OF THE PARTIES?

2 A. NO.

3 Q. AND DID SOME PARTIES NOT TELL YOU WHAT TYPE OF
4 CROP THEY WERE GROWING?

5 A. I TOLD YOU I DIDN'T TALK TO ANY OF THE PARTIES.
6 ALL I HAD, FROM ANY AN INFORMAL STANDPOINT, WERE THE DATA
7 THAT WERE PRESENTED ON THE EXHIBIT 4 THAT I WAS PROVIDED.

8 Q. LET ME REPHRASE.

9 THE COURT: NOW MS. BRENNAN, LET ME REMIND YOU THAT
10 IN TERMS OF THE '11 AND '12 NUMBERS, THOSE ARE FINDINGS OF
11 FACT THAT THE COURT MADE, OKAY? THOSE ARE IN THE RECORD.
12 THEY ARE WHAT THEY ARE AND I'M NOT GOING TO AUTHORIZE YOU
13 TO CROSS-EXAMINE AS TO THOSE NUMBERS.

14 MS. BRENNAN: THAT'S FINE, YOUR HONOR. I BELIEVE
15 I'VE ESTABLISHED THROUGH THIS WITNESS THOUGH, THAT HE USED
16 FIVE ADDITIONAL YEARS BEYOND THOSE TWO.

17 THE COURT: BE SPECIFIC IF YOU'RE GOING TO DO THAT
18 AND MAKE IT RELEVANT TO THE ISSUE HERE.

19 Q. BY MS. BRENNAN: SO GOING BACK TO THE LAST
20 QUESTION, THE INFORMATION YOU WERE GIVEN REGARDING EXHIBIT
21 4 AND THE PARTIES' WATER USAGE, DID SOME OF THAT
22 INFORMATION NOT PROVIDE YOU WITH THE TYPE OF CROP SOME OF
23 THOSE PARTIES WERE GROWING?

24 A. THE ONLY INFORMATION I HAD REGARDING THE TYPE
25 OF CROP THAT A PARTICULAR PARTY WAS GROWING WAS PRESENTED
26 ON EXHIBIT 4 MODIFIED, WHICH IS, OF COURSE, MY
27 MODIFICATION. AND IN COLUMN B -- SORRY COLUMN R, IT TALKS
28 ABOUT THE AGRICULTURAL PRODUCT THAT WAS GROWN OR PRODUCED

1 BY EACH OF THE PRODUCERS. AND YOU CAN DETERMINE WHAT CROP
2 IT WAS BY LOOKING AT THAT NUMBER AND THEN COMPARING THAT TO
3 THE NOTES COLUMN -- IN COLUMN T, WHICH IS THE RIGHT-HAND
4 MOST COLUMN ON THAT TABLE.

5 Q. OKAY. DO YOU RECALL YOUR DEPOSITION BEING
6 TAKEN ON SEPTEMBER 24, 2015?

7 A. YES.

8 Q. OKAY. AND DO YOU RECALL BEING ASKED WHAT TYPE
9 OF INFORMATION YOU WERE GIVEN ON EXHIBIT 4?

10 A. YES.

11 Q. OKAY. AND DO YOU RECALL BEING ASKED IF --
12 WELL, THE SPECIFIC QUESTION WAS, DID YOU DO ANYTHING WITH
13 THAT INFORMATION? AND YOUR RESPONSE WAS, I CONSIDERED IT,
14 BUT AGAIN, THE SPECIFIC UTILIZATION OF THE WATER BY CROP
15 TIME, FOR EXAMPLE, WAS NOT NECESSARILY PROVIDED?

16 A. YES, I REMEMBER THAT.

17 Q. SO IS IT YOUR TESTIMONY THAT FOR EVERY PARTY
18 LISTED ON EXHIBIT 4, YOU KNEW PRECISELY WHICH CROP THEY
19 WERE GROWING?

20 A. NO.

21 Q. OKAY.

22 MR. DAVIS: OBJECTION, YOUR HONOR; ASSUMES FACTS NOT
23 IN EVIDENCE; NOT EVERY PARTY ON EXHIBIT 4 GREW ANYTHING.

24 THE COURT: WELL, BELATED OBJECTION SO OVERRULED.

25 MR. WEEKS: YOUR HONOR, JUST CLARIFICATION. COUNSEL
26 CONTINUES TO USE EXHIBIT 4, BUT WE'RE NOT REFERRING TO AN
27 EXHIBIT TITLED EXHIBIT 4.

28 THE COURT: THAT'S CORRECT.

1 MR. WEEKS: SO I'M NOT REALLY SURE WHERE THAT'S
2 COMING FROM. BUT IT'S EXHIBIT PWS 525, NOT EXHIBIT 4.

3 THE COURT: WELL --

4 MR. WEEKS: ALTHOUGH IT HAS EXHIBIT 4 ON THE BOTTOM.

5 THE COURT: I THOUGHT IT WAS 522.

6 MR. WEEKS: I'M SORRY, 522, BUT IT'S NOT EXHIBIT 4,
7 IT'S PWS 522.

8 THE COURT: THERE'S A DIFFERENCE BETWEEN THE
9 DEPOSITION EXHIBITS AND THESE EXHIBITS NUMBER WISE,
10 CORRECT?

11 I DON'T KNOW WHAT 522 WAS AT THE DEPOSITION. DO
12 YOU?

13 MR. WEEKS: I DON'T RECALL. I DON'T RECALL.

14 THE WITNESS: I DO.

15 Q. BY MS. BRENNAN: WHEN I WAS REFERRING TO
16 EXHIBIT 4, IS IT YOUR UNDERSTANDING THAT -- AND WAS IT YOUR
17 TESTIMONY RELATING TO EXHIBIT 4 TO THE PROPOSED PHYSICAL
18 SOLUTION OR WAS IT SOMETHING ELSE?

19 A. I THOUGHT YOU WERE REFERRING TO THE THING THAT
20 I USED AT MY DEPOSITION AND THAT IS PRESENTED AS EXHIBIT
21 522 HERE, WHICH DOWN AT THE BOTTOM SAYS EXHIBIT 4 MODIFIED,
22 MEANING MODIFIED BY ME.

23 Q. CORRECT. SO THE RECORD, I SUPPOSE, SHOULD
24 REFLECT THAT ANY TIME YOU WERE BEING ASKED ABOUT EXHIBIT 4
25 IT'S EXHIBIT 4 MODIFIED AND TRIAL EXHIBIT 522. IS THAT --

26 A. CORRECT. YES.

27 Q. OKAY. THANK YOU. AND YOU DO NOT HAVE ANY
28 OPINIONS WITH RESPECT TO HOW THE WATER WAS USED, CORRECT?

1 MR. ZIMMER: OBJECTION; VAGUE; MISSTATES TESTIMONY.

2 MR. WEEKS: OBJECTION; HE TESTIFIED AS TO --

3 THE COURT: SUSTAINED.

4 Q. BY MS. BRENNAN: AT YOUR DEPOSITION, YOU WERE
5 ASKED, SO IT FAIR TO SAY THAT WITH RESPECT -- I'M READING
6 PAGE 29, LINE 1 OF THE DEPOSITION, "SO IS IT FAIR TO SAY
7 THAT WITH RESPECT TO HOW THE WATER WAS USED, YOU'RE NOT
8 ARRIVING AT ANY OPINIONS REGARDING THAT? ANSWER: I DON'T
9 THINK IT'S QUITE THAT BROAD, NO."

10 MR. ZIMMER: SAME OBJECTION. IT'S NOT IMPEACHMENT.
11 IT'S VAGUE AS TO WHAT'S REFERRING TO.

12 THE COURT: ALL RIGHT.

13 Q. BY MS. BRENNAN: DID YOU DO ANY EVALUATION OF
14 ONE PARTY'S USE RELATIVE TO ANOTHER PARTY'S USE AND
15 DETERMINE WHETHER OR NOT IT'S REASONABLE TO HAVE THAT
16 PARTICULAR USE?

17 MR. WEEKS: OBJECTION; OUTSIDE THE SCOPE OF HIS
18 OPINION.

19 MR. LEMIEUX: OBJECTION, YOUR HONOR. I'D LIKE TO
20 REASSERT THE STANDING OBJECTION AS WELL. COMPARING THE
21 USES I THINK GOES BEYOND THE SCOPE OF WHAT THE CLASS CAN DO
22 HERE.

23 THE COURT: WELL, THIS WITNESS'S TESTIMONY IS THAT
24 HE REVIEWED THE VARIOUS DECLARATIONS AND EXHIBITS AND OTHER
25 MATERIALS IN ORDER TO DETERMINE WHETHER OR NOT TWO THINGS:
26 WHETHER THE CLAIMED WATER USAGE THAT WAS STIPULATED TO AND
27 AGREED TO BY THE PARTIES HERE WAS REASONABLE. HE TESTIFIED
28 THAT IN HIS OPINION IT WAS AND IT MADE SENSE WITH ONE

1 EXCEPTION. THAT IS, A PARTY WHO IS NOT PART OF THE
2 STIPULATION WHO IS MAKING AN INDEPENDENT CLAIM, AND THAT'S
3 THE TAPIA CLAIM, FOR WATER RIGHTS IN THIS ADJUDICATION.
4 AND IT SEEMS TO ME THAT THE REAL PROBLEM HERE IS THE SCOPE
5 OF WHATEVER INTEREST THE WILLIS CLASS HAS IN THEIR OWN
6 WATER RIGHTS, SO THAT IN THE EVENT THAT YOU WERE ABLE TO
7 ESTABLISH, AND I DON'T QUITE SEE HOW THIS REALLY IS GOING
8 TO HAPPEN, BUT THAT THERE'S REALLY NO OVERDRAFT AND,
9 THEREFORE, THEY SHOULD BE ENTITLED TO PUMP WITHOUT ANY TYPE
10 OF FEE OR OTHER ARRANGEMENT AT THIS POINT, BUT THEY'RE
11 NEVERTHELESS CHALLENGING THE AMOUNT OF WATER ALLOCATED TO
12 THESE VARIOUS PEOPLE IN THE AGREEMENT. AND THE FACT THAT
13 THE COURT HAS FOUND THAT THOSE NUMBERS WHICH WERE PUMPED IN
14 2011, 2012, WHICH ARE THE SAME NUMBERS THAT ARE STIPULATED
15 TO AS THE BEGINNING POINT, I BELIEVE, FOR THESE PARTIES,
16 PROVIDES THEM WITH THE RIGHT TO ESTABLISH THAT THEY'RE
17 BEING ALLOCATED TOO MUCH WATER. THAT IS, THE PARTIES TO
18 THE ADJUDICATION BECAUSE IT IMPACTS THEIR RIGHTS. AND I
19 THINK THEY'RE ENTITLED TO GO INTO THAT TO SOME EXTENT, BUT
20 IT'S GOT TO BE LIMITED. AND THIS EXAMINATION, SO FAR.
21 SEEMS TO ME TO STRIKE FAR AFIELD OF THE REAL ISSUES THAT
22 THEY'RE CONCERNED WITH.

23 SO MS. BRENNAN, MAYBE YOU WANT TO MAKE AN OFFER OF
24 PROOF AS TO WHAT IT IS YOU INTEND TO ESTABLISH IN YOUR
25 EXAMINATION.

26 MS. BRENNAN: WELL, WE INTEND TO ESTABLISH THAT THIS
27 EXPERT DID NOT APPLY HIS EXPERTISE IN A TRUE ANALYSIS OF
28 THE UNDERLYING USES OF THE 140 STIPULATING PARTIES, THAT HE

1 APPLIED HIS EXPERTISE TO TAPIA AND SPENT MANY HOURS AND
2 USED MANY TECHNICAL DEVICES TO DETERMINE THAT THE WATER
3 USAGE WAS NOT -- DID NOT COMPORT WITH THE REPORTED WATER
4 USAGE OF TAPIA. AND HE DID NOT USE ANY OF THOSE SKILLS AND
5 EXPERTISE AS TO THE 140 PARTIES AND THEREFORE, THE WEIGHT
6 OF THE EVIDENCE OF -- FROM THIS EXPERT, ALTHOUGH HE'S VERY
7 QUALIFIED, IT SHOULD NOT BE GREAT AT ALL, IF ANY WEIGHT
8 SHOULD BE GIVEN TO HIS OPINION WITH RESPECT TO THOSE
9 PARTIES ON EXHIBIT 4. THAT IS OUR OFFER OF PROOF.

10 THE COURT: BUT FOR THE MOST PART, ALL OF THOSE WERE
11 FOUND BY THE COURT TO BE APPROPRIATE NUMBERS BASED UPON THE
12 SUBMISSIONS TO THE COURT WHICH WERE STIPULATED TO AND
13 WITHOUT OBJECTION. THAT'S THE RULE OF THE CASE.

14 MS. BRENNAN: RIGHT, AS TO ONLY THE AMOUNT OF
15 PUMPING IN 2011 AND 2012, BUT THE FINDINGS AND THE LEGAL
16 MATTERS GOING TO A PHYSICAL SOLUTION GO FAR BEYOND THAT AND
17 THIS EXPERT DOES NOT HAVE ANY TESTIMONY TO SUPPORT A
18 FINDING BEYOND WHAT IS ALREADY STIPULATED TO BY THE
19 PARTIES.

20 THE COURT: THAT'S NOT WHAT I HEARD FROM HIM. HE
21 TALKED ABOUT HOW HE CONCLUDED THAT THESE WERE REASONABLE
22 NUMBERS FOR THE TYPE OF CROPS THAT WERE BEING USED, WHAT
23 THE CROP DUTIES WERE FOR THESE PARTICULAR CROPS AND THE
24 AMOUNT OF ACREAGE INVOLVED. HE DID A VERY CAREFUL ANALYSIS
25 TO SEE IF IT MADE SENSE. HE IS AN EXPERT. HE'S BOTH AN
26 EXPERT IN AGRICULTURAL ENGINEERING, WHICH OBVIOUSLY ALWAYS
27 INCLUDES CROP DUTIES AND THE LIKE, SO I -- AND I FOUND HE
28 WAS QUALIFIED AND I FIND HIM TO BE A CREDIBLE WITNESS.

1 MS. BRENNAN: ABSOLUTELY. WE DON'T DISPUTE THAT,
2 YOUR HONOR.

3 THE COURT: I DIDN'T HEAR WHAT YOU JUST SAID.

4 MS. BRENNAN: WE DON'T DISPUTE ANY OF WHAT YOU JUST
5 SAID, YOUR HONOR. WHAT THE OFFER OF PROOF IS, HOWEVER, HE
6 DID NOT APPLY THAT UNDISPUTED EXPERTISE TO THE 140 PARTIES.
7 HE JUST TOOK THE DATA AS IS AND DID NOT ANALYZE IT.

8 THE COURT: WELL, THAT'S NOT CORRECT. THAT'S NOT
9 WHAT HE TESTIFIED TO. HE DID ANALYZE IT. I HEARD HIM
10 TESTIFY THAT HE JUST -- HE ANALYZED IT AND IT MADE SENSE.
11 IT WAS A REASONABLE ALLOCATION CLAIMED FOR THE PARTICULAR
12 CROPS THAT WERE BEING USED WITH A SINGLE EXCEPTION OF
13 TAPIA, AT THIS POINT. AND IT JUST SEEMS TO ME THAT YOU ARE
14 FAR AFIELD FROM THE REAL ISSUE THAT YOU SHOULD BE CONCERNED
15 WITH. AND PART OF THAT IS GOING TO COME UP AS A LEGAL
16 MATTER AS TO WHETHER OR NOT YOU HAVE A RIGHT TO DISPUTE
17 SOME OF THE STIPULATED AGREEMENT BETWEEN THESE PARTIES AND
18 WHETHER OR NOT THOSE AFFECT YOUR STIPULATED JUDGMENT. YOU
19 DO HAVE A JUDGMENT, YOU'RE NOT PARTY TO THE LAWSUIT
20 INVOLVING THE LAND OWNERS. THAT'S A TOTALLY SEPARATE
21 LAWSUIT. BECAUSE IT'S A CONSOLIDATED ACTION, HOWEVER, AND
22 BECAUSE YOU STIPULATED AND AGREED THAT YOUR STIPULATION
23 WOULD BECOME PART OF THE PHYSICAL SOLUTION, TO THE EXTENT
24 THAT IT IS CONSISTENT WITH IT, THAT REALLY IS A
25 DETERMINATION THAT THE COURT IS GOING TO HAVE TO MAKE AS TO
26 WHETHER IT IS OR NOT. IF IT ISN'T, THEN IT MAY BE THAT
27 THERE ARE SOME DIFFICULTIES THAT THE PARTIES ARE GOING TO
28 HAVE TO DEAL WITH ABOUT HOW TO GET THEIR OWN SOLUTION AND

1 RESOLUTION APPROVED, BUT THAT'S A DIFFERENT ISSUE THAN WHAT
2 YOU'RE GOING AT NOW. AND IT SEEMS TO ME THAT YOU SHOULD BE
3 VERY HAPPY TO HEAR WHAT HE JUST SAID ABOUT THE TAPIA CASE
4 BECAUSE THAT REDUCES THE AMOUNT OF WATER, IF HIS POSITION
5 IS AND OPINION IS CORRECT, TO THE EXTENT THAT TAPIA BECOMES
6 PART OF ANY SOLUTION HERE.

7 MS. BRENNAN: YOUR HONOR, AS FAR AS AN EXPERT
8 ANALYZING THAT UNDERLYING DATA -- I'M NOT SAYING HE DIDN'T
9 ANALYZE ALL THE DATA, HE DID NOT INVESTIGATE AS HE DID IN
10 THE TAPIA SITUATION. AND I AGREE WITH YOU, AS FAR AS A
11 LEGAL POINT, OBVIOUSLY, WE ARE OVERLYING LAND OWNERS AND WE
12 HAVE A RIGHT AND A PRIORITY ABOVE APPROPRIATORS, ETCETERA,
13 BUT WE DON'T NEED TO GET INTO THAT NOW. BUT WE DO HAVE A
14 RIGHT TO ANALYZE AND CROSS-EXAMINE REGARDING ALLEGED
15 REASONABLE AND BENEFICIAL USE AS TO THE PERMANENT
16 ALLOCATION IN THE PROPOSED PHYSICAL SOLUTION WHICH GOES ON
17 17 YEARS AND THEN THERE'S THE LOOK TO SEE IF IT SHOULD BE
18 ADJUSTED THAT IS THE NATIVE SAFE YIELD --

19 THE COURT: DON'T GET INTO THAT ARGUMENT BECAUSE
20 WE'RE WELL REMOVED FROM THAT AT THIS POINT. THE ONLY THING
21 WE'RE TALKING ABOUT IS THIS WITNESS'S TESTIMONY,
22 SPECIFICALLY AS TO HIS EVALUATION OF THE VARIOUS CLAIMS OF
23 PUMPING THAT HAVE BEEN MADE BY THE PARTIES HERE, MOST OF
24 WHICH HAVE ALREADY BEEN APPROVED AND FOUND TO BE TRUE BY
25 THE COURT AND PURSUANT TO STIPULATION AND AGREEMENT. AND
26 I'M NOT GOING TO REOPEN THAT. THAT'S THE RULE OF THE CASE
27 AND THE RULE THAT THIS COURT MADE AFTER PHASE FOUR --

28 MS. BRENNAN: RIGHT.

1 THE COURT: -- SO WHAT YOU'RE REALLY DOING IS
2 GETTING INTO THAT AND I'M GOING TO SUSTAIN AN OBJECTION TO
3 THAT. NOW, IF YOU WANT TO TALK ABOUT THE PARTIES WHO HAVE
4 NOT BEEN PART OF PHASE FOUR, THAT'S A DIFFERENT ISSUE.
5 THAT HAS TO BE ESTABLISHED BY THEM.

6 MS. BRENNAN: RIGHT. WELL, IT'S THE WILLIS CLASS
7 POSITION, AND I THINK YOU UNDERSTAND, THAT ANYTHING OVER
8 AND ABOVE THE AMOUNT OF PUMPING IN 2011 AND 2012 IS NOT LAW
9 OF THE CASE AND MUST BE PROVEN HERE IN COURT.

10 THE COURT: THE NUMBERS THAT WERE STIPULATED TO WERE
11 AGREED TO BE THE NUMBERS THAT WERE TO BE PLACED INTO THE
12 PROPOSED GLOBAL, SO-CALLED, SETTLEMENT, OKAY?

13 THE WITNESS: BUT THERE WAS NO FINDING --

14 THE COURT: AND IT'S 2011, 2012 THAT'S THE STARTING
15 POINT WITH THE RECOGNITION, AND IT'S PRETTY CLEAR THAT
16 ULTIMATELY THE WATER MASTER IS GOING TO BE EVALUATING,
17 DURING THE TWO-YEAR PERIOD, THE APPROPRIATENESS OF THE
18 CLAIMED PUMPING. THEY'RE GOING TO BE LOOKING AT IT FROM
19 MULTIPLE STANDPOINTS AND THAT HAS TO HAPPEN IN ORDER FOR
20 THERE TO BE A RAMP DOWN PERIOD. SO I MEAN, I JUST THINK
21 THAT YOU'RE GETTING VERY PREMATURE HERE AND I REALLY THINK
22 THAT YOUR QUESTIONING OF THIS WITNESS IS MISPLACED. I GOT
23 SOME LAWYERS HERE WHO WANT TO SAY SOMETHING. I ASSUME
24 THAT'S WHY YOU'RE STANDING UP. ALL RIGHT, MR. JOYCE.

25 MR. JOYCE: YOUR HONOR, BOB JOYCE ON BEHALF OF
26 DIAMOND FARMING. I THINK IT WOULD BE IMPORTANT TO TAKE
27 NOTE -- REFERENCE TO THIS WITNESS'S TESTIMONY THAT DURING
28 THE RESOLUTION OF THE SETTLEMENT, EVERYBODY VETTED

1 EVERYBODY ELSE'S NUMBERS JUST AS IN PHASE FOUR WE ALL
2 VETTED EACH OTHER'S NUMBERS DURING THAT PROCESS AS WELL.
3 THE ONLY ISSUE HE TESTIFIED TO HERE THAT HAS ANY BEARING
4 WHATSOEVER IS THAT HE OPINED AS TO A NEW CLAIM BY A PARTY
5 WHO WAS NOT BEFORE THE COURT DURING PHASE FOUR AND WHO IS
6 NOT YET A PART OF THE RESOLUTION, BASICALLY MAYBE TO SOME
7 EXTENT SHINING LIGHT ON WHY THEY'RE NOT. THAT'S MY
8 COMMENT.

9 MS. BRENNAN: YOUR HONOR, I MOVE TO STRIKE THAT --
10 WHAT MR. JOYCE JUST SAID. HE'S NOT UNDER OATH, HE CAN'T
11 TESTIFY AND IT'S JUST IMPROPER PROCEDURE FOR A TRIAL.

12 THE COURT: I UNDERSTAND THAT TO BE A REPRESENTATION
13 AS AN OFFICER OF THE COURT AS TO WHAT TRANSPIRED BETWEEN
14 COUNSEL. IT WILL STAY FOR THAT PURPOSE. MR. ZIMMER.

15 MR. ZIMMER: BRIEFLY, YOUR HONOR. NO. 1, MR. BEEBY
16 TESTIFIED THAT HE LOOKED AT THESE NUMBERS ON AN ACREAGE
17 BASIS AND WITH A CROP DUTY BASED UPON SOME TYPE OF USE.
18 AND HE FOUND -- HE REVIEWED ALL THOSE NUMBERS FIRST AND
19 THEN DETERMINED WHETHER A FURTHER EXAMINATION WAS NECESSARY
20 AND FOUND IT WAS NOT. ON TAPIA, THE DIFFERENCE WAS THAT
21 WHEN HE LOOKED AT THAT, IT DID NOT MAKE SENSE THAT'S WHY HE
22 MADE THE INQUIRY FURTHER. SECOND POINT IS THAT WHAT WE'RE
23 TALKING ABOUT IS A PHYSICAL SOLUTION THAT RAMPS DOWN
24 CURRENT PUMPING TO SAFE YIELD. THE COURT'S FOUND SAFE
25 YIELD OF 823 NATIVE SAFE YIELD, IT RAMPS DOWN TO SAFE
26 YIELD. SO THE QUESTION WAS, IN PHASE FOUR, WHAT IS THE
27 CURRENT PUMPING, 2011, 2012? THAT'S ALL WE NEED. WE DONT
28 NEED TO BE INTO SEVEN MORE YEARS. 2011 AND 2012 WAS

1 ADMITTED INTO EVIDENCE, THE COURT MADE FINDINGS AND THAT'S
2 WHAT THE WITNESS NEEDS TO BE ABLE TO SHOW THAT IN THE
3 PHYSICAL SOLUTION IT WAS CUT BACK SUBSTANTIALLY TO MAKE THE
4 PHYSICAL SOLUTION WORK.

5 THE COURT: I THINK THAT'S KIND OF WHAT I SAID, BUT
6 I'M NOT SURE WHERE YOU'RE GOING WITH THIS AT THIS POINT OR
7 WHERE TO GO FOR YOU, BUT IT SEEMS TO ME THAT WE'VE TAKEN
8 ENOUGH TIME ARGUING ABOUT IT, THAT IT'S TIME TO MOVE AHEAD.

9 MS. BRENNAN: ALL RIGHT. I ONLY HAVE A FEW MORE
10 QUESTIONS, YOUR HONOR, IF YOU'LL INDULGE ME.

11 THE COURT: I WILL INDULGE YOU, MAYBE.

12 MS. BRENNAN: I WANT --

13 THE COURT: I WANT TO HEAR THE QUESTION FIRST.

14 Q. BY MS. BRENNAN: UNDERSTAND, YOUR HONOR. YOU
15 DIDN'T LOOK AT WHAT SOURCE -- WHAT THE SOURCE OF THE
16 PARTIES' WATER WAS, CORRECT?

17 MR. WEEKS: OBJECTION; ASKED AND ANSWERED AND
18 ARGUMENTATIVE.

19 THE COURT: WELL, IT IS ARGUMENTATIVE BUT MAYBE YOU
20 CAN ANSWER IT ANYWAY.

21 THE WITNESS: I DIDN'T LOOK AT THE -- WHETHER THE
22 SOURCE WAS IMPORTED WATER OR NOT BECAUSE I WAS GOING OFF
23 THE COLUMN HEADINGS ON EXHIBIT 4 AS MODIFIED WHICH SAYS
24 PUMPING. AND PUMPING, TO ME, MEANS GROUNDWATER PUMPING.

25 Q. BY MS. BRENNAN: ALL RIGHT. BUT YOU DO NOT
26 INDEPENDENTLY KNOW WHETHER THERE WAS ACTUAL PUMPING OR IT
27 COULD HAVE BEEN WATER THAT WAS IMPORTED?

28 MR. ZIMMER: IT'S ARGUMENTATIVE.

1 THE COURT: THAT'S WHAT HE JUST SAID.

2 Q. BY MS. BRENNAN: JUST CONFIRMING IT. YOU
3 TESTIFIED WITH RESPECT TO TAPIA THAT IN ONE YEAR THERE WAS
4 NO WATER AVAILABLE FROM AVEK. DO YOU RECALL THAT?

5 A. I RECALL THAT'S WHAT HE SAID IN HIS DEPOSITION,
6 YES.

7 Q. ALL RIGHT. AND YOU MAY NOT KNOW THE ANSWER TO
8 THIS, BUT DO YOU KNOW WHY WATER WAS NOT AVAILABLE TO TAPIA
9 VIA AVEK?

10 MR. ZIMMER: RELEVANCE, STANDING.

11 THE COURT: IT'S IRRELEVANT.

12 Q. BY MS. BRENNAN: DID YOU USE ANY LAND SAT
13 PHOTOS TO CONFIRM WATER USAGE AS REPORTED BY THE LAND
14 OWNERS?

15 A. ONLY ON TAPIA.

16 MS. BRENNAN: THAT'S IT. NO FURTHER QUESTIONS.
17 THANK YOU.

18 THE COURT: THANK YOU, MS. BRENNAN.

19 MR. WEEKS: IF THERE'S NO FURTHER EXAMINATION, YOUR
20 HONOR, I REQUEST EXHIBITS 521 THROUGH 539 BE ADMITTED.

21 THE COURT: THEY'LL BE ADMITTED.

22 MR. WEEKS: THANK YOU.

23

24 (ADMITTED INTO EVIDENCE, EXHIBIT
25 NOS. PWS 521 THROUGH 539.)

26

27 THE COURT: MR. BEEBY, THANK YOU VERY MUCH. I HOPE
28 YOU HAVE A SAFE DRIVE HOME.

1 THE WITNESS: THANK YOU.

2 THE COURT: ALL RIGHT. WE'RE GOING TO TAKE OUR
3 RECESS AT THIS POINT. WE'VE BURDENED THE REPORTER NOW FOR
4 AN HOUR AND A HALF, SO LET'S TAKE A 15-MINUTE RECESS, THEN
5 WE'LL RESUME WITH DR. WILLIAMS.

6

7 (A SHORT RECESS WAS TAKEN.)

8

9 THE COURT: ALL RIGHT. FIRST OF ALL, I HAVE SOME
10 GOOD NEWS. AND THE GOOD NEWS IS WE'LL BE ABLE TO BE IN
11 SESSION TOMORROW MORNING AT 9:00. WE WILL BE IN DEPARTMENT
12 48, WHICH IS ON THE FIFTH FLOOR. IT'S IN ROOM 506 -- IS
13 APPARENTLY IS THE COURTROOM DESIGNATION, BUT IT'S COURTROOM
14 48. THAT'S WHERE YOU NEED TO BE, FIFTH FLOOR, AND -- AND
15 WE'LL BE THERE ALL DAY AND WE CAN COME BACK HERE ON
16 THURSDAY.

17 MR. DUNN: MAY I INQUIRE, YOUR HONOR? WE HAVE A
18 SETUP HERE. I TAKE IT WE'LL NEED TO TAKE IT DOWN TONIGHT
19 BEFORE WE LEAVE?

20 THE COURT: UNFORTUNATELY, YES, BECAUSE WE HAVE TO
21 CLEAR THE DECKS AND -- AND IF YOU WANT TO PUT THAT UP IN
22 48, THAT WILL BE FINE.

23 MR. DUNN: WOULD WE HAVE TIME THIS AFTERNOON TO DO
24 IT? I KNOW THINGS TYPICALLY SHUT DOWN HERE, ALL I'M ASKING
25 IS WHATEVER WE CAN DO TO FACILITATE THE MOVE.

26 THE COURT: I -- ALL RIGHT. SO TO FACILITATE -- ONE
27 OF THE THINGS THAT I'M GOING TO DO IN ORDER TO FACILITATE
28 THIS IS WE'LL BREAK AT 4:00 AND THAT WAY YOU'LL HAVE AN

1 OPPORTUNITY TO GET WHATEVER YOU NEED TO UP THERE
2 INCLUDING --

3 MR. DUNN: WE'RE GOING TO NOTIFY OUR STAFF TO BE
4 HERE AT 4:00 TO DO THE MOVE. THANK YOU VERY MUCH.

5 THE COURT: ALL RIGHT. NOW WE HAVE DR. WILLIAMS ON
6 THE STAND AND YOU'RE THROUGH WITH YOUR EXAMINATION; IS THAT
7 RIGHT?

8 MR. DUNN: NOT OF DR. WILLIAMS, NO. WE INTERRUPTED
9 MIDSTREAM.

10 THE COURT: I'M SORRY. I MISUNDERSTOOD YOU. ALL
11 RIGHT. GO AHEAD.

12

13 DIRECT EXAMINATION (CONTINUED)

14 BY MR. DUNN:

15 Q. DR. WILLIAMS, WE'RE IN PWS EXHIBIT 543,
16 SPECIFICALLY ON SLIDE 55. IT'S UP ON THE SCREEN. I'LL
17 IDENTIFY IT ON THE RECORD AS AVAA FEDERAL RESERVE WATER
18 RIGHTS EQUALS 7,600 AND THEN IT GOES ON FROM THERE. NOW
19 DR. WILLIAMS, WAS THIS SLIDE PREPARED BY YOUR OFFICE OR
20 UNDER YOUR DIRECTION?

21 A. YES, IT WAS PREPARED UNDER MY DIRECTION.

22 Q. OKAY. AND WHAT DOES -- WHAT IS YOUR INTENT OR
23 WHY DID YOU HAVE THIS SLIDE PREPARED AS PART OF YOUR
24 ANALYSIS?

25 A. WELL, WE IN -- IN ORDER TO PUT ALL OF THE
26 EXTRACTIONS IN THE PHYSICAL SOLUTION, WE PREPARED ALL OF
27 THE DATA AND THIS SHOWS THE MAP OF THE -- WHERE THE FEDERAL
28 RESERVE RIGHTS OF 7,600 AND -- ACTUALLY THE PUMPING, THE

1 UNUSED FEDERAL RESERVE RIGHT IS THE 7,600 MINUS THE 1,348
2 WHICH WAS REALLOCATED TO PUBLIC WATER SUPPLIERS. SO THIS
3 MAP SHOWS THE LOCATION OF THE -- YOU CAN SEE SOME DOTS,
4 YELLOW DOTS. THEY'RE THE SAME AS WE WERE DISCUSSING BEFORE
5 MR. BEEBY'S TESTIMONY IS THAT OF ALL THE EXTRACTIONS AND
6 THE BASIN IN TERMS OF THE LOCATION AND RELATIVE AMOUNT BY
7 THESE COLORED CIRCLES.

8 Q. AND THE YELLOW DOTS REFLECT PUMPING BY WHICH
9 ENTITY?

10 A. THE FEDERAL AGENCY.

11 Q. THE UNITED STATES GOVERNMENT?

12 A. UNITED STATES GOVERNMENT, YES. EDWARDS AIR
13 FORCE BASE AND THE AIR FORCE PLANT 42.

14 Q. AND HOW DID YOU RECEIVE THE INFORMATION
15 REGARDING THE WELL LOCATION AS DEPICTED HERE ON SLIDE 55?

16 A. WE RECEIVED THOSE, I THINK, FROM BEST, BEST &
17 KRIEGER.

18 Q. LET'S DIRECT YOUR ATTENTION NOW TO THE NEXT
19 SLIDE, SLIDE 56, THE TITLE IS "AVAA FEDERAL RETURN FLOW
20 LOCATIONS." AND WAS THIS SLIDE PREPARED BY YOU OR UNDER
21 YOUR DIRECTION?

22 A. IT WAS PREPARED UNDER MY DIRECTION AND THIS IS
23 A COMPANION SLIDE TO THE PREVIOUS ONE, WHICH SHOWS FROM THE
24 FEDERAL PUMPING WHERE THE RETURN FLOWS WERE USED. AND YOU
25 CAN SEE THAT EVEN THOUGH THE WELLS UP IN THE UPPER RIGHT --
26 YOU KNOW, THE WELLS WERE DOWN IN THIS AREA HERE, IT WAS
27 USED -- WE ASSUMED IT WAS USED ON THE BASE UP THERE.

28 Q. AND SO WE'RE CLEAR ON THE RECORD, YOU'RE USING

1 A LASER POINTER TO HIGHLIGHT WELLS THAT ARE LOCATED WHERE?

2 A. IN THIS AREA HERE, NEAR THIS LINE, YOU CAN SEE
3 THE GREEN DOTS. AND THEY WERE USED -- WE ASSUME THAT THE
4 WELLS WERE USED AND WATER WAS PUMPED UP OR USED UP ON THE
5 BASE.

6 Q. ALL RIGHT. SO LET'S MOVE TO THE NEXT SLIDE,
7 SLIDE 57, PLEASE. AND DO WE HAVE HERE WHAT'S MARKED AS --
8 EXCUSE ME WE HAVE A SLIDE 57. IT'S MARKED "AVAA STATE OF
9 CALIFORNIA WELLS." I TAKE IT, DR. WILLIAMS, THIS SLIDE
10 DEPICTS, AS PART OF A SEQUENCE OF SLIDES, THE LOCATION OF
11 WELLS BY PARTIES IN THE PHYSICAL SOLUTION PROPOSAL; IS THAT
12 CORRECT?

13 A. THAT'S CORRECT. EACH ONE OF THESE PRODUCERS
14 HAS THREE SLIDES. ONE SHOWS THE LOCATION OF WELLS, THE
15 NEXT ONE WILL SHOW THE RELATIVE PUMPING WITH THE COLORED
16 CIRCLES AND THE THIRD ONE WOULD BE WHERE THE RETURN FLOW
17 WAS PLACED OR WENT INTO THE BASIN.

18 Q. AND SLIDE 57 IS -- SHOWS THE WELLS FOR WHICH
19 ENTITY?

20 A. STATE OF CALIFORNIA.

21 Q. AND --

22 A. SO YOU HAVE WELLS OVER HERE ON THE WEST SIDE
23 AND THEN ON THE TOP.

24 Q. THOSE ARE SHOWN BY BLACK DOTS?

25 A. YES.

26 Q. AND THE SOURCE OF THIS INFORMATION CAME FROM
27 WHERE?

28 A. FROM BEST, BEST & KRIEGER.

1 Q. NEXT SLIDE IS SLIDE 58, AND IT IS MARKED OR
2 IDENTIFIED AS "AVAA STATE OF CALIFORNIA PRODUCTION RIGHTS."
3 AND DR. WILLIAMS, WHAT IS DEPICTED ON THIS SLIDE?

4 A. THIS IS THE RELATIVE PUMPING FROM THOSE WELLS
5 IN THE PREVIOUS SLIDE. THE YELLOW CIRCLES SHOW THE
6 PUMPING, BASICALLY THE AMOUNTS ARE ZERO TO 500 ACRE FEET
7 PER YEAR.

8 Q. SO I TAKE IT, DR. WILLIAMS, WHAT YOU DID FOR
9 THE PARTIES IN THE PHYSICAL SOLUTION IS TO NOT ONLY PLACE
10 OR IDENTIFY THE LOCATION OF THEIR RESPECTIVE WELLS, BUT YOU
11 ALSO DETERMINED THE AMOUNT OF PRODUCTION FOR THOSE WELLS?

12 A. YES.

13 Q. OKAY. AND EXHIBIT NO. 59 -- EXCUSE ME -- SLIDE
14 NO. 59 IS MARKED "AVAA STATE OF CALIFORNIA RETURN FLOW
15 LOCATIONS."

16 A. YES, THAT'S -- THAT'S CORRECT. AND IT ALSO
17 SHOWS THE GREEN DOTS WHERE THE RETURN FLOW OCCURRED IN THE
18 IMMEDIATE VICINITY OF THE WELLS THAT WERE PUMPING AND THE
19 WEST SIDE AND UP IN THE NORTH.

20 Q. AND SO THE RECORD IS CLEAR, WHEN WE TALK NOW IN
21 THESE -- IN THIS SLIDE AND THESE RECENT SERIES OF SLIDES
22 ABOUT RETURN FLOWS, ARE YOU REFERRING TO RETURN FLOWS FROM
23 NATIVE WATER OR FROM STATE WATER PROJECT USE?

24 A. THIS WOULD BE JUST PUMPING FROM THE WELLS AND
25 WHERE -- WHERE THE WELLS WERE USED, THE RETURN FLOW FROM --
26 USE OF THAT WATER FROM THE WELL.

27 Q. NEXT SLIDE IS SLIDE 60 AND IT'S MARKED "AVAA
28 SMALL PUMPER'S PARCELS." AND WHAT DO WE SEE HERE?

1 A. WELL, THIS IS -- IT'S KIND OF HARD TO SEE HERE,
2 BUT THE SMALL PUMPERS -- WE GOT SOME INFORMATION FROM
3 WILDERMUTH ENGINEERS ON PARCEL LOCATION OF THIS -- ALL THE
4 SMALL PUMPERS AND WE ALSO GOT INFORMATION ON IMPROVED
5 PARCELS, WHICH WE ASSUMED IF THEY WERE IMPROVED, THAT THEY
6 WERE GOING TO BE USING GROUNDWATER. SO WITH ALL OF THE
7 SMALL PUMPER PARCELS THAT HAVE IMPROVEMENTS, THAT'S WHAT'S
8 SHOWN HERE BY ALL OF THE YELLOW SQUARES AND AREAS.

9 Q. ALL RIGHT. AND NEXT SLIDE IS SLIDE 61.

10 A. YEAH, THE SECOND IS -- ALSO SHOWS THEN OF THE
11 PRODUCTION RIGHTS FROM THE SMALL PUMPERS OF 3806.4 WHERE WE
12 PUT THOSE WELLS IN THE MODEL, WHICH IF THE PARCEL HAD
13 IMPROVEMENTS, THEN WE ASSUMED THAT THEY IMPROVED IT USING A
14 WELL.

15 Q. OKAY. AND THEN THE NEXT SLIDE, SLIDE 62.

16 A. YEAH, IT'S -- IT JUST SHOWS WHERE THE --
17 BASICALLY THE RETURN FLOW FROM PUMPING WAS ASSUMED TO OCCUR
18 IN THE VICINITY OF THE WELL WHERE IT WAS PUMPED.

19 Q. ALL RIGHT. AND SO WE'RE CLEAR, 62 IS MARKED
20 "AVAA SMALL PUMPERS RETURN FLOW LOCATIONS."

21 A. THAT'S CORRECT.

22 Q. NOW, THERE'S A NOTE NEAR THE BOTTOM OF THIS
23 SLIDE THAT INDICATES APPLICATION EVENLY AND ACROSS ALL WELL
24 LOCATIONS. WHAT DO YOU MEAN BY THAT?

25 A. WELL, WHEN THE WELL, THE TOTAL 3808.4, WE
26 REALLY DIDN'T KNOW THE EXACT PUMPING FROM EACH WELL, BUT WE
27 DID KNOW THE NUMBER OF IMPROVED PARCELS, SO WE DISTRIBUTED
28 THAT EQUALLY ACROSS ALL OF THE AREAS WHERE THE WELLS AND

1 THE IMPROVED PARCELS WERE.

2 Q. AND THEN THE NEXT SLIDE, PLEASE, THE SLIDE 63.
3 NOW, THIS SLIDE IS TITLED "IMPORTED WATER USE 2011, 2012."
4 CAN YOU DESCRIBE TO THE COURT WHAT THIS SLIDE REPRESENTS?

5 A. YES. THIS IS WATER THAT WAS IMPORTED FROM AND
6 USED -- IT WAS IMPORTED BY -- FROM STATE PROJECT WATER BY
7 THE THREE AGENCIES, WHICH WOULD BE AVEK, LITTLEROCK CREEK
8 IRRIGATION DISTRICT AND PALMDALE WATER DISTRICT. AND THEN
9 THIS -- THAT WATER WHICH IN THE AVERAGE FOR 2011 AND '12
10 WAS 65,503.4 ACRE FEET AND IT SHOWS THAT THE -- ALL OF THE
11 AGENCIES THAT USED THAT IMPORTED STATE PROJECT WATER.

12 Q. OKAY. WHERE DID YOU GET THE INFORMATION FOR
13 THIS SLIDE?

14 A. WELL, THIS WAS FROM BEST, BEST & KRIEGER.

15 Q. NEXT SLIDE IS SLIDE 64.

16 A. IT'S -- YES, SLIDE 64 IS JUST A PIE CHART OF
17 THE PREVIOUS SLIDE OF IMPORTED WATER USE FOR 2011 AND 2012.
18 AND WHAT'S INTERESTING IS YOU CAN SEE THAT THE -- WITHOUT
19 GOING BACK TO THE PREVIOUS TABLE, BUT THE TOP FIVE
20 IMPORTERS CONSTITUTE 94 PERCENT OF ALL OF THE IMPORTED
21 WATER. SO IF YOU ADD UP THE TOP FIVE -- ONE, TWO, THREE,
22 FOUR, FIVE, THIS IS 94 PERCENT OF ALL THE STATE PROJECT
23 WATER IMPORTED DURING 2011 AND 2012.

24 Q. AND LET'S MOVE TO THE NEXT SLIDE, SLIDE 65
25 PLEASE. THIS ONE IS MARKED "AVAA RETURN FLOW LOCATIONS
26 FROM IMPORTED WATER USE." NOW, WE SEE THE TERM "RETURN
27 FLOW" USED AGAIN HERE. IS THIS A DIFFERENT TYPE OF RETURN
28 FLOW FROM WHAT WE'VE PREVIOUSLY SEEN?

1 A. YES. THIS IS RETURN FLOWS FROM IMPORTED WATER
2 USE SO BASICALLY THE GREEN SHADED AREA REPRESENTS THE AREAS
3 WHERE THAT RETURN FLOW WAS DISTRIBUTED.

4 Q. AND AGAIN WE SEE A SIMILAR NOTATION AT THE
5 BOTTOM OF THIS SLIDE AS WE SAW IN A PREVIOUS SLIDE
6 REGARDING APPLICATION. CAN YOU EXPLAIN THAT, PLEASE?

7 A. WELL, IF IT'S A WELL, IT WAS DISTRIBUTED NEAR
8 THE WELL LIKE THESE CIRCLES, OR IF IT WAS A WATER DISTRICT,
9 FOR EXAMPLE, IT WOULD BE DISTRIBUTED EVENLY THROUGHOUT THAT
10 WATER DISTRICT AS A RETURN FLOW RECHARGE.

11 Q. SO THIS SLIDE SHOWS THE AREA FOR RETURN FLOW
12 LOCATIONS FROM IMPORTED WATER USE?

13 A. THAT'S CORRECT.

14 Q. ALL RIGHT. NEXT SLIDE, PLEASE. NOW, THIS IS
15 SLIDE 66. AND CAN YOU DESCRIBE WHAT'S ON THIS SLIDE,
16 PLEASE?

17 A. YEAH, IF YOU RECALL OUR SCENARIOS, SCENARIO 1,
18 FOR EXAMPLE, AND 1A, ONE HAD IMPORTED WATER. IT HAD A
19 CURRENT PUMPING PLUS IMPORTED WATER AS PER DROUGHT
20 CONDITIONS SO WE CHOSE THE LAST TWO YEARS, WHICH WERE --
21 OBVIOUSLY WE'RE IN A FOUR-YEAR DROUGHT. WE LOOKED AT THE
22 AMOUNT OF WATER THAT WAS AVAILABLE TO STATE WATER PROJECT
23 CONTRACTORS. FOR EXAMPLE, IN 2014, IT WAS -- 2014 WAS FIVE
24 PERCENT AND I THINK 2015 WAS 20 PERCENT. LET ME MAKE SURE
25 I GOT THAT RIGHT AND NOT BACKWARDS. YEAH, YOU COULD SEE,
26 IF YOU READ DOWN HERE, THE FIVE PERCENT WAS DELIVERED IN
27 2014 AND 20 PERCENT IN 2015, SO FOR OUR SIMULATION OF
28 SCENARIO 1, WE AVERAGED THOSE WHICH IS 12-AND-A-HALF

1 PERCENT AS SHOWN BACK HERE AS TO SUPPLEMENTAL WATER THAT
2 WAS IMPORTED IF CURRENT PUMPING CONDITIONS CONTINUED.

3 Q. AND THAT AVERAGE PERCENTAGE OF 12.5 PERCENT
4 APPLIES TO WHAT?

5 A. WELL, IF YOU GO TO THE NEXT SLIDE, YOU CAN SEE
6 THE IMPORTED WATER DELIVERY CAPABILITY. THIS IS PERCENT OF
7 TABLE A WATER AND IT'S FROM A REPORT THAT'S PUT OUT CALLED
8 THE DRAFT DELIVERY REPORT. IT'S PUT OUT BY THE STATE.

9 Q. IS THAT THE DEPARTMENT OF WATER RESOURCES?

10 A. YES. SO IF YOU -- WHAT WE DID FOR OUR SCENARIO
11 1 IS WE LOOKED AT THIS TABLE A, TIMES 12-AND-A-HALF PERCENT
12 AND THAT WAS ASSUMED THAT THE AMOUNT OF SUPPLEMENTAL WATER
13 THAT WAS IMPORTED FOR THAT PARTICULAR SCENARIO.

14 Q. LET ME STOP YOU RIGHT THERE. COMMONLY, TABLE A
15 REFERS TO WHAT?

16 A. IT'S A CONTRACT BETWEEN STATE AND THE IMPORTING
17 AGENCY AS TO THE AMOUNT OF WATER THAT CAN BE IMPORTED FROM
18 STATE WATER PROJECT.

19 Q. AND THEN ACROSS THE TOP YOU HAVE SOME
20 ASSUMPTIONS BEGINNING WITH "ALL TABLE A." CAN YOU EXPLAIN
21 THOSE LABELS AND THE NUMBERS THAT ARE UNDERNEATH THEM?

22 A. YEAH. THESE ARE -- THESE ARE THE IMPORTS AVEK,
23 LITTLEROCK CREEK IRRIGATION DISTRICT AND PALMDALE WATER
24 DISTRICT. SO THIS ONE IS -- IS MORE OR LESS THE SUM OF ALL
25 OF THOSE THREE AND THEN -- SO THIS IS FOR EXISTING
26 CONDITION. IT'S ACTUALLY BASED ON THE 62 PERCENT, FOR
27 EXAMPLE, IS BASED ON LONG TERM STUDY FROM 1922 TO 2003 IN
28 THIS DRAFT DELIVERY REPORT. AND THESE VARIOUS OTHER ROWS,

1 FOR EXAMPLE, DCR, ECO AND ECLOW AND ALL THESE ARE VARIOUS
2 ASSUMPTIONS THAT MAY OR MAY NOT HAPPEN REGARDING CLIMATE
3 CHANGE, SEA LEVEL RISE, A LOT OF DIFFERENT EXPLANATIONS TO
4 HOW THEY CAME UP WITH THIS. BUT ON AVERAGE, WE LOOKED AT
5 THIS 62 PERCENT, WHICH WOULD BE WHAT WE USED AT
6 12-AND-A-HALF PERCENT OF THIS -- I'M SORRY, NOT 62, BUT
7 12-AND-A-HALD PERCENT OF THE 168444 AS OUR SCENARIO 1.

8 Q. SO IN SCENARIO 1, IT REFLECTS THE EXISTING
9 DROUGHT CONDITIONS WHERE THERE'S LESS STATE WATER PROJECT
10 WATER AVAILABLE; IS THAT CORRECT?

11 A. THAT'S CORRECT.

12 Q. BUT AS INDICATED HERE ON SLIDE 67, ACCORDING TO
13 THIS DEPARTMENT OF WATER RESOURCES DOCUMENT THAT YOU USED,
14 62 PERCENT IS THE APPROXIMATE LONG TERM AVERAGE?

15 A. YES, IT IS. AND BY THE WAY, WAS NOT JUST
16 SCENARIO 1, BUT SCENARIO 2 ALSO HAD THIS ASSUMPTION OF
17 DROUGHT CONDITIONS FOR IMPORTED WATER.

18 Q. LET'S GO TO THE NEXT SLIDE, SLIDE 68, PLEASE.
19 NOW THIS ONE IS ENTITLED "CUMULATIVE ANNUAL CHANGE IN
20 GROUNDWATER STORAGE." DID YOU PREPARE THIS CHART OR WAS IT
21 PREPARED UNDER YOUR DIRECTION?

22 A. YEAH, I PREPARED THIS. IT WAS PREPARED UNDER
23 MY DIRECTION AND IT'S A VERY INTERESTING SLIDE BECAUSE IT
24 IS THE RESULTS OF THE MODEL -- THE FOUR MODEL SCENARIOS.
25 SCENARIO 1, WHICH IS PUMPING EXISTING PLUS THE DROUGHT
26 CONDITIONS SUPPLEMENTAL WATER. 1A IS EXISTING PUMPING PLUS
27 IMPORTING THE TOTAL SUPPLEMENTAL YIELD IMPORTED AND THEN 2
28 IS A RAMP DOWN WITH THE DROUGHT CONDITIONS AND 2A IS A RAMP

1 DOWN WITH THE -- THE SUPPLEMENTAL SUSTAINABLE YIELD. SO
2 YOU CAN SEE THIS -- THIS CHANGE IN STORAGE -- FIRST OF ALL,
3 THE TRIANGLES ARE FOR THE HISTORICAL PERIOD FROM 19 --
4 WELL, ACTUALLY IN THE '40S THROUGH THE 2000 -- EARLY 2000'S
5 THAT WERE THE CHANGE IN STORAGE FROM THE EXPERT REPORT.
6 AND THE SOLID LINE IS THE MODEL CALIBRATION, PERIOD 1915 TO
7 2005, AND YOU CAN SEE THAT GOES UP TO ABOUT HERE. AND THEN
8 THE PREDICTIONS FROM THE MODEL ONTO WHETHER THE PHYSICAL
9 SOLUTION IS A GOOD SOLUTION, YOU CAN SEE THAT THIS LOWER
10 CURVE, WHICH IS CONTINUE PRESENT PUMPING WITH DROUGHT
11 CONDITION IMPORTS OF SUPPLEMENTAL WATER, THE STORAGE IN THE
12 BASIN CONTINUES TO DROP VERY, VERY DRASTICALLY. SO THAT
13 TELLS ME THAT'S PROBABLY NOT A GOOD SOLUTION.

14 NOW EVEN IF YOU BRING IN 27,700 ACRE FEET BUT
15 CONTINUE EXISTING PUMPING OVERALL THE GROUNDWATER BASIN
16 STORAGE WILL STILL CONTINUE TO DROP, ALBEIT AT A SLIGHTLY
17 LESS STEEP SLOPE.

18 Q. LET ME STOP YOU RIGHT THERE, DR. WILLIAMS, SO
19 WE'RE ALL ON THE SAME PAGE HERE. THE SOLID DARK LINE AT
20 THE BOTTOM OF THE COLUMN THAT SAYS THE -- UNDER THE
21 PREDICTIVE PERIOD COLUMN, THAT'S CURRENT DROUGHT
22 CONDITIONS, 12 PERCENT -- 12.5 PERCENT DELIVERY STATE
23 PROJECT WATER AND CURRENT PUMPING -- WHAT WE CALL CURRENT
24 PUMPING BEING THE 2011, 2012 PUMPING CONTINUING FOR 50
25 YEARS?

26 A. THAT'S CORRECT.

27 Q. AND THE ORANGE DOTTED LINE ABOVE THAT IS A
28 TOTAL SUSTAINABLE YIELD OF 110,000? IN OTHER WORDS --

1 A. NO. NO. I'M SORRY.

2 Q. OKAY.

3 A. THAT IS THE CURRENT PUMPING BUT BRINGING IN THE
4 SUPPLEMENTAL SUSTAINABLE YIELD, WHICH HAS A RECHARGE OF
5 27,700, ASSUMING YOU CAN GET -- ASSUMING THAT YOU COULD GET
6 THAT FROM THE TABLE A IMPORTS UP TO 27 -- IN OTHER WORDS,
7 THE AMOUNT OF WATER THAT WOULD RESULT IN 27,700 RECHARGE
8 THAT IS THIS LINE. SO WHAT THIS SAYS IS THAT EVEN IF YOU
9 BRING IN SUPPLEMENTAL WATER, ABOUT AS MUCH AS I THINK THE
10 HISTORICAL AVERAGE OF TABLE A WOULD PERMIT, THIS STILL IS
11 NOT A PHYSICAL SOLUTION TO THE BASIN BECAUSE THE STORAGE IS
12 STILL DROPPING DRAMATICALLY. ONLY WHEN YOU RAMP DOWN YOU
13 START CUTTING BACK DO YOU SEE A STABILIZATION. SO SCENARIO
14 2, WHICH IS THE RAMP DOWN TO THE NATIVE SAFE YIELD PLUS THE
15 DROUGHT CONDITION SUPPLEMENT, YOU CAN SEE THE BASIN
16 STABILIZE RIGHT AWAY.

17 Q. EVEN WITH CURRENT DROUGHT CONDITIONS?

18 A. EVEN WITH CURRENT DROUGHT CONDITIONS IT
19 STABILIZES RIGHT AWAY. IT GOES FROM THE START AND IT TAKES
20 A FEW YEARS, BUT IT DOES STABILIZE. AND THEN SCENARIO 2A,
21 IF YOU RAMP DOWN TO NATIVE SAFE YIELD AND BRING IN ENOUGH
22 SUPPLEMENTAL WATER TO ALLOW A SUSTAINABLE YIELD,
23 SUPPLEMENTAL YIELD OF 27,700 THE BASIN IN THE STORAGE
24 REFILLS. SO THIS TELLS ME THAT THE PHYSICAL SOLUTION,
25 WHICH IS 2 OR 2A, WOULD BRING THE BASIN AND SUBSIDENCE INTO
26 BALANCE OR MINIMIZE THE SUBSIDENCE AND ACTUALLY ALLOW AN
27 INCREASE OR REFILLING OF THE BASIN UNDER 2A. SO RAMPING
28 DOWN PLUS BRINGING IN THE SUPPLEMENTAL SAFE YIELD AMOUNT OF

1 27,700 WOULD RESULT, IN MY OPINION, A VERY VALID PHYSICAL
2 SOLUTION.

3 Q. OKAY. SO AGAIN, SO WE'RE CLEAR LET'S LOOK AT
4 THE TOP DOTTED GREEN LINE.

5 A. OKAY.

6 Q. SO THAT REPRESENTS SCENARIO 2A?

7 A. YES.

8 Q. SO THE BASIN HAS A NATIVE SAFE YIELD OF 82,300,
9 CORRECT?

10 A. RIGHT.

11 Q. THEN WE'RE ADDING FOR THAT DOTTED GREEN LINE
12 THE SUPPLEMENTAL SUSTAINABLE YIELD OF 27,000 --

13 A. 700.

14 Q. -- 700?

15 A. THAT'S CORRECT.

16 Q. AND THAT TOTALS THE 110,000 TOTAL SAFE YIELD IN
17 THE BASIN, CORRECT?

18 A. THAT DOES, YES.

19 Q. SO ASSUMING A TOTAL SAFE YIELD OF THE BASIN OF
20 110,000 AND THE RAMP DOWN PROPOSED IN THE PHYSICAL
21 SOLUTION, THE DOTTED GREEN LINE, THE HIGHEST OF THE FOUR
22 LINES ON THE RIGHT-HAND COLUMN MARKED PREDICTIVE PERIOD,
23 WOULD SHOW NOT JUST A LEVELLING OFF OF WATER LEVELS, BUT
24 THE POTENTIAL OVER A 50-YEAR TIME PERIOD TO INCREASE WATER
25 LEVELS IN THE BASIN?

26 A. THAT'S CORRECT. INCREASE IN STORAGE.

27 Q. AND AGAIN SO WE'RE CLEAR, THE SOLID GREEN LINE
28 IS THE RAMP DOWN AS PROPOSED IN THE PHYSICAL SOLUTION, BUT

1 THE CURRENT DROUGHT CONDITIONS SOMEHOW CONTINUES OVER THE
2 NEXT 50 YEARS. NO ONE KNOWS FOR SURE?

3 A. THAT'S CORRECT. THIS IS THE RAMP DOWN, THE
4 SOLID GREEN LINE AND ASSUMING 2014, 2015, 12-AND-A-HALF
5 PERCENT IMPORTED WATER AVAILABILITY.

6 Q. IN TERMS OF THE SOLID GREEN LINE, THE SCENARIO
7 2, THE CURRENT DROUGHT CONDITION, IS IT -- WOULD YOU
8 CHARACTERIZE THAT AS SORT OF THE WORST-CASE SCENARIO WITH
9 REGARDS TO SUPPLEMENTAL WATER OR ONE OF THE WORST-CASE
10 SCENARIOS?

11 A. WELL, I CAN'T SAY FOR SURE, BUT THAT'S WHY WE
12 PICKED THE LAST TWO YEARS BECAUSE IT IS VERY, VERY LOW.
13 AND IT'S BEEN -- IT'S BEEN -- YOU KNOW, WE'RE IN FOUR, FIVE
14 YEARS OF DROUGHT NOW.

15 Q. SO EVEN IN A DROUGHT CONDITION, THE PROPOSED
16 PHYSICAL SOLUTION WITH ITS RAMP DOWN WILL SHOW SLIGHTLY
17 RECOVERING WATER LEVELS IN THE BASIN OVER THE NEXT 50
18 YEARS?

19 A. IT WILL STABILIZE THE BASIN -- THE RAMP DOWN
20 WILL STABILIZE THE BASIN.

21 Q. LET'S GO TO THE NEXT SLIDE, SLIDE 69.

22 A. THIS IS -- THIS IS A SIMILAR MODEL RESULTS, BUT
23 SHOWING WHAT HAPPENS WITH VARIOUS WELLS THROUGHOUT THE
24 BASIN. YOU CAN SEE THERE'S ONE, TWO, THREE, FOUR, FIVE,
25 SIX PANELS AND THESE ARE ALL HYDROGRAPHS AT VARIOUS
26 PORTIONS OF THE BASIN FOR THE FOUR SCENARIOS. AND IF WE GO
27 TO THE NEXT SLIDE, WHICH IS A BLOWUP SO YOU CAN SEE IT
28 EASIER.

1 Q. THIS IS SLIDE 70?

2 A. SLIDE 70, YES. SLIDE 70 IS A PORTION IN THE
3 BASIN KIND OF MID IN HERE AND YOU CAN SEE THE SAME THING.
4 FIRST OF ALL, THE DOTS ARE OBSERVED WATER LEVELS SO YOU CAN
5 SEE THE MODEL DURING THE HISTORICAL PERIOD IT'S PRETTY WELL
6 CALIBRATED, IT MATCHES THAT. AND THEN WE START IN WITH THE
7 SCENARIO 1 WHICH IS THIS LOW LINE, SO IF YOU CONTINUE
8 PRESENT PUMPING THE BASIN'S GOING TO CONTINUE TO DROP THE
9 WATER LEVELS. AND EVEN IF YOU BRING IN 27,700 BUT HAVE
10 CURRENT PUMPING, THE BASIN WILL DROP. NOT QUITE AS MUCH AS
11 THE DROUGHT CONDITION IMPORTS, BUT IT WILL CONTINUE TO
12 DECLINE FOR -- THROUGH THE 50 YEAR MARK. ONLY WHEN YOU
13 RAMP DOWN THE PUMPING, AS SHOWN BY THE SOLID LINE, DOES THE
14 BASIN STABILIZE OR IMPROVE. AND FINALLY, IF YOU RAMP DOWN
15 PLUS BRING IN THE 27,700, THEN YOU GET QUITE AN INCREASE.
16 AND THIS IS PRETTY MUCH THE SIGNATURE THAT I'VE SEEN WITH
17 TWO 2 AND 2A. SO THIS, TO ME, REPRESENTS A GOOD, YOU KNOW,
18 EXAMPLE OF WHY THE PHYSICAL SOLUTION WILL WORK, THE RAMPING
19 DOWN PLUS THE IMPORTED WATER SUPPLIES.

20 Q. OKAY. LET'S GO TO SLIDE 70 -- EXCUSE ME. I'M
21 SORRY. SLIDE 71.

22 A. SLIDE 71 IS JUST A SERIES OF HISTORICAL
23 HYDROGRAPHS AND IT -- IT SHOWS VARIOUS WATER LEVELS IN THE
24 BASIN SOME IN SOME AREAS SHOWING A STEEP DECLINE RESULTING
25 TO THE SEVERE OVERDRAFT, BUT IT DOES SHOW WATER LEVEL
26 STABLE IN SOME AREAS. AND THE REASON I'M SHOWING THIS IS
27 BECAUSE IN THESE AREAS IS WHERE IMPORTED -- HISTORICAL USE
28 OF IMPORTED WATER. SO IT'S DEFINITELY IN THE MID '70S, I

1 THINK '72, WHEN IMPORTED WATER WAS FIRST BROUGHT INTO THE
2 BASIN. YOU CAN SEE IT HAD A DRASTIC AFFECT SO THAT FURTHER
3 STRENGTHENS AND REENFORCES MY BELIEF THAT IMPORTING
4 SUPPLEMENTAL WATER PLUS A RAMP DOWN OR REDUCTION OF PUMPING
5 WILL BE A GOOD PHYSICAL SOLUTION FOR THIS BASIN.

6 Q. THEN LOOK -- LET'S LOOK AT SLIDE 72.

7 A. HERE AGAIN IT JUST SHOWS A CLOSE-UP OF ONE OF
8 THE HYDROGRAPHS SHOWING THAT IN THE MID '70S WHEN IMPORTED
9 WATER WAS BROUGHT IN, IT HAD A MAJOR AFFECT IN THOSE AREAS
10 WHERE THE WATER WAS BROUGHT IN.

11 Q. NOW LET'S MOVE TO SLIDE 73. THIS ONE'S
12 ENTITLED "WATER LEVEL CHANGES IN 50 YEARS, SC-1." CAN YOU
13 DESCRIBE WHAT IS DEPICTED HERE?

14 A. THIS IS A CALLED A COLOR FLOOD MAP, BUT IT'S
15 GROUNDWATER LEVEL CHANGES IN 50 YEARS AFTER THE END OF THE
16 MODEL, BETWEEN THE START OF THE MODEL, AFTER THE RAMP DOWN.
17 BETWEEN THE START OF THE MODEL RUN AFTER THE RAMP DOWN TO
18 THE 50 YEAR IT SHOWS THE CHANGE IN WATER LEVELS. AND THE
19 RED DENOTES WATER LEVEL DECLINE SO YOU CAN SEE IN 50 YEARS
20 THIS WHOLE -- MOST OF THE AREA OF ANTELOPE VALLEY IS GOING
21 TO CONTINUE TO HAVE PRETTY SEVERE DECLINES. AND WE SAW
22 THAT IN THE PREVIOUS SLIDES BY THE DECLINING STORAGE AND
23 THE DECLINING HYDROGRAPHS. THIS IS JUST A CONJURE MAP
24 REFLECTING THE SAME VERY, SEVERE DECLINES WITH DARK REDS
25 OVER IN THIS AREA HERE. THAT'S THE CENTRAL OF -- THE SOUTH
26 CENTRAL AREA.

27 Q. THEN MOVING TO THE NEXT SLIDE, SLIDE 74.

28 A. THEN EVEN IF WE BRING IN SUPPLEMENTAL WATER, IT

1 STILL SHOWS DECLINES IN THE BASIN. SO -- AND THIS IS
2 REFLECTED WHAT WE SAW AS -- STILL A DECREASE IN STORAGE AND
3 STILL A DECREASE IN WATER LEVEL, BUT NOT AS SEVERE THAT
4 SCENARIO 1A.

5 Q. SO AGAIN, SCENARIO 1A HAS THE TOTAL SAFE YIELD
6 OF 82,300 NATIVE YIELD?

7 A. NO. NO. EXCUSE ME. NO. SCENARIO 1A IS
8 CURRENT PUMPING BUT BRINGING IN THE SUSTAINABLE YIELD OF
9 27,700.

10 Q. RIGHT. BUT THE MODEL WOULD ALSO TAKE INTO
11 ACCOUNT THAT THERE'S AN 82,300 NATIVE YIELD COMPONENT
12 THERE?

13 A. YES, THAT'S TRUE.

14 Q. SO THIS TOGETHER WITH THE TOTAL -- EXCUSE
15 ME -- WITH THE SUPPLEMENTAL SAFE YIELD OF THE 27,000,
16 APPROXIMATELY, FOR TOTAL SAFE YIELD OF 110,000 IS BEING
17 DEPICTED HERE?

18 A. WELL, THIS IS 1A, WHICH MEANS EXISTING PUMPING
19 WITH SUFFICIENT IMPORTED WATER TO EQUAL SUPPLEMENTAL SAFE
20 YIELD. YOU'RE STILL VERY MUCH EXCEEDING THE NATIVE SAFE
21 YIELD BECAUSE THE PUMPING IS STARTING OUT IT'S SO HIGH.
22 YOU HAVEN'T RAMPED DOWN PUMPING.

23 Q. OKAY.

24 A. IT'S ONLY WHEN YOU GO TO THE NEXT ONE, YOU CAN
25 SEE THE EFFECT OF NOW YOU'RE LOOKING AT 2, WHICH IS A RAMP
26 DOWN WITH DROUGHT CONDITIONS IMPORTED WATER. AND ALL OF A
27 SUDDEN NOW YOU SEE CHANGES FROM REDS TO GREENS AND YOU SEE
28 INCREASES IN WATER LEVELS, LIKE WE SAW IN A STORAGE OF 30,

1 45 FEET IN THIS AREAS SO THE BASIN IS REBOUNDED EVEN
2 WITHOUT BRINGING IN MORE THAN DROUGHT CONDITION
3 SUPPLEMENTAL WATER. SO THIS ITSELF IS A PHYSICAL SOLUTION.

4 Q. DR. WILLIAMS, LET ME JUST IDENTIFY SLIDE 75.
5 IT'S WATER LEVEL CHANGES IN 50 YEARS SC-2. SO WHAT YOU
6 HAVE DEPICTED HERE IS THE MODEL ANALYSIS OF PUMPING OF THE
7 NATIVE SAFE YIELD BEING RAMPED DOWN TO THE NATIVE SAFE
8 YIELD, CORRECT?

9 A. YES.

10 Q. AND BUT YOU HAVE THE EXISTING DROUGHT
11 CONDITIONS CONTINUING REGARDING STATE PROJECT DELIVERIES,
12 THE AVERAGE OF THE 12.5 PERCENT, CORRECT?

13 A. YES, THAT'S CORRECT. AND YOU CAN SEE THE BASIN
14 IS STABILIZING IN MOST AREAS.

15 Q. AND THEN FINALLY, LET'S -- WELL, NOT FINALLY,
16 BUT LET'S GO TO THE NEXT SLIDE, SLIDE 75.

17 A. SO THIS IS THE -- THIS IS THE CONDITION CALLED
18 2A, WHICH WAS THE RAMP DOWN AND NATIVE SAFE YIELD PLUS
19 SUFFICIENT IMPORTED WATER TO EQUAL SUPPLEMENTAL SAFE YIELD
20 OF 27,700. AND YOU CAN SEE NOW THE BASIN IS ACTUALLY
21 REFILLING ITSELF QUITE RAPIDLY WITH THESE DARK GREEN AREAS,
22 WHICH YOU SEE INCREASES OF 60 OR 70 FEET OF RECOVERY IN
23 THESE AREAS. SO THE BASIN IS REALLY STABILIZED AND
24 ACTUALLY IMPROVING THE STORAGE LOSS.

25 Q. SO TO SUMMARIZE THIS DEPICTION HERE, WE HAVE A
26 50-YEAR SIMULATION OF THE PROPOSED PHYSICAL SOLUTION WITH
27 ALLOCATIONS OF THE NATIVE YIELD EQUALING THE NATIVE YIELD
28 SUPPLY OF 82,300, CORRECT?

1 A. YES.

2 Q. AND THEN WE HAVE ON TOP OF THAT APPROXIMATELY
3 27,000 ACRE FEET A YEAR AND SUPPLEMENTAL YIELD TO THE BASIN
4 FROM IMPORTED WATER?

5 A. RIGHT 27,700.

6 Q. YOU WOULD AGREE WITH ME, WHEN YOU ADD THE 823
7 THE NATIVE YIELD PLUS THE 27,000, APPROXIMATELY, WE GET TO
8 THE TOTAL SAFE YIELD OF 110,000?

9 A. THAT'S CORRECT.

10 Q. SO HERE WE HAVE TOTAL SAFE YIELD OF 110,000
11 WITH A RAMP DOWN AS PROPOSED IN THE PHYSICAL SOLUTION
12 DOCUMENT?

13 A. THAT'S CORRECT.

14 Q. OKAY. LET'S TAKE A LOOK, IF WE COULD, PLEASE,
15 AT SLIDE 77.

16 A. THIS IS JUST A SUMMARY, BASICALLY THE
17 DIFFERENCE BETWEEN THE SCENARIO 1 AND 2A. SCENARIO 1 IS
18 THE ONE SHOWING THE MOST DRAMATIC LOWERING OF STORAGE IN
19 THE BASIN AND 2A, WHICH IS THE BEST, AS FAR AS REFILLING
20 THE BASIN, STABILIZING AND REFILLING. SO YOU CAN SEE OVER
21 THE 50 YEARS YOU HAVE 40, 50, 60 FEET OF RECOVERY IN A
22 MAJOR PORTION OF THE BASIN.

23 Q. AND THAT IS MARKED OR IDENTIFIED AS WATER LEVEL
24 CHANGES BETWEEN SC-1 AND SC-2A IN 50 YEARS AND IT'S SLIDE
25 77. LET'S GO TO SLIDE -- THE NEXT SLIDE, PLEASE.

26 A. THIS KIND OF SUMMARIZES THE WHOLE MODEL
27 PHYSICAL SOLUTION RUNS. YOU HAVE -- UP ON THE TOP ROW, YOU
28 HAVE SCENARIO 1 WHICH IS CURRENT PUMPING WITH THE DROUGHT

1 CONDITION IMPORTED WATER. SCENARIO 1A, WHICH IS CURRENT
2 PUMPING PLUS THE SUPPLEMENTAL SAFE YIELD WATER. AND THEN 2
3 IS THE RAMP DOWN WITH DROUGHT CONDITION IMPORT, AND 2A IS
4 RAMP DOWN WITH SUPPLEMENTAL SAFE YIELD IMPORT. SO YOU CAN
5 SEE HERE THE GROUND LEVEL PUMPING OF 161, WHICH IS
6 EXISTING, IS THE ONE'S WHERE THE BASIN DID NOT STABILIZE,
7 NO MATTER HOW MUCH WATER YOU BROUGHT IN. FOR EXAMPLE, IF
8 YOU BROUGHT IN FOR SCENARIO 1A YOU BROUGHT IN 27,700, YOU
9 STILL HAD A DECREASE IN STORAGE OF ALMOST 31,000 ACRE FEET
10 A YEAR. SCENARIO 1, WHICH IS JUST CURRENT PUMPING PLUS
11 DROUGHT CONDITION IMPORTS, THE BASIN'S STILL GOING DOWN TO
12 52,300 ACRE FEET PER YEAR AND THAT'S BOTH WHAT THE STORAGE
13 AND THE HYDROGRAPHS REFLECTED. NOW, IF YOU RAMP DOWN TO
14 THE NATIVE SAFE YIELD ON THE PUMPING AND STILL BRING IN
15 DROUGHT CONDITION SUPPLEMENT, THE BASIN STARTS -- IT'S
16 PRETTY WELL STABILIZED. IT'S PLUS 2,200 ACRE FEET A YEAR.
17 NOW YOU BRING IN 27,700 ON TOP OF RAMPING DOWN ON THE BASIN
18 REFILLS AT 24,000 ACRE FEET A YEAR. SO IN MY OPINION,
19 SCENARIO 2 AND 2A REPRESENT A GOOD PHYSICAL SOLUTION.

20 Q. LET'S MOVE TO THE NEXT SLIDE, PLEASE, WHICH IS
21 NOT REALLY A SLIDE, BUT IT'S GOING TO BE A SIMULATION OR A
22 MODEL RUN.

23 A. YEAH, WHAT I THOUGHT WOULD BE ILLUSTRATIVE,
24 JUST KIND OF SHOW AN ANIMATION, THIS IS A STILL SHOT,
25 BUT -- WELL, IT'S NOT. THIS IS THE -- THESE -- BEFORE WE
26 START -- OKAY, IT'S -- IT'S SHOWING. DID YOU START THE
27 ANIMATION?

28 Q. NOT YET.

1 A. OKAY. SORRY. IT SHOWS THE -- ON THE RIGHT IS
2 THE ANTELOPE VALLEY LOOKING SOUTH. IN OTHER WORDS, IF YOU
3 LOOK AT THIS INSET MAP, NORMALLY WE PLOT TO THE NORTH OUT,
4 BUT WE'RE LOOKING THIS WAY FROM THE BOTTOM OF THE PICTURE
5 UP TO THE TOP THROUGH PALMDALE SO THIS IS THE ROGERS LAKE
6 AREA AND THIS IS THE PALMDALE AREA (INDICATING). SO THESE
7 ARE -- REPRESENT GROUNDWATER LEVELS, GREEN IS GOOD, RED IS
8 DECLINING. SO THIS IS WHERE THE GROUNDWATER LEVELS WERE IN
9 1915. SO GO AHEAD AND START THE ANIMATION. SO THIS IS
10 GOING TO RUN THROUGH -- YOU CAN SEE THE YEARS UP HERE AND
11 YOU CAN SEE THE GROUNDWATER LEVELS DROPPING. AND THIS IS
12 JUST SIMULATING WHAT THE MODEL HAS PREDICTED FOR EVERY ONE
13 OF THOSE YEARS AND EVERY ONE OF THOSE CELLS. AND WE CAN
14 CREATE THIS KIND OF ANIMATION FROM THAT DATA, BUT YOU CAN
15 SEE IT'S CONTINUING TO DROP TO -- BASICALLY REFLECTING THE
16 SEVERE OVERDRAFT THAT THE BASIN HAS EXPERIENCED. AND NOW
17 THE -- IT'S GOING FROM GREEN TO CHANGING TO THE RED COLORS
18 AND IT'S -- YOU CAN SEE IT'S STABILIZED A LITTLE BIT WHEN
19 THEY BROUGHT IN IMPORTED WATER IN THE '70S, BUT IT'S STILL
20 CONTINUING TO DROP, SO -- OKAY, SO THAT WAS -- THAT WAS
21 HISTORICAL PERIOD. IF WE GO TO THE NEXT SLIDE.

22 Q. NO. 80 -- EXCUSE ME. 81 AND 82?

23 A. YEAH. NOW THIS -- THIS IS GOING TO BE -- THIS
24 IS AN INTERESTING COMPARISON. ON THE LEFT PANEL WE HAVE
25 SCENARIO 1, WHICH IS CURRENT PUMPING WITH SEVERE DROUGHT
26 CONDITIONS. AND ON THE RIGHT PANEL, WE HAVE SCENARIO 2A,
27 WHICH WAS THE RAMP DOWN TO NATIVE SAFE YIELD PLUS IMPORTED
28 SUPPLEMENTAL SAFE YIELD. SO THE SAME DEAL, WE START OFF

1 WITH A WATER LEVELS THE SAME AND THEN WE'RE GOING TO GO 50
2 YEARS INTO THE FUTURE. SO YOU CAN WATCH THE COLORS CHANGE.
3 OKAY, GO AHEAD. SO HERE WE ARE AND YOU CAN SEE ON THE
4 RIGHT WHERE THE PHYSICAL SOLUTION IT'S REFILLING ITSELF
5 WHILE UNDER SCENARIO 1, CURRENT PUMPING, NO MATTER -- YOU
6 KNOW, WITH THE SEVERE DROUGHT, IT CONTINUES TO DROP, A LOT
7 OF REDS AND ON THE RIGHT, THE BASIN IS GETTING THE HEALTH
8 BACK, IT'S REFILLING, STORAGE IS RECOVERING, WATER LEVELS
9 ARE RECOVERING. SO THIS IS -- IT'S AN EASY TO UNDERSTAND
10 GRAPHIC THAT WE PRESENTED TO SHOW THE PHYSICAL SOLUTION, IN
11 MY OPINION, WILL WORK.

12 Q. OKAY. LET'S MOVE TO SLIDE 83, PLEASE.

13 A. SO IN ADDITION TO WATER LEVEL STABILITY, THE
14 LAND SUBSIDENCE WAS ALSO WHAT WE MODELED AND HERE'S THE
15 SAME. IF WE -- THIS -- THIS SLIDE 83 SHOWS REPRESENTATIVE
16 LAND SUBSIDENCE AND THE EFFECTS OF THE FOUR SCENARIOS. AND
17 I THINK IT'S MORE ILLUSTRATIVE IF WE GO TO THE NEXT ONE
18 BECAUSE IT'S GOT SOMETHING YOU CAN SEE A LITTLE BETTER.

19 Q. SLIDE 84?

20 A. SLIDE 84 SHOWS THE BENCHMARK AND IT'S PRETTY
21 MUCH THE CENTER OR THE HIGHEST SUBSIDENCE WAS. SO AGAIN,
22 THE DOTS ARE -- IN THE INSET ARE THE MEASURED LAND
23 ELEVATIONS FROM BENCHMARKS, AND THEN WE HAVE THE FOUR
24 SCENARIOS. SO THE SCENARIO 1, WHICH IS THE LOWEST ONE,
25 SUBSIDENCE WILL INCREASE WITH TIME. EVEN BRINGING IN
26 SUPPLEMENTAL WATER OF 27,700 SUBSIDENCE WON'T STOP AND IT
27 WILL KEEP GOING. AND IT'S ONLY WHEN YOU GO TO SCENARIO 2
28 OR 2A DOES, IN THIS PARTICULAR CASE, THE SUBSIDENCE

1 ACTUALLY STOP. NOW, YOU'LL SEE THAT SUBSIDENCE WON'T STOP
2 EVERYWHERE IN THE BASIN AND THE REASON FOR THAT IS THAT YOU
3 HAVE VERY THICK BEDS AND SOMETIMES IT TAKES CENTURIES FOR
4 THESE -- EVEN IF YOU STOP PUMPING, IT TAKES CENTURIES FOR
5 THESE THICK BEDS TO SLOWLY DRAIN OUT THE WATER AND YOU CAN
6 SEE THAT IN SOME OF THE HYDROGRAPHS EVEN UNDER SCENARIO 2A
7 THERE'S STILL A SLIGHT DECREASE. BUT IF YOU JUST STOP
8 PUMPING EVERYTHING, IT WOULDN'T STOP THAT. THAT'S JUST
9 SOMETHING THAT WE'VE LEARNED ABOUT THE NATURE OF
10 SUBSIDENCE.

11 THE COURT: MR. DUNN, IT'S 4:00, SO YOU CAN STEP
12 DOWN, DOCTOR. SO WE ARE GOING TO TAKE OUR RECESS NOW SO
13 YOU CAN MOVE. I WANT TO KNOW WHAT WE'RE GOING TO DO
14 TOMORROW. WE'RE GOING TO FINISH, OBVIOUSLY, YOUR DIRECT.

15 MR. DUNN: YES, YOUR HONOR.

16 THE COURT: THERE MAY BE SOME CROSS-EXAMINATION OR
17 SOME OF THE OTHER PARTIES MAY WISH TO ENGAGE IN
18 EXAMINATION; IS THAT CORRECT? OTHER THAN -- I MEANT
19 PROPONENTS OF THE SOLUTION HERE, IS THERE GOING TO BE ANY
20 EXAMINATION BY THE WILLIS COUNSEL.

21 MR. KALFAYAN: YES, YOUR HONOR.

22 THE COURT: YOU'RE NOT A PROPONENT.

23 MR. JOYCE: I MAY HAVE A ONE QUESTION OR TWO.

24 THE COURT: OKAY. SO ESSENTIALLY MR. DUNN, YOU'RE
25 GOING TO FINISH WITH THIS WITNESS TOMORROW?

26 MR. DUNN: IN THE MORNING, YES.

27 THE COURT: HOW MUCH MORE -- I NOTICE WE DON'T HAVE
28 A LOT OF THE EXHIBITS.

1 MR. DUNN: WE DON'T HAVE A LOT LEFT. I WOULD --
2 MAYBE ANOTHER --

3 THE COURT: HOUR.

4 MR. DUNN: OH, I WOULD SUSPECT LESS THAN THAT, YOUR
5 HONOR.

6 THE COURT: OKAY. AND THEN WHAT ARE WE GOING TO DO?

7 MR. DUNN: AFTER THE CROSS-EXAMINATION, THE PUBLIC
8 WATER SUPPLIERS, WE PUT ON OUR WITNESSES.

9 THE COURT: SO YOU'RE GOING TO REST IN TERMS OF THE
10 PHYSICAL SOLUTION. THE DEFAULTED PARTIES, IS THERE
11 ANYTHING ELSE THAT YOU'RE GOING TO OFFER DURING THIS PHASE?

12 MR. DUNN: JUST ONE MOMENT, YOUR HONOR. WE HAVE A
13 SMALL AMOUNT OF DOCUMENTARY EVIDENCE, WHICH DOESN'T REQUIRE
14 A WITNESS, IT'S JUST THE BUSINESS RECORDS OF OUR IMPORTED
15 WATER PURCHASES. THAT'S IT. THAT WILL TAKE MAYBE A
16 MINUTE.

17 THE COURT: ALL RIGHT. LET ME ASK MS. AILIN: DO
18 YOU INTEND TO EXAMINE THIS WITNESS?

19 MS. AILIN: I DO, YOUR HONOR.

20 THE COURT: CAN YOU GIVE ME A TIME ESTIMATE OF WHAT
21 YOU THINK WILL BE INVOLVED?

22 MS. AILIN: ABOUT 45 MINUTES.

23 THE COURT: OKAY. SO WE SHOULD CERTAINLY FINISH HIM
24 BEFORE NOON?

25 MS. AILIN: THAT DEPENDS ON MR. KALFAYAN.

26 THE COURT: WITH YOUR EXAMINATION, AND MR. DUNN.

27 MS. AILIN: YES, I WOULD EXPECT SO.

28 THE COURT: THEN WE'LL DEAL WITH YOUR EXAMINATION,

1 MR. KALFAYAN, OKAY? AND THEN WHAT ELSE ARE WE GOING TO DO
2 TOMORROW, ASSUMING THAT YOU FINISH WITH THIS WITNESS
3 TOMORROW?

4 MR. JOYCE: YOUR HONOR, MR. JOYCE ON BEHALF OF
5 DIAMOND FARMING. I WILL SIMPLY BE PROVIDING TO THE COURT A
6 SUPPLEMENTAL DECLARATION AS DIRECTED BY THE COURT TO
7 ADDRESS THE EARLY YEARS, PUMPING NUMBERS.

8 THE COURT: OKAY. MR. DAVIS.

9 MR. DAVIS: WE HAVE THE SAME THING. WE HAVE
10 DOCUMENTS THAT HAVE ALREADY BEEN MARKED AND THEY'RE WITH
11 THE COURT HALF OF THOSE HAVE BEEN ALREADY ADMITTED IN PHASE
12 FOUR. WE'RE JUST GOING TO GO THROUGH THOSE, MOST ALL
13 BUSINESS RECORDS WITH SOME EXPLANATIONS.

14 THE COURT: MR. ZIMMER.

15 MR. ZIMMER: JUST TO ADDRESS BOTH MR. JOYCE'S AND
16 MR. DAVIS'S CONCERNS, WE WILL BE MOVING INTO EVIDENCE
17 THE -- ALL THE INFORMATION THAT WAS PROVIDED TO THE EXPERT
18 THAT INCLUDES THE SAME INFORMATION THAT THEY'RE TALKING
19 ABOUT. WE TALKED EARLIER ABOUT THAT DOING THAT IN A
20 SUMMARY FASHION SO WE'RE NOT HERE FOR WEEKS. AND THEN
21 THERE'S ANOTHER EXHIBIT 66, WHICH SETS -- IT'S ALREADY IN
22 EVIDENCE. IT SETS FORTH THE PUMPING THAT -- BOTH PUBLIC
23 AND PRIVATE PUMPING SINCE 1925. AND THEN THE QUESTION IS
24 WHATEVER THESE FOLKS DO ON CROSS, THERE ARE TWO ADDITIONAL
25 WITNESSES THAT WE HAVE AVAILABLE, MR. WAGNER IS ONE WITNESS
26 AND MR. WAGNER WOULD TESTIFY SOMEWHAT SIMILARLY TO THE
27 TESTIMONY GIVEN BY MR. BEEBY BUT IN MORE DETAIL IF WE NEED
28 IT REGARDING CROP DUTIES. HE HAS LOOKED AT ALL PUMPING AND

1 WITH REGARD TO MR. BINDER, WHO ALSO HAS LOOKED AT THE
2 PHYSICAL SOLUTION, BUT PART OF THAT WILL DEPEND UPON WHAT
3 HAPPENS TOMORROW. SOME OF THOSE WITNESSES ARE NOT
4 AVAILABLE UNTIL NEXT WEEK, BUT WE'RE GOING TO -- WE WANT TO
5 MAKE THIS AS EXPEDITIOUS AS POSSIBLE AND WE WILL BE DOING
6 THAT DEPENDING UPON WHAT HAPPENS TOMORROW.

7 THE COURT: OKAY. NOW, ONE OF THE THINGS THAT I
8 THINK IS CLEAR, BUT MAYBE IT'S NOT, IS THAT IN TERMS OF THE
9 PROPONENTS, THEY ARE ESSENTIALLY STIPULATING TO THIS
10 EVIDENCE COMING IN AND THE POSITIONS TAKEN BY THE
11 VARIOUS -- THE OPINIONS TAKEN BY THE VARIOUS WITNESSES THAT
12 HAVE BEEN PRESENTED THUS FAR; IS THAT RIGHT?

13 MR. DAVIS: SO STIPULATED.

14 THE COURT: IN OTHER WORDS, THIS IS A JOINT
15 PROPONENT -- YOU ARE JOINT PROPONENTS OF THE PHYSICAL
16 SOLUTION AND THE PARTIES THAT ARE OPPOSED TO IT ARE NOT
17 DIRECTLY PARTIES IN THE LITIGATION BETWEEN THE LAND OWNERS
18 AND THE PUBLIC WATER SUPPLIERS AND OTHERS, BUT THEY
19 OBVIOUSLY HAVE AN ASPECT OF INTEREST IN TERMS OF
20 CONSISTENCY WITH THE STIPULATED JUDGMENT THAT THEY ENTERED
21 INTO WITH THE PUBLIC WATER SUPPLIERS. SO IN TERMS OF THE
22 COURT'S VIEW, THERE'S NO OPPOSITION FROM ANY OF THE
23 PROPONENTS AS TO THIS EVIDENCE, BUT THERE OBVIOUSLY IS
24 GOING TO BE OPPOSITION TO THE GLOBAL, SO-CALLED, SETTLEMENT
25 BY THE WILLIS CLASS AND I DON'T KNOW ABOUT OTHERS.

26 WHAT ABOUT THE CLAIMS AGAINST -- THAT MR. TAPIA HAS?
27 WHERE DOES THAT FIT INTO THIS?

28 MR. ZIMMER: LET ME ADDRESS BOTH ISSUES. ONE, YES,

1 YOU'RE CORRECT ON WHAT YOU SAID IN TERMS OF THE JOINT
2 PROPONENTS SUBJECT TO RESERVATION OF RIGHTS AND THE
3 COMMENTS ON THE MODEL. IN TERMS OF MR. TAPIA, I THINK THAT
4 TESTIMONY WAS BEING OFFERED THROUGH MR. BEEBY BECAUSE HE
5 WAS HERE TODAY AS A MATTER OF REBUTTAL. THERE'S BEEN NO
6 CASE PRESENTED BY THE TAPIA'S SO FAR SO IT COULD BE SUBJECT
7 TO NONSUIT IF THEY PRESENT NOTHING. BUT IF THEY DID
8 PRESENT SOMETHING, THEN IT'S MY VIEW THAT THE TESTIMONY OF
9 MR. BEEBY WOULD BE THEN USED AS REBUTTAL TO THAT.

10 MR. JOYCE: JOYCE REBUTTAL.

11 THE COURT: SO THE QUESTION THAT NATURALLY OCCURS TO
12 ME IS WHERE MR. BEEBY'S COUNSEL?

13 MR. JOYCE: TAPIA'S --

14 THE COURT: I'M SORRY. MR. TAPIA'S COUNSEL, WHERE
15 IS HE?

16 MR. ZIMMER: THAT, I CAN'T ANSWER FOR YOU.

17 THE COURT: WHO IS IT?

18 MR. KUHS: MR. BRUMFIELD, A BAKERSFIELD LAWYER. HE
19 WAS CERTAINLY GIVEN NOTICE OF THE TRIAL TIME AND PLACE.

20 MR. JOYCE: YOUR HONOR, I HAVE NO EXPLANATION. IT'S
21 NOT MY OBLIGATION.

22 MR. DUNN: I DON'T KNOW WHERE HE IS TODAY. I WAS
23 INFORMED BY MR. BRUMFIELD OR HIS OFFICE THAT HE WAS ENGAGED
24 IN TRIAL YESTERDAY IN BAKERSFIELD. I DON'T KNOW WHERE HE
25 IS TODAY. WE HAVE HAD COMMUNICATION WITH MR. BRUMFIELD AND
26 HIS COLLEAGUE. THEY HAVE REQUESTED OCTOBER 14TH, 1-4, FOR
27 MR. TAPIA TO PRESENT HIS CASE. I'M JUST A MESSENGER, YOUR
28 HONOR.

1 THE COURT: NO, WHAT I'M INTERESTED IN, THOUGH, IS
2 THAT WE GET TOGETHER SO THAT WE CAN HAVE SOME AGREEMENT AS
3 TO WHEN WE'RE GOING TO BE IN SESSION. AND ONE OF THE
4 THINGS THAT I'M SOMEWHAT CONCERNED ABOUT IS THIS WEEK AND
5 I'D LIKE TO BE ABLE TO FILL IT OUT SO THAT WE'RE WORKING
6 UNTIL NOON ON FRIDAY. AND SO FAR, I'M NOT HEARING THAT.

7 NOW MR. KALFAYAN, YOU INDICATED THAT YOU WERE GOING
8 TO CALL SOME WITNESSES. IS MR. ESTRADA AVAILABLE?

9 MR. KALFAYAN: MR. ESTRADA IS IN FRANCE. HE WONT BE
10 BACK UNTIL OCTOBER 9TH. IT'S KIND OF --

11 THE COURT: I THOUGHT YOU TOLD ME THAT HE WAS GOING
12 TO BE ABLE TO BE HERE MONDAY AND --

13 MR. KALFAYAN: I THOUGHT THAT --

14 THE COURT: WHEN DID HE LEAVE FOR FRANCE?

15 MR. KALFAYAN: IT WAS MONDAY MORNING THAT HE HAD TO
16 LEAVE TO FRANCE.

17 MR. ZIMMER: WHO'S LEAVING FOR FRANCE?

18 THE COURT: MR. ESTRADA WHO WAS GOING TO BE THE
19 FIRST WITNESS ON MONDAY AND NOW HE'S IN FRANCE FOR HOW
20 LONG?

21 MR. KALFAYAN: UNTIL OCTOBER 9TH. AND I WAS WAITING
22 UNTIL THE PUBLIC WATER SUPPLIERS -- I THOUGHT THEY WERE
23 GOING TO TAKE MORE TIME AND THEY HAD MORE WITNESSES. AND
24 WE HAVE ADDITIONAL EXPERT WITNESSES, BUT I'M WAITING UNTIL
25 THE PUBLIC WATER SUPPLIERS AND STIPULATING PARTIES REST.

26 THE COURT: THAT'S ABOUT READY TO HAPPEN, I THINK.

27 MR. ZIMMER: IS THERE A POSSIBILITY WE COULD GET
28 PROPOSED TESTIMONY FROM MR. ESTRADA, SEE WHETHER MIGHT BE A

1 STIPULATION TO THAT OR A DISCUSSION AS TO WHETHER IT'S
2 RELEVANT OR NOT?

3 MR. KALFAYAN: IT'S POSSIBLE.

4 THE COURT: MAYBE YOU CAN WORK ON THAT, BUT WHAT
5 ABOUT YOUR EXPERTS?

6 MR. KALFAYAN: YES, YOUR HONOR.

7 THE COURT: ARE YOU GOING TO OFFER THOSE AND THE
8 COURT HAS TO RULE ON THAT AND HOPEFULLY MAYBE WE CAN DO
9 THAT TOMORROW.

10 MR. KALFAYAN: THAT'S FINE, YOUR HONOR. THEY HAVE
11 EXPERT REPORTS AND I'VE SHARED THOSE REPORTS. I POSTED
12 THEM ONLINE. THERE IS ONE OTHER REPORT, MAYBE TWO REPORTS,
13 THAT I HAVE NOT, BUT I INTEND TO DO THAT. AND I'M HOPING
14 THAT I CAN GET THEM IN NEXT WEEK.

15 MR. ZIMMER: MY SUGGESTION ON HIS EXPERTS, YOUR
16 HONOR, IS THAT THIS -- FROM MEMORY WHAT SOME OF THOSE
17 EXPERTS WERE PLANNING TO TESTIFY TO, I THINK THERE'S SOME
18 ISSUES THERE AS TO RELEVANCE 352. AND JUST OUT OF RESPECT
19 TO MR. KALFAYAN, RATHER THAN HAVING HIM PAY TO BRING THOSE
20 EXPERTS HERE, WE MIGHT WANT TO HAVE A HEARING ON TO WHAT
21 EXTENT THEIR TESTIMONY WOULD BE.

22 THE COURT: THAT'S WHAT I WAS SUGGESTING, THAT WE
23 START HEARING SOME OFFERS AND SOME DISCUSSION ABOUT WHETHER
24 OR NOT THOSE WITNESSES ARE ACTUALLY GOING TO BE TESTIFYING.
25 AND IT MAY WELL BE THAT JUST THIS SUBMISSION OF THEIR
26 REPORTS MIGHT BE A POSSIBILITY, TOO, I DON'T KNOW. IN ANY
27 EVENT, IF IT'S POSSIBLE, I WOULD LIKE TO MAKE SURE THAT WE
28 ARE BUSY THE REST OF THE WEEK. AND PERHAPS IT'S KIND OF A

1 FAINT HOPE EXCEPT FOR ARGUMENT AND LEGAL ARGUMENT AND
2 ISSUES THAT WE ESSENTIALLY FINISH THIS WEEK, AND THAT WOULD
3 BE IDEAL FOR ME -- FOR THE COURT. I THINK IT WOULD BE
4 IDEAL FOR COUNSEL, ECONOMICALLY AS WELL, AND THERE ARE
5 SOME, YOU KNOW, SERIOUS ISSUES HERE THAT THE COURT
6 APPRECIATES AND I WANT TO MAKE SURE THAT WE HAVE A FULL
7 HEARING REGARDING THOSE, BUT I'M NOT SURE THAT IT TAKES
8 FURTHER EVIDENTIARY BEYOND THE THINGS THAT WE TALKED ABOUT.
9 AND I -- I CAN TELL YOU RIGHT NOW THAT I'M GOING TO BE
10 ASKING FOR MORE BRIEFING ON A COUPLE OF THE ISSUES THAT
11 HAVE ARISEN WITH THE OPPOSITION TO THE SETTLEMENT. AND THE
12 COURT ALSO IS GOING TO HAVE TO MAKE FINDINGS WITH REGARD TO
13 THE DEFAULTS AS WELL AS ANY CONTESTED ISSUES AND WE ALSO
14 HAVE PHELAN PINION HILLS, WHICH I THINK IS STILL KIND OF
15 FLOATING AROUND OUT THERE IN TERMS FURTHER CAUSES OF
16 ACTION.

17 MS. AILIN: ALSO IN TERMS OF SOME ADDITIONAL
18 EVIDENCE BECAUSE WE DO PROPOSE TO HAVE MR. HARDER TESTIFY
19 REGARDING THE MODEL THAT'S BEEN USED BY MR. WILLIAMS. HE'S
20 AVAILABLE THE 5TH AND THE 9TH NEXT WEEK. THE FOLLOWING
21 WEEK HE'S AVAILABLE ANY DAY, BUT HE'S NOT AVAILABLE THIS
22 WEEK.

23 THE COURT: I'M JUST TRYING TO PUT THAT INTO MY
24 LITTLE COMPUTER HERE ABOUT THE FACT HE'S ALREADY TESTIFIED
25 SIGNIFICANTLY DIFFERENT, SOMEWHAT BUT NOT TOTALLY,
26 DIFFERENTLY THAN WHAT I'VE HEARD FROM THE EVIDENCE IN THIS
27 CASE, AT THIS POINT.

28 MS. AILIN: AND I THINK HIS TESTIMONY ABOUT THE

1 MODEL SYSTEM ACTUALLY IN TERMS OF WHAT'S OCCURRED IN COURT
2 AS OPPOSED TO A DEPOSITION.

3 THE COURT: WE MAY HAVE TO EVALUATE THAT ISSUE. IN
4 ANY EVENT, LET'S TALK ABOUT THAT AND I SUSPECT I'M GOING TO
5 HEAR SOME OPPOSITION.

6 MR. MCLACHLAN: THERE WAS ONE OTHER ISSUE YESTERDAY
7 WHICH I DON'T THINK WE CLOSED THE LOOP ON, WHICH WAS
8 MR. KALFAYAN INDICATED THAT HE WAS GOING TO IDENTIFY SOME
9 OF THE STIPULATING PARTY WITNESSES THAT HE INTENDED TO
10 CROSS-EXAMINE AND I DON'T BELIEVE THAT'S OCCURRED.

11 THE COURT: NO, HE HAS NOT DONE THAT TO THIS POINT,
12 BUT I SUSPECT THAT HE AND MS. BRENNAN ARE GOING TO BE
13 TALKING ABOUT THAT THIS EVENING SO THAT HE'LL GIVE US AN
14 ANSWER TOMORROW MORNING.

15 MR. JOYCE: YOUR HONOR, IF IN FACT THEY CHOSE TO
16 WANT TO CROSS EXAMINE MR. VOSS, MY DECLARANT, I NEED TO
17 KNOW THAT SOONER RATHER THAN LATER.

18 MR. KALFAYAN: YOUR HONOR, I RENEW THE OBJECTION
19 THAT I MADE YESTERDAY. IT'S 140 PARTIES THAT ARE TAPPING
20 ME ON THE SHOULDER SAYING, PLEASE LOOK AT MY EVIDENCE, MY
21 WITNESS CAN ONLY COME ON THIS TIME, THIS TIME. IT'S JUST
22 AN UNDULY -- UNREASONABLY SHIFTING THE BURDEN ON THE CLASS
23 TO LOOK AT ALL THIS INFORMATION DIGEST THE INFORMATION AND
24 DETERMINE WHETHER OR NOT -- WHETHER OR NOT TO
25 CROSS-EXAMINE.

26 THE COURT: EVERY COUNSEL HAS BURDENS. THE COURT'S
27 CONCERNED WITH, NO. 1, THE BURDEN OF PROOF, AND COUNSEL
28 SHOULD BE CONCERNED ABOUT THE RISK OF FAILURE TO SUSTAIN

1 THEIR OWN BURDEN AND RISK OF LOSS, SO THAT'S ALL I CAN TELL
2 YOU AT THIS POINT.

3 MR. KALFAYAN: YOUR HONOR --

4 THE COURT: WE'LL HAVE SOME MORE TIME TO TALK BUT WE
5 NEED TO GET THIS STUFF MOVED.

6 MR. KALFAYAN: MAY I INQUIRE, WILL MR. WAGNER AND
7 MR. BINDER BE CALLED TO TESTIFY THIS WEEK?

8 MR. ZIMMER: THEY'RE NOT AVAILABLE THIS WEEK. WHAT
9 I WOULD SUGGEST WITH REGARD TO THE EXPERTS, YOUR HONOR, IS
10 WHAT YOU SUGGESTED. I THINK THAT IF THERE ARE ASPECTS OF
11 EXPERT TESTIMONY, THE FIRST QUESTION IS, IS IT RELEVANT?
12 IS IT ADMISSIBLE? THE SECOND QUESTION IS IF WE CAN DO IT
13 BY STIPULATION, I THINK THAT CAN WORK BOTH WAYS. MS. AILIN
14 HAS SOMETHING FROM PHELAN, IF IT'S SOMETHING FROM MR.
15 CARTER, IT'S --

16 THE COURT: THIS DOESN'T HAVE TO BE ON THE RECORD.
17 WE'RE DONE.

18

19 (PROCEEDINGS ADJOURNED TO WEDNESDAY,
20 SEPTEMBER 30, 2015 AT 9:00 A.M.)

21

22 (THE NEXT PAGE NUMBER IS 25601.)

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OPINIONS

- 1 - The Physical Solution as outlined in the Stipulation of Settlement (26-Feb-15)), will restore a hydrologic balance in the Antelope Valley basin. The Physical Solution has three main components:
 - Ramp Down Pumping to Native Safe Yield
 - Import Supplemental Water to Meet Demand
 - Monitor and Manage the Basin using Management under guidance of a Watermaster
- 2 - Pumping PPHCSD Well 14 at 1,200 afy will decrease in storage of 700 afy within the AVAA

BASIS FOR OPINION

- Stabilization and recovery of groundwater levels and subsidence based on groundwater model simulations
- Water levels, subsidence and water balance
- Recharge is greater than or equal to extraction and the system will be in hydrologic balance or a state of recovery

Antelope Valley Groundwater

USGS GROUND WATER MODEL ANTELOPE VALLEY

Model	Year	Reference	Rows/Columns	Layers	Totals
Original	2003	Leighton and Phillips USGS WRI Report 03-4016	43/60	3	17,740 57,200 17,740
MOD-1	2012	Tracy Ishikawa and Adam Siade - USGS	130/118	4	61,360 320,118 61,360
1 - Lacustrine deposits 150 ft 2 - Upper Aquifer 400 ft 3 - Middle Aquifer 400 ft 4 - Lower Aquifer 550 ft					
MOD-2	2014-2015	GEOSCIENCE/LSCE	130/118	4	61,360 320,118 61,360
1 - Lacustrine deposits 150 ft 2 - Upper Aquifer 400 ft 3 - Middle Aquifer 400 ft 4 - Lower Aquifer 550 ft					

USGS Original Model

Simulation of Ground-Water Flow and Land Subsidence in the Antelope Valley Ground- Water Basin, California

By David A. Leighton and Steven P. Phillips

U.S. GEOLOGICAL SURVEY

Water-Resources Investigations Report 03-4016

Prepared in cooperation with the

ANTELOPE VALLEY WATER GROUP

7212-53

Sacramento, California
2003

PWS-0543-00004

MOD-1

Groundwater-Flow and Land-Subsidence Model of Antelope Valley, California

By Adam J. Siede, Tracy Nishikawa, Diane L. Lewis, Peter Martin, and
Steven P. Phillips

Prepared in cooperation with the Los Angeles County Department of Public
Works, Antelope Valley-East Kern Water Agency, Palmdale Water District, and
Edwards Air Force Base

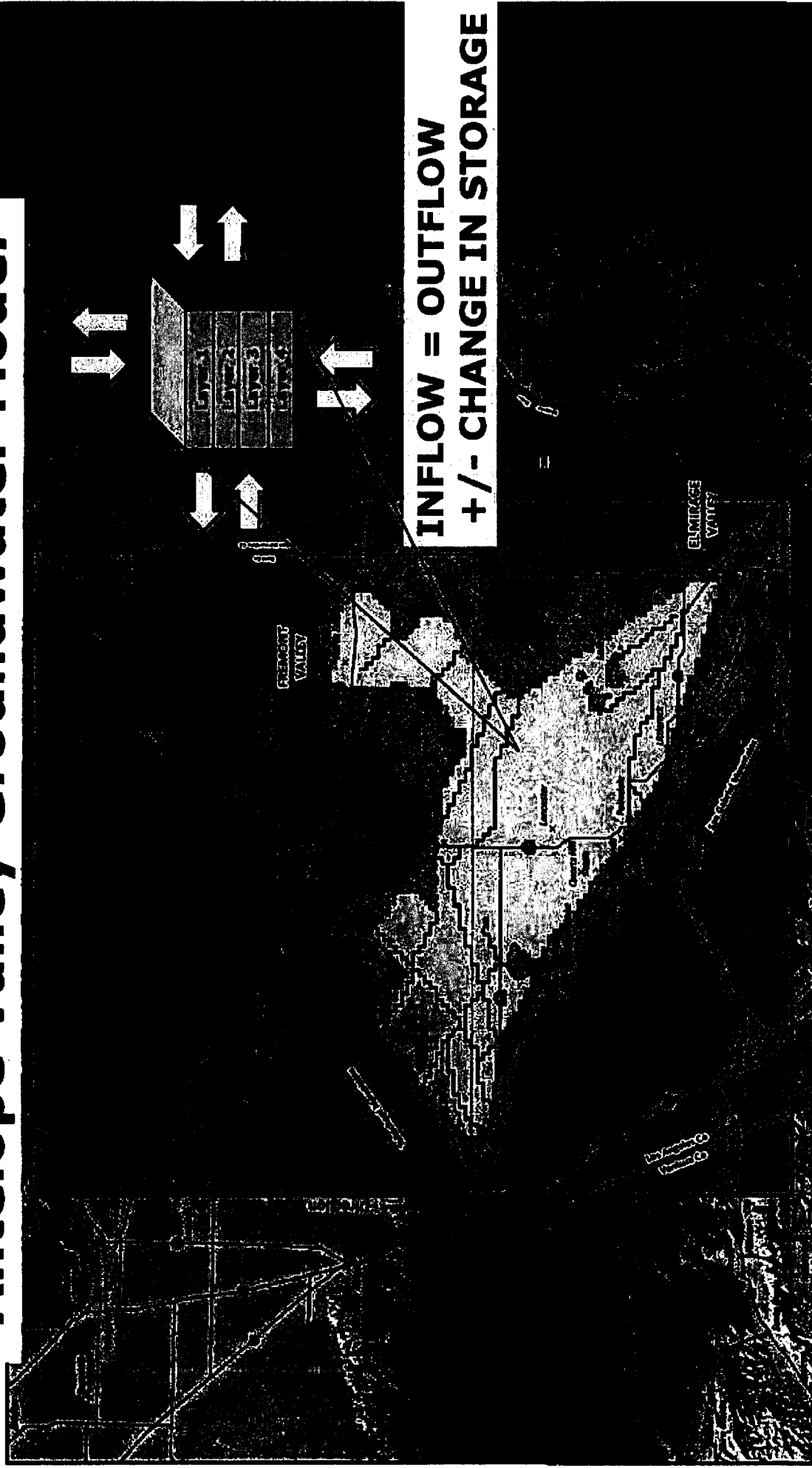
Scientific Investigations Report 2014-5166

U.S. Department of the Interior
U.S. Geological Survey

PWS-0543-00005

Antelope Valley Groundwater Model

BEST BEST & KIRZ



800-348

Prepared by: DWR Map Production Unit (MUP) June 11.
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PWS-0543-00006

SUBAREAS



5

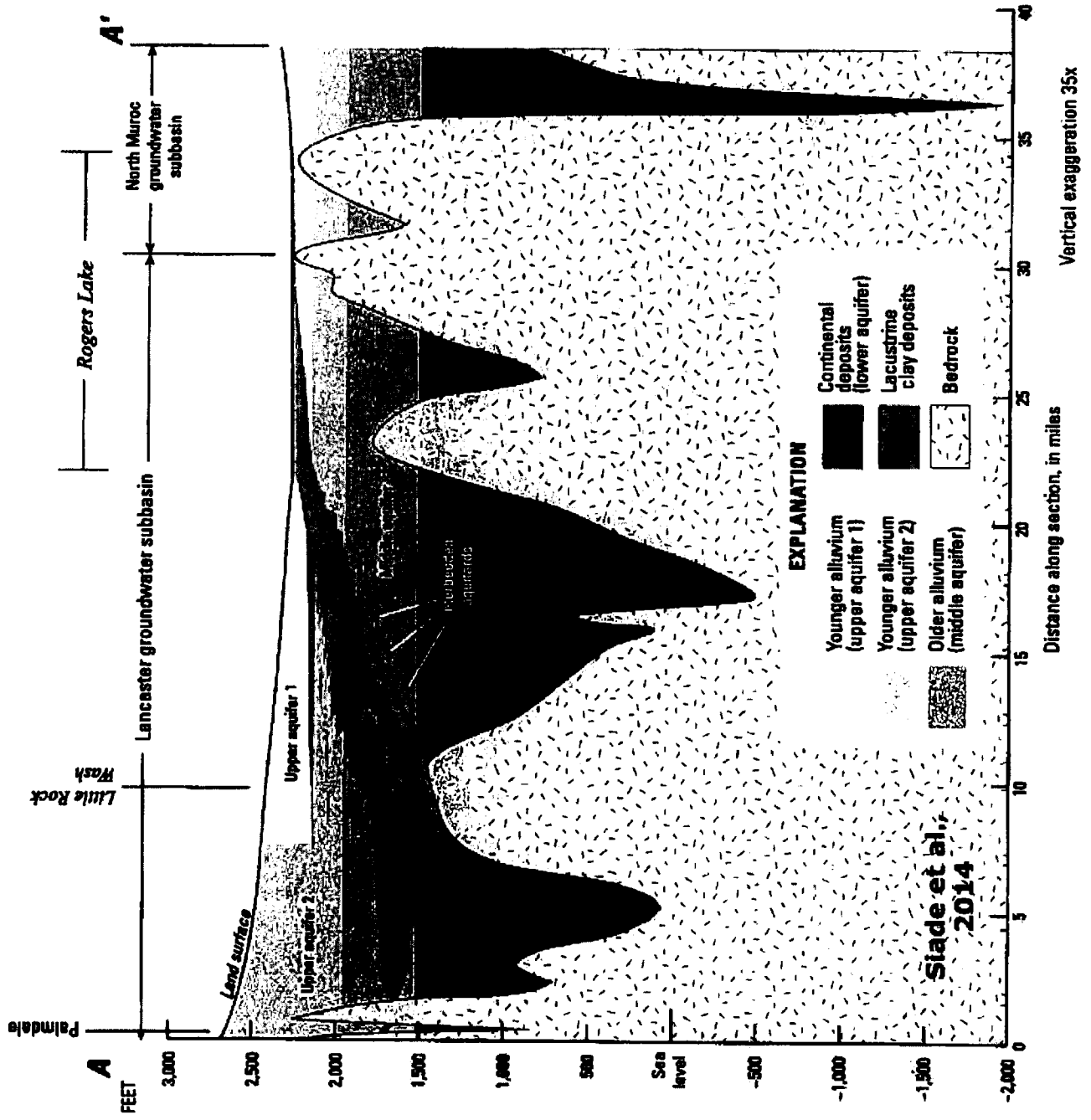
EXHIBIT

PROXY

THE NEW YORK PUBLIC LIBRARY

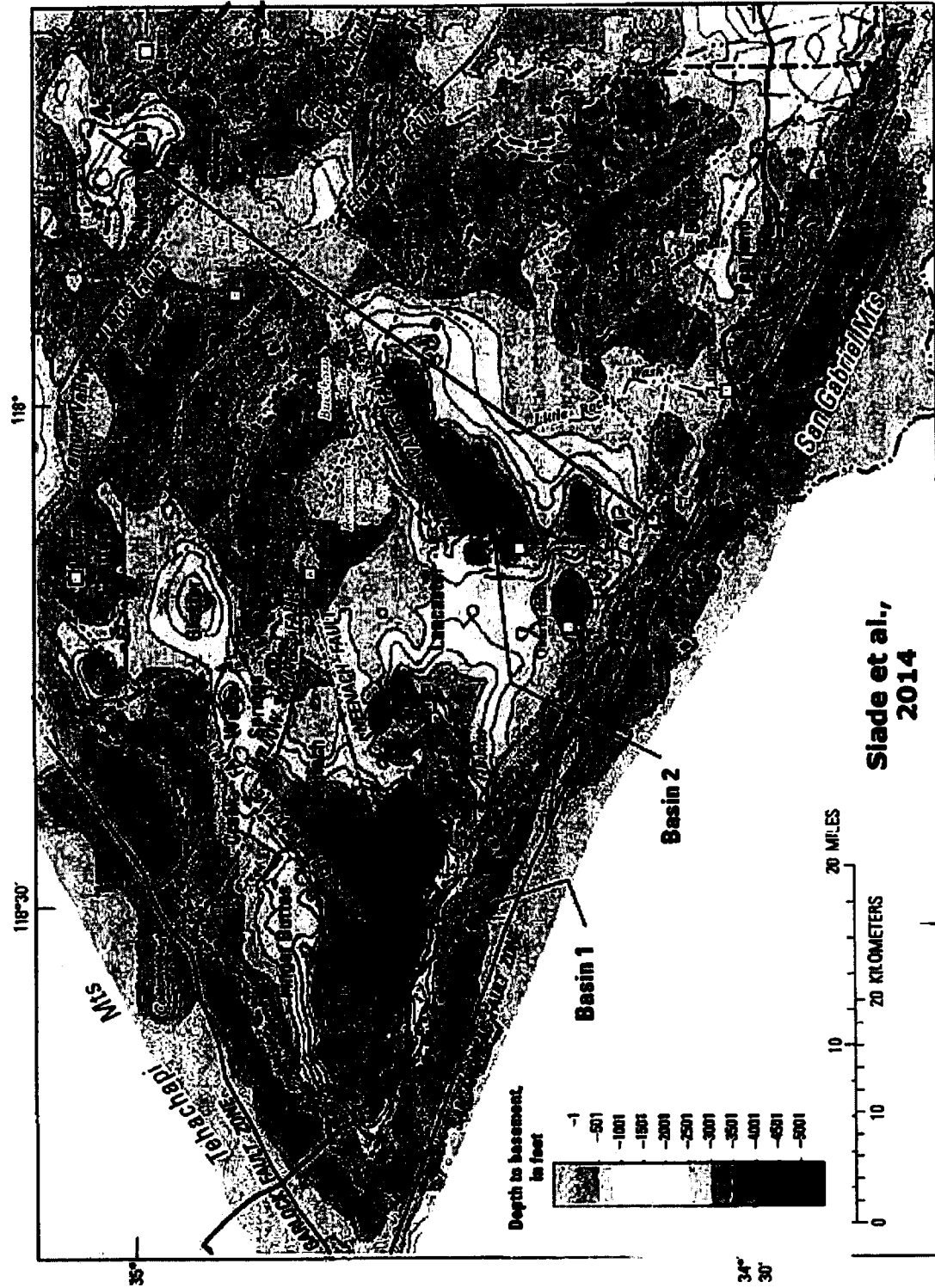
**Siade et al.,
2014**

PWS-0543-00008



PWS-0543-00009

Depth to Basement



PWS-0543-00010

1915 Groundwater Levels

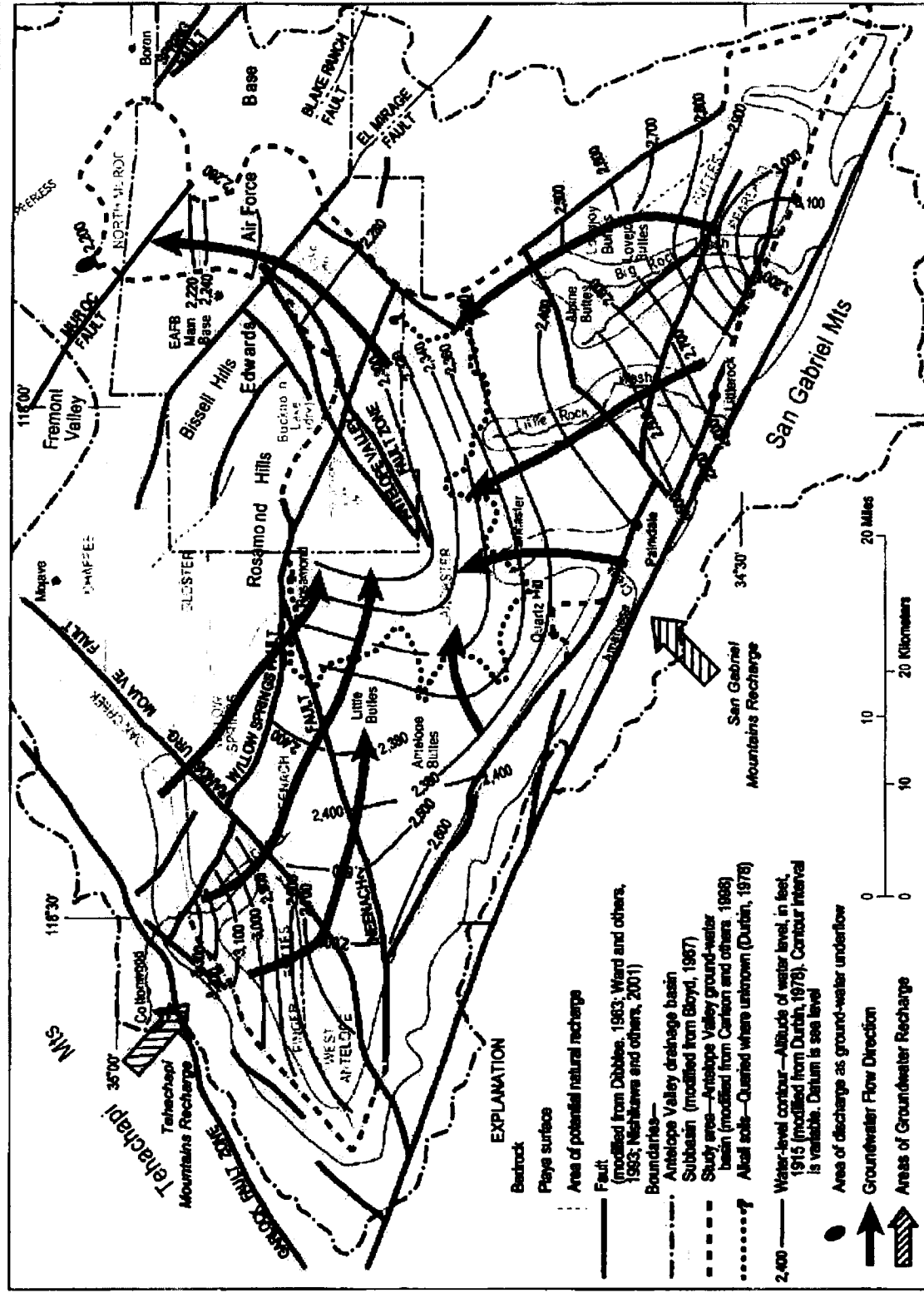
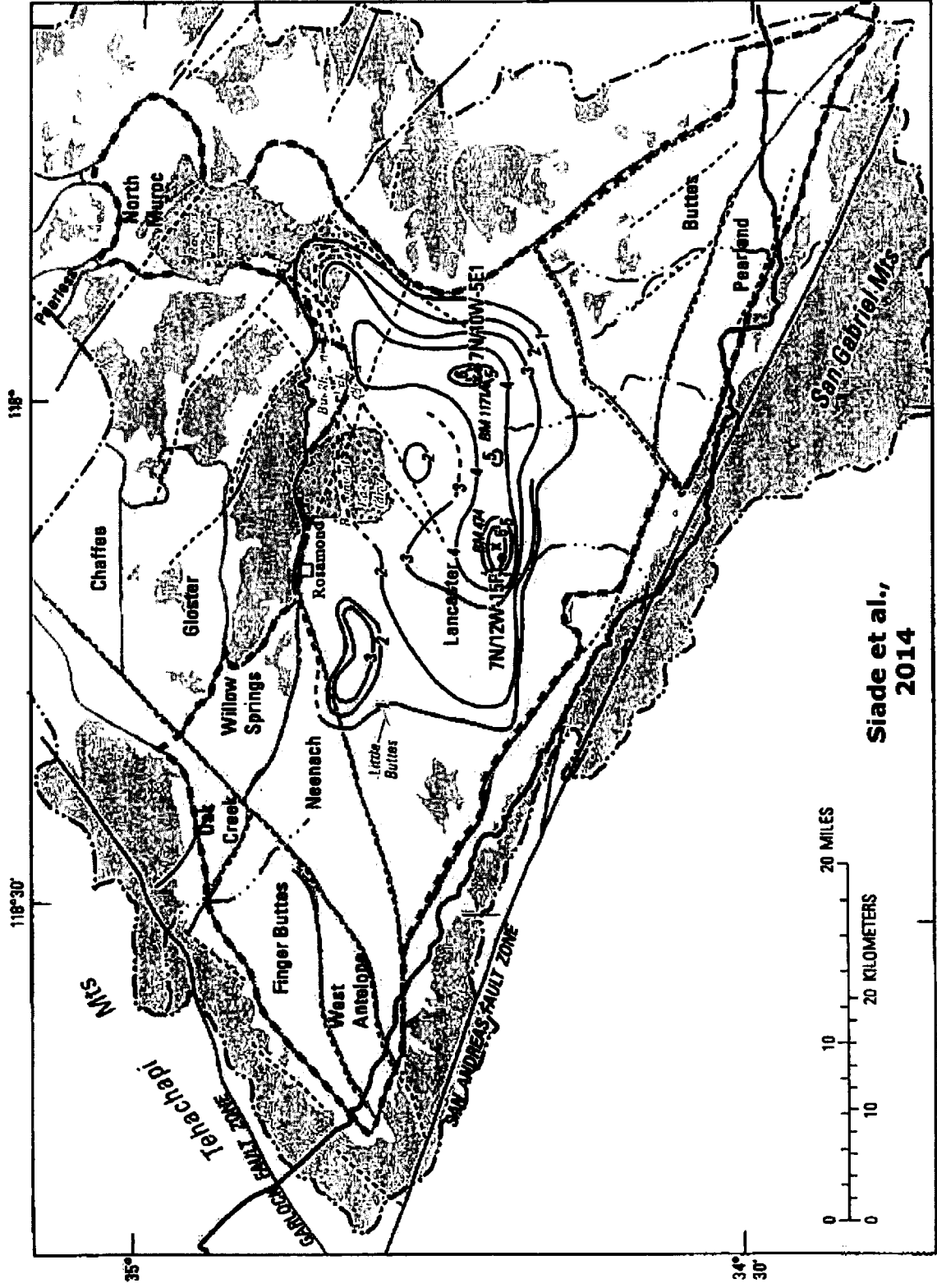


Figure 3.2 from Durbin, 2008 Antelope Valley Groundwater Basin Subbasin Analysis

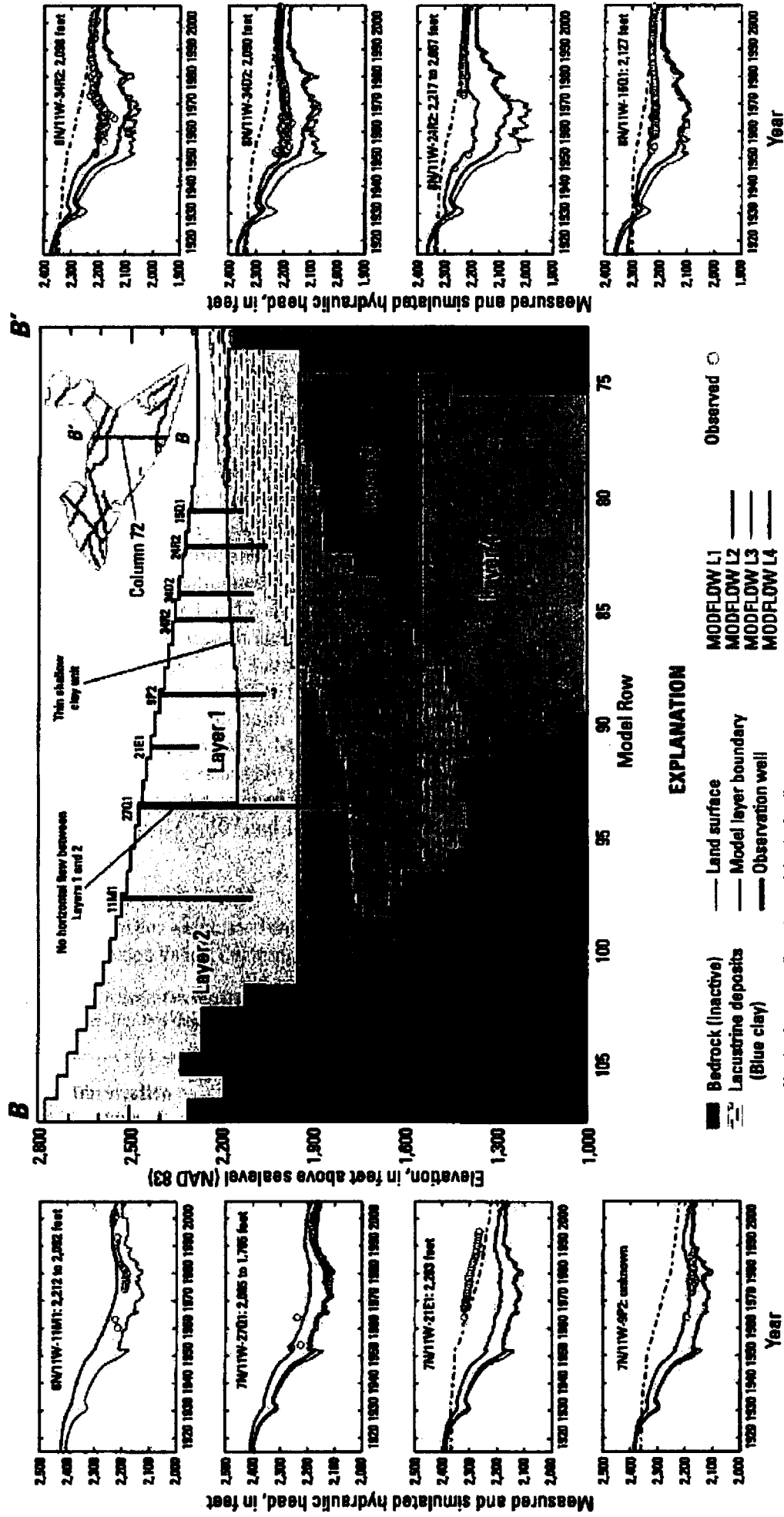
Land Subsidence 1930



Siade et al.,
2014

PWS-0543-00012

Groundwater Model



Siade et al.,
2014

Model Calibration

- **Purpose of Calibration**

- to make the model as accurate as possible
- calibration period 1915-2005

- **Method**

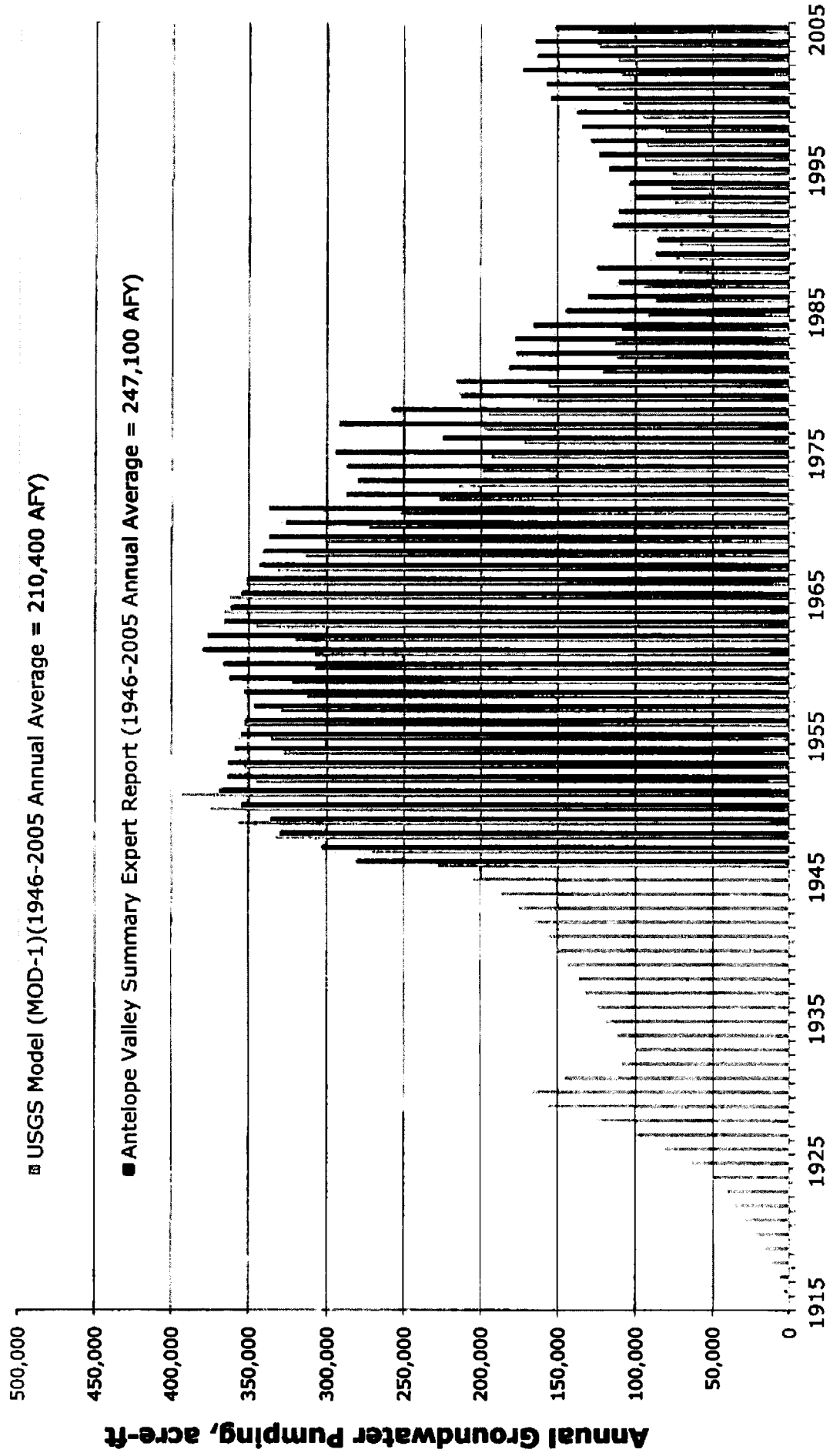
Calibration is performed using the historical

matching technique whereby the model is adjusted

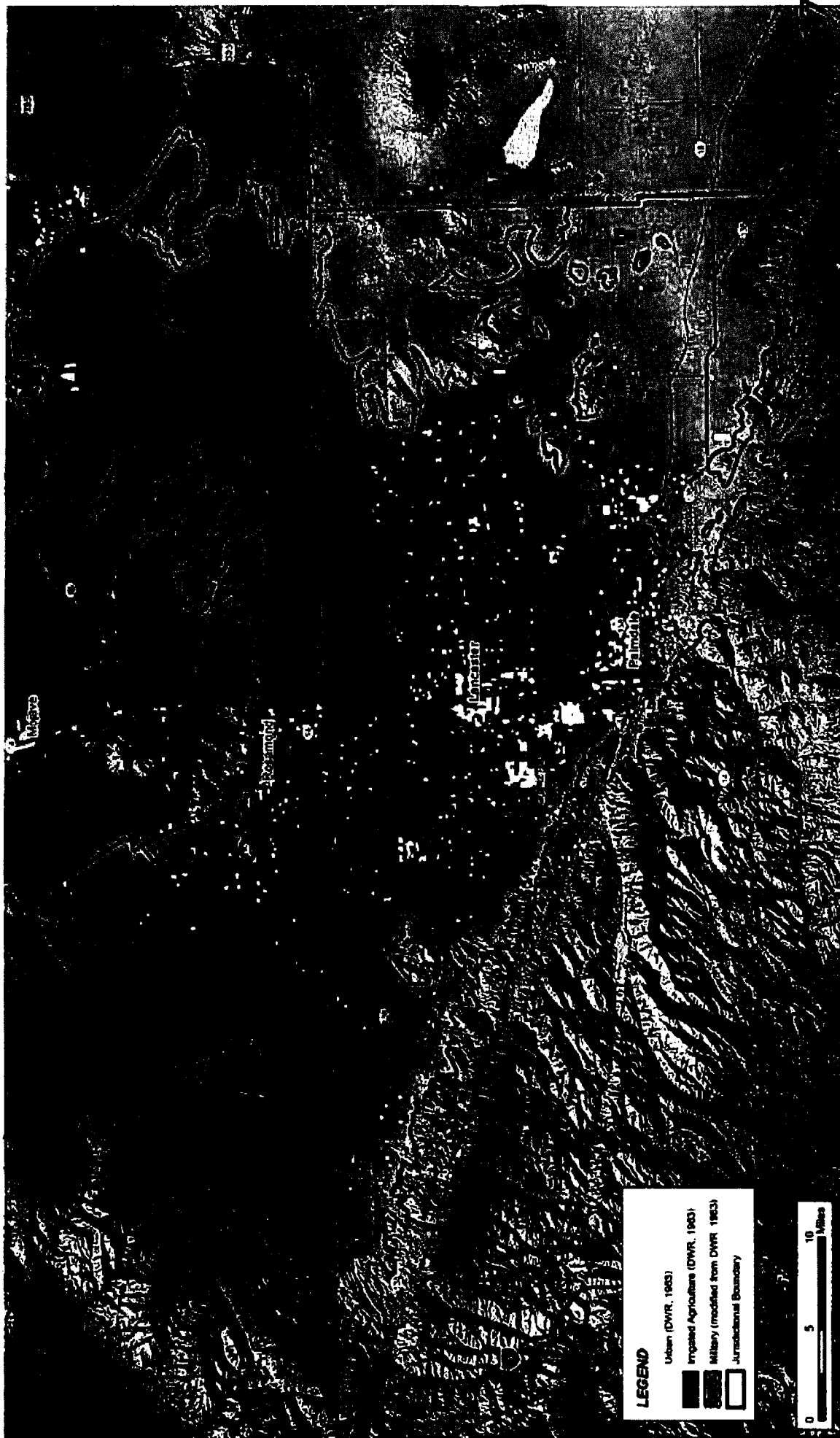
to match historical water levels and supplies

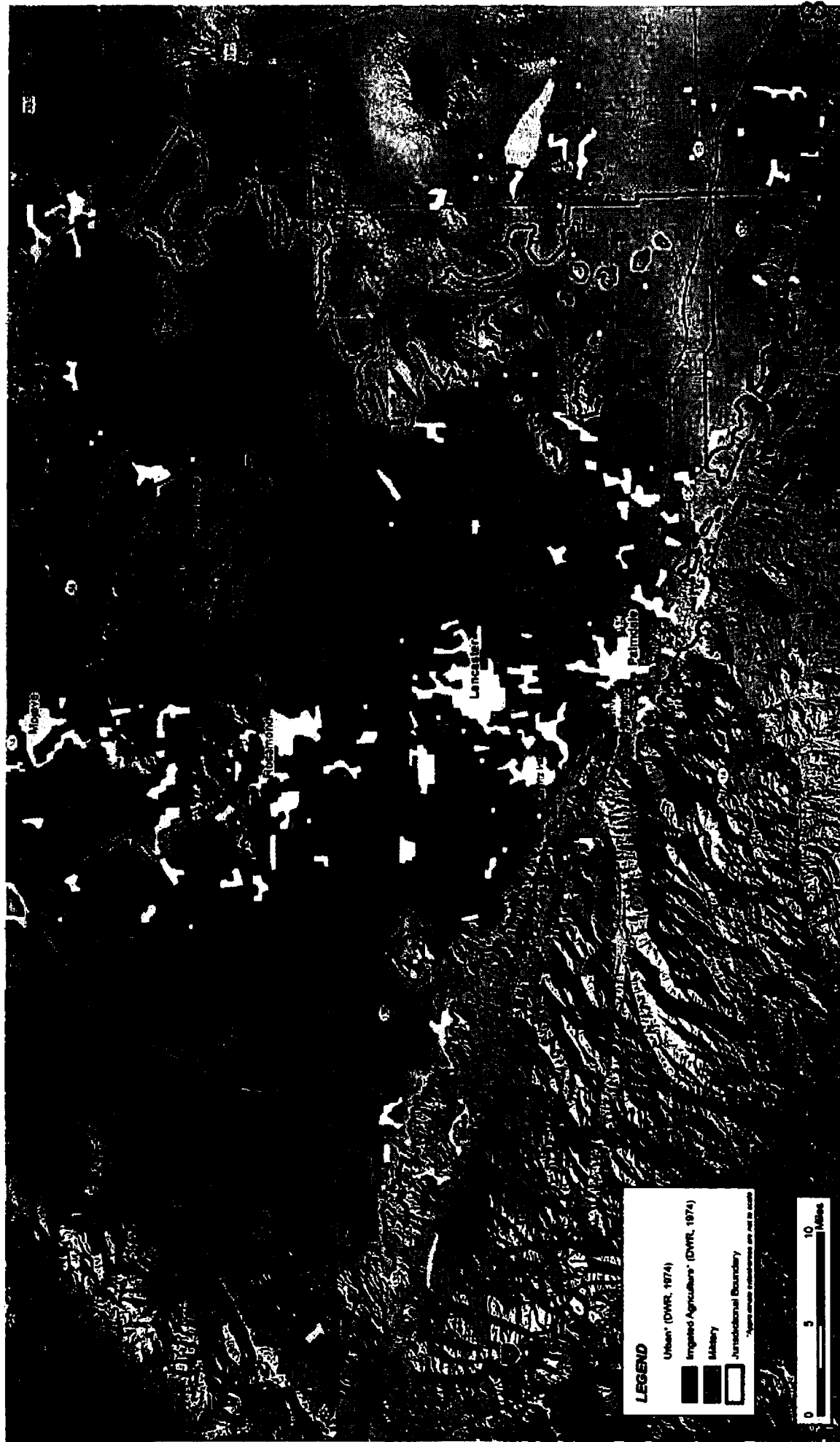
over the calibration period (1915-2005)

Adjustment of Pumping in MOD-2



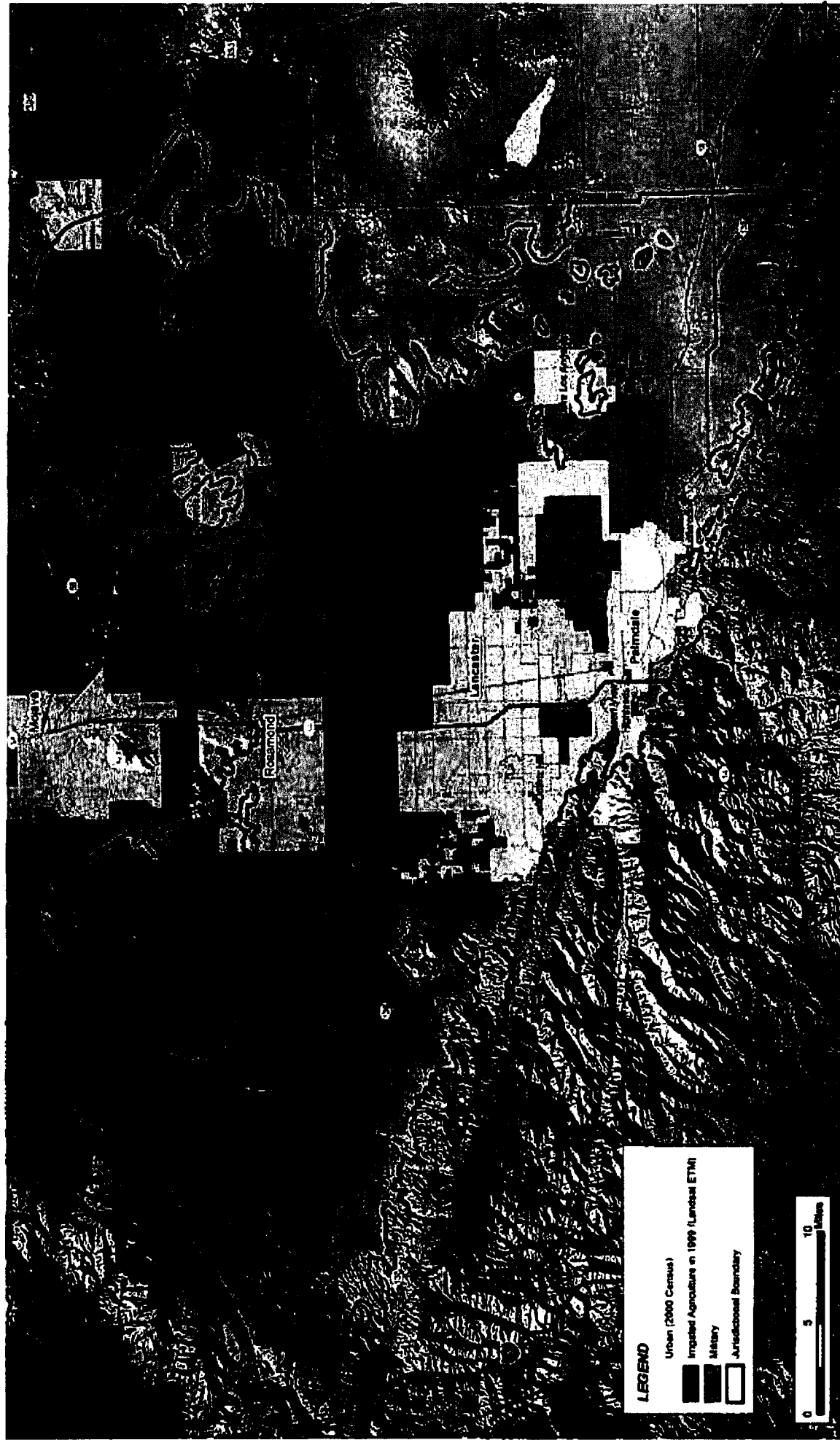






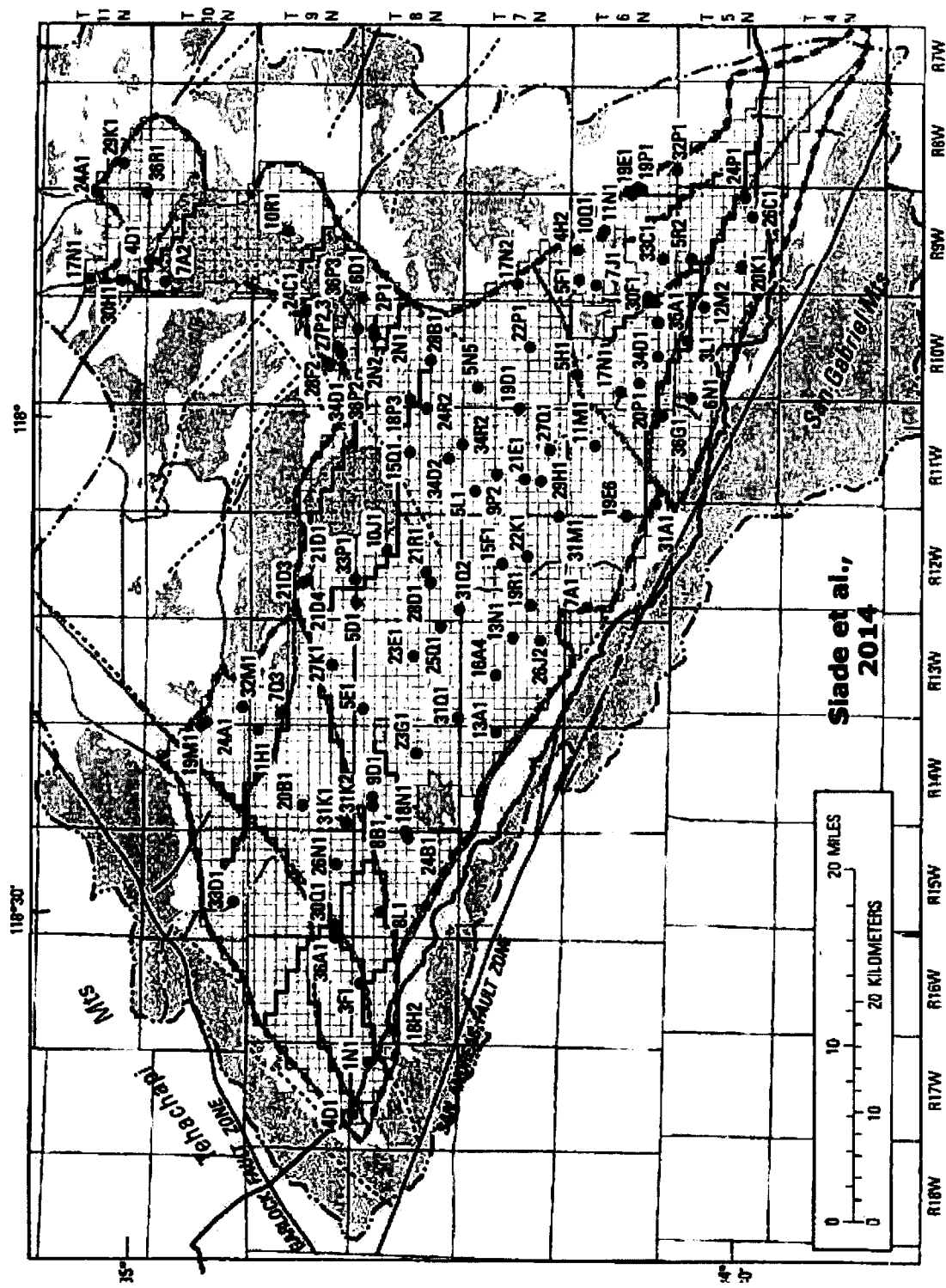








Wells Used for Calibration



Siade et al.,
2014

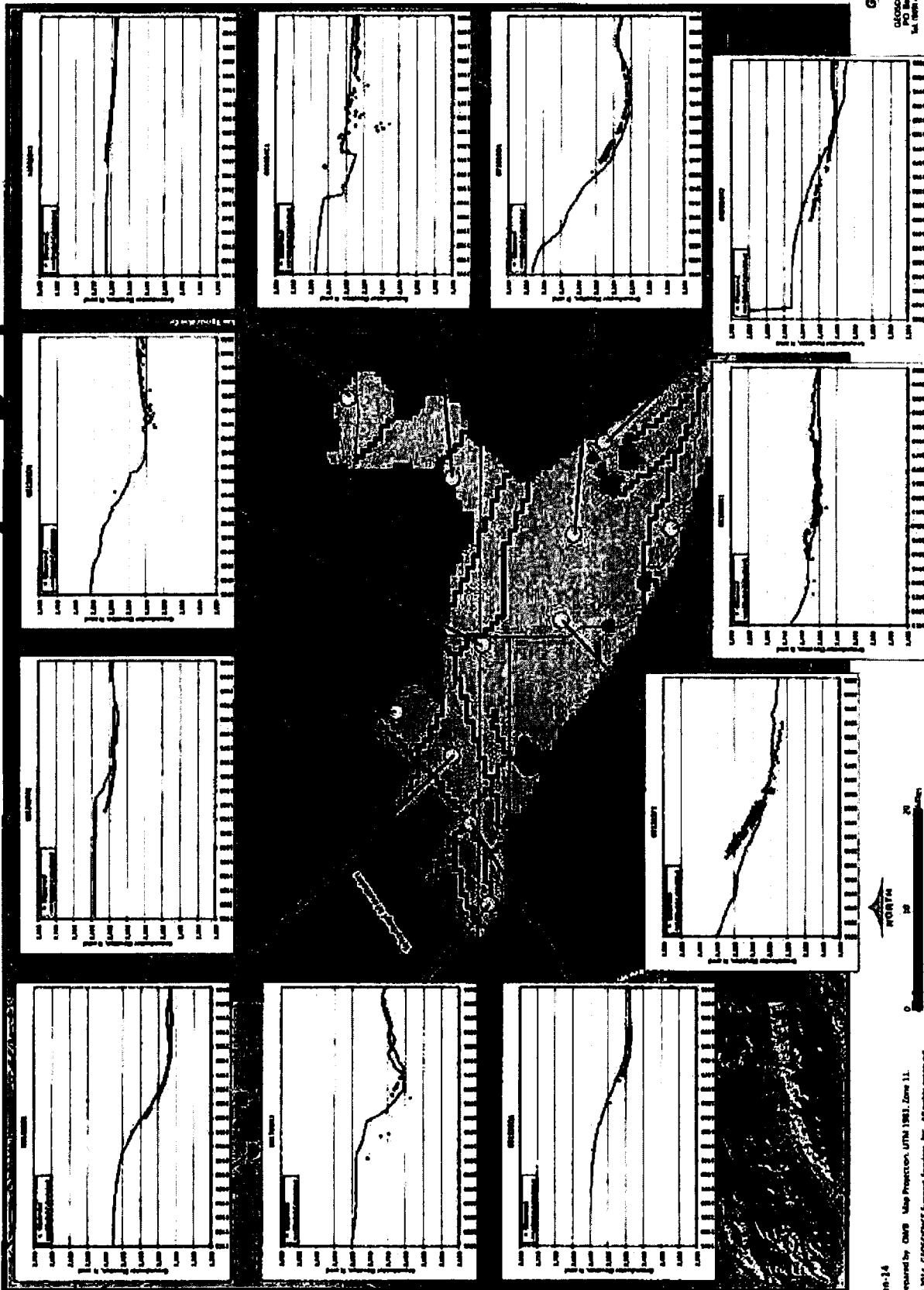
PWS-0543-00023

Calibration Hydrographs

MOD 2 HYDROGRAPH
CALIBRATION
1915-2005

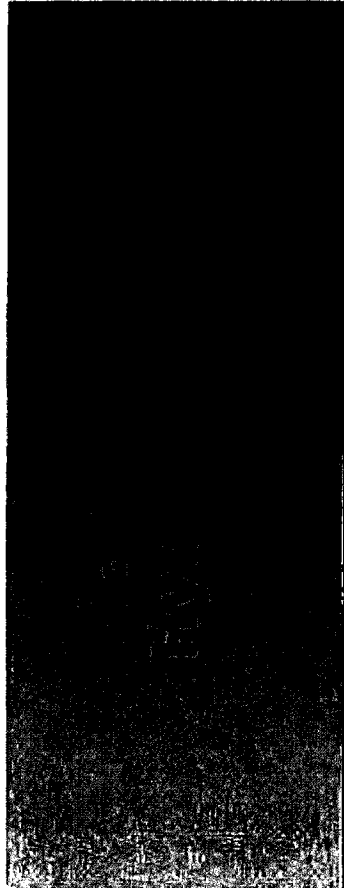
EXPLANATION

-  Model Boundary
-  No-Flow Model Cell
-  Antelope Valley Area of Adjudication
-  Selected Well with Hydrograph
-  County Boundary
-  Model Groundwater Flow Barrier

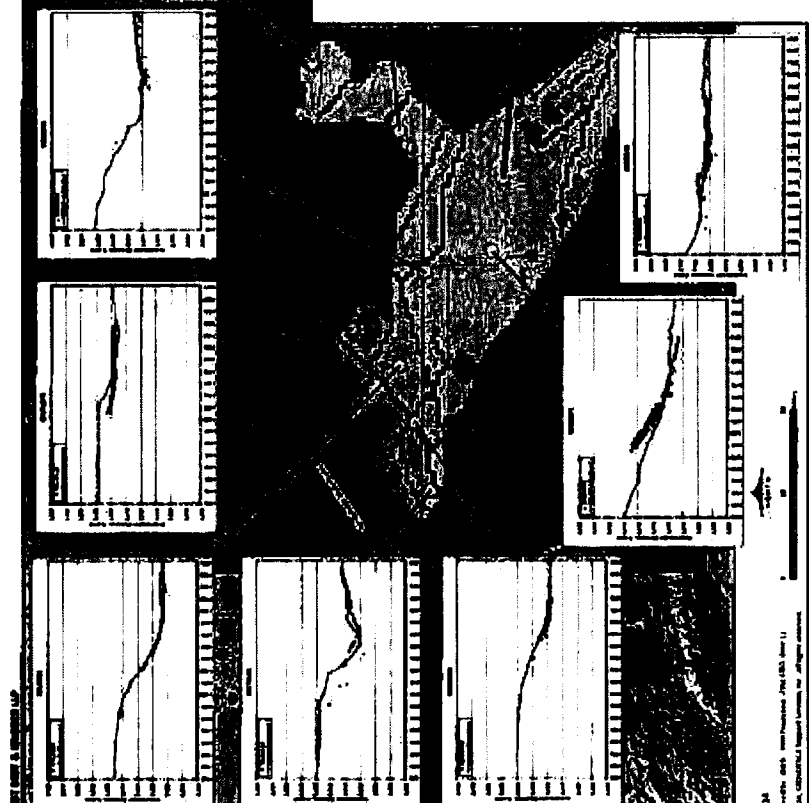
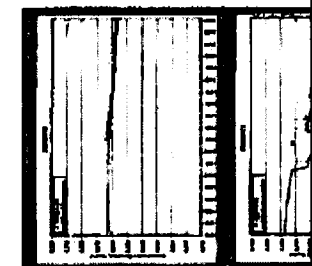
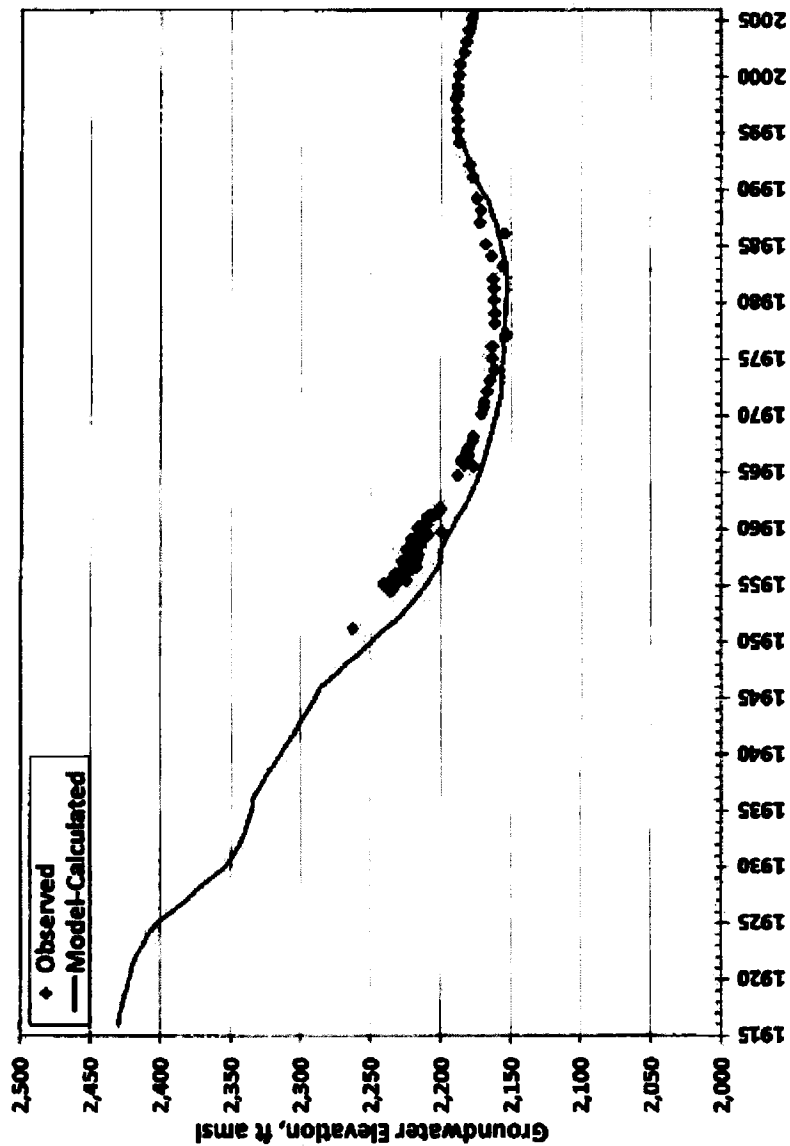


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Map 14
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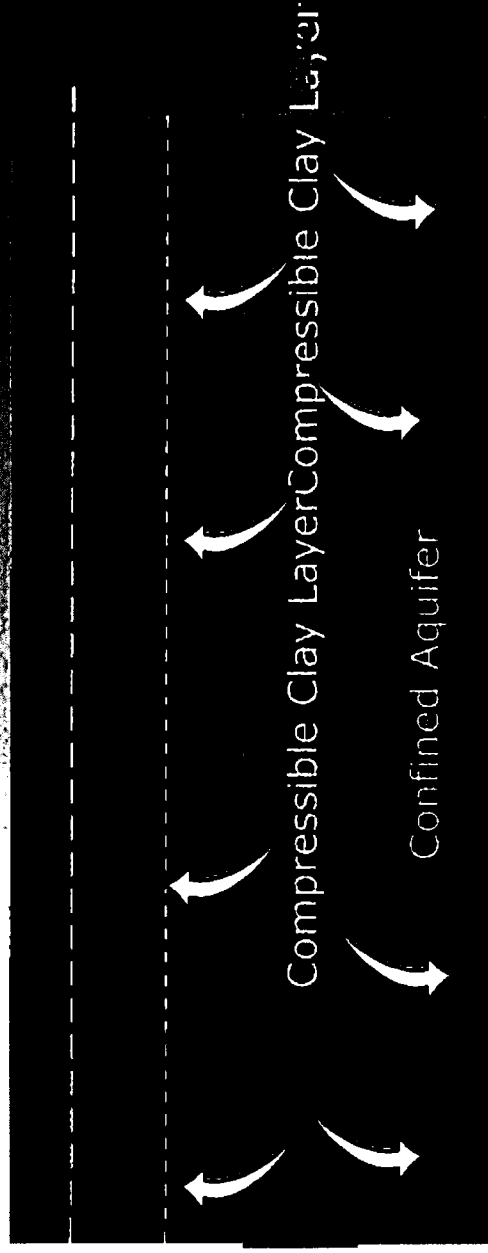
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Subsidence Due to Ground Water

Initial Water Level

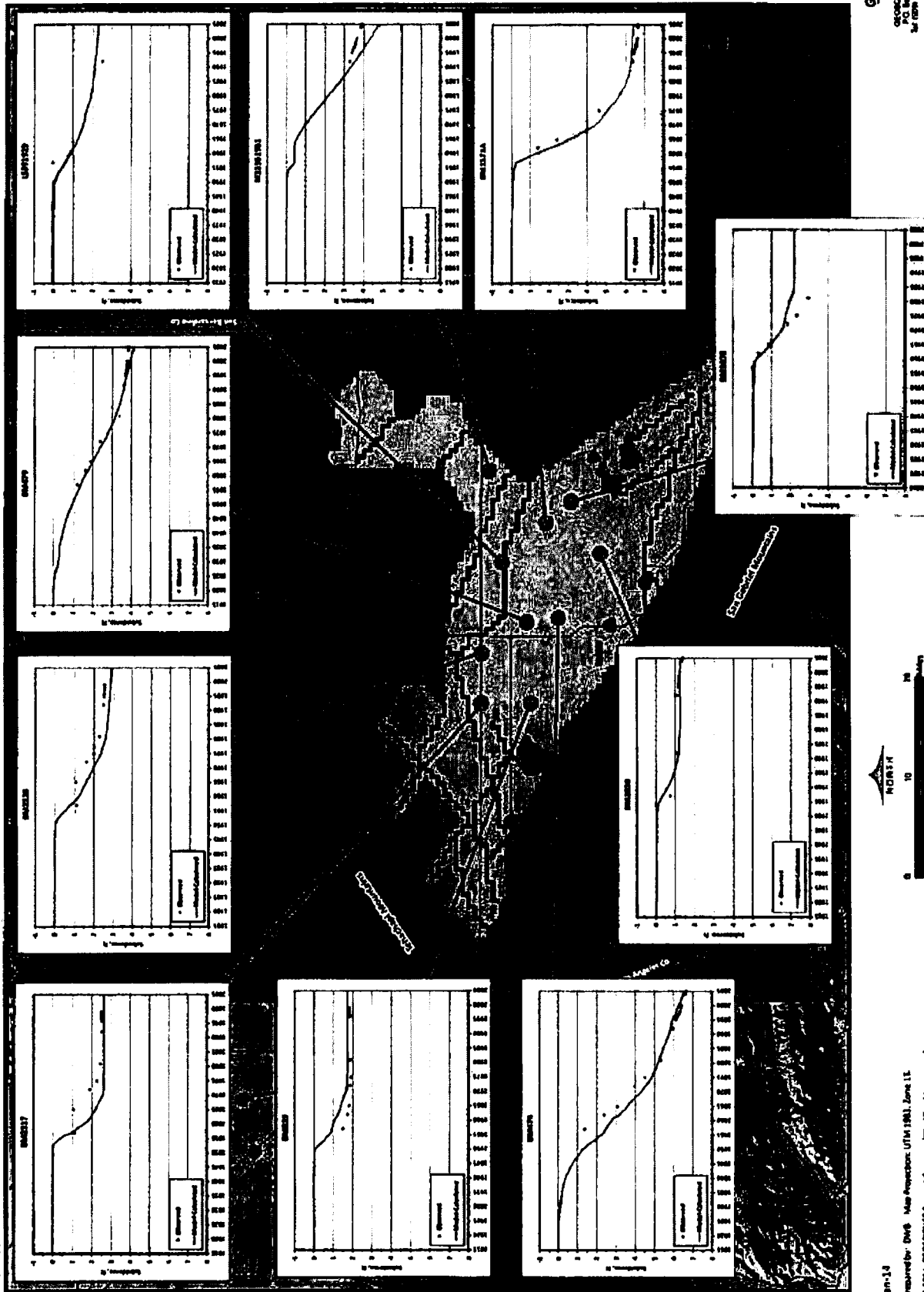
Water Level Lowered
Due To Pumping



Doubly Draining Aquitard Theory

THE WISCONSIN & IOWA LEGAL

**MOD 2 COMPACTION
CALIBRATION
1915-2005**

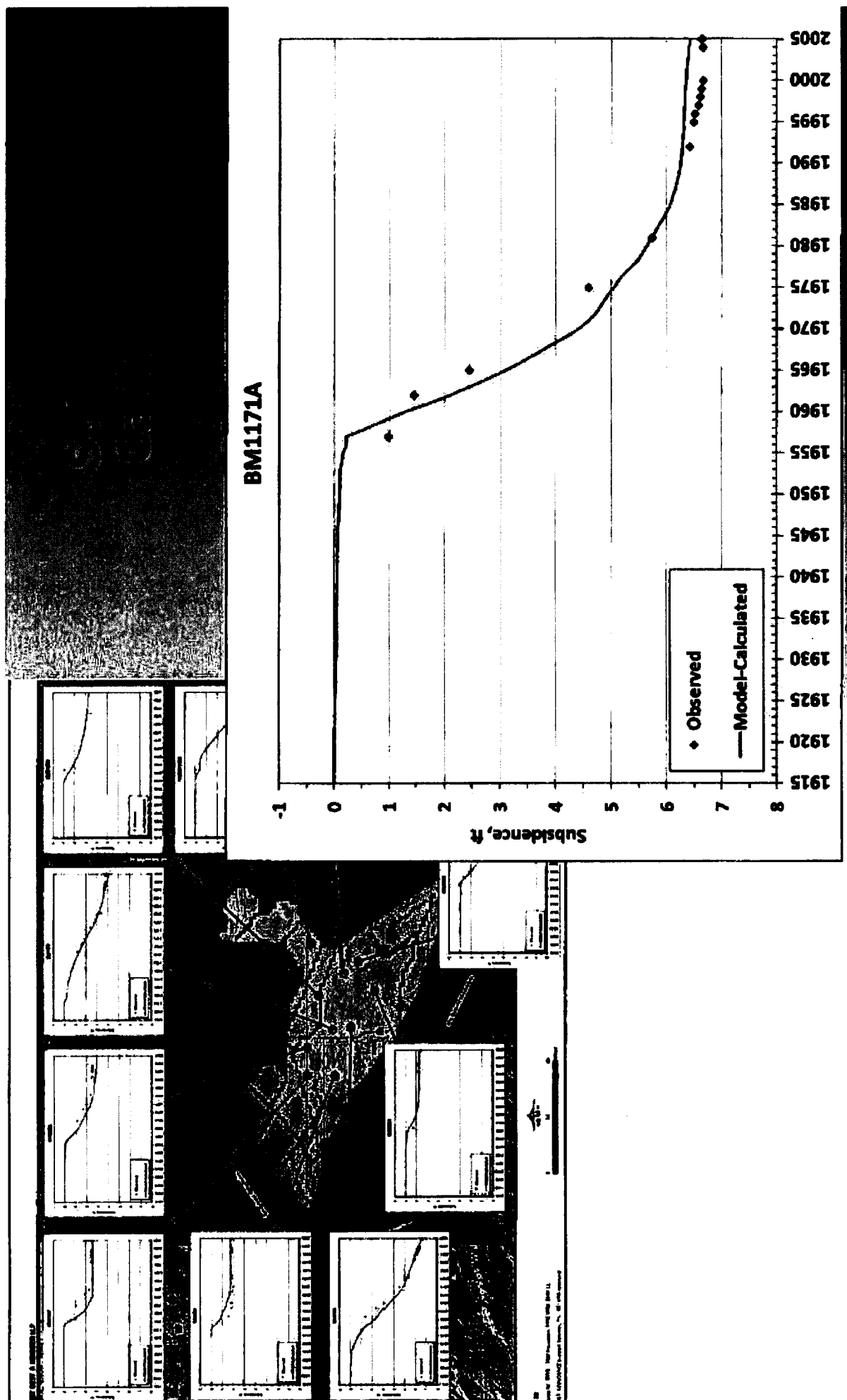


Jan-14
Approved by: DMS Map Inspector UTM 1981, Zone 11.
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PWS-0543-00027



PWS-0543-00028

Model Calibration Results

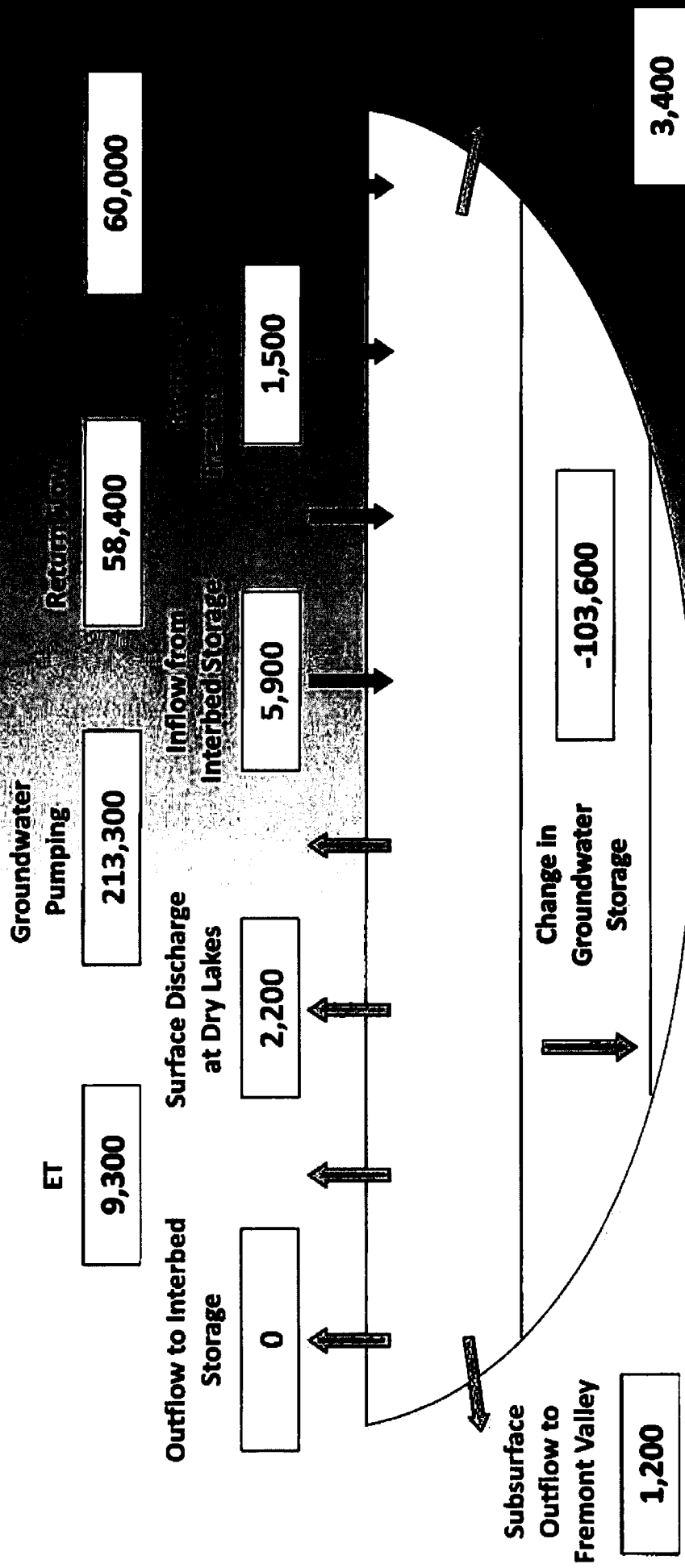
Parameters	Water Level	
	MOD-1 (USGS)	MOD-2 (GEOSCIENCE/LSCE)
Number of Wells	124	124
Number of Measurements	5,918	5,918
Average Residuals, ft	-5.67	-1.76
Standard Deviation of Residuals, ft	31.03	30
Sum of Squares of Residuals, ft ²	5,889,565	5,345,779
Relative Error	2.35%	2.27%

Model Calibration Results - Land

Parameters	Land Subsidence	
	MOD-1 (USGS)	MOD-2 (GEOSCIENCE/LSCE)
Number of Benchmarks	32	32
Number of Measurements	268	268
Average Residuals, ft	-0.08	0.06
Standard Deviation of Residuals, ft	0.73	0.43
Sum of Squares of Residuals, ft ²	143.62	92.48
Relative Error	10.92%	8.76%

PWS-0543-00030

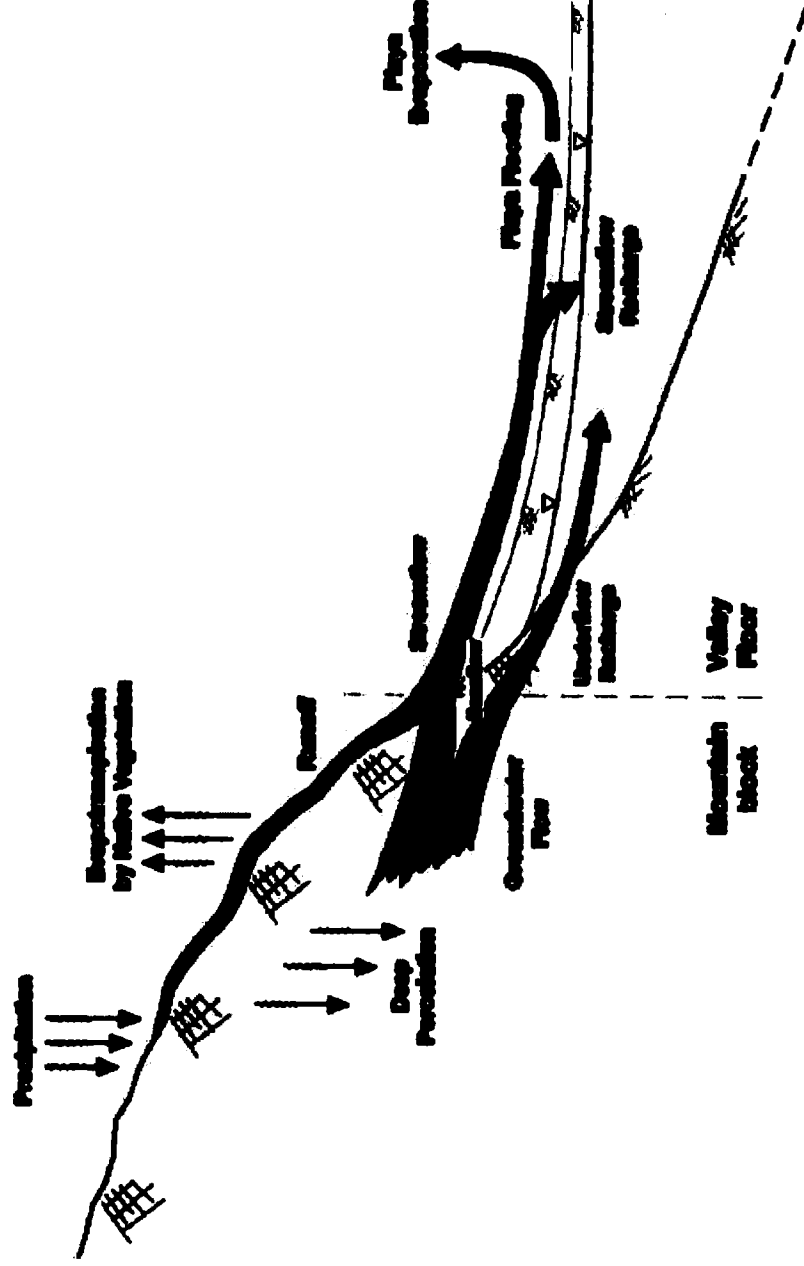
Groundwater Budgets for Interbed Annual Average - 1915 to 2005 (ft³/day)



Modeling the Physical System

- Scenario Hydrology = Average hydrology from Expert Summary Report
 - Natural Recharge = 60,000 afy
 - NSY = 82,300 afy
 - SSY = 27,700 afy
 - TSY = 110,000 afy
- Model Input Data
 - Existing pumping (2011-2012)
 - Rampdown Pumping to NSY
- Pumping in Basin
 - Public Water Suppliers
 - Land Owners
 - Small Pumps
 - Federal
 - State of CA
 - City of Lancaster
 - PPHCSD

Natural Recharge Independent Watershed Analyses



**Natural Recharge =
Streamflow Recharge + Underflow Recharge**

Method (from Durbin)

Evapotranspiration	55,000 acy
Precipitation Yield	58,400 acy
Change	58,000 acy

Scalmanini
Exhibit 86

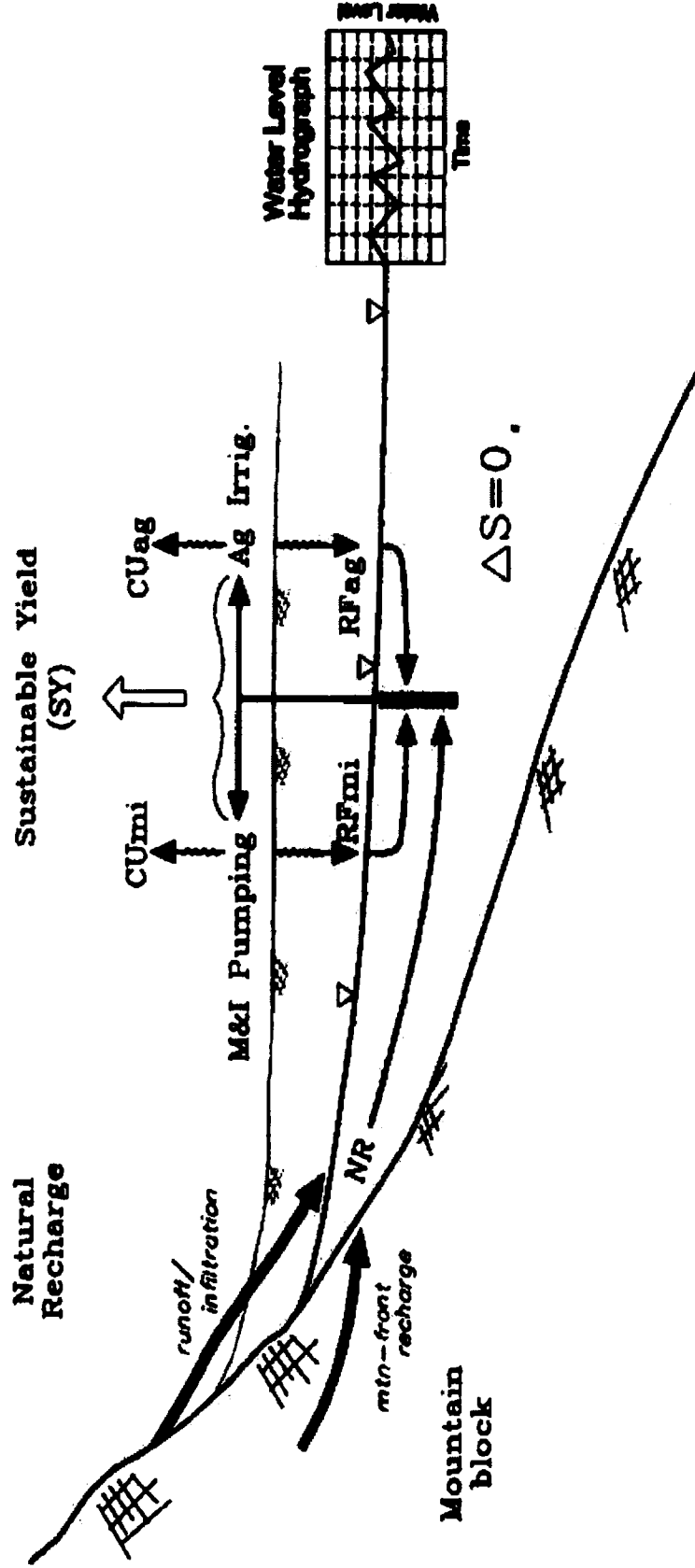


Natural Recharge Estimate

- Water Balance (Durbin)
(Yield = Precip - Evap) (1949 - 2003) = 12,000 cfs
- Chloride Mass Balance (1995 - 2003) = 12,000 cfs
- Precipitation - Yield Modeling (1949-2003) = 12,000 cfs
- Wildermuth_Water Balance = 57,000 cfs

Average Natural Recharge Estimate = 12,000 cfs

Native Safe Yield

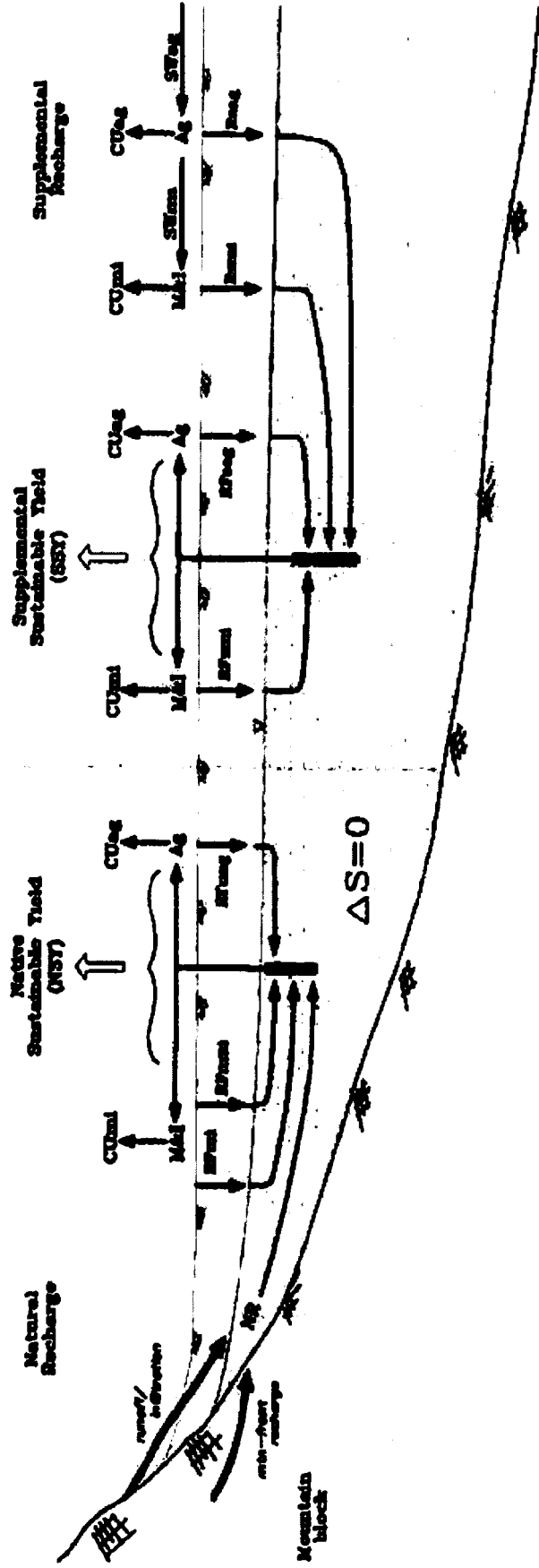


Sustainable Yield (SY) = Natural Recharge (NR) +
 Ag Return Flows (RFag) +
 M&I Return Flows (RFmi)
 (when S = constant over time)

Native Safe Yield

Land Use Period	Land Uses		Natural Recharge (afy)	Ag. Return Flows (afy)	M&I Return Flows (afy)	Recycled Return Flows (afy)	Native Sustainable Yield (afy)
	Ag (%)	M&I (%)					
Early- All Ag.	100	0	60,000	20,000	0	0	80,000
1995-1999	51.9	48.1	60,000	10,680	11,120	500	82,300
1996-2005	53.2	46.8	60,000	10,950	10,850	500	82,300
2005	51.5	48.5	60,000	10,600	11,200	500	82,300

Supplemental Safe Yield



Supplemental Sustainable Yield (SSY) =
 Recharge from Ag. Use of Supp. Water (Rsag) +
 Recharge from M&I Use of Supp. Water (Rsmi) +
 Ag. Supp. Return Flows (RFsag) +
 M&I Supp. Return Flows (RFsmi)

Supplemental Safe Yield

Land Use Period	Supplemental Water Use (afy)		Supplemental Recharge (afy)		Return Flows from Supp. Recharge (afy)		Supplemental Sustainable Yield (afy)		
	Ag	M&I	Ag	M&I	Ag	M&I	Ag	M&I	Total
1995-1999	19,550	48,100	4,890	13,515	1,610	5,285	6,500	18,800	25,300
1996-2005	16,625	56,320	4,155	15,825	1,345	6,175	5,500	22,000	27,500
2005	9,500	64,000	2,375	17,985	825	7,015	3,200	25,000	28,200

Total Safe Yield

Land Use Period	Native Safe Yield (afy)	Supplemental Safe Yield (afy)	Total Safe Yield (afy)
Early- All Ag.	80,000	N/A	80,000
1995-1999	82,300	25,300	107,600
1996-2005	82,300	27,500	109,800
2005	82,300	28,200	110,500

Physical Solution Model

- SC-1 (Run model 50 yrs) – Average 2011-2012 Pumping to Equal Supplemental Water Under Severe Drought Conditions (Average 2011-2012 Pumping to Equal Supplemental Water)
- SC-1a (Run model 50 yrs) – Average 2011-2012 Pumping to Equal Supplemental Water (Sufficient Imported Water Deliveries to Equal Supplemental Water)
- SC-2 (Run model 50 yrs) – Ramp Down Current Pumping to Equal Supplemental Water (Rampdown) to Native Safe Yield with Imported Water (Sufficient Imported Water Deliveries to Equal Supplemental Water) Under Drought Conditions
- SC-2a (Run model 50 yrs) - Ramp Down Current Pumping to Equal Supplemental Water (Rampdown) to Native Safe Yield with Sufficient Imported Water (Sufficient Imported Water Deliveries to Equal Supplemental Water) Under Drought Conditions

NSY and ADJUSTED NSY

Small Pumper Class Stipulation of Settlement

Exhibit A.1 Section ¹	Name	acre-ft/yr
4.1	Safe Yield (Native Safe Yield)	82,300
5.1.1.3	Small Pumper Class Production Rights	3,806.4
5.1.1.4	Federal Reserved Right	7,600
5.1.1.5	State of California	207
3.5.2	Subtotal 5.1.1.3+5.1.1.4+5.1.1.5	11,613.4
	Adjusted Native Safe Yield (82,300-11,613.4)	70,686.6
Exhibit 3	Public Water Suppliers	12,345
Exhibit 4 ²	Land Owners	58,322.23
		82,280.63

¹ From Small Pumper Class Stipulation of Settlement (Judgment and Physical Solution)

² From the Second Revised Exhibit 4 to the Second Amended Stipulation for Entry the Judgment

Pumping Assumptions for Predictive

Scenarios 1 and 1a
(Average Pumping, between 2011 and 2012)
Model Years 1 to 50, [acre-ft/yr]

Name	Pumping	Sources
Small Pumper Class	9,747.55	Estimated based on report prepared by GSI Water Solutions, Inc. July 2015
Federal	1,348.34	Phase IV Amended Statement of Partial Decision
State of California	279.46	Based on email from Noah Golden-Krasner of California Department of Justice on 29-Jun-15
Public Water Suppliers	34,198.36	Phase IV Amended Statement of Partial Decision and historical pumping records provided by the West Valley County Water District
Land Owners	113,872.82	Materials provided by Mr. Kuney
City of Lancaster	506.34	Phase IV Amended Statement of Partial Decision
Phelan Pinon Hills CSD	1,044.2	Phase IV Amended Statement of Partial Decision
Total	160,997.07	

Current Pumping from Sma

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Groundwater Use AFY/HH*	2011 AFY/HH Cumulative %	2012 AFY/HH Cumulative %	Average AFY/HH Cumulative %	Average AFY/HH %	Number of HH	Groundwater Use, AFY
0	2	2	2	2	94	0.00
0 to 0.1	5	6	5.5	3.5	165	8.25
0.1 to 0.5	26	25	25.5	20	941	282.3
0.5 to 1	44	38	41	15.5	729	546.75
1 to 1.5	64	58	61	20	941	1,176.25
1.5 to 2	67	66	66.5	5.5	259	453.25
2 to 2.5	76	74	75	8.5	400	900
2.5 to 3	79	78	78.5	3.5	165	453.75
3 to 4	86	83	84.5	6	282	987
4 to 5	90	89	89.5	5	235	1,057.5
5 to 8	96	97	96.5	7	329	2,138.5
8 to 12	99	99	99	2.5	118	1,180
12+	100	100	100	1	47	564
Total				100	4,705	9,747.55

*HH = Household

[1], [2], and [3]: from GSI Water Solution, Inc. July 2015

[4] = ([2] + [3]) / 2

[5]: calculated from [4]

[6] = [5] x total number of households (4,705). Total number of households was calculated as members (3,459) divided by participating class members (86) multiplied by participating

= 3,459 / 86 x 117)

[7] = [6] x mid-value of [1]

Pre-Rampdown Pumping Assumptions

Scenario 2 and 2a (Ramp Down Current Pumping to Native Safe Yield)		Sources	
Name	Model Years 1 and 2 Pre-Rampdown acre-ft/yr		
Small Pumper Class	9,747.55	Average of 2011 and 2012 pumping estimated based on report prepared by GSI Water Solutions, Inc. July	
Federal ¹	1,348.34	Average of 2011 and 2012 pumping based on the Phase IV Amended Statement of Partial Decision	
State of California	279.46	Average of 2011 and 2012 pumping based on email from Noah Golden-Krasner of California Department of Justice on 29-Jun-15	
Public Water Suppliers ²	40,450.02	Average of 2011 and 2012 pumping based on Phase IV Amended Statement of Partial Decision and historical pumping records provided by the West Valley County Water District	
Land Owners	105,892.63	Pre-Rampdown production from the Second Revised Exhibit 4 to the Second Amended Stipulation for Entry of Judgment	
City of Lancaster	500	Based on Section 5.1.7 of the Judgment and Physical Solution	
Phelan Pinon Hills CSD	1,200	Based on Section 6.4.1.2 of the Judgment and Physical Solution	
Total	159,418.00		

¹ Federal reserved right is 7,600 AFY. 35 AFY of unused water right was reallocated to West Valley County and the remaining unused water right was reallocated to the remaining public water suppliers. The share shown in Exhibit 3 of the Judgment and Physical Solution.

² Including unused water right from the Federal reserved right.

Rampdown Pumping Assumptions for Scenario 2 and 2a (Ramp Down Current Pumping to Native Safe Yield)

Name	Scenario 2 and 2a (Ramp Down Current Pumping to Native Safe Yield)	
	Model Years 8 and 50 Rampdown acre-ft/yr	Sources
Small Pumper Class	3,806.4	Rampdown production from the Section 5.1.3 of the Judgment and Physical Solution
Federal ¹	1,348.34	Rampdown production from the Section 5.1.4 of the Judgment and Physical Solution
State of California	207	Rampdown production from the Section 5.1.5 of the Judgment and Physical Solution
Public Water Suppliers ²	18,596.66	Rampdown production from the Exhibit 3 of the Judgment and Physical Solution
Land Owners	58,322.23	Rampdown production from the Second Revised Exhibit 4 to the Second Amended Stipulation for Entry of Judgment
City of Lancaster	0	Based on Section 5.1.7 of the Judgment and Physical Solution
Phelan Pinon Hills CSD	1,200	Based on Section 6.4.1.2 of the Judgment and Physical Solution
Total	83,480.63	

¹ Federal reserved right is 7,600 AFY. 35 AFY of unused water right (6,251.66 AFY) was reallocated to West Valley County Water District and the remaining unused water right was reallocated to public water suppliers based on percentage share shown in Exhibit 3 of the Judgment and Physical Solution.

² Including 12,345 AFY public water suppliers water rights and 6,251.66 AFY unused water right (18,596.66 AFY = 12,345 AFY + 6,251.66 AFY).

Pumping Assumptions for Predictive Scenario 2 and 2a (Ramp Down Current Pumping to Native Safe Yield)

Name	Scenario 2 and 2a (Ramp Down Current Pumping to Native Safe Yield)						
	Model Years 1 and 2 Pre Rampdown	Model Year 3	Model Year 4	Model Year 5	Model Year 6	Model Year 7	Model Years 8 to 50
	acre-ft/yr						
Small Pumper Class	9,747.55	8,757.36	7,767.17	6,776.98	5,786.78	4,796.59	3,806.4
Federal ¹	1,348.34	1,348.34	1,348.34	1,348.34	1,348.34	1,348.34	1,348.34
State of California	279.46	267.38	255.31	243.23	231.15	219.08	207
Public Water Suppliers ²	40,450.02	36,807.79	33,165.57	29,523.34	25,881.11	22,238.89	18,596.66
Land Owners ³	105,892.63	97,964.23	90,035.83	82,107.43	74,179.03	66,250.63	58,322.23
City of Lancaster ⁴	500	500	500	500	500	500	0
Phelan Pinon Hills CSD ⁵	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Total	159,418.00	146,845.10	134,272.22	121,699.32	109,126.41	96,553.53	83,480.63

¹ Federal reserved right is 7,600 AFY. 35 AFY of unused water right was reallocated to West Valley Groundwater and the remaining unused water right was reallocated to the remaining public water suppliers in the region share shown in Exhibit 3 of the Judgment and Physical Solution.

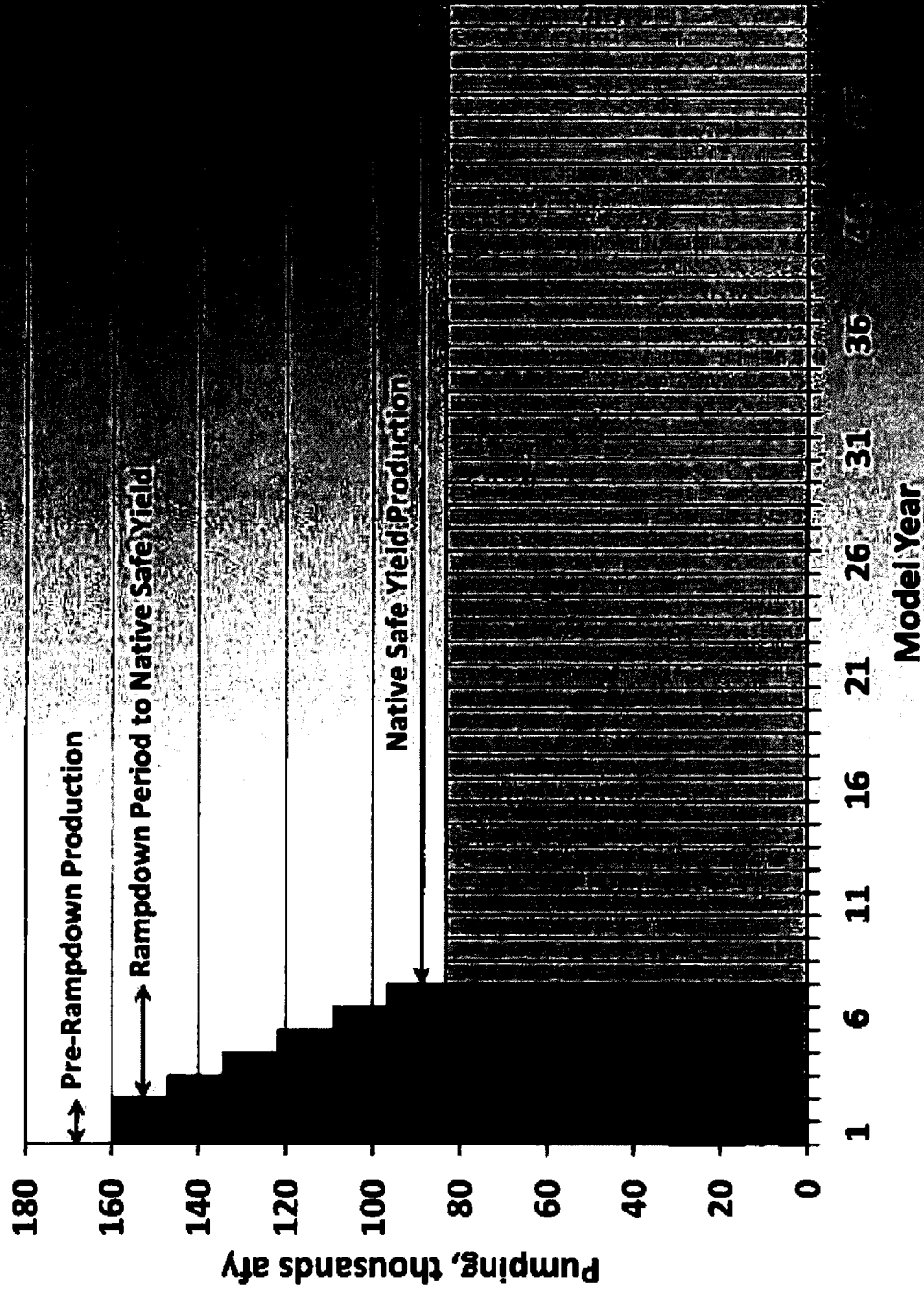
² Including unused water right from the Federal reserved right.

³ Pre-Rampdown production from the Second Revised Exhibit 4 to the Second/Amended Stipulation for Settlement.

⁴ Per Section 5.1.7 of the Judgment and Physical Solution.

⁵ Per Section 6.4.1.2 of the Judgment and Physical Solution.

Pumping Assumptions for Predictive Seepage



AVAA Land Owners Wells



Source: Materials provided by Mr. Kuney

PWS-0543-00048

AVAA Land Owners Production Rights = 58,322.23 AFY



Production Rights (ac-ft/yr)

- 0 - 500
- 500 - 1,000
- 1,000 - 1,500
- 1,500 - 1905

— Jurisdictional Boundary

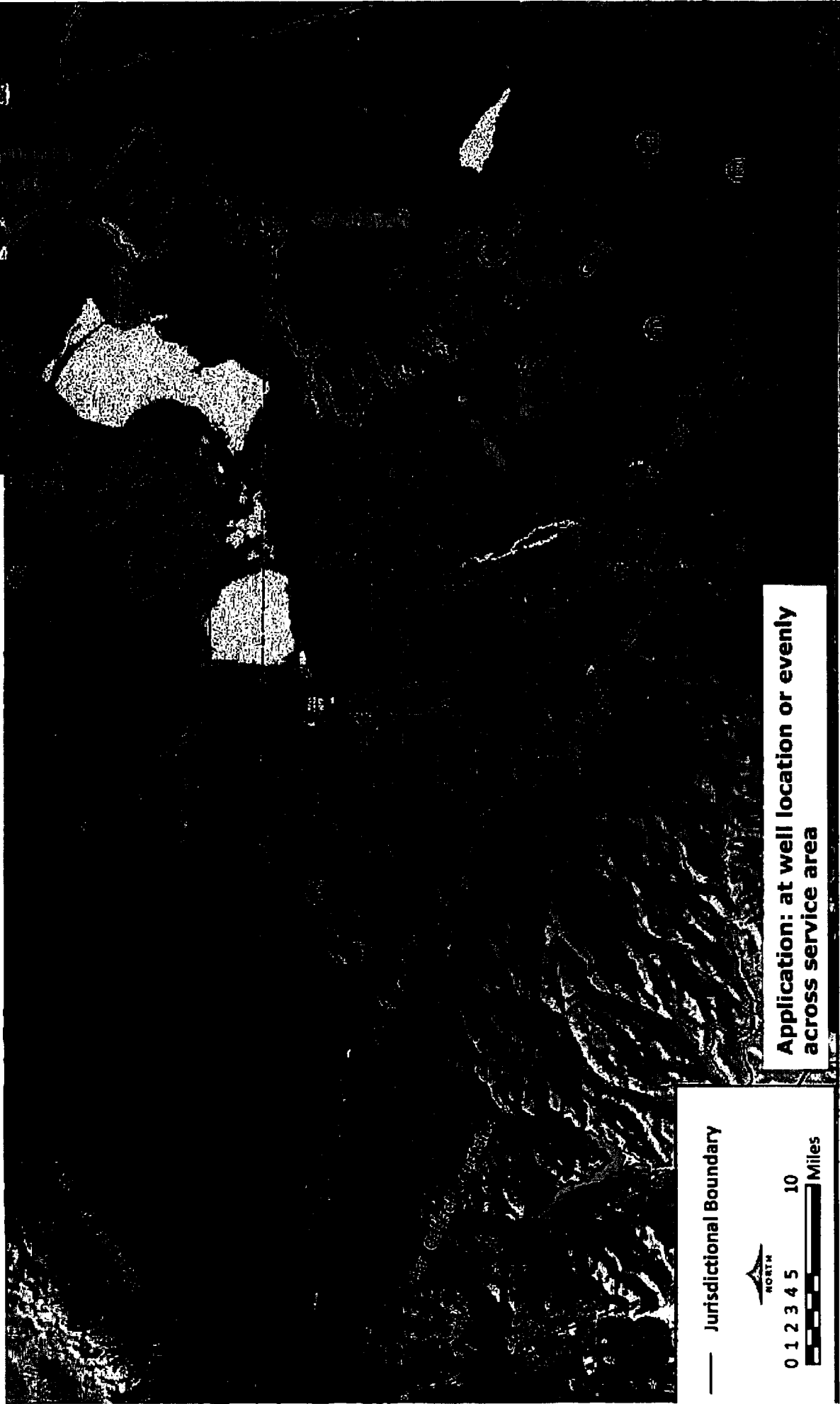


0 1 2 3 4 5 10

Miles

PWS-0543-00049

AVAA Land Owners Return Flow Locations



PWS-0543-00050

AVAA Public Water Suppliers Wells

North Edwards Water District

005



Public Water Suppliers

- Boron Community Services District
- California Water Service Company
- Desert Lake CSD
- Little Rock Creek Irrigation District
- Los Angeles Co. Water Works Dist. 40
- North Edwards Water District
- Palm Ranch Irrigation District
- Palmdale Water District
- Quartz Hill Water District
- Rosamond CSD
- West Valley County Water District

— Jurisdictional Boundary



0 1 2 3 4 5 10

Miles

**Source: Materials provided by
Mr. Kuney and public water
suppliers**

Palmdale Water District

PWS-0543-00051

**AVAA Public Water Suppliers
Production Rights = 12,345 AFY
(Plus 6,251.66 AFY Federal Unused
Water Rights)**



PWS-0543-00052

AVAA Public Water Suppliers Return Flow Locations

North Edwards Water District

Desert Lake CSD

Boron CSD

LA Co. Water Works Dist. 40

California Water Service Company

LA Co. Water Works Dist. 40

Quartz Hill Water District

LA Co. Water Works Dist. 40

Palmdale Water District

Rosamond CSD

West Valley County Water District

Palm Ranch Irrigation District

Palmdale Water District

Uttlerock Creek Irrigation District

Application: evenly across service area

Public Water Suppliers

- Boron Community Services District
- California Water Service Company
- Desert Lake CSD
- Littlerock Creek Irrigation District
- Los Angeles Co. Water Works Dist. 40
- North Edwards Water District
- Palm Ranch Irrigation District
- Palmdale Water District
- Quartz Hill Water District
- Rosamond CSD
- West Valley County Water District

— Jurisdictional Boundary



0 1 2 3 4 5 10

Miles

PWS-0543-00053

AVAA Federal Wells



Source: Materials provided by Federal

PWS-0543-00054

**AVAA Federal Reserved Water Rights = 7,600 AFY
(Pumping of 1,348.34 AFY and unused water right
was reallocated to public water suppliers)**

295

Edwards
Air Force Base

Air Force
Plant 42

Production Rights (ac-ft/yr)

- 0 - 500
- 500 - 1,000
- 1,000 - 1,500
- 1,500 - 1,905

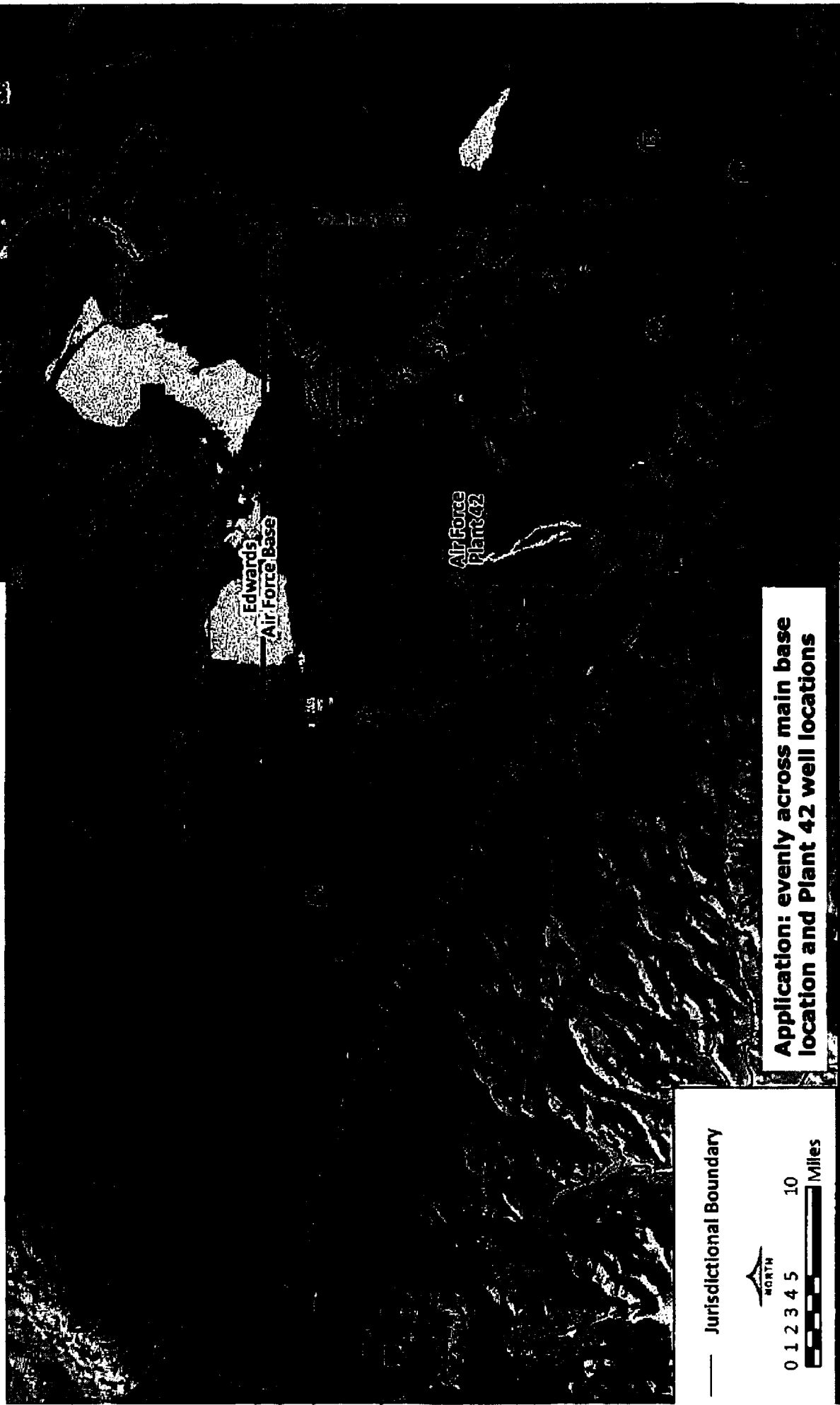
— Jurisdictional Boundary



0 1 2 3 4 5 10

Miles

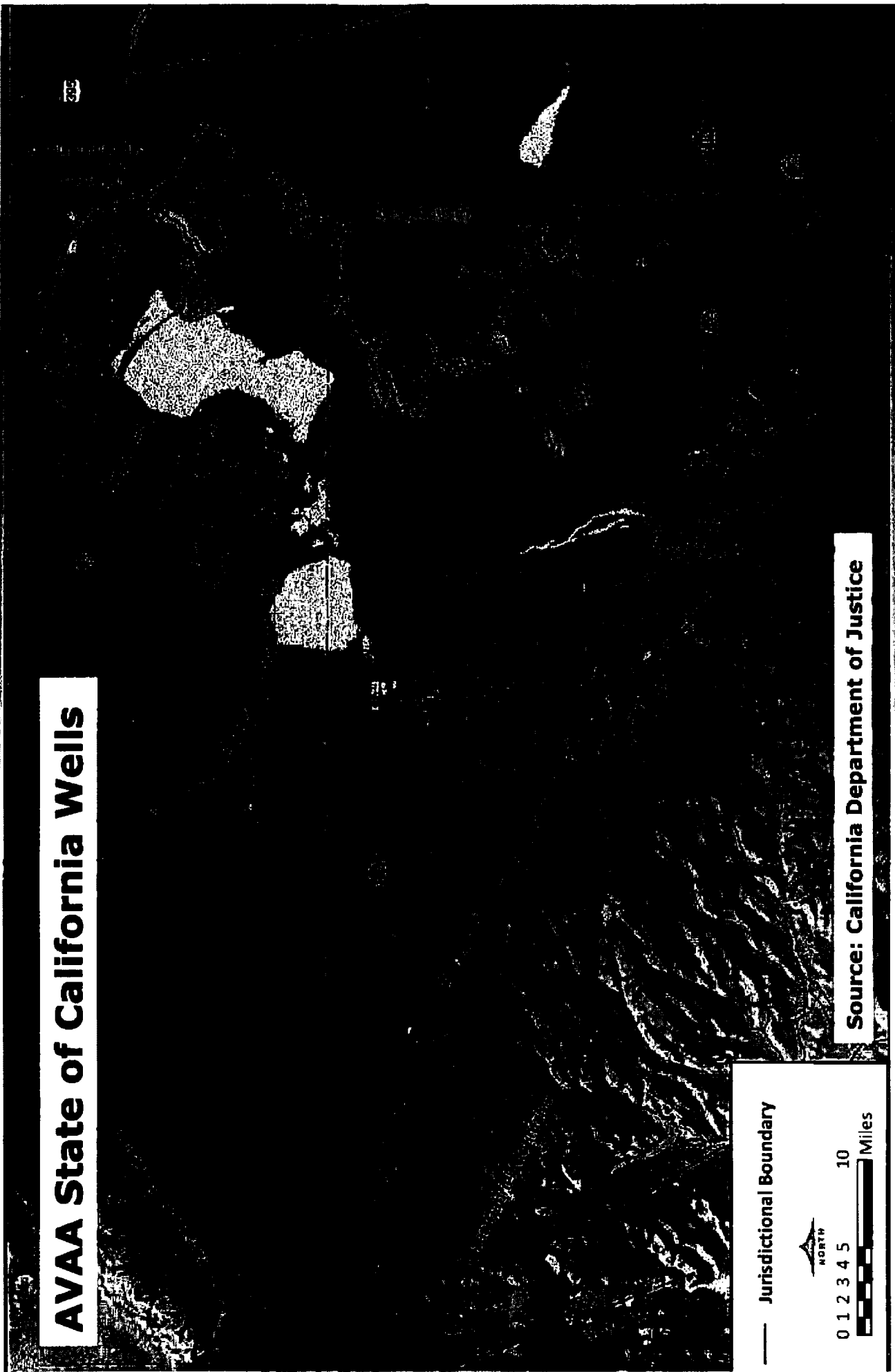
AVAA Federal Return Flow Locations



Application: evenly across main base location and Plant 42 well locations

PWS-0543-00056

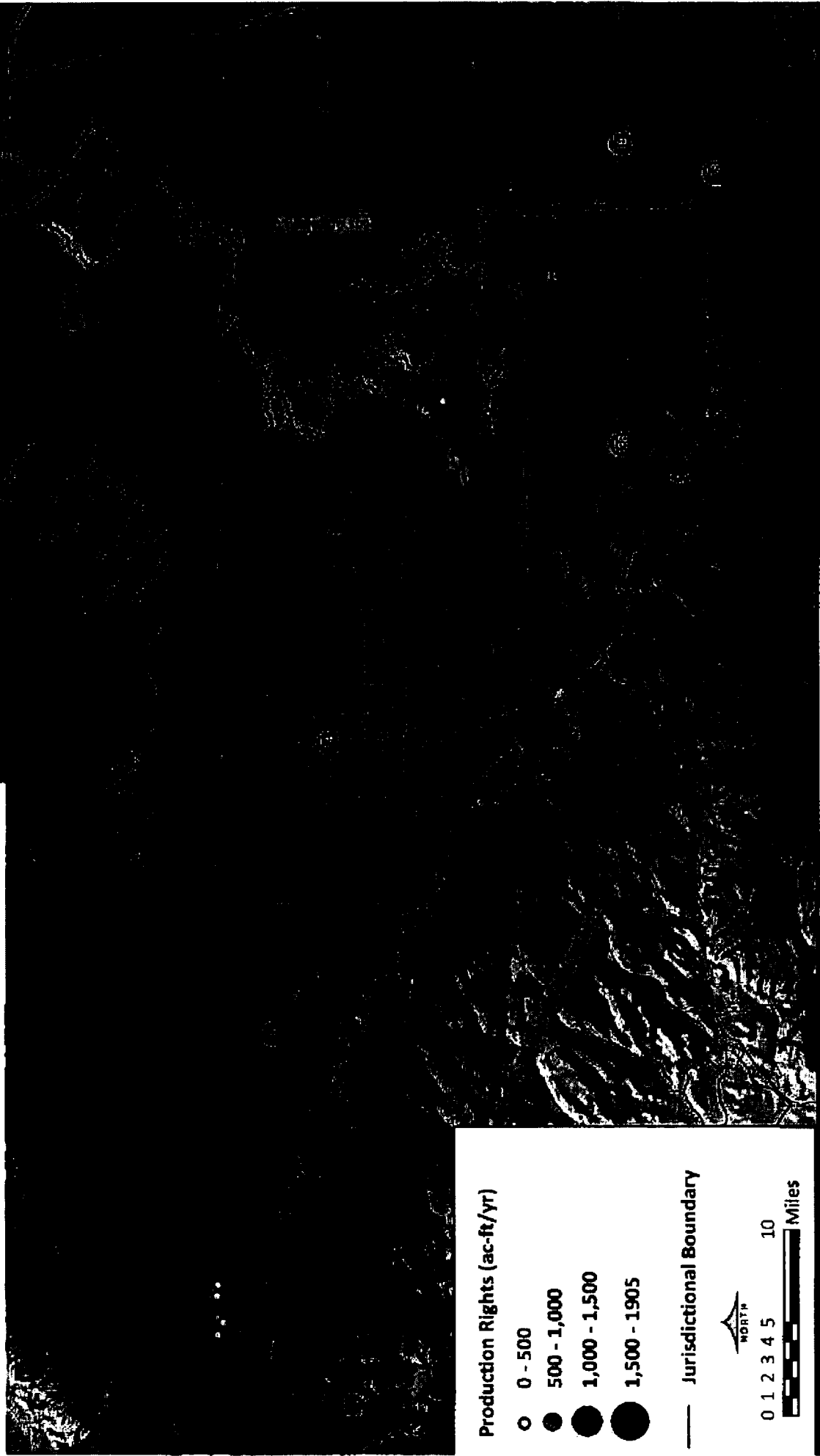
AVAA State of California Wells



Source: California Department of Justice

PWS-0543-00057

AVAA State of California Production Rights = 207 AFY



Production Rights (ac-ft/yr)

- 0 - 500
- 500 - 1,000
- 1,000 - 1,500
- 1,500 - 1905

— Jurisdictional Boundary



0 1 2 3 4 5 10

Miles

PWS-0543-00058

AVAA State of California Return Flow Locations

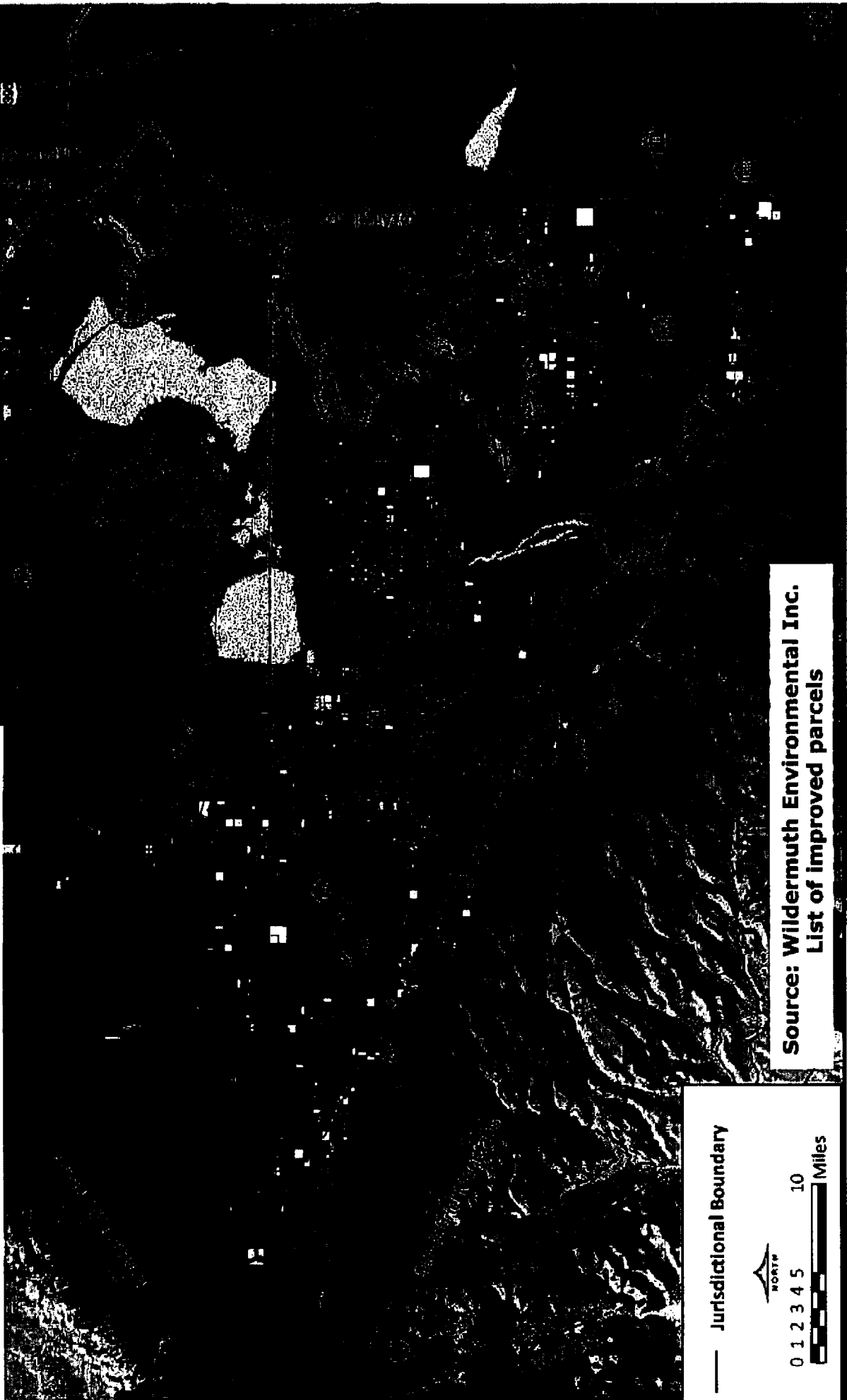
305



Application: at well location

PWS-0543-00059

AVAA Small Pumps Parcels



— Jurisdictional Boundary



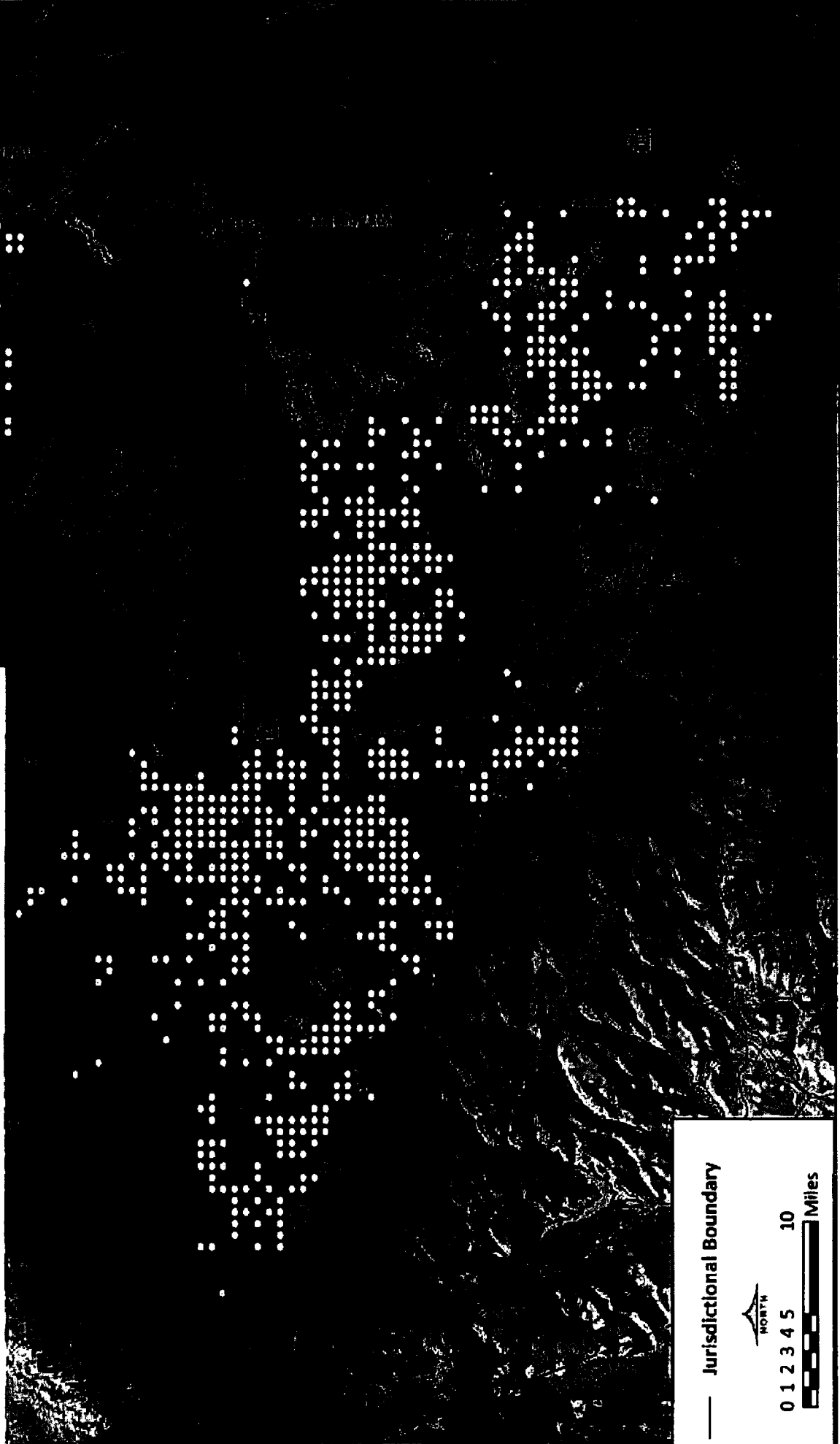
0 1 2 3 4 5 10

Miles

Source: Wildermuth Environmental Inc.
List of improved parcels

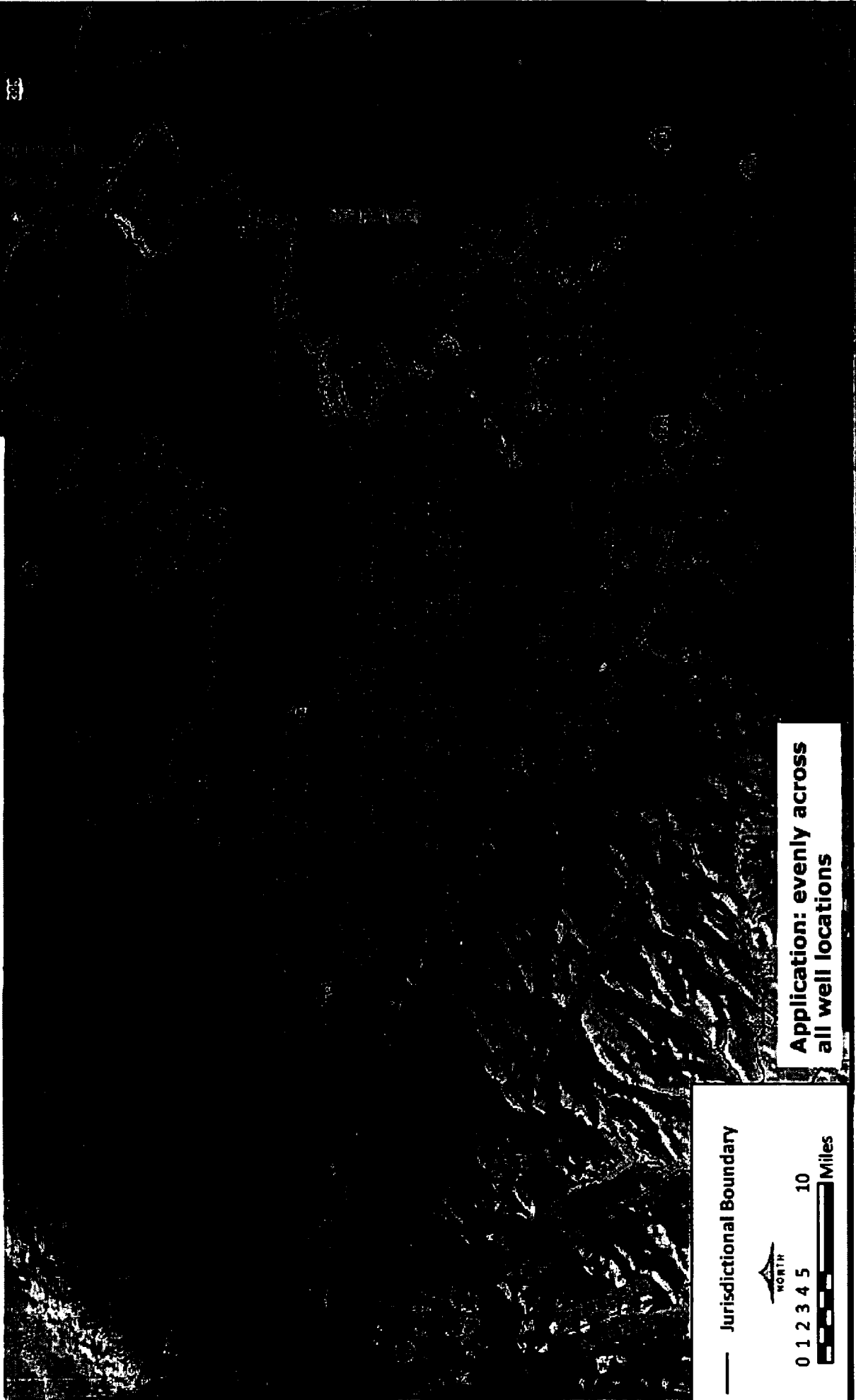
PWS-0543-00060

AVAA Small Pumps Production Rights = 3,806.4 AFY



PWS-0543-00061

AVAA Small Pumpers Return Flow Locations

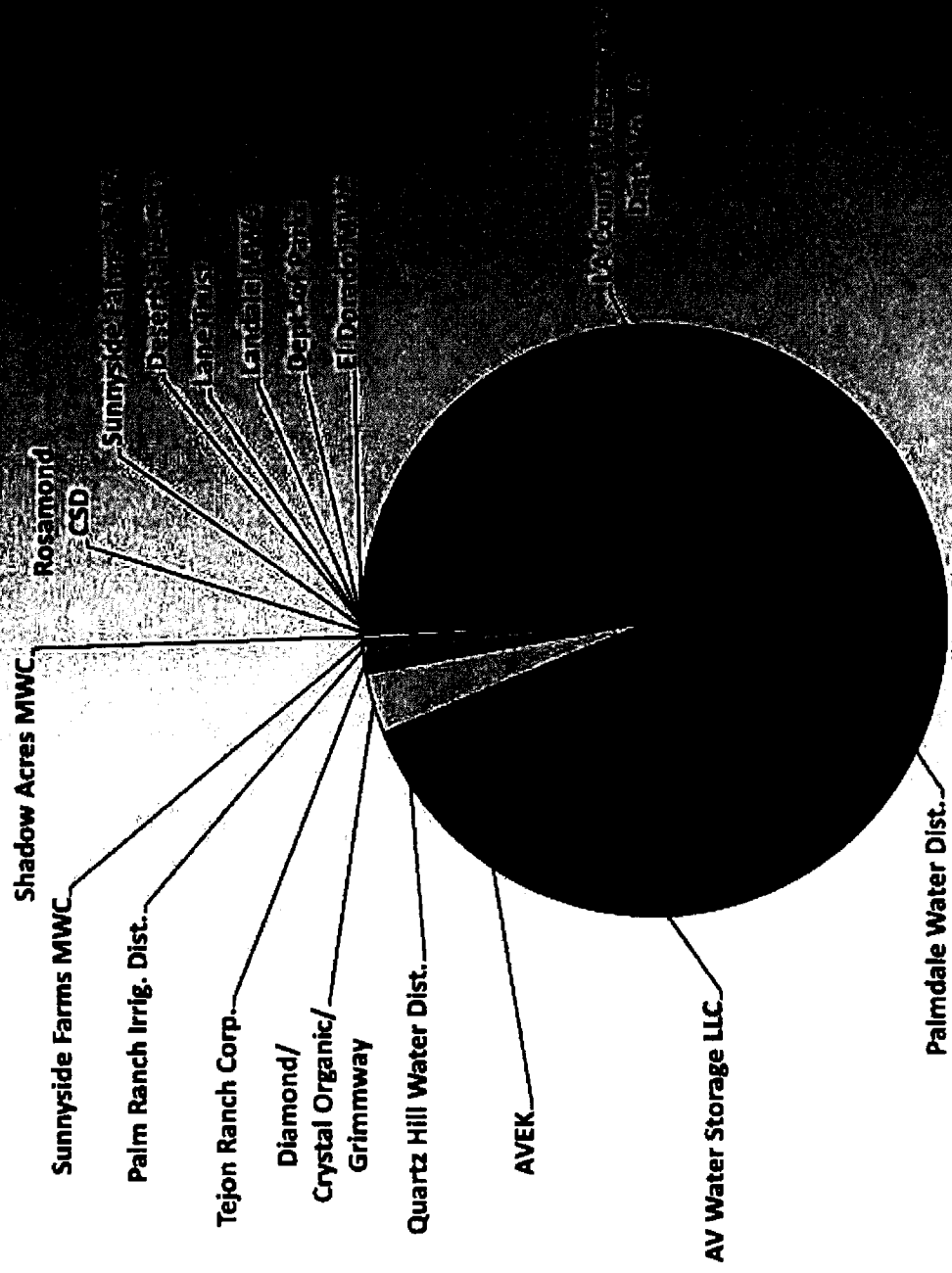


PWS-0543-00062

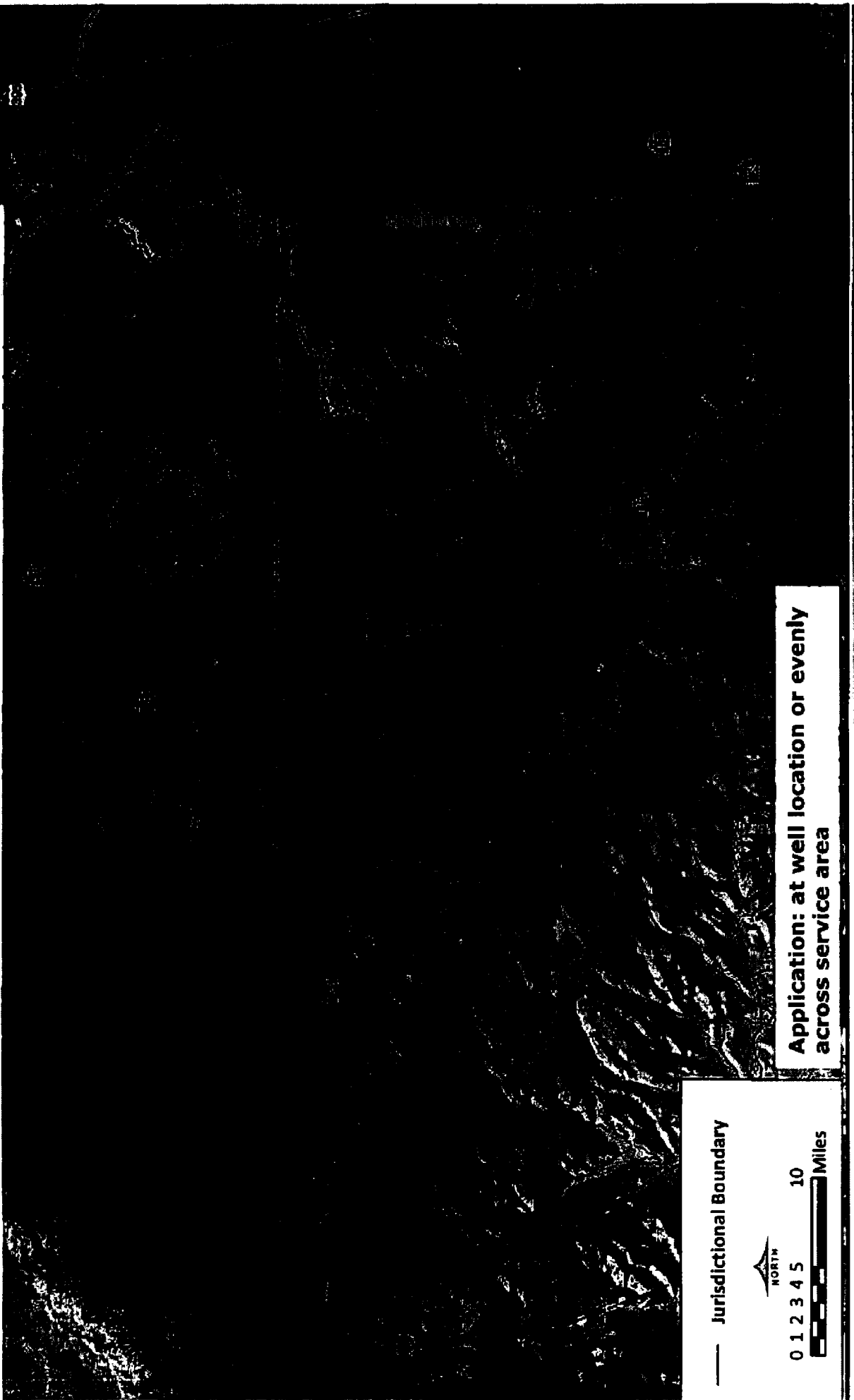
Imported Water Use 2014

Entity	Avg 2011-2014 [afy]	Percent [afy]
LA County Waterworks Dist. No. 40	30,732.5	45.8%
Palmdale Water Dist.	13,586.5	20.7%
AV Water Storage LLC	8,714.5	13.2%
AVEK	4,333.0	6.5%
Quartz Hill Water Dist.	4,056.2	6.1%
Diamond/Crystal Organic/Grimmway	2,205.8	3.4%
Tejon Ranch Corp.	662.5	1.0%
Palm Ranch Irrig. Dist.	345.2	0.5%
Shadow Acres MWC	208.4	0.3%
Rosamond CSD	185.8	0.3%
White Fence Farms MWC	177.1	0.3%
Sunnyside Farms MWC	158.4	0.2%
Desert Lake CSD	105.6	0.2%
Lane Trust	19.0	0.0%
Landale MWC	6.4	0.0%
Dept. of Parks	6.0	0.0%
El Dorado MWC	0.5	0.0%
TOTAL	65,503.4	

Imported Water Users



AVAA Return Flow Locations from Imported Water Use



PWS-0543-00065

Imported Water Deliveries Severe Drought Conditions

2014

State of California

DEPARTMENT OF WATER RESOURCES
CALIFORNIA STATE WATER PROJECT

California Natural Resources Agency

State of California

DEPARTMENT OF WATER RESOURCES
CALIFORNIA STATE WATER PROJECT

California Natural Resources Agency

NOTICE TO STATE WATER PROJECT CONTRACTORS



Date: APR 18 2014

Number: 14-07

Subject: 2014 State Water Project Allocation Increase back to 5 Percent

From:

Carl A. Torgelson
Deputy Director
Department of Water Resources

The Department of Water Resources (DWR) is increasing the allocation of 2014 State Water Project (SWP) water for long-term contractors from 0 acre-feet to 208,628 acre-feet. Based on recent precipitation, runoff, and current water supply conditions, SWP supplies are projected to meet 5% of SWP contractors' requests for Table A water, which totals 4,172,536 acre-feet. A condition of this Allocation is that SWP contractors take delivery of this water after September 1, 2014. Attached is the modified 2014 SWP allocation table.

NOTICE TO STATE WATER PROJECT CONTRACTORS



Date: MAY 17 2015

Number: 15-03

Subject: 2015 State Water Project Allocation Increase - 20 Percent

From:

Carl A. Torgelson
Department of Water Resources

The Department of Water Resources (DWR) is increasing the allocation of 2015 State Water Project (SWP) water for the long-term contractors from 635,759 acre-feet to 839,568 acre-feet. Due primarily to runoff from storms in December and February which was exported and stored in the San Luis Reservoir, SWP supplies are projected to increase from 15 percent to 20 percent of most SWP contractors' requests for Table A water, which totals 4,172,686 acre-feet. Attached is the updated 2015 SWP allocation table.

Average (2014-2015) = 12.59%

PWS-0543-00066

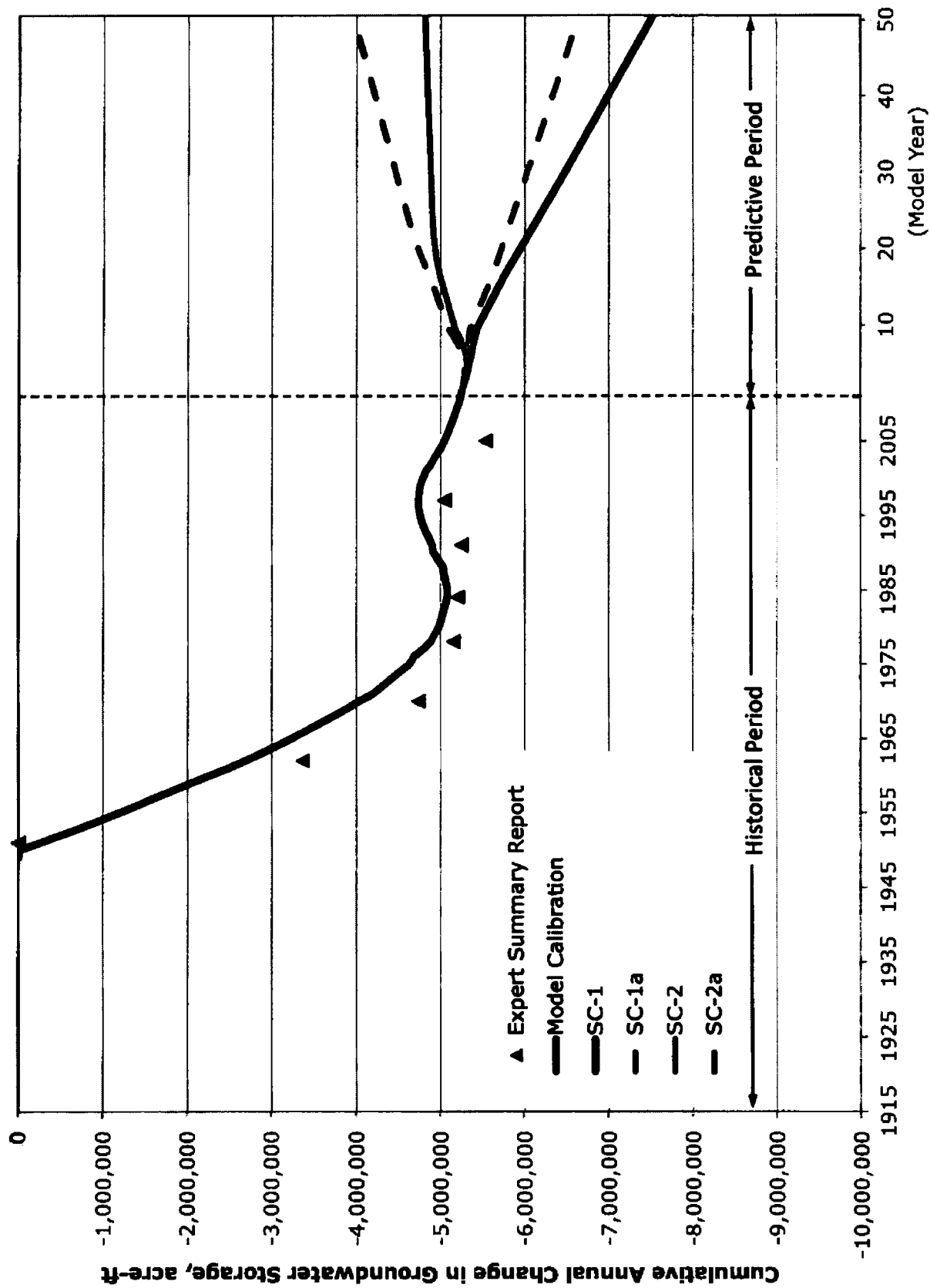
Imported Water Delivery

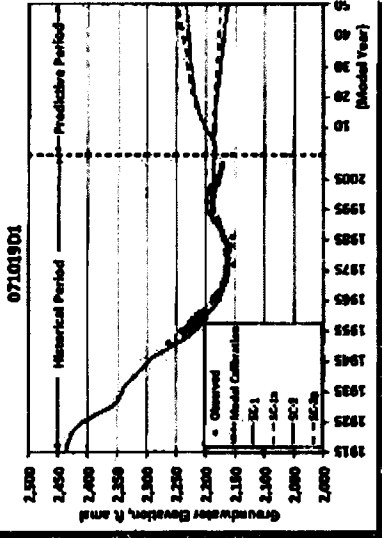
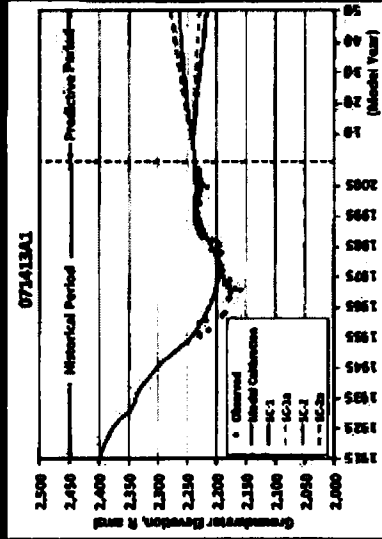
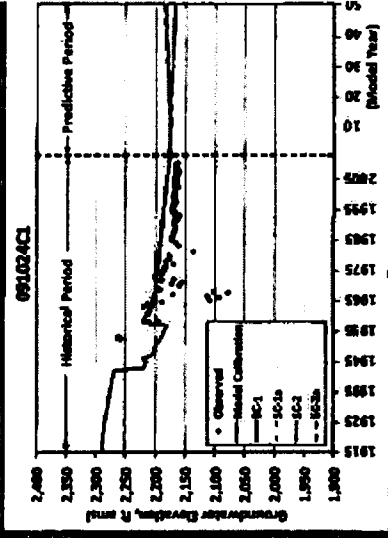
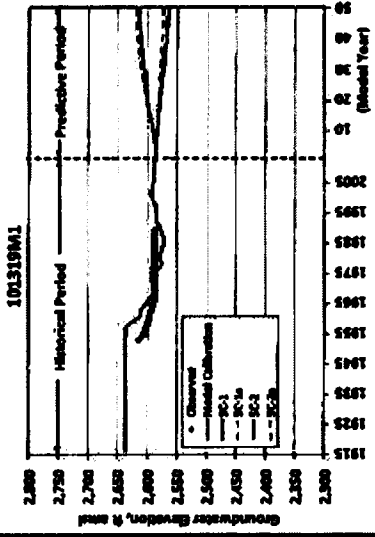
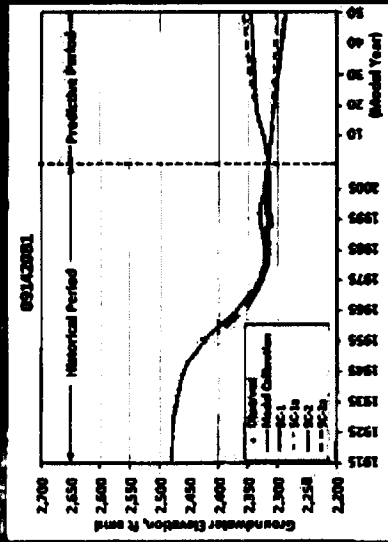
Percent of Maximum SWP Table A (2015 Draft Delivery Capacity)

Assumptions	All Table A	AVEK	IGID	IGID
Table A Amount [AFY]	168,444	144,844	2,500	2,500
Existing Conditions				
AVG	62%	61%	62%	62%
Amt [AFY]	104,435	88,355	1,425	1,425
2015 DCR ELT				
AVG	61%	59%	60%	60%
Amt [AFY]	102,751	85,458	1,380	1,380
DCR ECHO				
AVG	43%	40%	41%	41%
Amt [AFY]	72,431	57,938	943	943
DCR ECLO				
AVG	51%	50%	50%	50%
Amt [AFY]	85,906	72,422	1,150	1,150
2015 DCR Alt 4				
AVG	69%	69%	71%	71%
Amt [AFY]	116,226	99,942	1,633	1,633

- Existing Conditions: 2030 Land Use, updated Central Valley Project (CVP) operations, no Vernalis Adaptive Management, and updated American River operations
- ELT (Early Long-Term): 2025 emission level with 15 cm of sea level rise
- ECHO (Existing Conveyance High Outflow): ELT climate change conditions, existing south of Delta conveyance conditions, Conservation Plan (BDCP), South Delta operating restrictions, and enhanced spring outflow requirements
- ECLO (Existing Conveyance Low Outflow): Same as ECHO but without enhanced spring outflow requirements
- Alt 4: ELT climate change conditions with modified conveyance system (new operation criteria, minimum restrictions, increased Banks permitted capacity, control gates, etc)

Cumulative Annual Change in Groundwater Storage





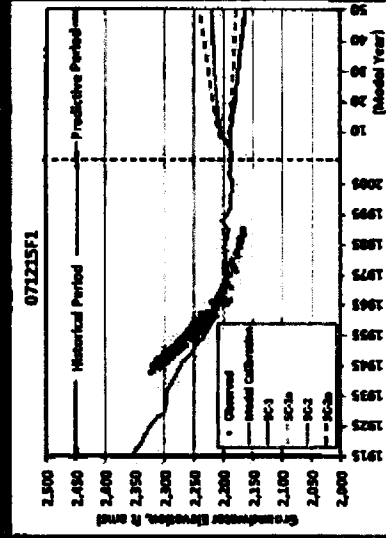
Selected Hydrographs

Selected Well with Hydrograph

Jurisdictional Boundary



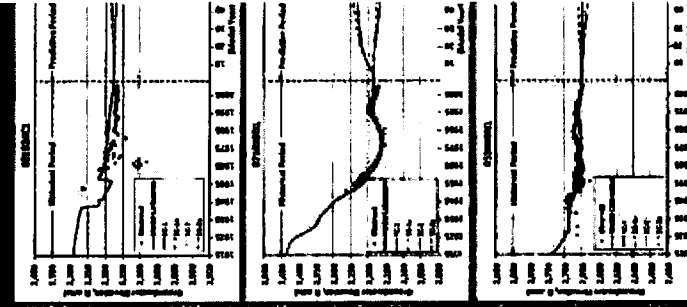
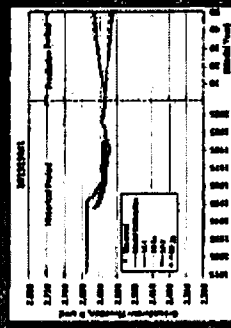
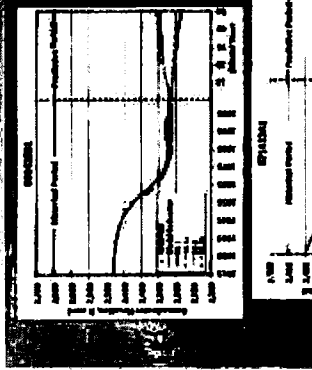
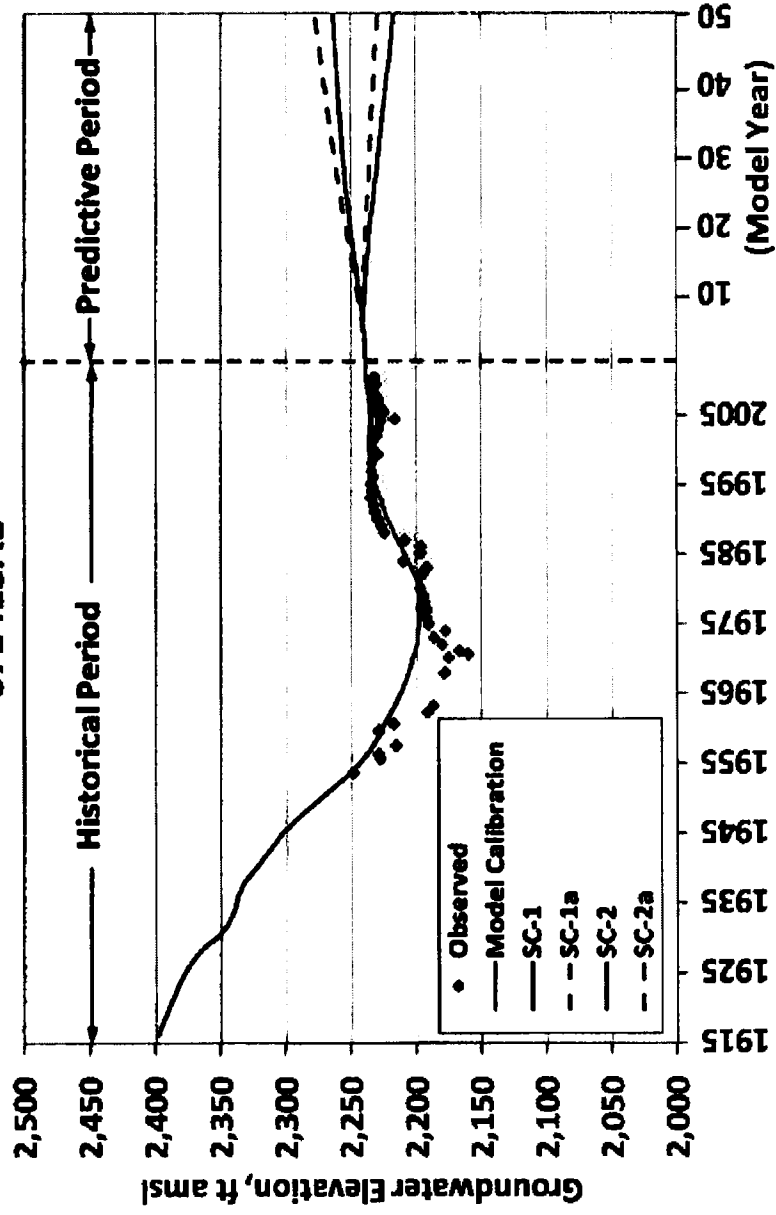
0 1 2 3 4 5 10 Miles

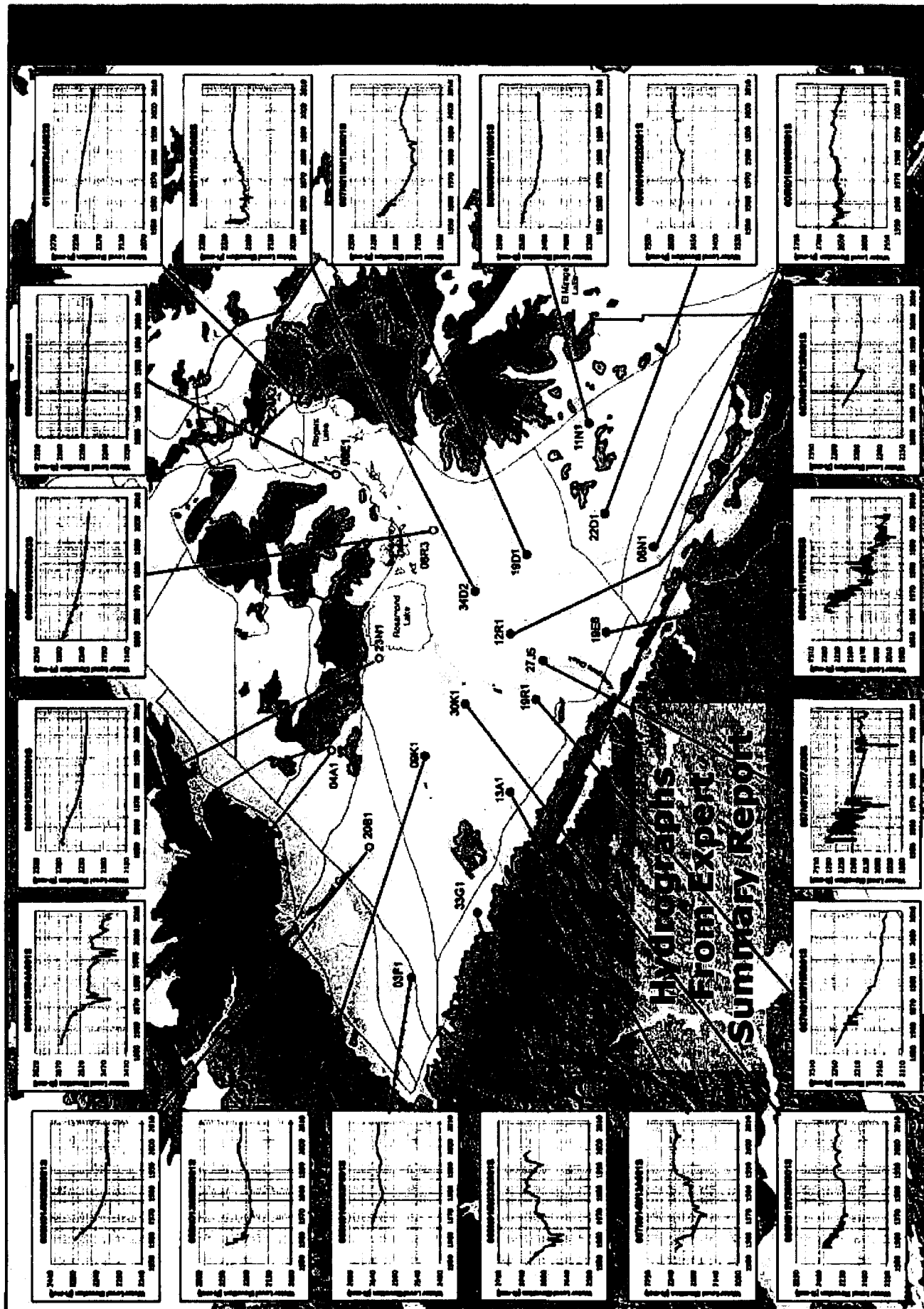


PWS-0543-00069

Selected Hydrographs

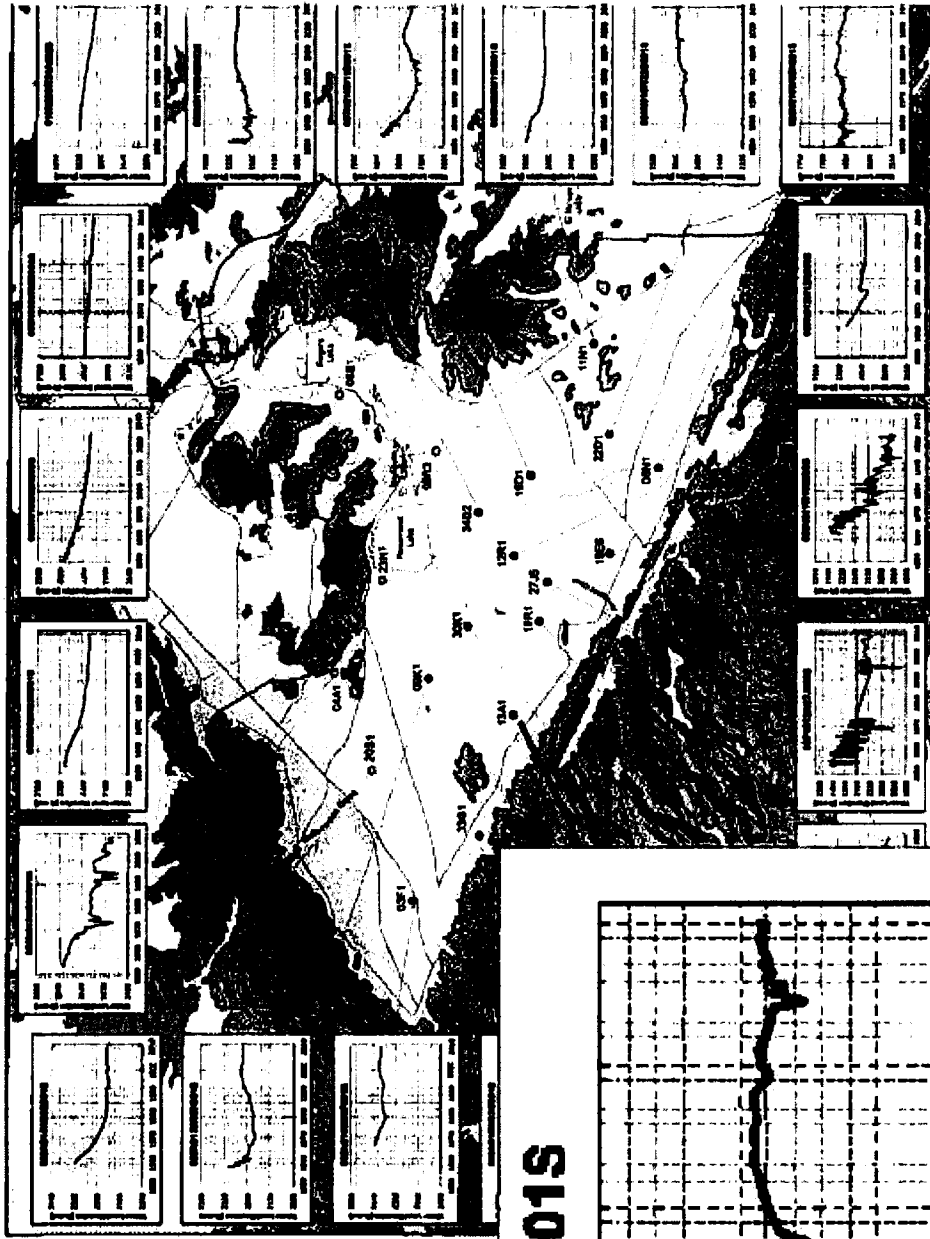
071413A1



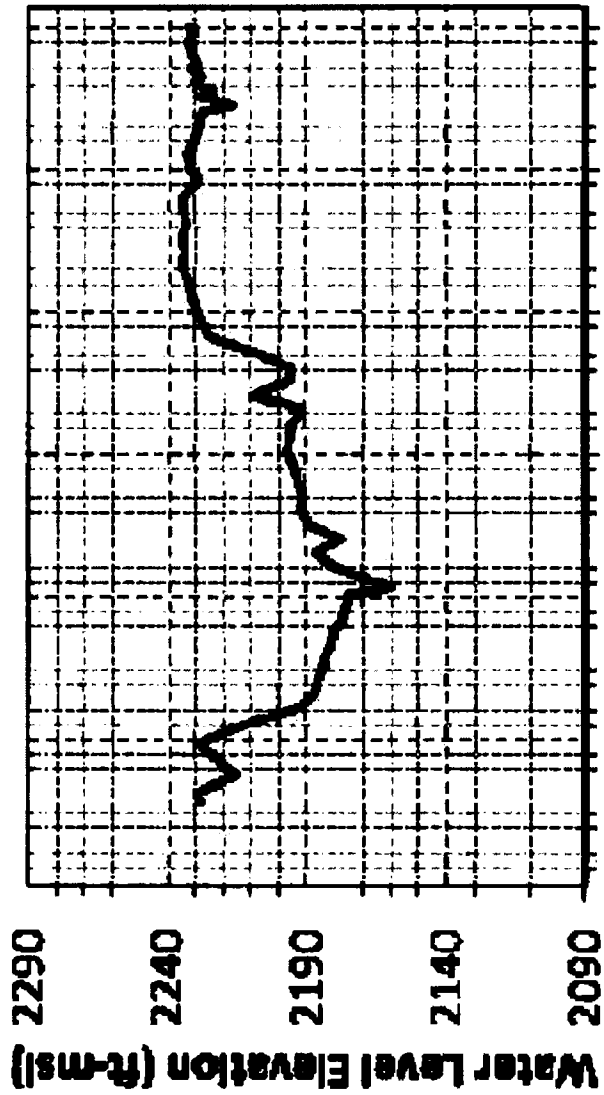


PWS-0543-00071

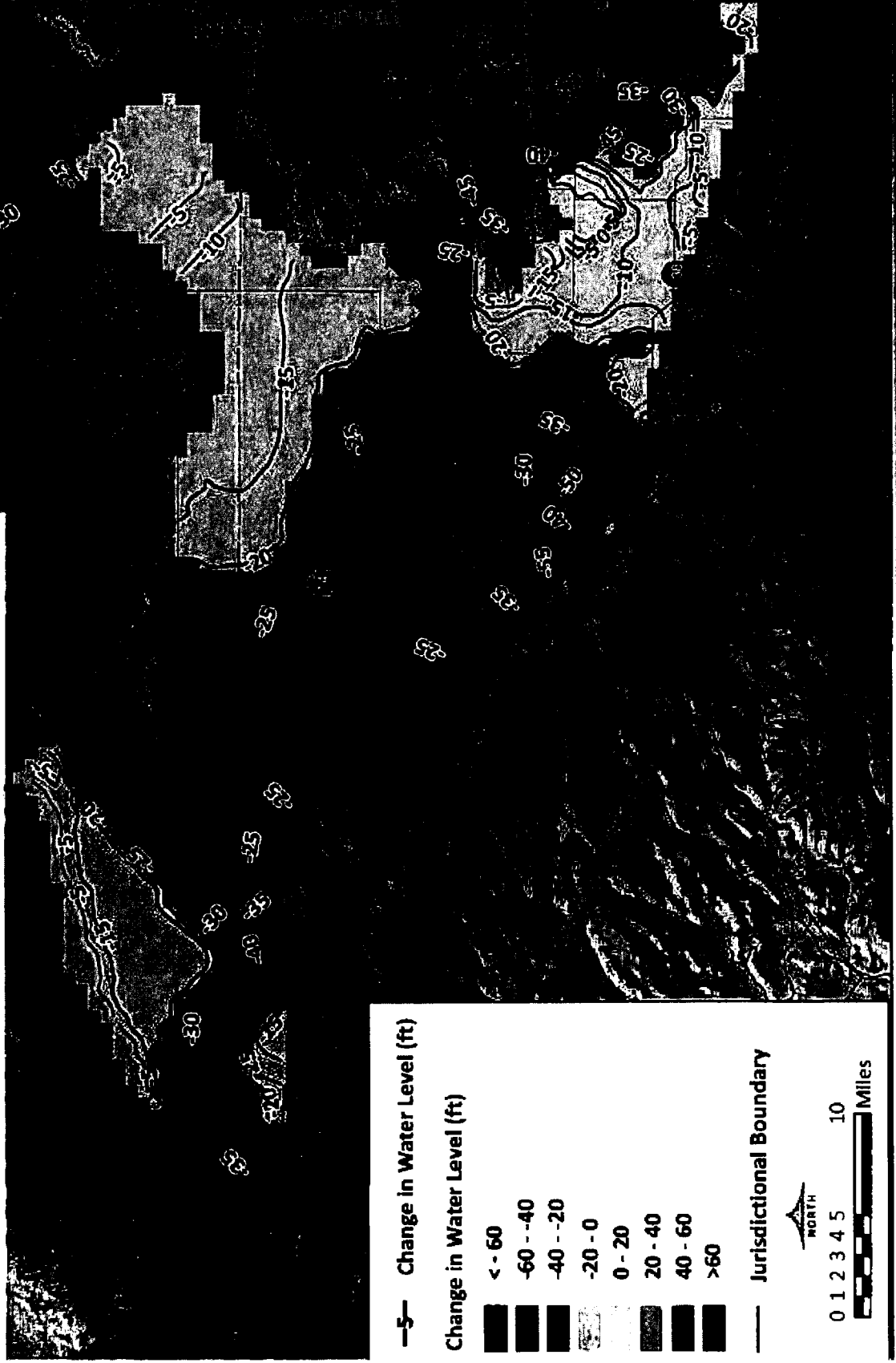
Hydrographs From Expert Summary Report



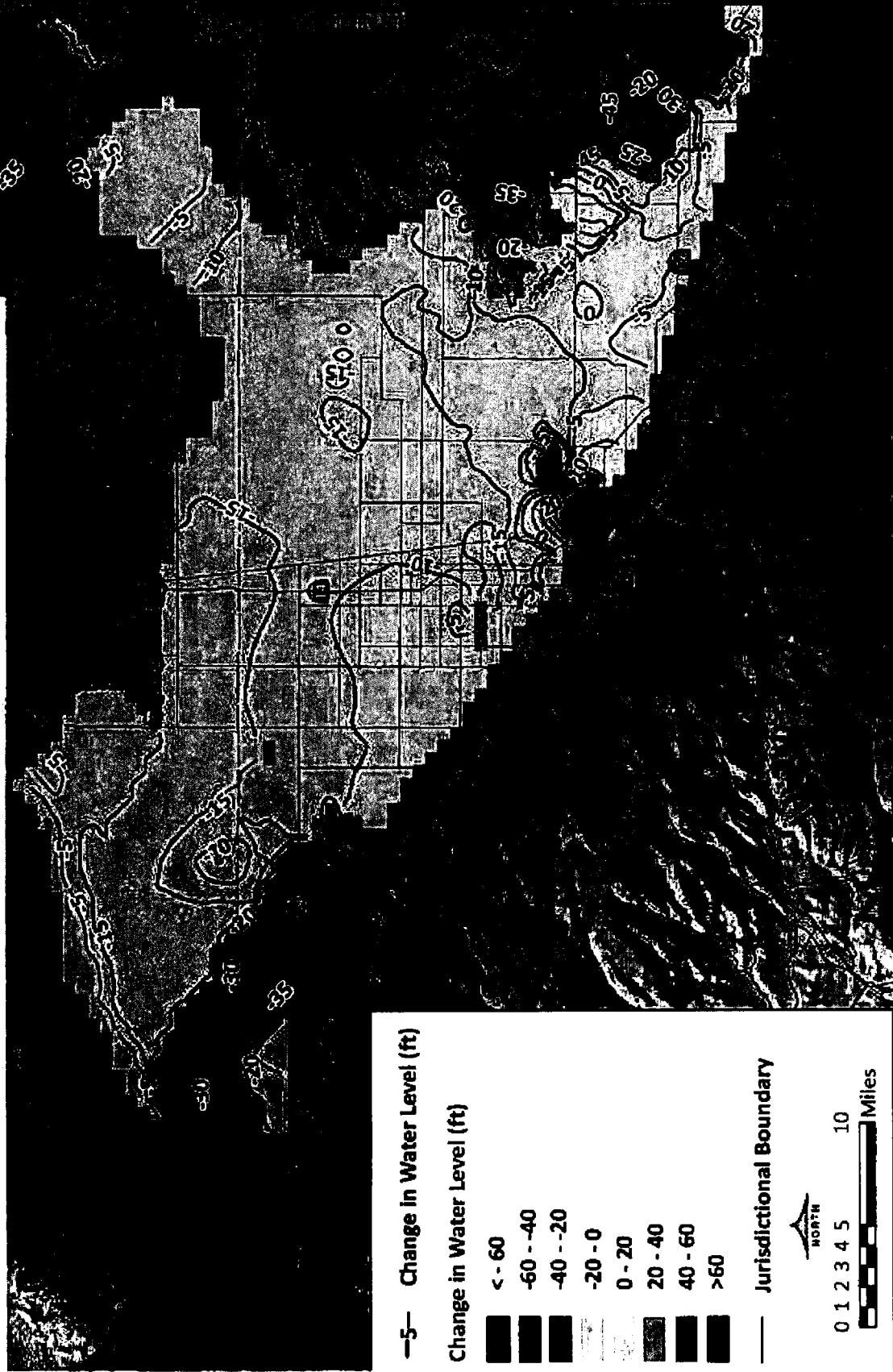
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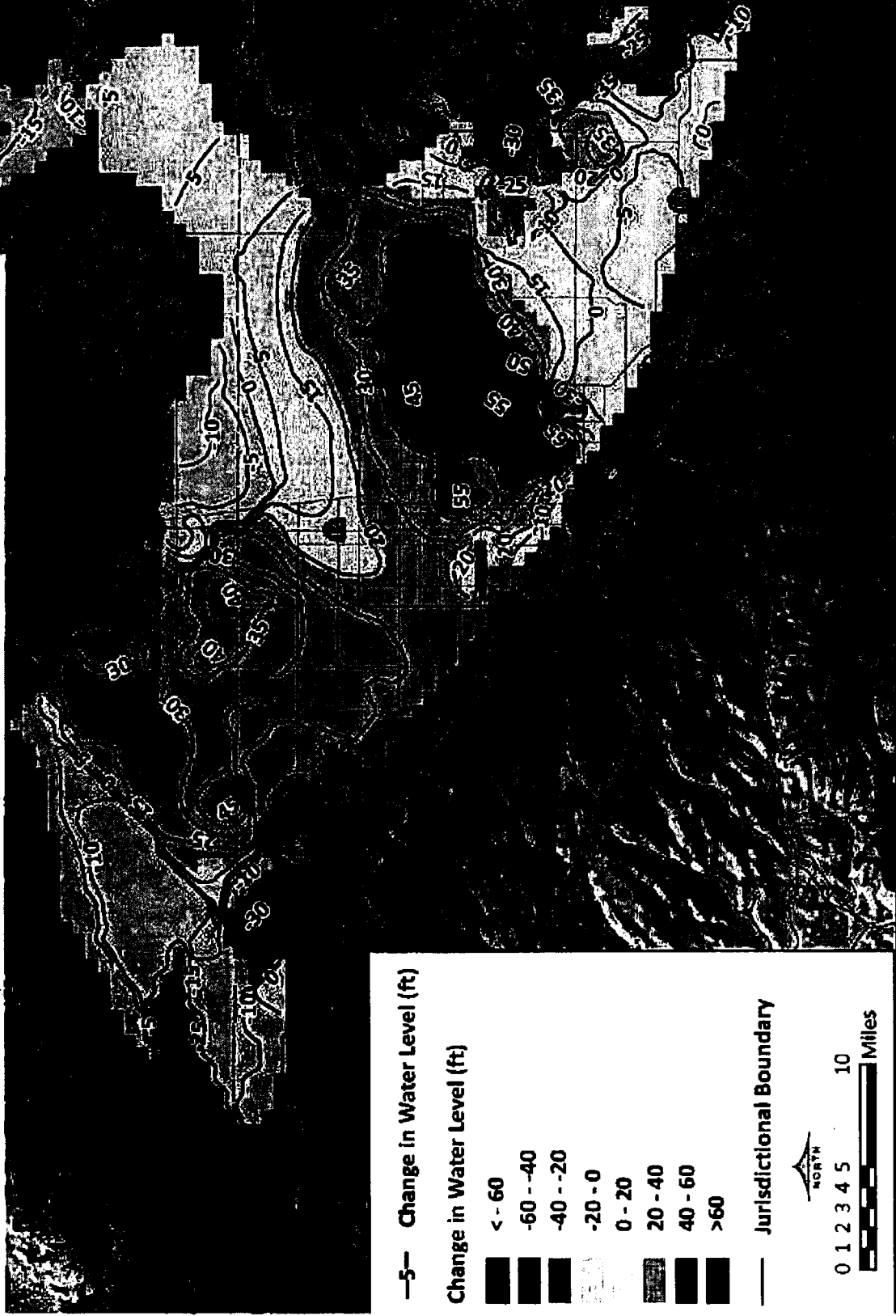
Water Level Changes in 50 Yrs SC-1 (Avg 2011-2012 Pumping with Imported Water Under Severe Drought Conditions)



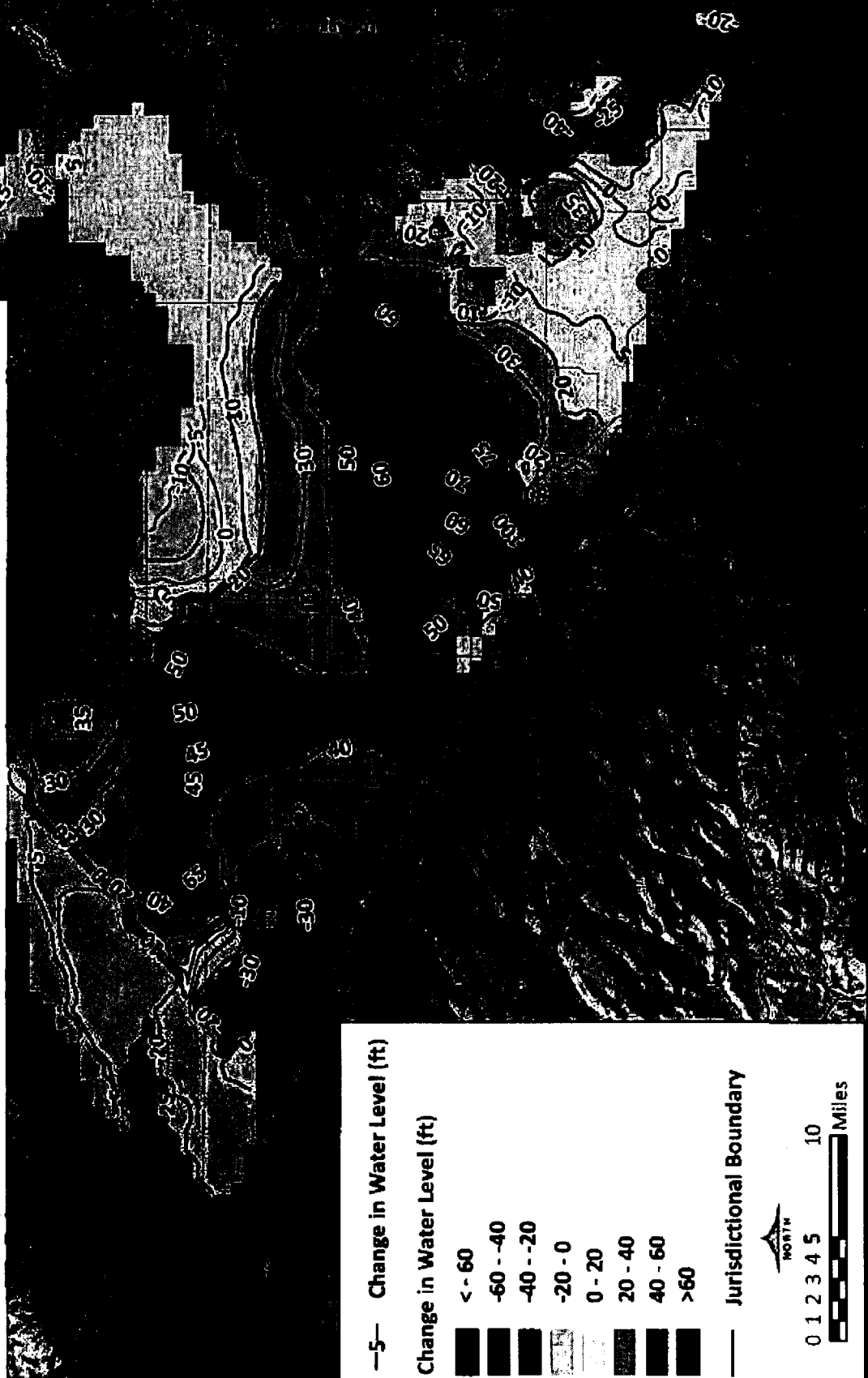
Water Level Changes in 50 Yrs SC-1a (Avg 2011-2012 Pumping with Sufficient Imported Water Deliveries to Equal Supplemental Safe Yield)



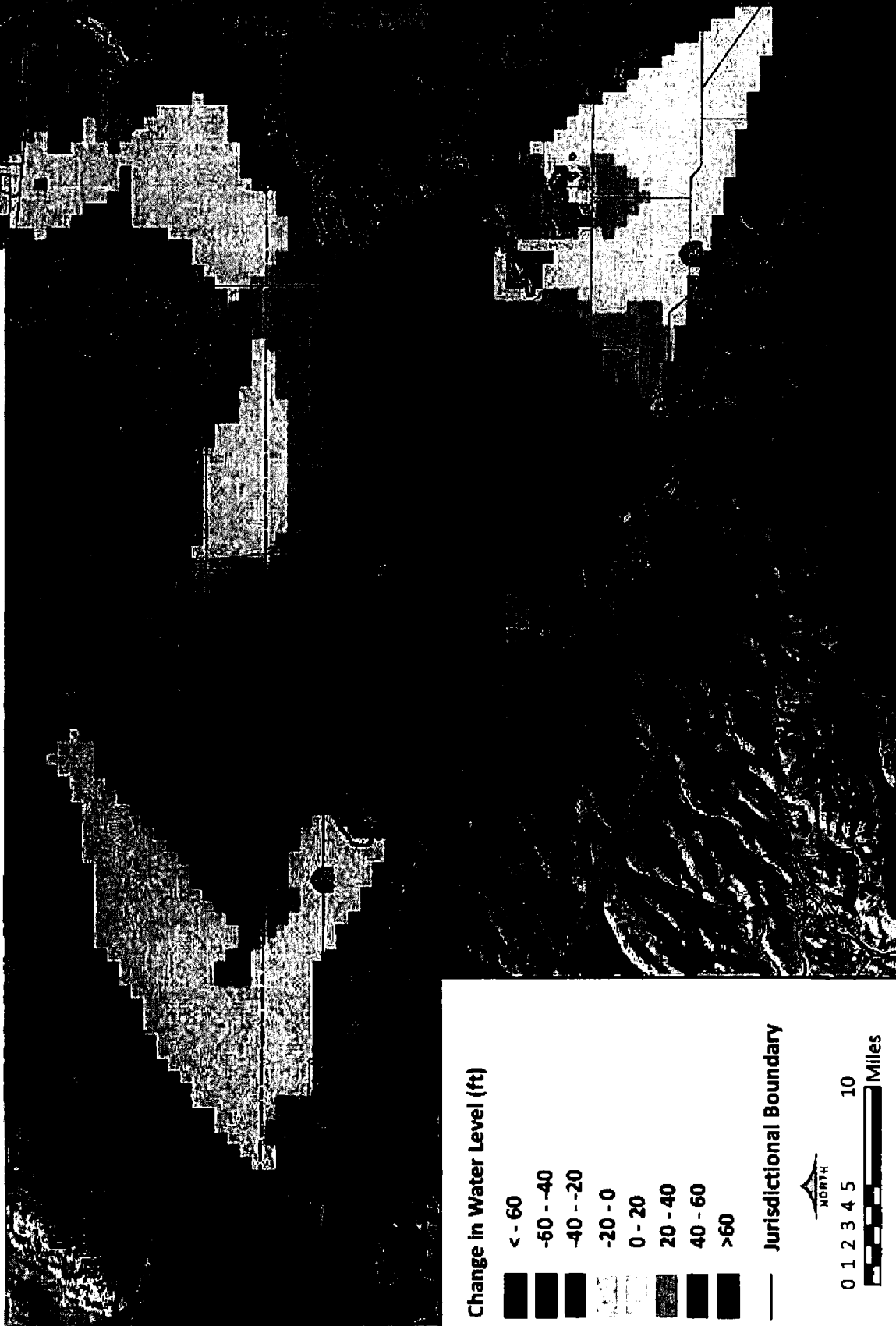
Water Level Changes in 50 Yrs SC-2 (Ramp Down Current Pumping to Native Safe Yield with Imported Water Under Severe Drought Conditions)



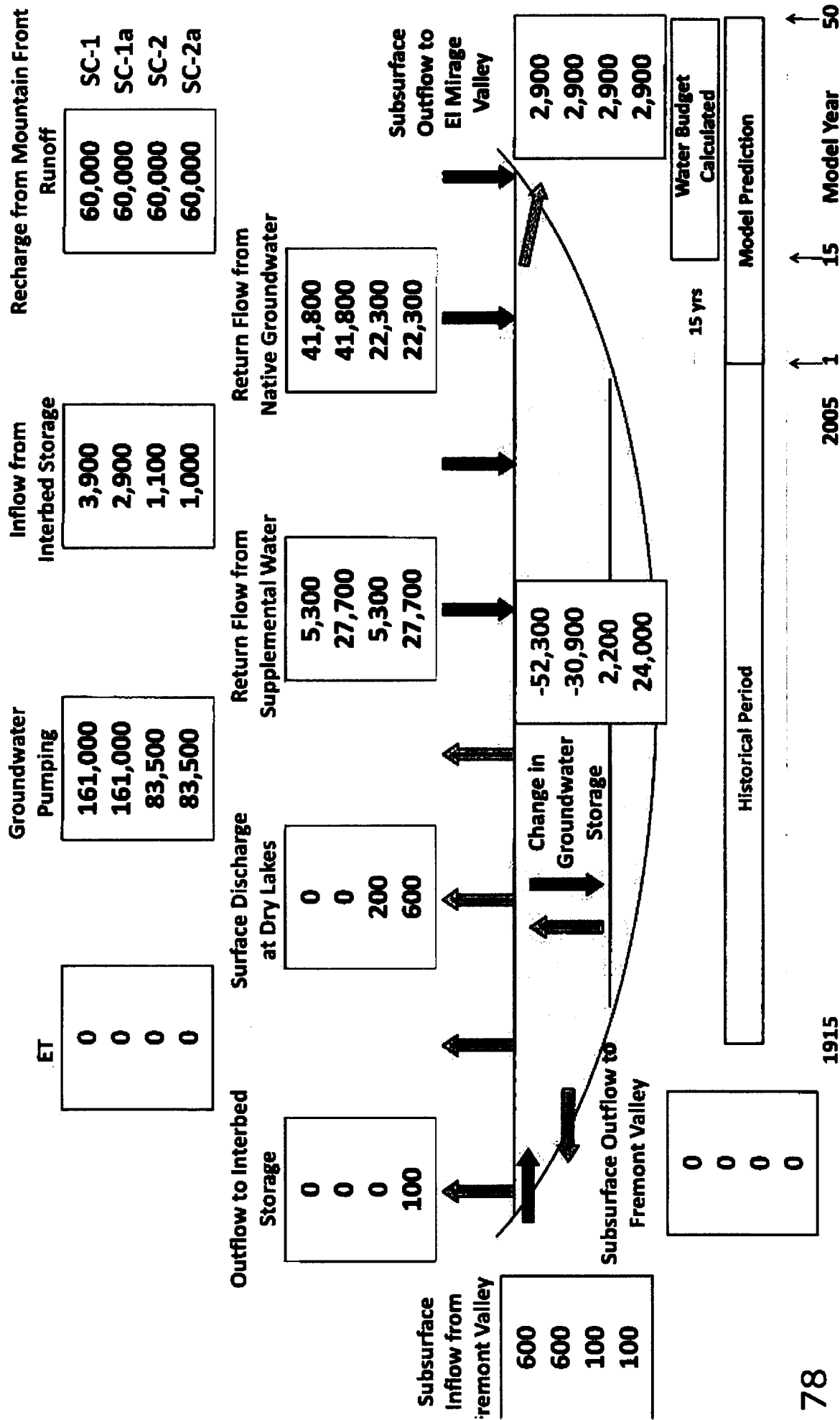
Water Level Changes in 50 Yrs SC-2a (Ramp Down Current Pumping to Native Safe Yield with Sufficient Imported Water Deliveries to Equal Supplemental Safe Yield)



Water Level Changes Between SC-1 and SC-2a in 50 Yrs (SC-2a minus SC-1)



Groundwater Budget - Annual Average of Model Years 35 to 50 (Units in acre-ft/yr)

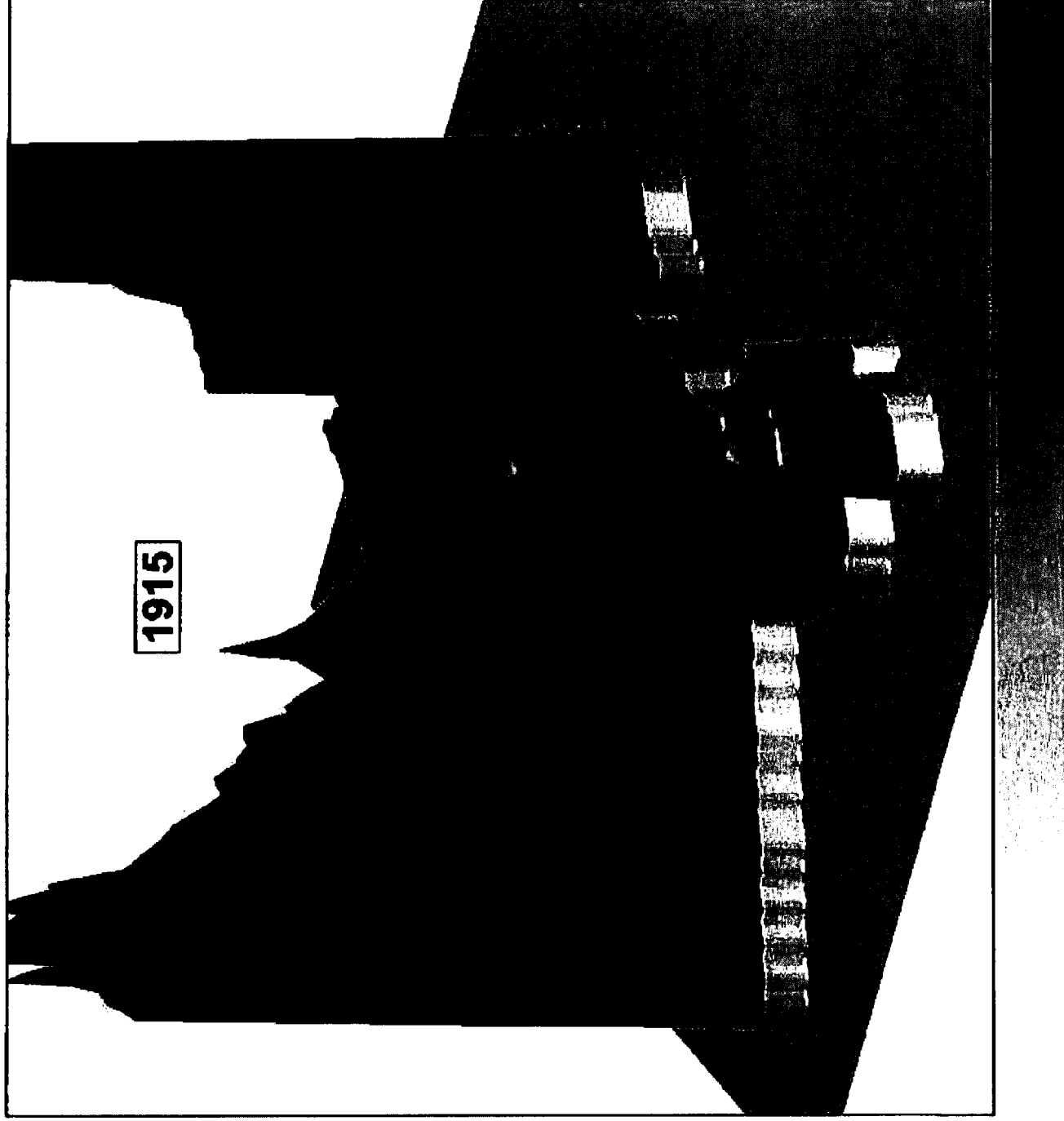
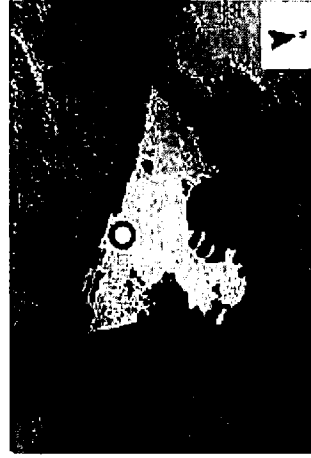


Historical Period

Model-Calculated Water Level

1915 to 2012

View Looking South



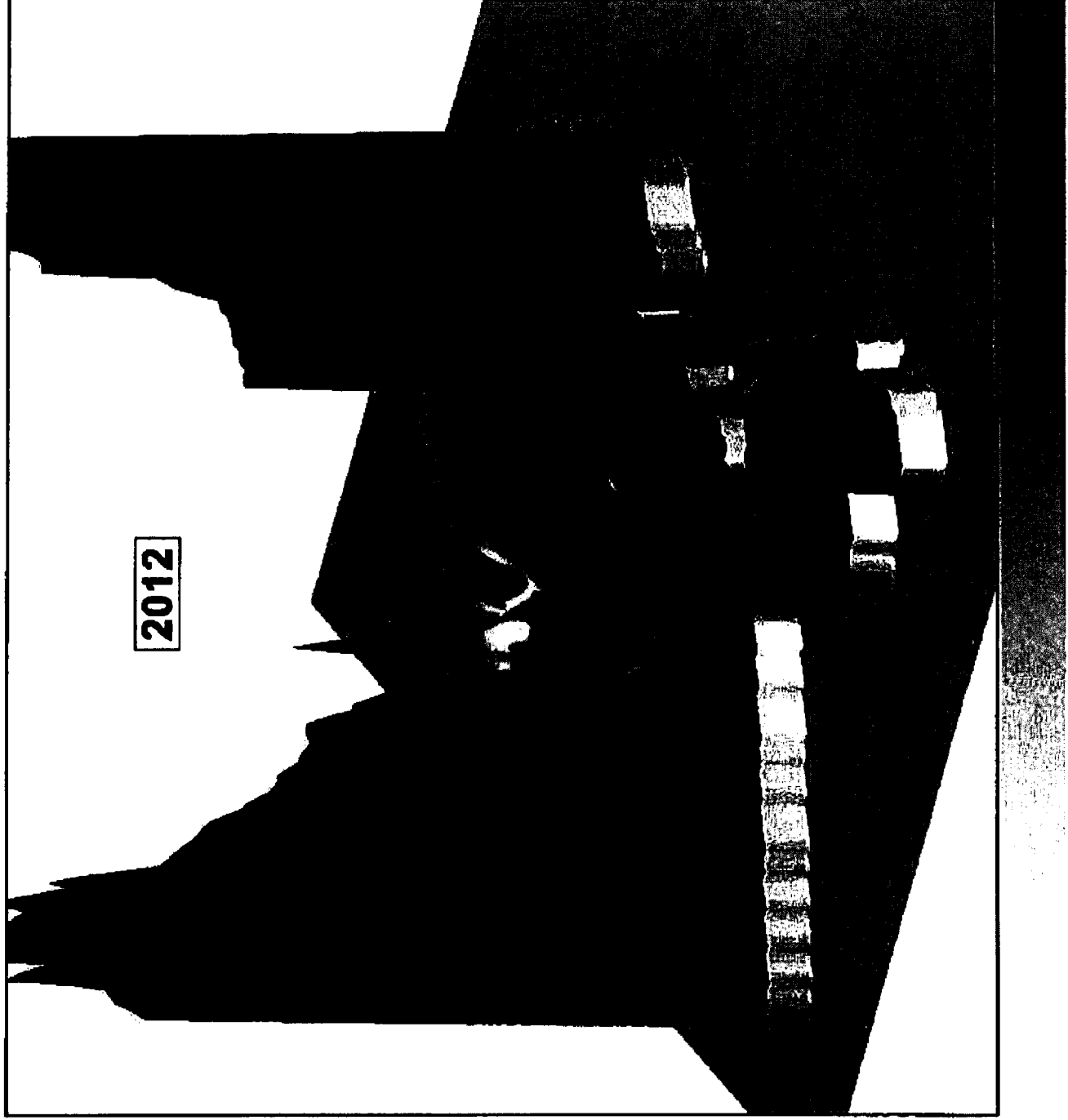
PWS-0543-00079

Historical Period

Model-Calculated Water Level

1915 to 2012

View Looking South



2012

PWS-0543-00080

**SC-1 (Avg 2011-2012 Pumping with
Imported Water Under Severe Drought
Conditions)**

**SC-1
Native
Water**

Model Yr. 1

Model Yr. 1



PWS-0543-00081

**SC-1 (Avg 2011-2012 Pumping with
Imported Water Under Severe Drought
Conditions)**

**SC-1
Native
Water**

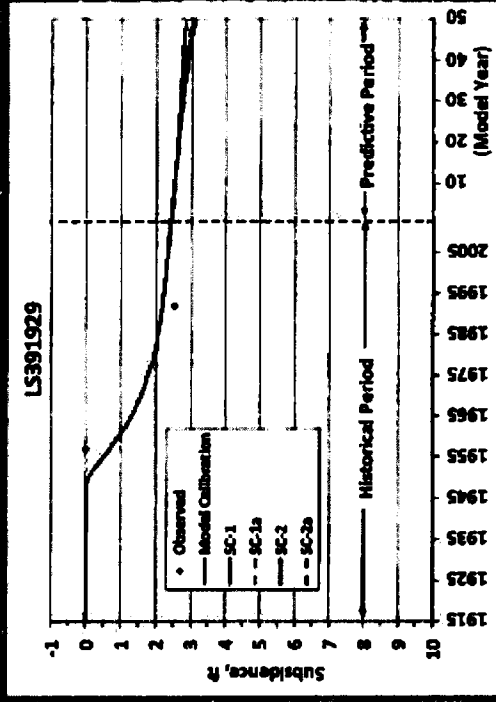
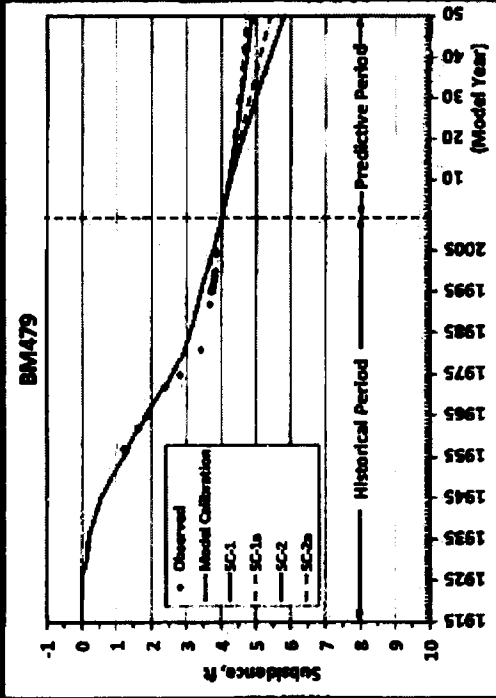
Model Yr. 50



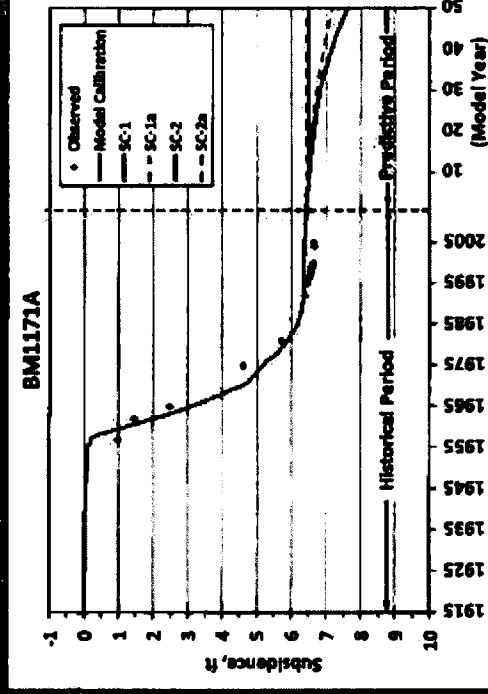
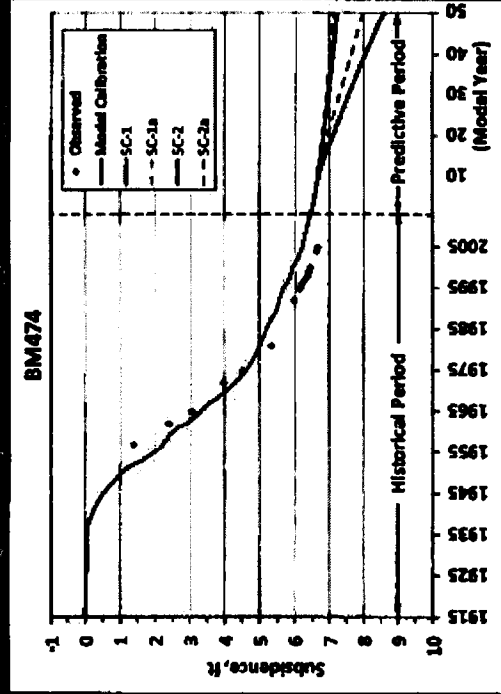
Model Yr. 50



PWS-0543-00082



Land Subsidence at Selected Benchmarks



● Selected Benchmark

— Jurisdictional Boundary

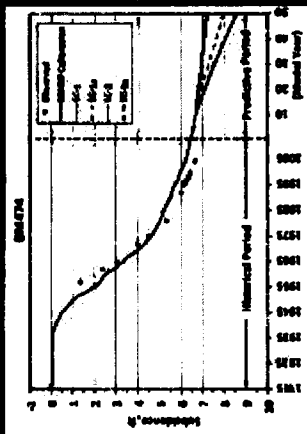
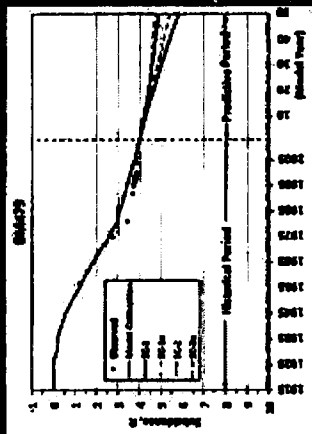


0 1 2 3 4 5 10

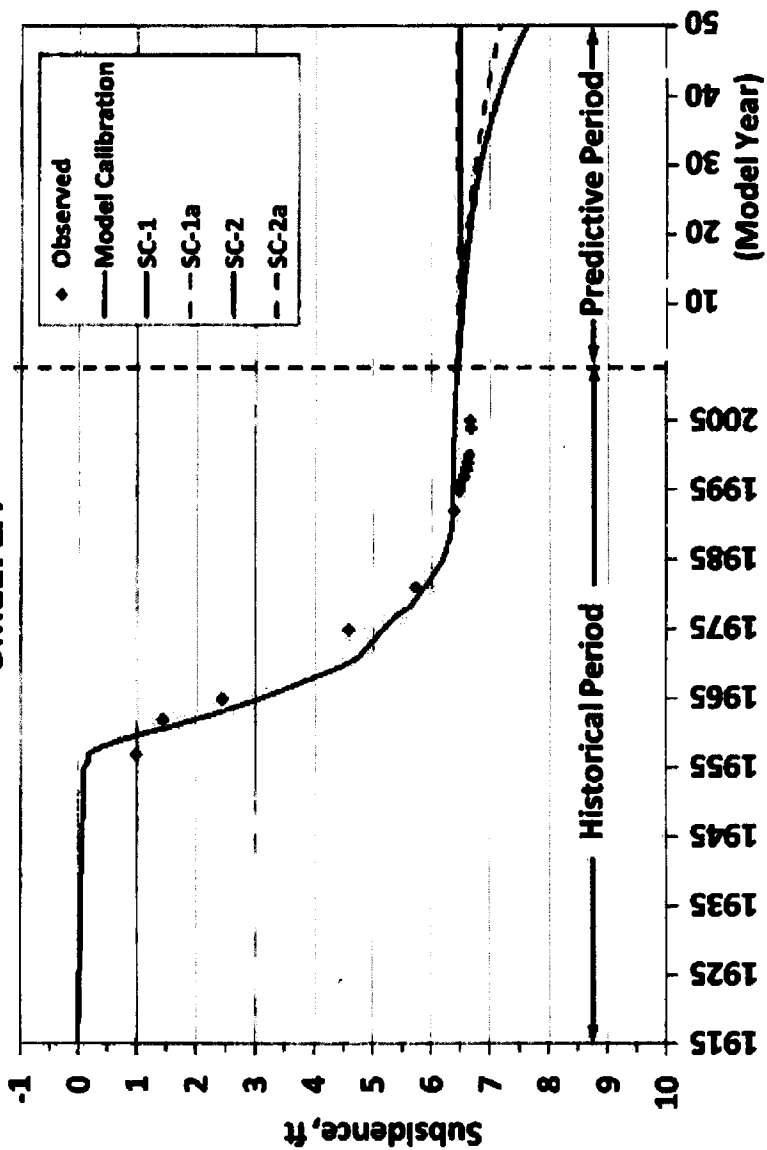
Miles

PWS-0543-00083

Land Subsidence at Selected Benchmarks



BM1171A

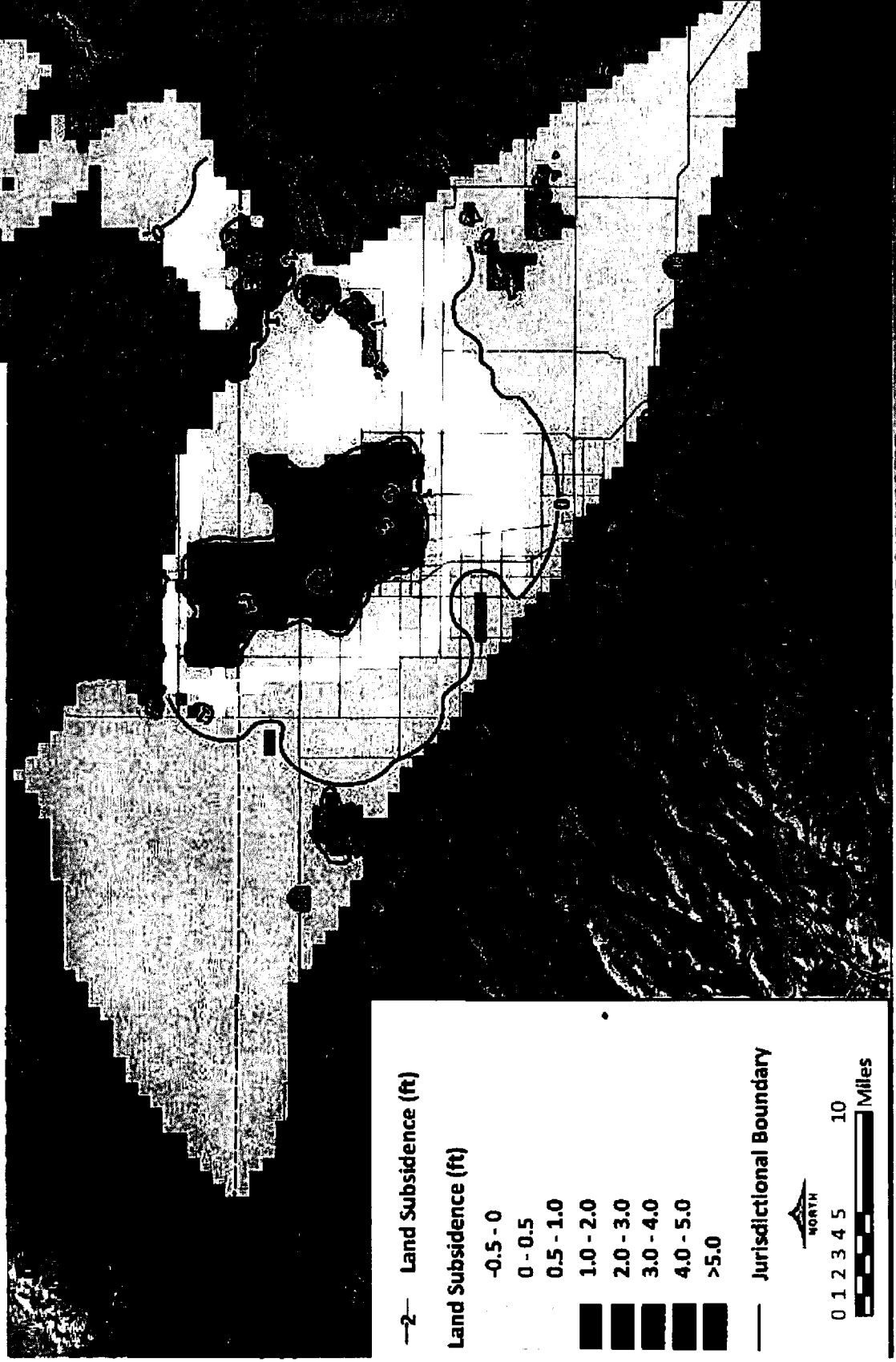


Selected Benchmark

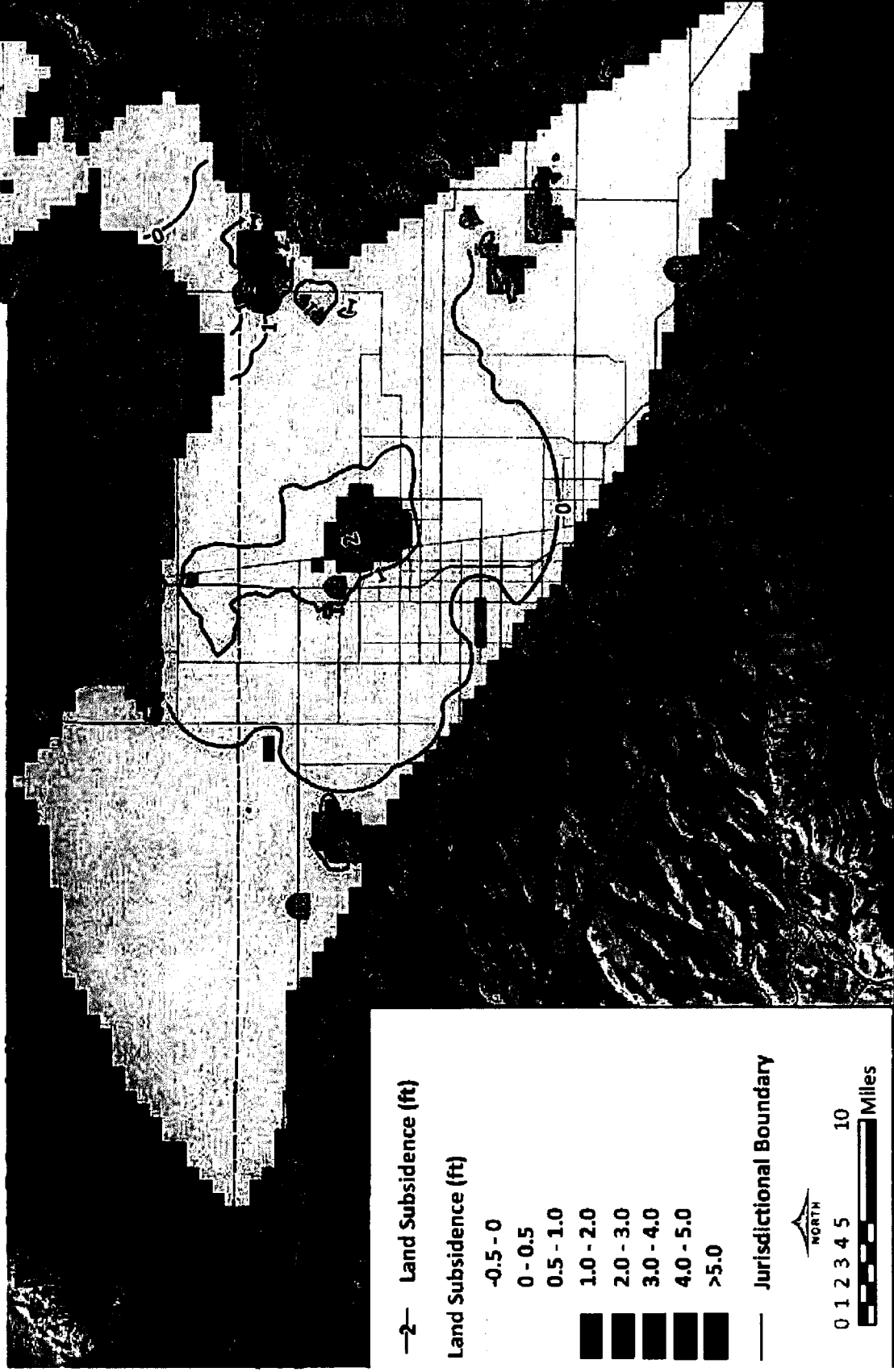
Artificially Boundary

0 1 2 3 4 5 10 Miles

Additional Land Subsidence in 50 Yrs SC-1 (Avg 2011-2012 Pumping with Imported Water Under Severe Drought Conditions)

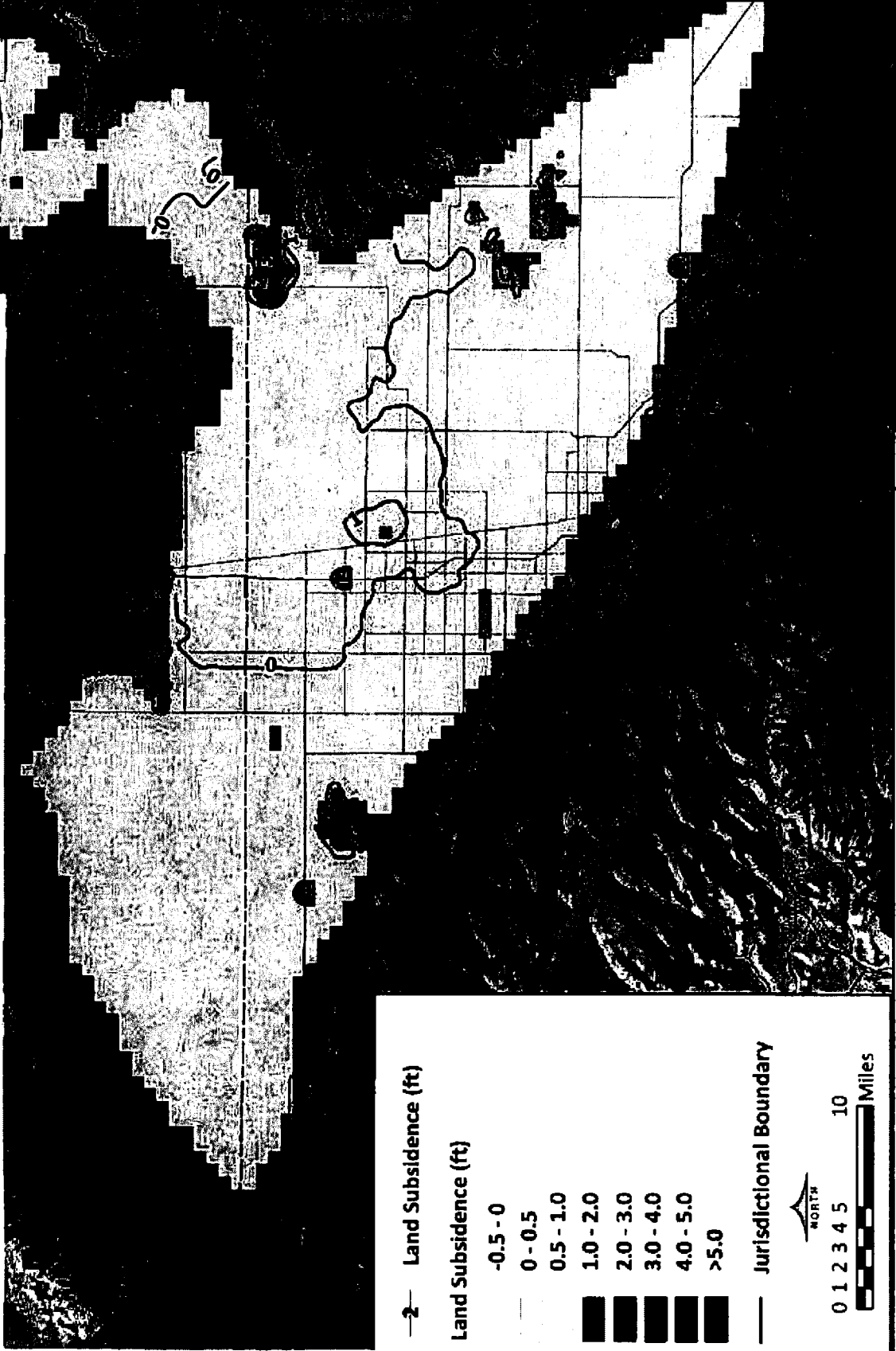


Additional Land Subsidence in 50 Yrs SC-1a (Avg 2011-2012 Pumping with Sufficient Imported Water Deliveries to Equal Supplemental Safe Yield)



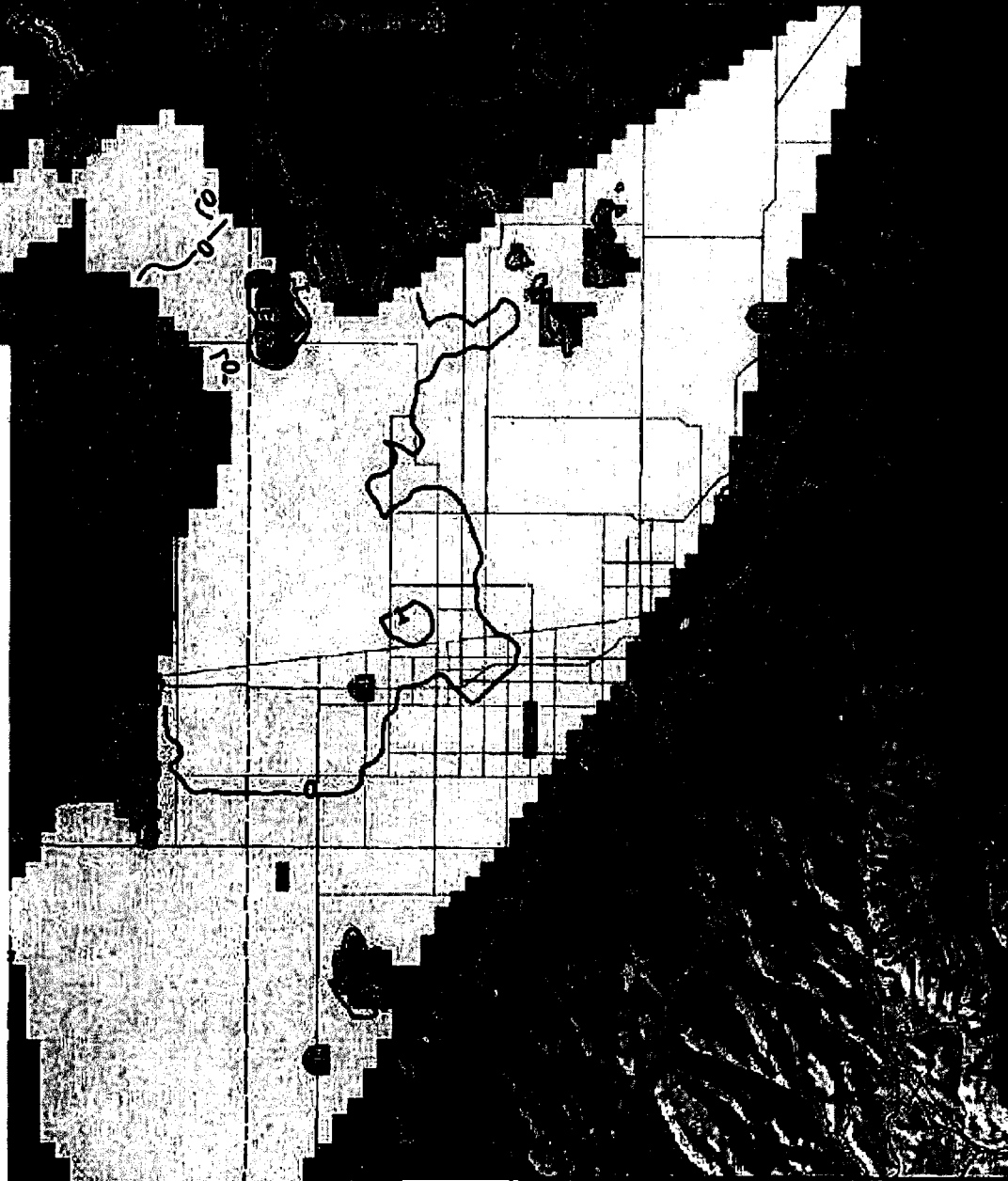
Additional Land Subsidence in 50 Yrs SC-2 (Ramp Down Current Pumping to Native Safe Yield with Imported Water Under Severe Drought Conditions)

595



Additional Land Subsidence in 50 Yrs SC-2a (Ramp Down Current Pumping to Native Safe Yield with Sufficient Imported Water Deliveries to Equal Supplemental Safe Yield)

306



—2— Land Subsidence (ft)

Land Subsidence (ft)

-0.5 - 0

0 - 0.5

0.5 - 1.0

1.0 - 2.0

2.0 - 3.0

3.0 - 4.0

4.0 - 5.0

>5.0

— Jurisdictional Boundary



0 1 2 3 4 5 10

Miles

PWS-0543-00088

Land Subsidence Changes Between SC-1 and SC-2a in 50 Yrs (SC-2a minus SC-1)

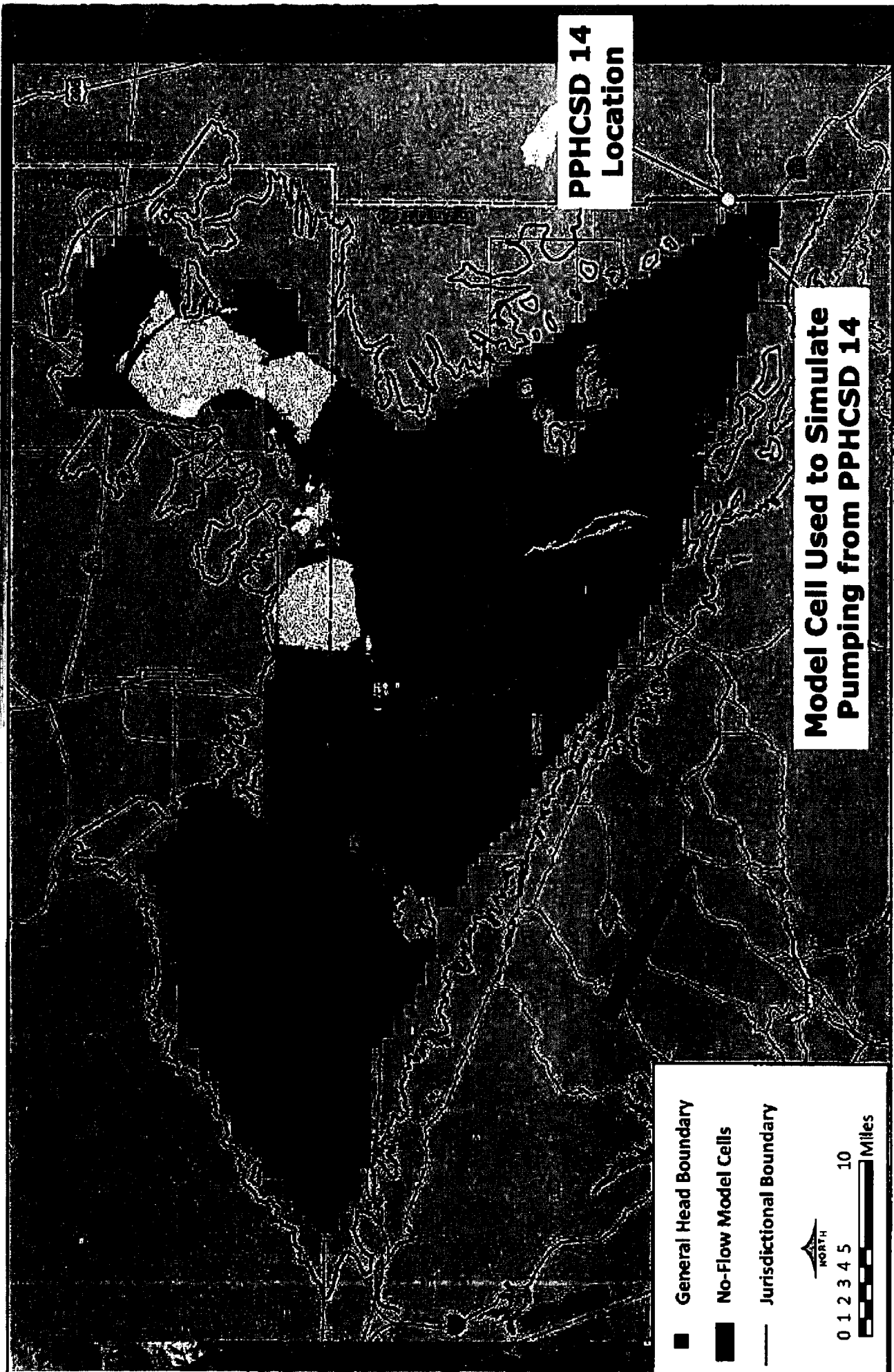


Summary of Modelling Results

- Model Scenarios 2 and 2a (ramp down to NSV) will result in the following Solution
 - Model Scenario 2 will stabilize water levels and reduce pumping
 - Model Scenario 2a will allow water levels to rise and stabilize subsidence
- Reduction in groundwater pumping (to settlement limit) as continued use of imported water will result in a surplus for the Antelope Valley groundwater basin and bring it into balance.

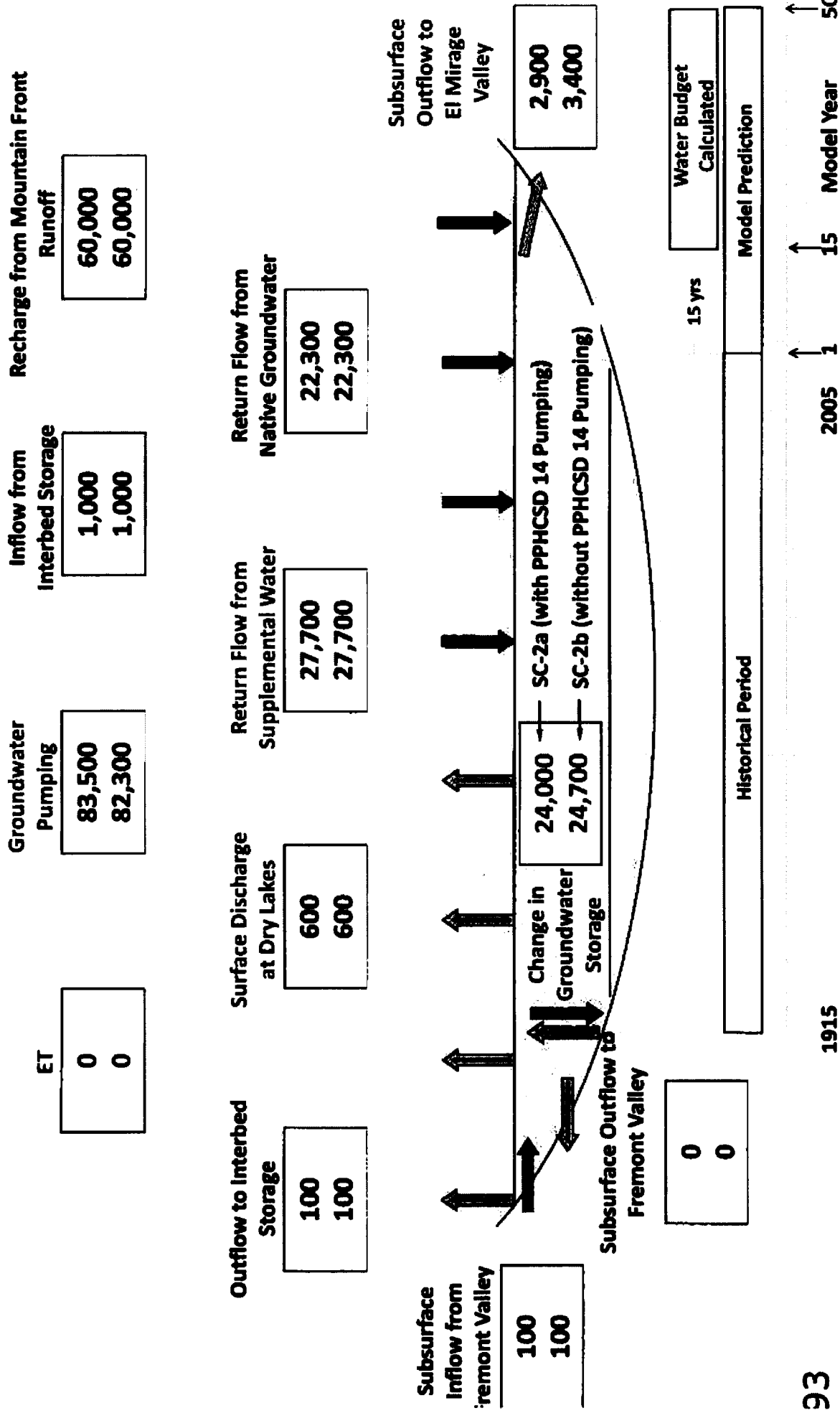
BASIS FOR OPINION

- The groundwater model was run with annual pumping at Well 14 pumping at 1,200 afy
- Water balances were prepared.
- Results show with Well 14 pumping, there would be a deficit of 700 afy from the Antelope Valley groundwater.



PWS-0543-00092

Groundwater Budget - Annual Average of Model Years 35 to 50 (Units in acre-ft./yr)



DATE RECEIVED: 12/28/15

**PHELAN PINON HILLS
COMMUNITY SERVICES
DISTRICT (PPHCSO)
WELL LOCATIONS**

HOLYWRITING



Model Boundary



No-Flow Model Cell

Antelope Valley
Arts of Adolescence

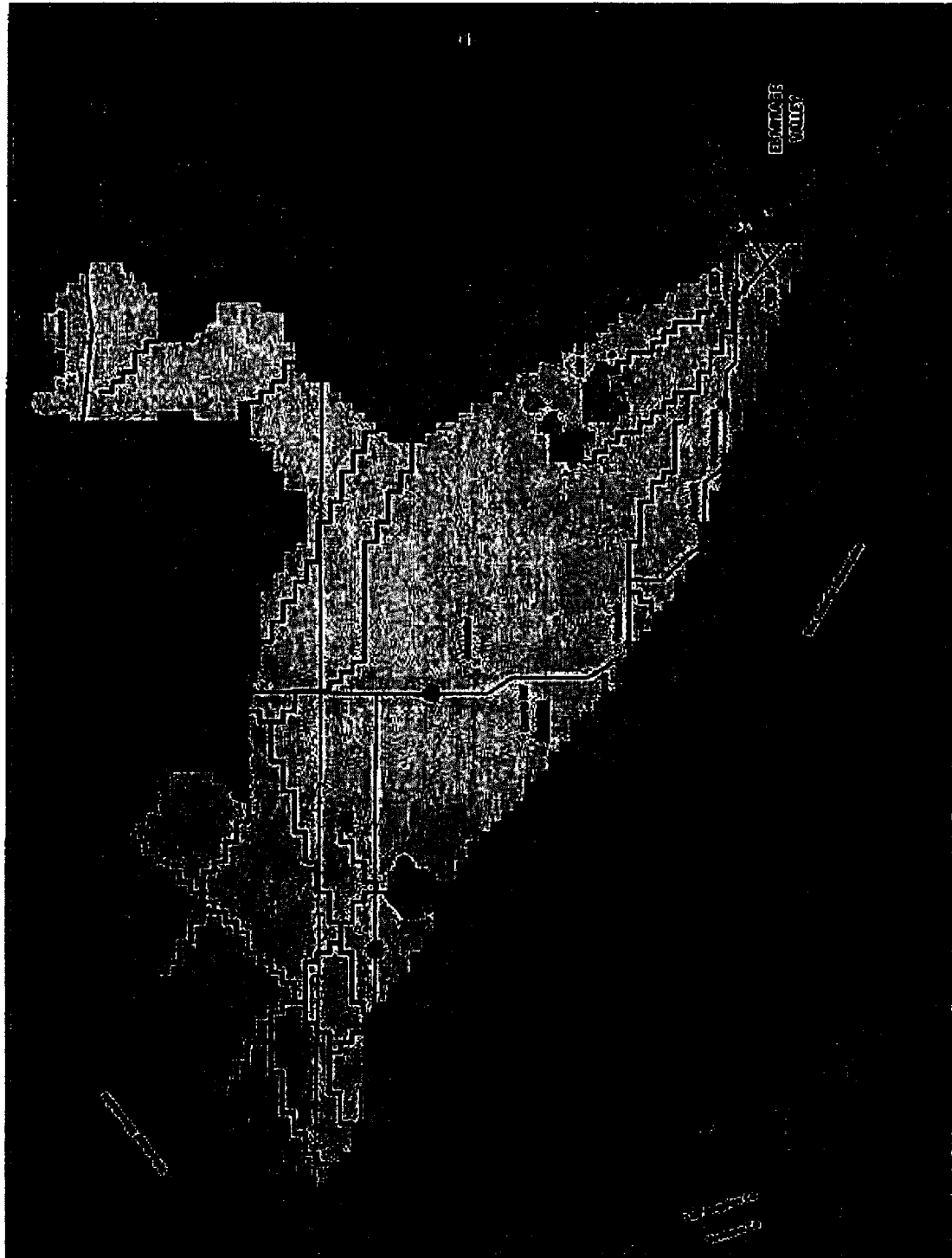
PHCSD Well Location



General Head Boundary

Model Groundwater
Flow Barrier

County Boundary



71-581

Approved by: CURE, 1400 Proctor Ave, 1901, June 11
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GEOSCIENCE

GEORGETOWN SUPER SERVICE
PO Box 228 Oceanside CA 91761
Tel (619) 435-0830 Fax (619) 435-0830

Figure 7

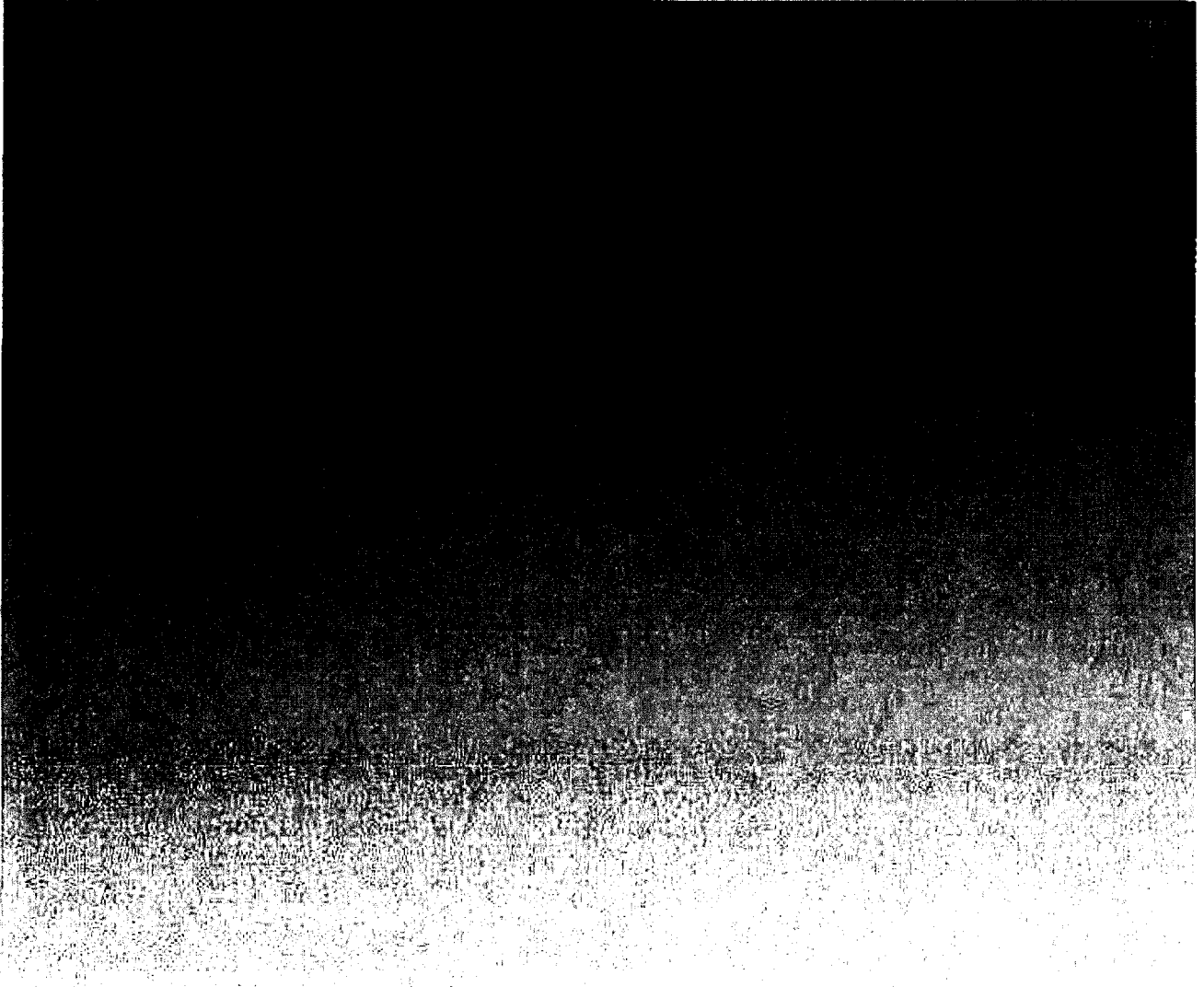
PWS-0543-00094

28-DCT-14

50 yr AVE

General Head Boundary (GHB) Elevation at the Eastern Model Boundary	Annual Average Outflow Across AVAA Boundary, [acre- ft./yr]		Change in Outflow Due to Lowering of GHB Elevation [acre-ft./yr]
	No Lowering of GHB Elevation	Lowering of GHB Elevation 0.47 ft./yr	
2904 ft amsl (Based on the USGS Model)	3,182	3,393	211
2965 ft amsl (Based on CSD Well No. 6A Water Level Data)	2,723	2,939	216
2915 ft amsl (Based on CSD Well No. 6A Water Level Data and Adjusted for 50 ft to Account for Model Underestimation of Water Level)	3,092	3,302	210

PWS-0543-00095



PWS-0543-00096

Return Flows (Gallons per acre)

Agricultural (Q_{ag})

Municipal (Q_{mi})

RF = 25%
 Q_{ag}^1

28.1% Q_{mi}

1 -- Based on Average and Median Rates for 1929-2005 (27% and 25% respectively) and rate for 1986-2005 (23%) (Expert Report July 2010 Appendix E pg 4) and testimony pg 509 line 3 and pg 512 line 6)

Return Flow Percentage

Municipal and Industrial (M&I)

Agricultural (Q_{ag})

Mutual/Private Water Co. and
Small Pumps (MWC) (Q_{mwc})

$RF_{ag} = 25\%$
(Q_{ag})

15 Year
Lag Time

Septic
 $RF_{smwc} =$
45% (Q_{mwc})

Irrigation
 $RF_{imwc} =$
11% (Q_{mwc})

15 Year
Lag Time

Public
Water
Supply
System
(PWS)

Public
Water
Supply
System
(PWS)

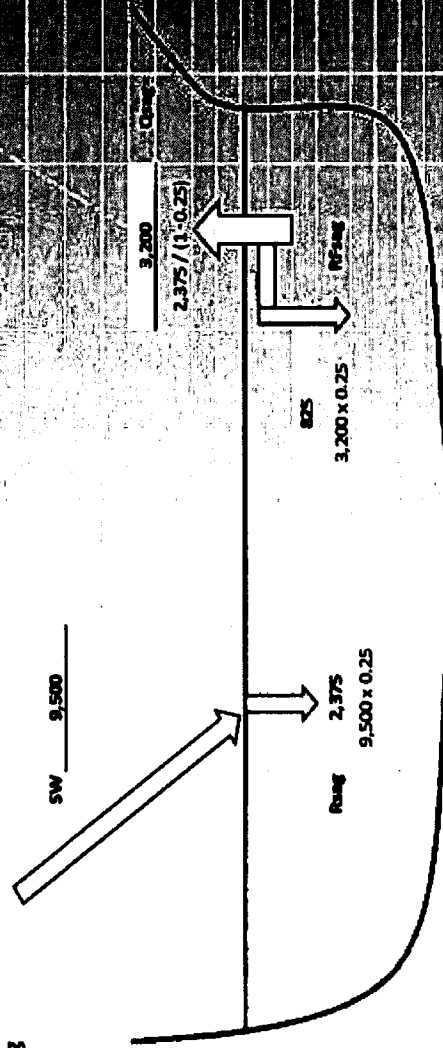
EXAMPLE OF SUPPLEMENTAL SUSTAINABLE YIELD FROM PUMPING OF AGRICULTURAL

Scalman Exhibit 95

Land Use Period	Supplemental Water Use (afy)		Supplemental Recharge (afy)		Return Flows from Well Supply Recharge (afy)	
	AG	MBI	AG	MBI	AG	MBI
1995-1999	19,550	48,100	4,890	13,515	13,515	13,515
1999-2005	16,625	56,320	4,155	15,625	15,625	15,625
2005	9,500	64,000	2,375	17,985	17,985	17,985
					3,200	3,200

Ag RF = 25%

Water Imported for Ag



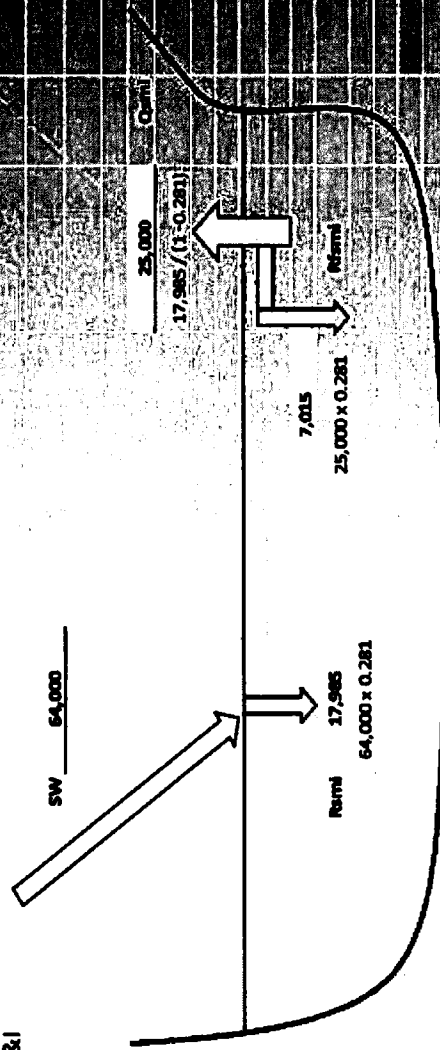
EXAMPLE OF SUPPLEMENTAL SUSTAINABLE YIELD FROM IMPORTING

Scalmanini Exhibit 95

Land Use Period	Supplemental Water Use (ar)		Supplemental Recharge (ar)		Return Flows (from Subj. Recharge) (ar)	
	AG	M&I	AG	M&I	AG	M&I
1995-1999	19,550	48,100	4,890	13,515	16,100	16,100
1998-2005	16,625	56,320	4,155	15,825	15,175	15,175
2005	9,500	64,000	2,375	17,985	17,015	17,015
						25,000

MI RF = 28.1%

Water Imported for M&I

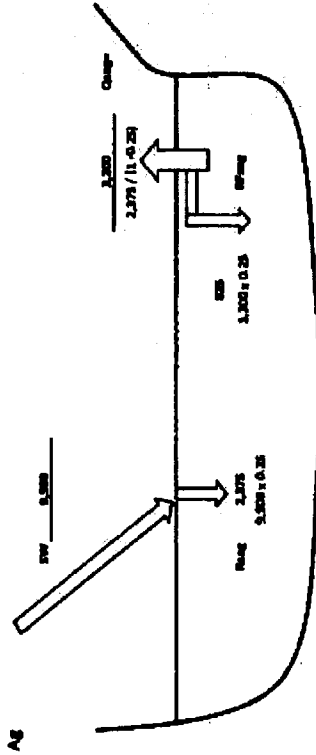


Supplemental Sustainable Yield
= SSY from Ag + SSY from Forest

Example for 2005 Land Use - Sealman

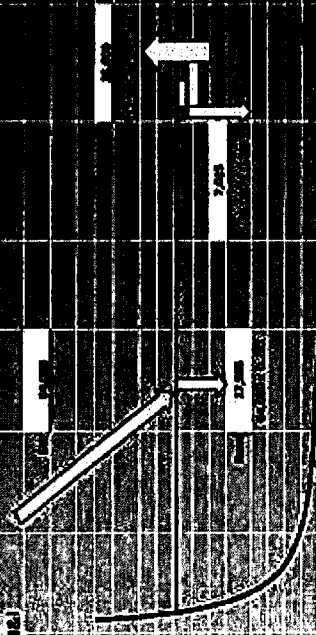
Ag RF = 25%

Water Imported for



MI RF = 28.1%

Water Imported for



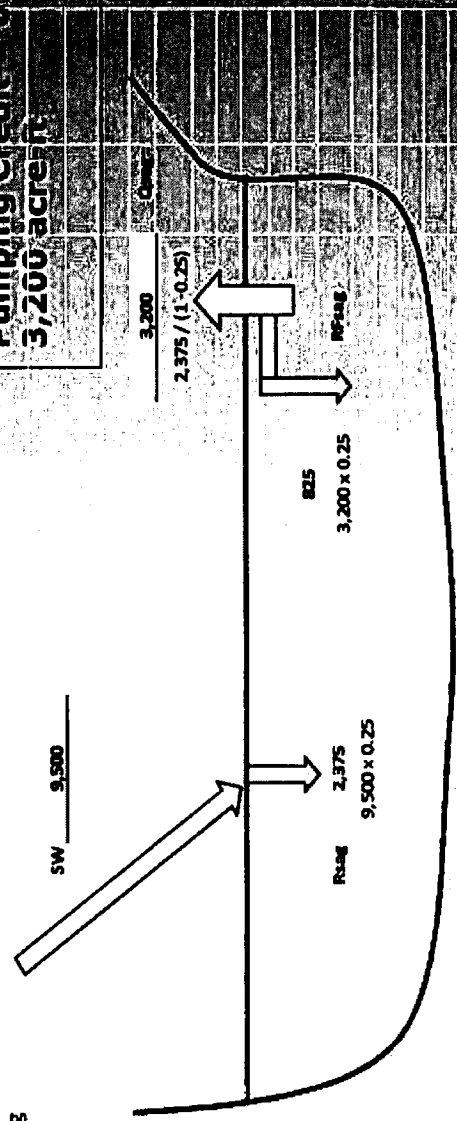
Supplemental Sustainable Yield = 3,200 + 28,000
28,200 afy

Recurrence Relation of Return Flows and Return Flow Credits Return Flow Credit = $RF\% / (1 - RF\%) \times \text{Water Imported for Ag}$

In other words, if 9,500 acre-ft of supplemental water was pumped to agricultural lands, a return flow of 2,375 acre-ft would occur. So, if you have to pump 3,200 acre-ft as 25% of the pumping, you would have to return to the aquifer.

Ag RF = 25%

Water Imported for Ag



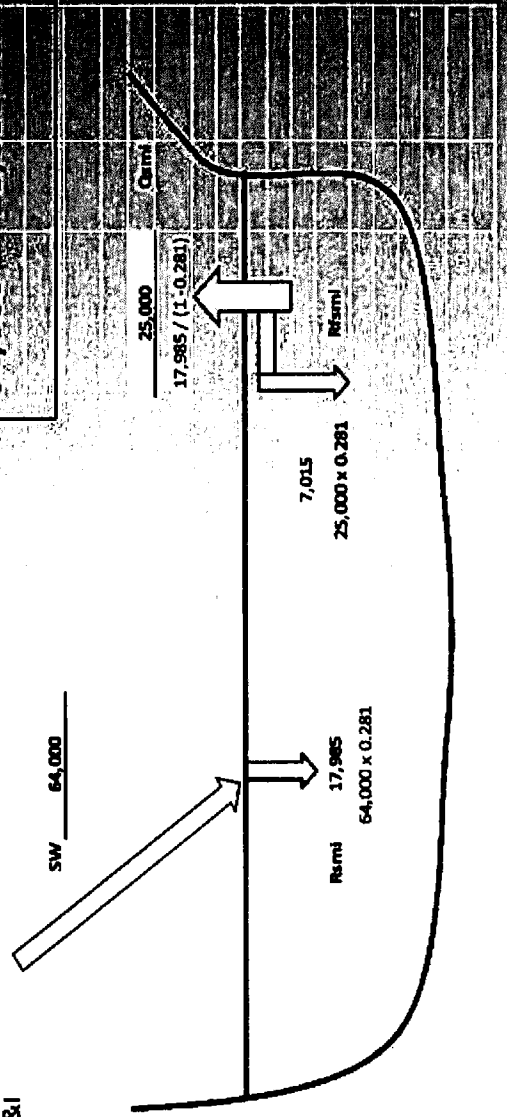
Recurrence Relation of Return Flows and Return Flow Credits

$$\text{Return Flow Credit} = \text{RF} / (1 - \text{RF}) \times$$

In other words, if 64,000 acre-ft of supplemental water was imported to the lands, a return flow of 17,985 acre ft would occur. To recover the water, we would have to pump 25,000 acre ft as 28.1% of the pumping would return to the aquifer.

MI RF = 28.1%

Water Imported for
M&I



Recurrence Relation of Return

$$\text{Pumping Credit} = \text{RF} / (1 - \text{RF}) \times$$

Agricultural Return Flow Percentage		25.0%		
Imported Supplemental Water (SW) afy		9,500		
Year	Equation for Amt pumped	Amt Pumped af	Multipier of Imported Supplemental Water	Explained Multiplier
1	SW x RF	2,375	0.2500	RF
2	SW x RF ²	594	0.0625	RF ²
3	SW x RF ³	148	0.0156	RF ³
4	SW x RF ⁴	37	0.0039	RF ⁴
5	SW x RF ⁵	9	0.0010	RF ⁵
6	SW x RF ⁶	2	0.0002	RF ⁶
7	SW x RF ⁷	1	0.0001	RF ⁷
Total Pumped-->		3,200	0.33	<= Sum of Multiplier

or... 33% of 9,500 af = 3,200 af

Recurrence Relation of Return Flows

Agricultural Return Flow Percentage	25.0%		
Imported Supplemental Water (SW) afy	9,500		
Year	Equation for Amt pumped	Amt Pumped af	Imported Supplemental Water af
1	SW x RF (9,500 x 0.25)	2375	9,500
2	SW x RF ² = (9,500 x 0.25 x 0.25) = (9,500 x RF x RF) = 9,500 x RF ²	594	9,500
3	SW x RF ³ = (9,500 x 0.25 x 0.25 x 0.25) = (9,500 x RF x RF x RF) = 9,500 x RF ³	148	9,500
4	SW x RF ⁴	37	9,500
5	SW x RF ⁵	9	9,500
6	SW x RF ⁶	2	9,500
7	SW x RF ⁷	1	9,500
Total Pumped-->		3200	6230

or 33% of 9,500 af = 3,200 af

or ... 33% of 9,500 af = 3,200 af

6-AVEK-2

Exhibits

Charles W. Binder

Opinions

- Proposed physical solution results in groundwater production being reduced to an amount equal to the native safe yield, resulting in the groundwater basin being in hydrologic balance.
- Native safe yield plus available supplemental supplies are sufficient to meet the total current water requirements.

Opinions

- Proposed physical solution provides a functional structure to administer the judgment and manage the groundwater basin. Key elements of the proposed physical solution include:
 - Management structure organized through a Watermaster and Watermaster Engineer.
 - Financial plan to fund the management structure and implement the physical solution.
 - Flexible management tools to implement the judgment and manage the groundwater basin.
 - Continuing Court jurisdiction for enforcement and modification of provisions of the judgment.

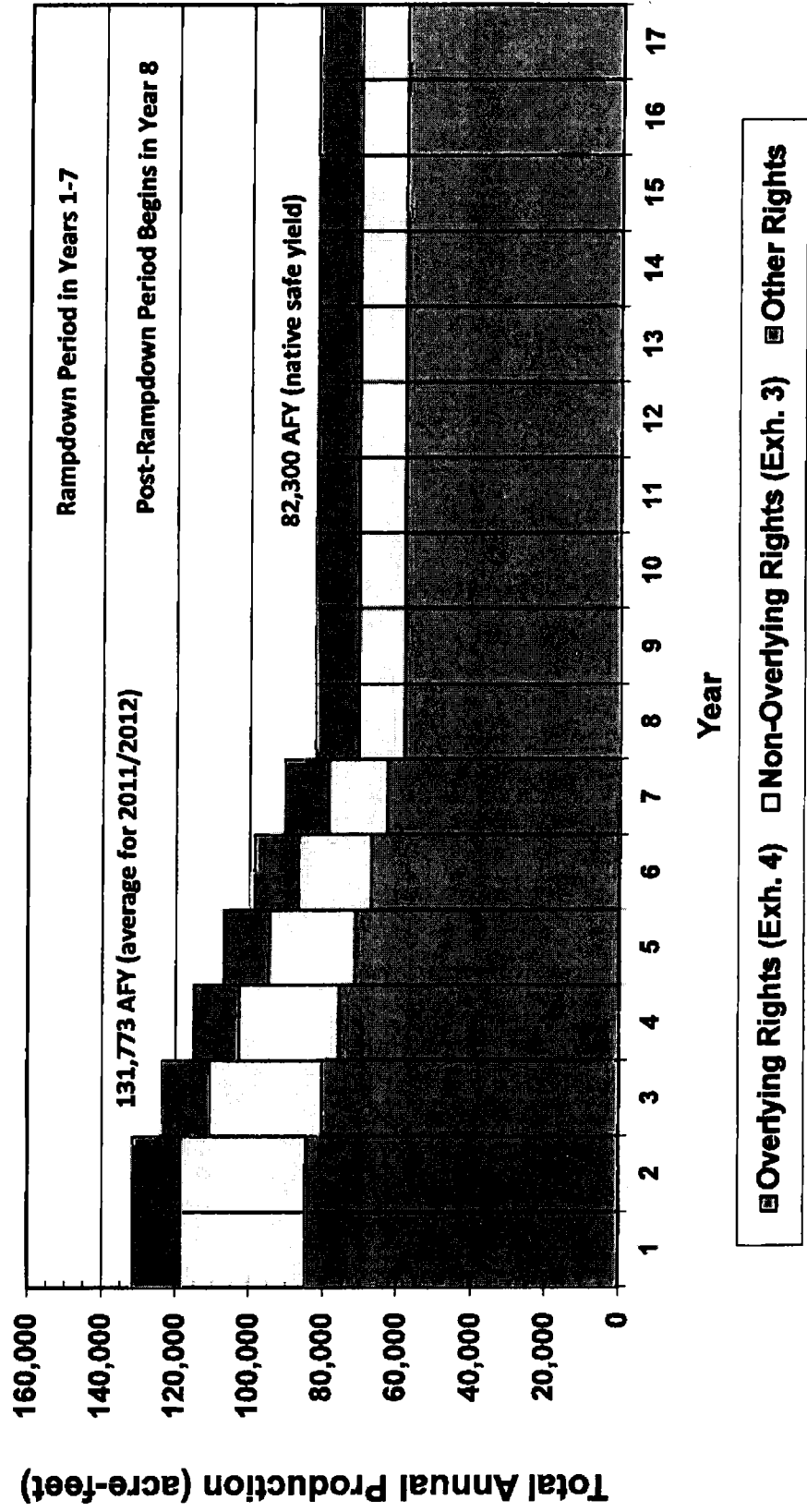
Objectives of the Proposed Physical Solution and Stipulated Judgment

- Achieve Safe Yield and Stabilize Groundwater Levels
- Develop Structure to Administer Judgment and Manage Groundwater Basin
- Develop Financial Plan for Administration of Judgment and Management of Basin
- Provide Flexible Management Tools for Functional Physical Solution
- Provide Continuing Court Jurisdiction for Enforcement and Modification of Physical Solution and Judgment

Balance Groundwater Production with Native Safe Yield

- Total Safe Yield Determined by Court
 - Native Safe Yield = 82,300 AFY
 - Supplemental Safe Yield = 27,700 AFY
 - Total Safe Yield = 110,000 AFY
- Groundwater Production Equals Native Safe Yield to Bring Groundwater Basin into Hydrologic Balance

Illustration of Annual Groundwater Production During Rampdown and Post-Rampdown Periods



Total Current Water Requirements
Average Uses for 2011 and 2012
(values in acre feet per year)

Groundwater Uses

Rural Residential (Small Pumpers) Groundwater Production	9,748	(1), (2)
Edwards AFB and Plant 42 (Federal Rights)	1,348	(3)
State of California	279	(1)
Public Water Suppliers	34,198	(1)
Overlying Landowners	84,650	(3), (4)
City of Lancaster	506	(3)
Phelan Pinon Hills CSD	1,044	(3)

Subtotal--Groundwater Uses **131,773**

Supplemental Water Uses

Local Surface Water Supplies	4,000	(5)
Recycled Water	15,400	
Environmental Uses	3,500	(6)
Agricultural Uses	11,900	(7)
M&I Uses	0	(8)
State Water Project Supplies	67,000	
Agricultural Uses	18,400	(9)
M&I Uses	48,600	(9)

Subtotal--Supplemental Water Uses **86,400**

TOTAL CURRENT WATER REQUIREMENTS **218,173**

Notes:

- (1) Page 42, Exhibit 1 from September 23, 2015 deposition of Dennis E. Williams.
- (2) Based on GSI Water Solutions, Inc. Technical Report, July 2015.
- (3) Amended Statement of Partial Decision for Phase IV Trial, June 29, 2013.
- (4) Proposed Judgment, Exhibit 4, March 3, 2015.
- (5) Palmdale Water District 2010 Urban Water Management Plan, June 2011.
- (6) Page D-23; Phase 3 Expert Report.
- (7) Average for Period 2005-2009, Appendix G, Phase 3 Expert Report.
- (8) Assumed value.
- (9) DWR Bulletin Nos. 132-12 and 132-13; and AVEK Customer Water Use Reports.

Comparison of Total Current Water Requirements and Water Supplies

- Total Current Water Requirements = 218,173 AFY
- Water Supplies
 - Native Safe Yield
 - Supplemental Supplies
- Native Safe Yield plus Supplemental Supplies Sufficient to Meet Total Current Water Requirements

Supplemental Water Supplies

- Local Surface Water Supplies = 4,000 AFY
- Present Recycled Water Supplies = 23,800 AFY
- Table A Imported Supplies from SWP = 168,444 AFY
 - AVEK = 144,844 AFY
 - Littlerock Creek ID = 2,300 AFY
 - Palmdale WD = 21,300 AFY
- Total Present Supplemental Supplies = 196,244 AFY

**Illustration of Average Water Supplies Provided by Physical Solution
With SWP Supplies Limited to Embedded Amount in Supplemental Safe Yield
(values in acre feet per year)**

A. TOTAL SAFE YIELD

Natural Safe Yield

Overlying Production Rights (Exhibit 4)	58,342	(1), (2)
Non-Overlying Production Rights (Exhibit 3)	12,345	(1)
Federal Reserved Right (Paragraph 5.1.4)	7,600	(1)
State of California Production Rights (Paragraph 5.1.5)	207	(1)
Small Pumper Class Production Rights (Paragraph 5.1.3)	3,806	(1)
Subtotal--Natural Safe Yield	82,300	

Supplemental Safe Yield

Agricultural Return Flows from 9,400 AF SWP Deliveries	3,200	(3)
M&I Return Flows from 62,800 AF SWP Deliveries	24,500	(3)
Subtotal--Supplemental Safe Yield	27,700	

Subtotal--Total Safe Yield	110,000	(4)
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B. LOCAL SUPPLEMENTAL SURFACE WATER SUPPLIES	4,000	(5)
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C. RECYCLED WATER

Environmental Purposes		3,500	(6)
Paiute Ponds	3,300		
Apollo Lakes	200		
Delivery to Agricultural Users		11,900	(7)
Delivery to M&I Users		8,400	(8)
Subtotal--Recycled Water		23,800	

D. SUPPLEMENTAL DIRECT DELIVERIES FROM SWP

SWP Deliveries to Agricultural Users (Embedded in Supplemental Safe Yield)	9,400	(9)
SWP Deliveries to M&I Users (Embedded in Supplemental Safe Yield)	62,800	(10)
Subtotal--Supplemental Direct Deliveries from SWP	72,200	
(Percentage of Table A Amount of 168,444 AFY)	43%	(11)

TOTAL WATER SUPPLIES	210,000	
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Notes:

- (1) Stipulation Exhibit 1--Proposed Judgment and Physical Solution (PJPS).
- (2) Amount for Overlying Production Rights adjusted upward to result in total of 82,300 AFY.
- (3) Split derived from Appendix F, Table F.4-1; Phase 3 Expert Report.
- (4) Court set total safe yield at 110,000 AFY per Statement of Decision Phase Three Trial.
- (5) Palmdale Water District 2010 Urban Water Management Plan, June 2011.
- (6) Page D-23; Phase 3 Expert Report.
- (7) Total 23,800 AFY minus 3,500 AFY equals 20,300 AFY; assume current use for Ag.
- (8) Total 23,800 AFY minus 3,500 AFY equals 20,300 AFY; assume remainder for M&I.
- (9) 3,200 AF/0.34; Agricultural Return Flow Percentage per Paragraph 5.2.1, PJPS.
- (10) 24,500/0.39; M&I Return Flow Percentage per Paragraph 5.2.1, PJPS.
- (11) Percentage equals 72,200 AFY divided by 168,444 AFY.

**Illustration of Average Water Supplies Provided by Physical Solution
With Additional SWP Supplies to Meet Current Water Requirements (Average for 2011 and 2012)
(values in acre feet per year)**

A. TOTAL SAFE YIELD

Natural Safe Yield

Overlying Production Rights (Exhibit 4)	58,342	(1), (2)
Non-Overlying Production Rights (Exhibit 3)	12,345	(1)
Federal Reserved Right (Paragraph 5.1.4)	7,600	(1)
State of California Production Rights (Paragraph 5.1.5)	207	(1)
Small Pumper Class Production Rights (Paragraph 5.1.3)	3,806	(1)

Subtotal--Natural Safe Yield 82,300

Supplemental Safe Yield

Agricultural Return Flows from 9,400 AF SWP Deliveries	3,200	(3)
M&I Return Flows from 62,800 AF SWP Deliveries	24,500	(3)

Subtotal--Supplemental Safe Yield 27,700

Subtotal--Total Safe Yield 110,000 (4)

B. LOCAL SUPPLEMENTAL SURFACE WATER SUPPLIES

4,000 (5)

C. RECYCLED WATER

Environmental Purposes

Paiute Ponds	3,300	(6)
Apollo Lakes	200	

Delivery to Agricultural Users 11,900 (7)

Delivery to M&I Users 8,400 (8)

Subtotal--Recycled Water 23,800

D. SUPPLEMENTAL DIRECT DELIVERIES FROM SWP

SWP Direct Deliveries to Agricultural Users (Embedded in Supplemental Safe Yield)	9,400	(9)
SWP Direct Deliveries to M&I Users (Embedded in Supplemental Safe Yield)	62,800	(10)
Additional SWP Direct Deliveries to Satisfy Unmet 2011/2012 Water Requirements	6,099	(11)

Subtotal--Supplemental Direct Deliveries from SWP 78,299
(Percentage of Table A Amount of 168,444 AFY) 46% (12)

**E. ADDITIONAL SUPPLEMENTAL SUPPLIES FROM PUMPING
OF IMPORTED WATER RETURN FLOWS NOT PART OF SAFE YIELD**

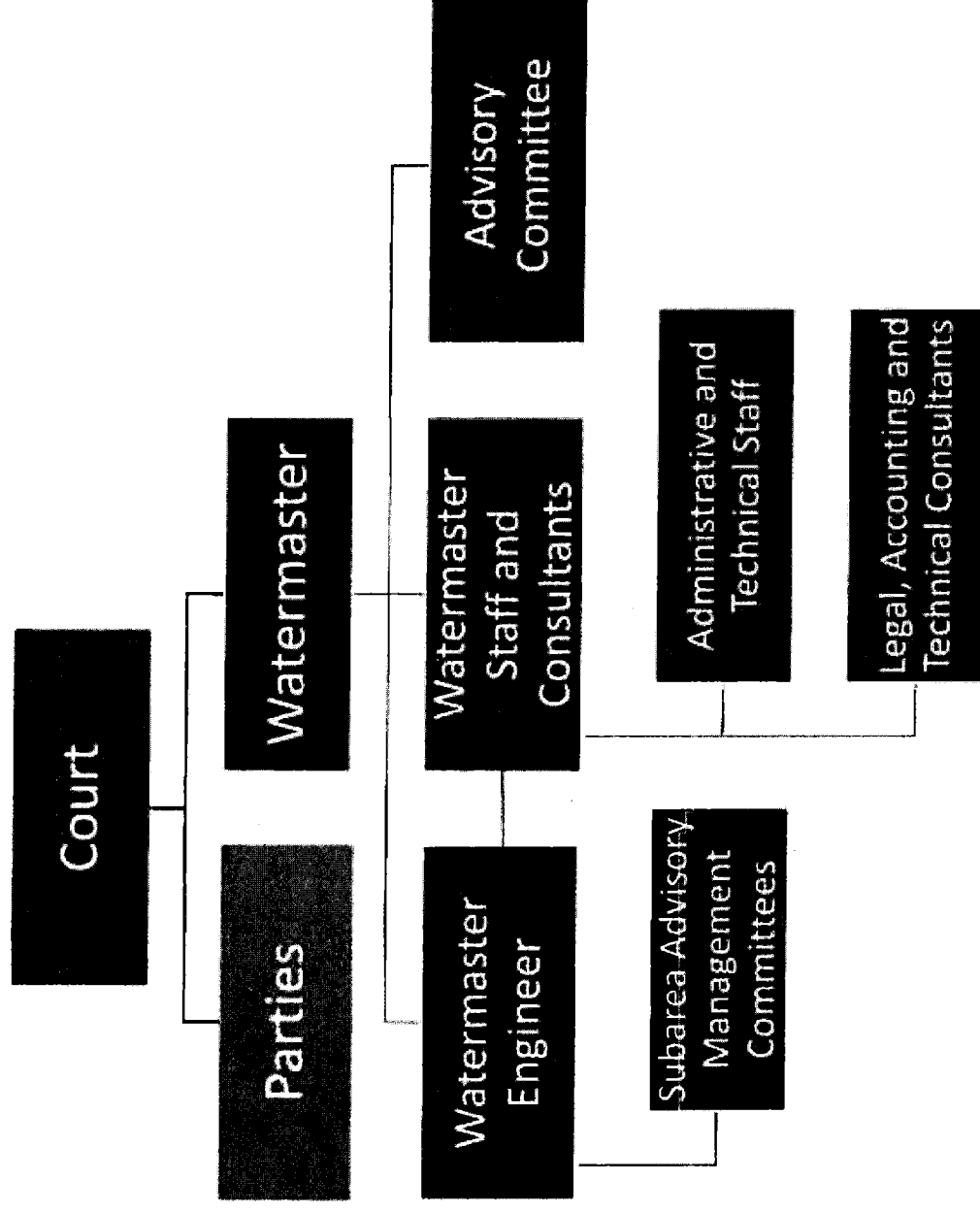
2,074 (13)

TOTAL WATER SUPPLIES 218,173

Notes:

- (1) Stipulation Exhibit 1--Proposed Judgment and Physical Solution (PJPS).
- (2) Amount for Overlying Production Rights adjusted upward to result in total of 82,300 AFY.
- (3) Split derived from Appendix F, Table F.4-1; Phase 3 Expert Report.
- (4) Court set total safe yield at 110,000 AFY per Statement of Decision Phase Three Trial.
- (5) Palmdale Water District 2010 Urban Water Management Plan, June 2011.
- (6) Page D-23; Phase 3 Expert Report.
- (7) Total 23,800 AFY minus 3,500 AFY equals 20,300 AFY; assume current use for Ag.
- (8) Total 23,800 AFY minus 3,500 AFY equals 20,300 AFY; assume remainder for M&I.
- (9) 3,200 AFY/0.34; Agricultural Return Flow Percentage per Paragraph 5.2.1, PJPS.
- (10) 24,500/0.39; M&I Return Flow Percentage per Paragraph 5.2.1, PJPS.
- (11) Unmet water requirements not distinguished between agricultural, M&I, and small pumper categories.
- (12) Percentage equals 78,299 AFY divided by 168,444 AFY.
- (13) Pumped from wells; assume return flow credit equals 34 percent.

Management Structure for Judgment and Physical Solution



Financial Plan

- Annual Watermaster Budget and Assessments Approved by Court
- Assessments Administered by Watermaster
 - Administrative Assessments
 - Replacement Water Assessments
 - Balance Assessments
- Watermaster Has Ability to Borrow Money

Direct Measures to Balance Water Supplies and Water Requirements

- Seven-Year Rampdown for Groundwater Production to Reach Native Safe Yield
- Rights to Imported Water Return Flows
- Provide Supplemental Imported Supplies from State Water Project
- Provide Recycled Water as Source of Supplemental Supplies

Management Tools for Coordinated and Conjunctive Use of Native and Supplemental Water Supplies

- Rights to Imported Water Return Flows
- Carryover Water
 - In Lieu Production
 - Imported Water Return Flows
 - Production Rights
- Groundwater Storage (Banking)
- Transfers
- Change in Point of Extraction

Monitoring Program for Management of Groundwater Basin

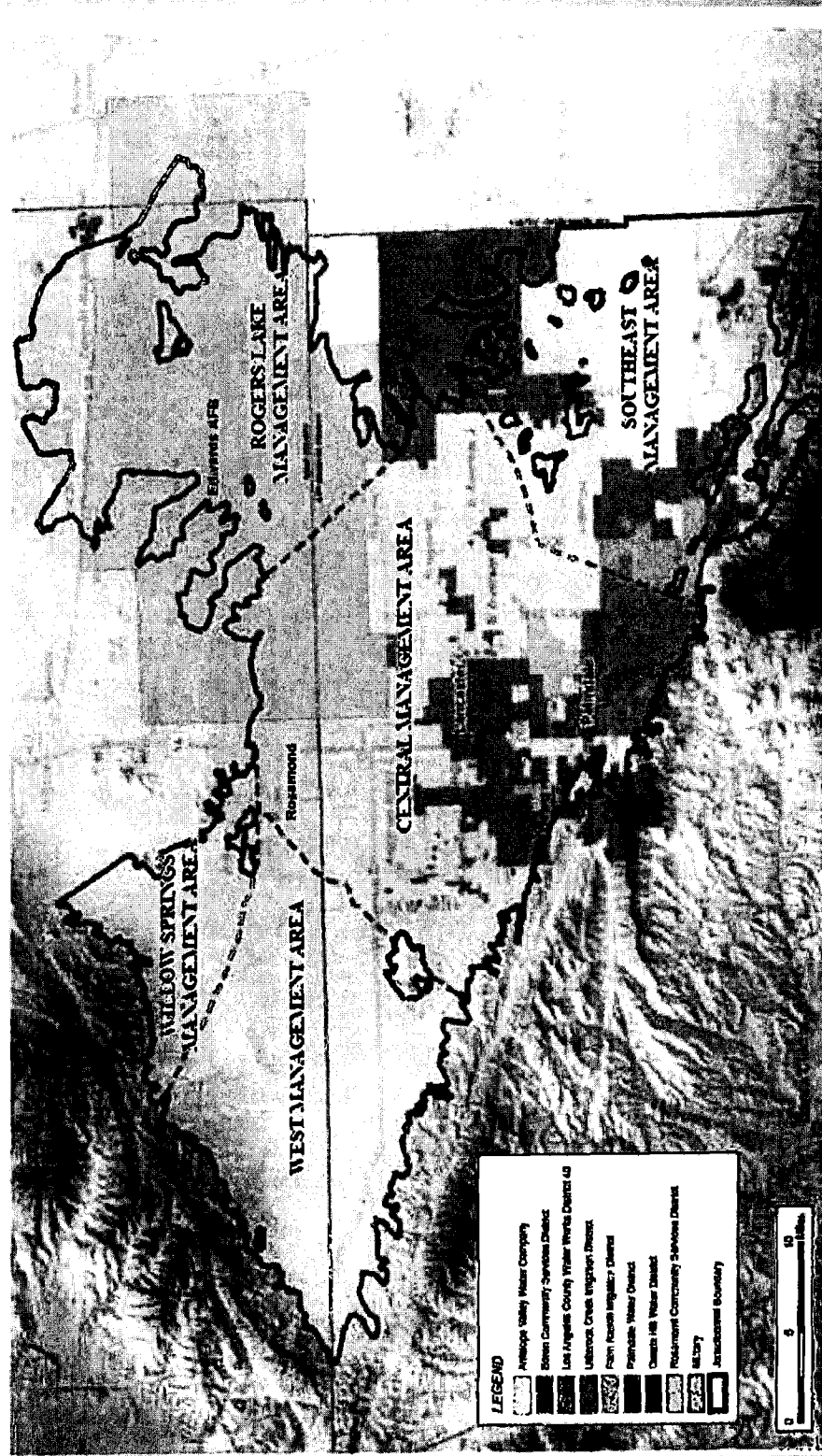
- Annual Watermaster Report Submitted to Court
- Monitoring Program
 - Water Use
 - Groundwater Levels
 - Subsidence
 - Precipitation
 - Water Quality
- Flow Meters for all Producers Except Small Pumper Class
- Production Reports Submitted by all Producers Except Small Pumper Class
- Monitoring Use by Small Pumper Class through Physical Inspection and Estimates Using Power Records

Five Management Subareas

- Five Management Subareas
 - Central Antelope Valley Subarea
 - West Antelope Valley Subarea
 - South East Subarea
 - Willow Springs Subarea
 - Rogers Lake Subarea
- Subarea Advisory Management Committees to Advise Watermaster Engineer
- Map Provided as Exhibit 10 to Proposed Judgment

Five Management Subareas

SUBAREAS



Overview of Watermaster

- Administer Judgment and Physical Solution
- Five Member Board Comprised of Various Water Users
- Duties Performed in Impartial Manner
- Adopt Watermaster Rules and Regulations for Conduct under Judgment
- Select Watermaster Engineer
- Consult with Advisory Committee

Key Duties of Watermaster

- Maintain Current List of Parties
- Administer Annual Budget, Investments, and Assessments
- Maintain Record of Carryover and Transfers
- Consider and Approve Applications for New Production
- Bring Actions or Motions to Enjoin Conduct Prohibited under Judgment

Duties and Responsibilities of Watermaster Engineer

- Prepare Watermaster Rules and Regulations
- Implement Monitoring, Flow Meter, and Production Reporting Programs
- Prepare Annual Report for Filing with the Court
- Review Native Safe Yield for Recommendations to Court
- Review Imported Water Return Flow Percentages for Recommendations to Court
- Administer Replacement Water and Assessment Program
- Administer Balance Assessment Program

Duties and Responsibilities of Watermaster Engineer (continued)

- Administer Application Procedure for Watermaster to Approve New Groundwater Production
- Review Proposed Transfers of Production Rights for Approval by Watermaster
- Administer Storage Agreements between Watermaster and Parties
- Administer Carryover Programs
- Conduct Analyses for Material Injury Determinations

Actions Subject to Material Injury Determination by Watermaster Engineer

- Exercise of Production Rights
- Storage Agreements
- Carryover
- Transfers
- Change in Point of Extraction
- New Production Applications

Continuing Jurisdiction of Court

- All Watermaster and Watermaster Engineer Actions Subject to Review by Court
- Court Review and Modification upon Petition by Party or Watermaster
- Ongoing Approval of Watermaster Assessments and Budget
- Ongoing Approval of Annual Watermaster Report
- Enjoin any Conduct Prohibited by Judgment