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

DEPARTMENT NO. 316 HON. JACK KOMAR, JUDGE

COORDINATION PROCEEDING)	
SPECIAL TITLE (RULE 1550B))	
)	JUDICIAL COUNCIL
ANTELOPE VALLEY GROUNDWATER CASES)	COORDINATION
)	NO. JCCP4408
)	
PALMDALE WATER DISTRICT AND)	SANTA CLARA CASE NO.
QUARTZ HILL WATER DISTRICT,)	1-05-CV-049053
)	
CROSS-COMPLAINANTS,)	
)	
VS.)	
)	
LOS ANGELES COUNTY WATERWORKS,)	
DISTRICT NO. 40, ET AL,)	
)	
CROSS-DEFENDANTS.)	
)	

REPORTER'S TRANSCRIPT OF PROCEEDINGS

FRIDAY, MARCH 25, 2011

APPEARANCES:

(SEE APPEARANCE PAGES)

GINGER WELKER, CSR #5585
OFFICIAL REPORTER

1 ASSIGNING ARBITRARY VALUES TO ADJACENT CELLS.

2 YOU CAN SEE THAT ON THIS FIRST SLIDE WHERE I
3 TALK ABOUT THE AREAS, ASSIGNING .5 TO A CELL THAT HAS NO
4 DATA IN IT, BASED ON ELEVATIONS IN ADJACENT CELLS, WHERE
5 THE OTHER CELLS ADJACENT TO IT HAVE MUCH DIFFERENT
6 ELEVATIONS.

7 COULD WE GO TO THE NEXT ONE.

8 AND WHEN YOU USE THAT METHOD, YOU ARE
9 BASICALLY ADDING -- TAKING THE VALUE IN EACH CELL AND
10 ADDING THEM ALL UP AND DIVIDING BY THE NUMBER OF CELLS
11 TO GET THE AVERAGE. THAT MEANS THAT THE CELLS HAVE TO
12 HAVE THE SAME WEIGHT. AND IN MR. BACHMAN'S CASE, THEY
13 DON'T.

14 THE COURT: NO. 13?

15 THE WITNESS: YES, YOUR HONOR.

16 MR. BACHMAN STATED THAT THESE WERE
17 2-MILE-BY-2-MILE GRIDS, AND THAT WOULD MEAN THAT WE
18 WOULD EXPECT THE AREAS TO BE 4 SQUARE MILES EACH.

19 WE ANALYZED THOSE GRIDS, AND THEY RANGE FROM
20 ABOUT 3.1 TO ABOUT 3.8 SQUARE MILES. SO WHEN YOU APPLY
21 THIS METHOD, YOU DON'T HAVE EQUAL WEIGHTS TO ALL OF
22 THAT.

23 AND THE VALUES THAT ARE ON THE BOUNDARIES,
24 HE MADE AN ARBITRARY ASSESSMENT OF WHAT THE WEIGHT
25 SHOULD BE. AND THE WAY WE TELL IT'S ARBITRARY IS THAT A
26 WEIGHT SHOULD EITHER BE 1 OR SOMETHING LESS THAN 1, 1
27 BEING 4 SQUARE MILES.

28 AND WHEN WE LOOK AT THE BOUNDARIES, THE

1 WEIGHTS ARE ALL INTEGER MULTIPLES OF .05; FOR EXAMPLE,
2 .45, .65. NONE OF THEM -- THEY DON'T LOOK RANDOM, AND
3 THEY OUGHT TO BE RANDOM IF THEY WERE DIGITIZED. SO WE
4 ASSUME THAT THEY WERE EYEBALLED IN.

5 BY MR. BUNN:

6 Q ALL RIGHT. LET'S GO TO SLIDE 14.

7 WHAT DOES THIS SLIDE REPRESENT?

8 A THIS SLIDE REPRESENTS WHAT A 4 SQUARE MILE
9 WOULD LOOK LIKE SUPERIMPOSED ON TOP OF DR. BACHMAN'S
10 SLIDE. FOR REFERENCE PURPOSES, WE MADE THIS THE ORIGIN,
11 WHERE I'M POINTING; SO GOING NORTH, SOUTH, EAST, AND
12 WEST FROM THAT POINT.

13 MR. JOYCE: COULD I SEE THE POINT OF ORIGIN AGAIN.

14 THE WITNESS: RIGHT ABOUT HERE.

15 MR. BUNN: IT'S IN THE UPPER -- NOT QUITE IN UPPER
16 LEFT-HAND CORNER, BUT IN THE UPPER LEFT-HAND AREA OF
17 PAGE 14.

18 MR. WILLIAM KUHS: COULD IT BE IDENTIFIED AS THE
19 GRID THAT HAS A 3.49 IN IT?

20 MR. BUNN: IT'S THE LOWER RIGHT-HAND CORNER, AS I
21 UNDERSTAND IT --

22 THE WITNESS: THAT MAY NOT BE UNIQUE, MR. KUHS.
23 THERE ARE SEVERAL --

24 MR. WILLIAM KUHS: OKAY. I'M SORRY.

25 THE WITNESS: FOR SCALE PURPOSES, YOU CAN SEE --
26 IN BOTH THE PRIOR EXHIBIT AND THIS ONE, THERE'S A SCALE
27 THAT SHOWS WHAT 2 MILES LOOKS LIKE.

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1 BY MR. BUNN:

2 Q WHAT DO THE PURPLE LINES REPRESENT?

3 A THE PURPLE LINES REPRESENT WHAT A
4 4-SQUARE-MILE OR 2-MILE-BY-2-MILE GRID WOULD LOOK LIKE.

5 ONE OF THE INTERESTING THINGS ABOUT HAVING
6 SORT OF A RANDOM GRID, WHICH IS WHAT YOU ARE SEEING UP
7 HERE IN DR. BACHMAN'S CASE, IS THAT THE ASSIGNMENT OF A
8 WELL TO A GRID COULD CHANGE BY MOVING JUST THE BOUNDARY
9 OF THE GRID.

10 IN OTHER WORDS, A RED DOT SHOWING UP IN ONE
11 GRID CELL MAY BELONG IN ANOTHER GRID CELL BECAUSE THE
12 GRID CELLS ARE VARYING. IT MAY MEAN HE HAS GOT -- HE
13 COULD LOSE DATA POINTS THIS WAY, OR GAIN DATA POINTS.

14 Q OKAY. CAN WE GO TO PAGE 15, PLEASE.

15 SEVERAL LANDOWNER WITNESSES MENTIONED A
16 STUDY BY IZBICKI WHICH MEASURED -- ACTUALLY MEASURED LAG
17 TIME IN VICTORVILLE. HAVE YOU REVIEWED THAT STUDY?

18 A YES.

19 Q IS IT APPROPRIATE TO USE THE IZBICKI STUDY
20 IN RELATION TO LAG TIMES OF AGRICULTURE RETURN FLOWS?

21 A NO.

22 Q WHY NOT?

23 A THE IZBICKI IS -- WAS TO DETERMINE TRAVEL
24 TIME AND INFILTRATION RATES IN RECHARGE BASINS IN THAT
25 AREA. SO THE HYDRAULIC LOADING RATES, WHICH ARE NOT
26 USED IN MY DIRECT TESTIMONY, IS EXTREMELY HIGH.

27 AND IF YOU -- WHEN WE TAKE HIS EXPERIMENTAL
28 DATA --

1 THE REPORTER: YOU'VE GOT TO SLOW DOWN. IT'S SO
2 TECHNICAL. WHEN WE TAKE THE "EXPERIMENT," THEN WHAT DID
3 YOU SAY? SLOW DOWN, PLEASE.

4 THE WITNESS: I APOLOGIZE AGAIN.

5 MR. IZBICKI HAD A VERY SMALL BASIN, AND HE
6 HAD THREE DIFFERENT RECHARGE PERIODS. HE WOULD STOP THE
7 RECHARGE IN THE MIDDLE OF THESE THINGS AND CLEAN THEM UP
8 AND KEEP THE RECHARGE GOING.

9 HIS EQUIVALENT RECHARGE OR INFILTRATION RATE
10 WAS 665 FEET PER YEAR. OUR ANNUAL INFILTRATION RATES
11 WHERE ALL THE ROOTS ARE WAS BETWEEN 1 AND 2 FEET PER
12 YEAR. SO THEY ARE NOT COMPARABLE IN ANY WAY.

13 IN FACT, YOU CAN GO AS FAR AS TO SAY THAT
14 HIS LAG TIMES WERE GENERALLY -- IT WOULD BE LESS THAN A
15 YEAR FOR A WELL-DEVELOPED BASIN, AND THOSE ARE ENTIRELY
16 CONSISTENT WITH OUR ASSUMPTIONS ABOUT THE TIME OF TRAVEL
17 FOR RECHARGE BASINS.

18 BY MR. BUNN:

19 Q REMIND US WHAT ASSUMPTIONS YOU DID USE FOR
20 TIME OF TRAVEL FROM RECHARGE DISTANCE.

21 A FOR COMPUTATIONAL PURPOSES, WE ASSUMED THEY
22 WOULD BE WITHIN A YEAR. WE SOMETIMES CALLED IT A "ZERO
23 LAG TIME."

24 Q OKAY. NOW, SEVERAL WITNESSES TALKED, AGAIN,
25 ABOUT CONFINED AND UNCONFINED AQUIFERS. MY QUESTION IS,
26 ARE THERE WAYS THAT YOU USED TO TELL WHETHER A WATER
27 LEVEL THAT YOU USED IN YOUR CALCULATION WAS FROM AN
28 UNCONFINED OR A CONFINED AQUIFER?

1 A YES.

2 Q WOULD YOU DESCRIBE THAT.

3 A SURE. REALLY, THE MOST STRAIGHTFORWARD WAY
4 IS INFORMATION ON EITHER HOW THE WELL IS CONSTRUCTED OR
5 THE BOREHOLE DEPTH. AND THAT INFORMATION WAS AVAILABLE
6 FOR MOST OF THE WELLS THAT WE LOOKED AT.

7 THERE ARE OTHER WELLS --

8 Q EXCUSE ME. HOW DO YOU USE THE WELL
9 CONSTRUCTION OR BOREHOLE DEPTH TO DETERMINE WHETHER
10 YOU'RE IN UNCONFINED OR CONFINED?

11 A WELL, WE HAVE VERY DETAILED
12 HYDROSTRATIGRAPHIC SECTIONS OR CROSS-SECTIONS THROUGH
13 THE AREA WHERE WE ARE CONCERNED ABOUT THE DISTINCTION
14 BETWEEN CONFINED AND UNCONFINED AQUIFERS. AND WE
15 COMPARE THE WELL CONSTRUCTION INFORMATION TO THOSE
16 CROSS-SECTIONS TO DETERMINE IF THOSE WELLS ARE
17 CONSTRUCTED IN THE UNCONFINED, OR LACUSTRINE DEPOSIT, OR
18 WHETHER CONSTRUCTED IN THE CONFINED OR IT'S CONSTRUCTED
19 ACROSS ALL OF THEM. THAT IS WHAT WE USE THAT WELL
20 CONSTRUCTION INFORMATION FOR.

21 Q ALL RIGHT. ARE THERE OTHER WAYS TO TELL?

22 A YES. WE DO HAVE WELL LEVEL INFORMATION FOR
23 SOME OF THE PURVEYOR WELLS THAT ARE PERFORATED IN THE
24 CONFINED AQUIFER. AND WE ARE ABLE -- WE BASICALLY HAVE
25 GROUNDWATER LEVEL INFORMATION FOR WELLS IN THE CONFINED
26 ZONE.

27 WE CAN COMPARE -- FOR WELLS THAT WE HAVE NO
28 CONSTRUCTION INFORMATION ON, WE CAN COMPARE WATER LEVEL

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STATE OF CALIFORNIA)
) SS.
COUNTY OF LOS ANGELES)

I, GINGER WELKER, OFFICIAL REPORTER OF THE
SUPERIOR COURT OF THE STATE OF CALIFORNIA, FOR THE
COUNTY OF LOS ANGELES, DO HEREBY CERTIFY THAT THE
TRANSCRIPT DATED MARCH 25, 2011 COMPRISES A FULL, TRUE,
AND CORRECT TRANSCRIPT OF THE PROCEEDINGS HELD IN THE
ABOVE ENTITLED CAUSE.

DATED THIS 28TH DAY OF MARCH, 2011.

OFFICIAL REPORTER, CSR #5585