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SUPERIOR COURT OF CALIFORNIA, COUNTY OF SAN JOAQUIN

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WAB

STATE OF CALIFORNIA,
 Plaintiff,
 vs.
 CONTRA COSTA COUNTY
 WATER AGENCY, et al.,
 Defendants.

COSTA COUNTY SUPERIOR COURT

No. 282495

DEPOSITION OF HARVEY BANKS

Tuesday, September 23, 1986 - 9:10 a.m.

Deposition Officer:
 Susan Portale, CSR No. 4095

Taken in the law offices of:
 NOMELLINI & GRILLI
 235 East Weber Avenue
 Stockton, California 95202

*Nov 3
 another copy*

PORTALE & ASSOCIATES DEPOSITION REPORTERS

211 East Weber Avenue
 Stockton, California 95202
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1 APPEARANCES OF COUNSEL:

2 RUSSELL KLETZING, Attorney at Law,
3 STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES,
4 1416 Ninth Street, Sacramento, California 95802,
5 appeared as counsel for and on behalf of the PLAINTIFF.

6 DANTE JOHN NOMEILLINI, Attorney at Law, of
7 the law offices of NOMEILLINI & GRILLI, 235 East Weber Avenue,
8 Stockton, California 95202, appeared as counsel for and on
9 behalf of the DEFENDANT CENTRAL DELTA WATER AGENCY.

10 DAVID WHITRIDGE, Attorney at Law, of the law
11 offices of WILSON, HOSLETT and WHITRIDGE, 311 East Main
12 Street, Stockton, California 95202, appeared as counsel for
13 and on behalf of the DEFENDANTS SOUTH DELTA WATER AGENCY,
14 NEW STONE CORPORATION N. V., SARALE FARMS AND SARALE.

15 WILLIAM H. BABER, Attorney at Law, of the law
16 offices of MINASIAN, MINASIAN, MINASIAN, SPRUANCE, BABER,
17 MEITH and SOARES, 1681 Bird Street, Oroville, California
18 95965, appeared as counsel for and on behalf of the
19 DEFENDANT BYRON-BETHANY IRRIGATION DISTRICT.

20 ---o0o---

21
22 ALSO PRESENT:

23 ALEX HILDEBRAND
24
25
26

STIPULATIONS

It is hereby stipulated by and between Plaintiff and Defendants, by counsel, that the witness be examined pursuant to and by virtue of the provisions of Sections 2016, 2018, 2019, and 2021 of the Code of Civil Procedure of the State of California, subject to all legal objections being reserved until the time of trial, save and except objections as to the form of the question.

That all objections as to the qualifications of the Notary and any and all irregularities in the manner of administering the oath are waived.

That if the witness should be instructed not to answer questions propounded by counsel, it shall be deemed that the Notary Public has instructed the witness to answer, and that the witness still refused to do so on the instruction of counsel.

That deposition exhibits will be appended to the depositions and that true copies may be so appended with full force and effect as if they were the originals subject to all rulings of the Court on admissibility.

That the deposition shall be read, corrected and signed prior to the time of trial, and if not, it may be used with the same force and effect as though it were read and signed pursuant to the Code of Civil Procedure

Section 2019(e) which is hereby waived. Said deposition may be signed before any Notary Public and all objections as to the qualifications of any such Notary are waived.

That this stipulation is deemed to be the written stipulation required by Section 2019(a)(2) of the Code of Civil Procedure.

1 (All parties present, the following proceedings were had
2 at 9:10 a.m.):

3
4 HARVEY BANKS,
5 a witness herein, having been sworn by the Deposition
6 Officer, testified as follows:

7
8 EXAMINATION

9 BY MR. NOMELELLINI: Q. Could you state
10 for the record your full name?

11 A. My first name is Harvey, H-a-r-v-e-y, middle
12 initial O, last name Banks, B-a-n-k-s.

13 Q. And your present address?

14 A. Number Three Kittie, K-i-t-t-i-e, Lane,
15 Belmont, California 94002.

16 Q. Have you ever had your deposition taken
17 before?

18 A. Yes.

19 Q. How many times?

20 A. I haven't counted them up but it must have
21 been at least six to eight.

22 Q. In terms of the last four or five years, had
23 you had your deposition taken during that period?

24 A. Yes.

25 Q. Okay. And what was the most recent occasion?

26 A. The most recent occasion that I recall, it

1 was in connection with some work that I am doing for --
2 in the state of New Mexico in connection with water
3 rights.

4 Q. And what was your most resent occasion in
5 California, if there was one?

6 A. I don't recall.

7 Q. I assume you understand the purpose of the
8 deposition, but let me just go through briefly.

9 What we are going to do is ask you questions,
10 and you are under oath, and if you testify at the time of
11 trial any differently than you've testified today, and we
12 could use your deposition to attempt to question your
13 credibility and impeach you. So it's important that your
14 answers be accurate, and if during the course of this
15 deposition I or any of the other attorneys questioning
16 you ask you a question that is ambiguous or compound in a
17 way that you don't understand the question, feel free to
18 ask us to clarify. Because it is important to get the
19 accurate answer. And you will have an opportunity to
20 review your deposition as to any errors, you know, prior
21 to its final form.

22 Okay. So you understand that?

23 A. I do.

24 Q. Are you familiar with this case, which I kind
25 of call the Drought Payment Case?

26 A. I believe so.

1 Q. All right. You know that the State of
2 California has brought an action against a number of
3 Delta water users and Delta districts concerning
4 utilization of water in 1977, which the state claims was
5 their water?

6 A. I understand.

7 Q. Are you a professional engineer?

8 A. I am.

9 Q. Are you registered in California?

10 A. I am.

11 Q. Is that in the civil field?

12 A. Yes.

13 Q. How long have you been a registered engineer
14 in California?

15 A. Some forty-seven years.

16 Q. And what has your educational background
17 been?

18 A. I have a Bachelor of Science Degree in Civil
19 Engineering from Syracuse University and a Master of
20 Science from Stanford University.

21 Q. And your Masters from Stanford was in what
22 field?

23 A. Hydraulic and sanitary engineering.

24 Q. Did you get your Masters immediately after
25 your Bachelors?

26 A. No.

1 Q. And when did you get your Masters?

2 A. 1955.

3 Q. You missed the campus and decided to return,
4 huh?

5 A. I had, to explain, I had done graduate work
6 at Stanford in the early thirties, but it ^{was} ~~did~~ not
7 complete at that time, and it took me the next twenty-odd
8 years to complete the work and fulfill the requirements
9 on a part-time basis.

10 Q. And what is your current occupation?

11 A. I am a consulting civil engineer.

12 Q. Are you with a firm or are you independent?

13 A. I am my own firm.

14 Q. And that is called what?

15 A. Harvey O. Banks Consulting Engineer,
16 Incorporated.

17 Q. When were you first engaged by the Department
18 of Water Resources with regard to the Drought Payment
19 Case?

20 A. I do not recall the exact date, but I believe
21 it was in 1983.

22 Q. And what were you asked to do with regard to
23 this case?

24 A. To make investigations and to present
25 testimony.

26 Q. And what investigations were you asked to

1 make?

2 A. Particularly, the investigations as to the
3 hydrology, stream flows in 1977.

4 Q. Anything else?

5 A. I have been asked to be able to present
6 evidence and testimony concerning the history, and
7 facilities, ^{and operations} of the Federal Central Valley Project and the
8 State Water Project and how those two projects
9 interrelate and interact.

10 Q. In the listing of expert trial witnesses
11 submitted to us by the state the state says with regard
12 to you, "He may testify regarding the Sacramento, San
13 Joaquin Rivers and Delta hydrology and the principal
14 facilities and operations of the State -- Federal and
15 State Water Projects, including their affects on water
16 quantity and quality."

17 Did you do any investigation as to quality
18 impacts for the projects?

19 A. Yes, I have.

20 Q. Did you perform any investigation with regard
21 to the impact of the State Water Project alone on quality
22 in 1977?

23 A. I have studied the water supplied by the
24 State Water Project to the Delta in 1977.

25 Q. Have you determined in your investigations
26 what impact the State Water Project water has on water

1 quality in the Delta?

2 A. I have not completed my investigation of that
3 as yet.

4 Q. Did you study the impact of the combined
5 operations of the State Water Project and Federal Central
6 Valley Project on water quality in the Delta in 1971?

7 A. I have made certain investigations which are
8 continuing.

9 Q. In the next sentence of this paragraph that I
10 referred to earlier they say, "He is expected to testify
11 that more water was released from State and Federal Water
12 Project facilities than was expected due to project
13 operations and legal standards; that the amount diverted
14 by Delta farmers during July and August was about twice
15 the natural flow that reached the Delta, and the rest
16 from water stored by projects and that one quarter of the
17 stored water taken by defendants was plaintiff's water.

18 Is that correct?

19 A. That is my general conclusion to date,
20 subject to change with further investigation and study.

21 Q. Have you testified as an expert in a
22 California court before?

23 A. Yes.

24 Q. And when was that?

25 A. In the early 1970's, I testified as an expert
26 in the Superior Court of Alameda County in connection

1 with ground water rights and management.

2 In the late 1970's, as I recall it, I
3 testified in the Superior Court of Imperial County
4 concerning alleged damage due to rising water levels in
5 Salton Sea.

6 Q. What year was that again?

7 A. The late 1970's. I do not recall the exact
8 date.

9 Q. Is that the case that finally got up to the
10 Appellate Court in the last year or so?

11 A. I believe it is pending in the Appellate
12 Court.

13 Q. Oh. Okay.

14 A. And in the early 1980's, I testified in the
15 Superior Court of Riverside County concerning flood
16 damage claims due to the breaching of levees on the San
17 Jacinto River in Riverside County.

18 Q. Have you ever testified as an expert relating
19 to the Delta before?

20 A. No.

21 Q. Going back to your experience, once you
22 graduated with your Bachelor of Science in Civil
23 Engineering, what did you do after that? What has been
24 your work experience since that time?

25 A. Immediately after I left Stanford in 1933, I
26 worked with the City of Palo Alto as a sanitary engineer

1 on sanitary sewage improvements that the city was making
2 at that time.

3 I then worked for Fred Tibbets Consulting
4 Engineer on the planning of conservation projects in
5 Santa Clara County.

6 Then in 1935, I was employed by the then U.S.
7 Soil Erosion Service, which is now the Soil Conservation
8 Service.

9 In 1938, I was employed by the State
10 Engineer's Office in Los Angeles on ground water
11 investigations.

12 I continued with the State Engineer's Office
13 until June, 1946, except for two-and-a-half years,
14 approximately, spent in the military service.

15 In 19 -- July of 1946, I was engaged in
16 consulting practice as a partner in Harold Conkling,
17 C-o-n-k-l-i-n-g, Consulting Engineer.

18 In July, 1950, I went -- I was again employed
19 by the State Engineer's Office in connection with the
20 newly authorized statewide water quality investigations
21 and remained with the State Engineer's Office until July
22 5th, 1956, when the Department of Water Resources was
23 formed, at which time I was appointed as the Director of
24 the new department.

25 I resigned as Director on the 2nd of January,
26 1961, to enter private practice as a Vice-President of

Leeds, Hill + Jewett

1 ~~Leedshill-Herkenhoff~~, Incorporated Consulting Engineers
2 in San Francisco.

3 I resigned from that firm in November, 1969,
4 to form my own firm, which I operated until through 1976,
5 at which time I was bought out by Camp, Dresser, and
6 McKee Consulting Engineers from Boston, Massachusetts.

7 I resigned from that firm in 1982, to again
8 form and operate my own firm, a situation which continues
9 to date.

10 Q. With regard to your consulting work, since
11 you left the Department of Water Resources, have you been
12 engaged by the Department of Water Resources or some
13 other department of the State as a consultant in any
14 other case or situation other than the present one?

15 A. Not that I recall.

16 Q. So this is the first time since your
17 resignation as Director of the Department of Water
18 Resources that you've worked for the Department of Water
19 Resources?

20 A. As I recall, that is correct.

21 Q. Okay. At the present time do you act as a
22 consultant to any Delta water users?

23 A. I am consultant to the Contra Costa Water
24 District.

25 Q. And how long have you served as a consultant
26 to them?

1 A. Since about 1962.

2 Q. Since leaving the Department of Water
3 Resources have you acted as a consultant to the Federal
4 Government in any respect?

5 A. I don't recall any such engagement.

6 May I correct that?

7 Q. Yeah. Sure.

8 A. I do recall serving as consultant to the
9 Bureau of Reclamation in connection with what is known as
10 the Westwide Study in the 1970's.

11 Q. Did that involve California?

12 A. Yes.

13 Q. And what was involved generally in that
14 study?

15 A. To provide information to the Bureau on water
16 problems and to review their analyses and conclusions.

17 Q. Do you consider yourself an expert on Delta
18 water quality?

19 A. I believe I have a reasonably good knowledge
20 of the problems.

21 Q. Is there any reason you don't consider
22 yourself an expert on Delta water quality?

23 A. To be explicit, I consider myself as
24 knowledgeable, and, as such, an expert.

25 Q. Okay.

26 MR. KLETZING: Modesty.

1 MR. NOME LLINI: Q. Do you consider
2 yourself an expert on tributary flows into the Delta?

3 A. Yes.

4 Q. Do you consider yourself an expert on State
5 Water Project operations?

6 A. Yes.

7 Q. Do you consider yourself an expert on Federal
8 Water Project operations in California?

9 A. Yes.

10 Q. Well, we must have the right guy then.

11 All right. Time --

12 A. Time will tell.

13 Q. With regard --

14 A. May I ask, is it possible for a cup of
15 coffee?

16 MR. NOME LLINI: Sure. Let's take a
17 break.

18 Let's go off the record a minute.

19

20 (Off-the-record discussion)

21

22 MR. NOME LLINI: Okay. Back on the
23 record.

24 Q. With regard to your tributary flow analysis
25 or investigation in this case, have you given the results
26 of your analysis in writing to the department?

1 A. No, I have not.

2 Q. Do you have any written documentation of your
3 results?

4 A. No.

5 My studies have been done in coordination
6 with the department staff, too.

7 Q. Do you know whether or not your work is
8 reflected in writing in any way?

9 A. I do not know. I'd have to refer to counsel
10 on that.

11 MR. NOME LLINI: Well, Counsel.

12 MR. KLETZING: Yeah, I think so.

13 MR. NOME LLINI: Do you have those with
14 you?

15 MR. KLETZING: Well, I think we are
16 talking about the forty-five tables in the binder.

17 MR. NOME LLINI: Oh, the forty-five
18 tables in the blue binder?

19 MR. KLETZING: Yeah.

20 MR. NOME LLINI: I'm going to hand you
21 this blue binder, Harvey, and you tell me if you
22 recognize anything in there (indicating),
23 starting at the beginning.

24 THE WITNESS: I do.

25 MR. NOME LLINI: Q. All right. What do
26 you recognize? An index?

1 A. I recognize the tables.

2 Q. Okay. And did you help prepare those tables?

3 A. I have reviewed them --

4 Q. Okay.

5 A. -- as they have progressed and made
6 suggestions and recommendations.

7 Q. What suggestions have you made with regard to
8 the preparation of those tables?

9 A. With respect to methodology and the treatment
10 of various other projects than the State and Federal
11 Project.

12 Q. Do you believe that all water that flows into
13 the Delta that is not natural flow is water that can be
14 properly characterized as project water?

15 A. No, I do not believe that.

16 Q. Do you know whether or not the department in
17 those calculations in that blue binder in any way
18 attempted to separate project water from other water,
19 other than natural flow, that flowed into the Delta in
20 1977?

21 A. We have tried to estimate the amount of
22 project water that flowed into the Delta as distinguished
23 from that flowing into the Delta from other sources.

24 Q. Calling your attention to July of 1977, what
25 is the estimated flow of project water into the Delta?

26 A. I would have to refer to the tabulations.

1 Q. Could you refer to it and give me that
2 number?

3 A. The summary table is not in here.
4 I have a copy in my briefcase in my car.

5 Q. Okay.

6 MR. NOME LLINI: Russ, do you know that
7 that summary table is somewhere else here in the room?

8 MR. KLETZING: It should be in there.

9 THE WITNESS: It isn't.

10 MR. KLETZING: Well, I mean, we sent it
11 to you possibly at a later time.

12 MR. WHITRIDGE: The original book just
13 has a page that says "Summary table not complete," but we
14 did get some stuff afterwards.

15 MR. KLETZING: We sent it to you in a
16 later letter.

17 MR. NOME LLINI: Okay.

18 Why don't we take a break. Harvey, maybe you
19 could go to your car and get that table and then we'll
20 run a copy of it and mark it as an exhibit unless we can
21 identify it somewhere here in the room.

22 Do you think it's in those boxes, Russ?

23 MR. KLETZING: No. No. It was a letter
24 we sent you -- or we probably sent it to Baber very
25 shortly after the next week.

26 MR. BABER: Which one was the --

1 MR. KLETZING: The first week in
2 September.

3 MR. NOME LLINI: All right. Let's hold
4 it a minute.

5 MR. KLETZING: It attached several
6 tables that weren't included.

7 MR. NOME LLINI: All right. I'm going to
8 hand Harvey a pile of documents that maybe is the table
9 (indicating).

10 THE WITNESS: Yes, I believe this is the
11 summary table (indicating).

12 MR. NOME LLINI: Okay.

13 MR. WHITRIDGE: Will you identify the
14 title on that?

15 MR. NOME LLINI: Yeah.

16 The summary table is a composite of a number
17 of sheets. It says, "Table one, natural supply and
18 riparian use, Sacramento Valley and Delta, 1977, designed
19 R. H. Taylor, date, 8-29-86.

20 Q. Okay. Harvey, from that table could you tell
21 me what the July, 1977, project inflow to the Delta was?

22 A. This particular table deals only within the
23 ~~conclusion that the summary is only~~ with respect to what
24 you have termed natural supply.

25 Let's see if I can find it in some of the
26 other --

1 Q. You say I have termed it. They have termed
2 it natural supply as well, right?

3 A. This is correct. This is a term which has
4 been used.

5 Q. And I gather, you, like me, may not believe
6 that that is really natural supply, is that what
7 you're trying to indicate to me?

8 A. I was not --

9 Q. We will go we'll get into.

10 A. I was not trying to indicate anything, if I
11 may correct you.

12 It's in here. I just have to...

13 May I suggest that I answer that question
14 after I've had a chance to look at this (indicating)?
15 The forty-five tables are complicated.

16 Q. All right. Well, that's why we've got an
17 expert here that can give us the answer. It's a
18 complicated subject.

19 But the questions that I would like the
20 answers to with regard to the calculations are the
21 estimated flow of project water into the Delta for July
22 of 1977 and for August of 1977.

23 And then of that project inflow to the Delta
24 what part is State Water Project water and what part is
25 the Federal Central Valley Project water, if you've made
26 the calculation?

1 A. With regard to your last question, the inflow
2 of project water has been allocated twenty-five percent
3 to the State Water Project, seventy-five percent to the
4 Federal Project in accordance with the continuing
5 agreement between the two agencies, State and Federal, as
6 to the relative assigned responsibility for meeting
7 in-basin needs.

8 Q. Okay. Then I would ask the question as to
9 what part of the project water entering the Delta in July
10 of 1977 and August of 1977, came from releases of stored
11 water from the State Water Project?

12 A. I believe that can be obtained from the
13 studies made to date. I do not have those values
14 immediately at hand in my memory.

15 Q. Are you familiar with Bulletin 168?

16 A. I have studied it.

17 Q. Have you compared the calculations that are
18 represented by this document, this table that we just
19 referred to, with the representations and conclusions
20 contained in Bulletin 168?

21 A. Not specifically.

22 MR. NOMELLINI: All right. Let's go off
23 the record so we can give you time to look in those
24 tables to find my answers to the July and August project
25 inflow.

26

1 (Off-the-record discussion)

2

3 MR. NOME LLINI: Go back on the record.

4 THE WITNESS: These tabulations indicate

5 that ^{258,900}~~79,600~~ acre feet of project water, that is, the

6 combined project water, entered the Delta in 1977, and

7 ^{208,400}~~23,200~~ acre feet in August, 1977.

8 MR. NOME LLINI: Q. Okay. And that

9 would be project water entering the Delta?

10 A. Yes.

11 Q. And how do you go about making that
12 calculation or that determination?

13 A. In that calculation we started at the
14 foothills, that is, at Keswick Reservoir on the
15 Sacramento, the Fair Oaks -- well, let me go back.

16 Keswick Dam and Reservoir on the Sacramento;
17 Oroville on the Feather and the Fair Oaks gauging station
18 on the American River, and the flow at Vernalis on the
19 San Joaquin, and used other gauging stations on streams
20 tributary to the Delta and to the Sacramento River and
21 its tributaries.

22 Q. Okay. And what are these other gauging
23 stations?

24 A. Such as the Yuba River.

25 Q. At Smartville?

26 A. Yes.

1 Q. What other ones?

2 A. Well, I will have to get the complete list.
3 They are all in the Bulletin 168.

4 Q. Okay. So if they are not in Bulletin 168,
5 they weren't included?

6 A. I did not mean to imply that.

7 Q. Do you know whether all tributaries were
8 included?

9 A. I believe they were.

10 Q. Did you make any review of that to make sure
11 they were included?

12 A. I have reviewed it.

13 Q. Tell me what other tributaries were included.

14 A. Particularly the ones on the west side of
15 Sacramento Valley. I believe we have included all
16 tributaries.

17 Q. Did you include Little Johns Creek in San
18 Joaquin County?

19 A. No.

20 We used the measured flow in the San Joaquin
21 River at Vernalis.

22 Q. Do you know where Little Johns Creek is?

23 A. I cannot tell you exactly, no.

24 Q. How about Bear Creek?

25 A. In the Sacramento --

26 Q. In San Joaquin.

1 A. I don't recall, frankly.

2 Q. Is it possible that some of these minor
3 tributaries were not considered?

4 A. It is possible.

5 Our intent was to include all for which we
6 had any data whatsoever. And even if we did, by any
7 chance, miss one or two, they were included in what we
8 have called the unmeasured accretions to the river, the
9 rivers, with which we are principally concerned; notably,
10 the Sacramento, the Feather, and the American.

11 Q. What was your last measuring point, the
12 farthest downstream measuring point on the San Joaquin?

13 A. Vernalis.

14 Q. And what was your farthest downstream
15 measuring point on the Sacramento?

16 A. Sacramento.

17 Q. So how do you account for unmeasured
18 accretions that occur from tributaries below those
19 points?

20 A. Where we had gauging stations downstream from
21 the foothill gauging station, which became the principal
22 point of interest, we had the means and the data to
23 estimate unmeasured accretions and depletions, I might
24 add, also, by a mass balance technique.

25 Q. Okay. Okay. But I mean that's with regard --
26 you've got two gauging stations.

1 The difference of the number in between is an
2 unmeasured accretion, or however you want to define it,
3 an unmeasured depletion, when it's a positive or a
4 negative number, I guess, right?

5 A. The difference in measured flow from an
6 upstream station and a downstream station corrected for
7 measured diversions^{and measured return flows}, that becomes what we have termed
8 unmeasured accretion or depletion, as the case may be.

9 Q. Okay. Now, my question is with regard -- you
10 said that you've accounted for these tributaries like
11 Duck Creek and Bear Creek in San Joaquin County in the
12 term or in the figure unmeasured accretions.

13 Right?

14 A. To the extent we have the data we have done
15 that.

16 Q. Okay. Well, I'm just trying to find out.
17 I don't think you could do it for anything
18 that entered into the Delta below the measuring points
19 that you described on the Sacramento and the Vernalis.

20 Now, if you can, then explain to me how you
21 did it. And if you can't, then I expect you to say,
22 "Yeah, you can't pick that up. We didn't pick it up."
23 That's all.

24 A. If there were no downstream gauging station,
25 you are correct.

26 MR. KLETZING: Are those what they call

1 the eastside streams?

2 THE WITNESS: Yes.

3 MR. NOME LLINI: I don't know what's
4 termed eastside but they are on the east side of the
5 Delta. There are a number of little tributaries in San
6 Joaquin County that I'm familiar with. Whether there are
7 more elsewhere, I don't know. You know, that's a
8 question I was asking. I happen to be familiar with some
9 of them, that's all.

10 THE WITNESS: Well, the Calaveras River
11 for one.

12 MR. NOME LLINI: Right.

13 MR. HILDEBRAND: And the Mokelumne.

14 MR. NOME LLINI: Pardon me?

15 MR. HILDEBRAND: And the Mokelumne.

16 MR. NOME LLINI: Well, the Mokelumne is
17 probably measured in some respect.

18 THE WITNESS: I believe the Mokelumne is
19 measured at Lodi.

20 MR. NOME LLINI: Q. Okay. So it's
21 possible then that in these calculations that some of the
22 tributary flow was not accounted for?

23 A. It is possible.

24 Q. Has anybody made a determination or study to
25 make -- to ascertain whether or not, in fact, all these
26 tributaries were considered?

1 A. To the best of my knowledge and belief, they
2 were.

3 Q. Okay. But you didn't make any such review?

4 A. I did review what the staff has presented and
5 made some suggestions based upon my own personal
6 knowledge of other streams.

7 Q. Was Bear Creek in San Joaquin County
8 included?

9 A. I cannot say offhand from memory.

10 Q. All right. And how would you go about making
11 that determination?

12 A. I would first determine is there a gauging
13 station at Bear Creek and where is the gauging station.

14 Q. How about if I told you there wasn't; would
15 that be helpful?

16 A. I would not say it would be helpful.

17 Q. If there was no -- okay. We've determined --
18 let's assume that we've determined that there is no
19 gauging station on Bear Creek.

20 Now what next would you do to determine
21 whether or not it was included?

22 A. If it were a significant contributor to the
23 Delta, I would make an attempt to estimate what the
24 runoff was during those two months.

25 Q. Do you know whether Bear Creek was a
26 significant contributor to the Delta in July or August?

1 A. I do not.

2 Q. Did you make any investigation to determine
3 whether or not minor tributaries were significant
4 contributors to the Delta in July and August of 1977?

5 A. No, I have not.

6 Q. Did you ask the department if they had?

7 A. No, I did not.

8 Q. Okay. Getting back to how you made the
9 determination or how the determination was made subject
10 to your review of the project inflow into the Delta in
11 July and August of 1977, you were explaining that you
12 started with -- at the foothills and the various staging
13 points, Keswick Dam and Reservoir, Oroville on the
14 Feather, Fair Oaks on the American, Yuba River at
15 Smartville, Vernalis on the San Joaquin, and then some
16 other measurements from streams. Okay.

17 What did you do from there? Once you
18 established those locations, then what did you do?

19 A. Corrected the flow -- or adjusted is a better
20 word, adjusted the flow, measured flow, at those upstream
21 points for the affects of the operation of the project
22 reservoirs and diversions from the projects, reservoirs
23 on the flow at the points I specified.

24 Q. So you measure the flow in the river at that
25 point and then you adjust out the project affect?

26 A. That is correct.

1 Q. With regard to Oroville, what does that
2 entail specifically?

3 A. It entails the change in storage in the
4 Oroville Reservoir, ^{and the State Water Project Reservoirs upstream} the flow past the fish diversion dam,
5 the change in storage in the various storage basins in
6 the Thermolito complex, releases back to the river from
7 Thermolito Afterbay and the evaporation in all of the
8 water bodies, Oroville and the Thermolito basins.

9 Q. How do you make sure that you remove the
10 project impact?

11 A. That is correct.

12 Q. I mean, how do you do that?

13 You just make the calculations of the -- the
14 change in storage, I guess, is measured, huh?

15 A. It is measured by virtue of the fact that the
16 elevations of the water surface are determined
17 periodically, and knowing the area ^{" "} of capacity curve, you
18 can calculate the change in storage between two different
19 elevations.

20 Q. And what do you do with evaporation?

21 A. Evaporation is -- where seepage is a problem,
22 that is corrected, too.

23 Q. Did you check those calculations of the
24 department with regard to the project affects at
25 Oroville?

26 A. I have examined their calculations and

1 satisfied myself that they are proper and reasonable
2 without having actually checked every figure.

3 Q. How close do you think they are to being
4 accurate?

5 In other words, what would the range of error
6 be possible in this type of approach?

7 A. I would think that such adjustments can be
8 made within an accuracy of plus or minus ten percent.

9 Q. Is that for the overall project affect or is
10 that just for like measuring reduction in storage?

11 A. I believe that that is a reasonable range of
12 error. A possible inaccuracy is a better term in the
13 overall affect.

14 Q. How do you account for diversions that are
15 taking place by water users other than the projects that
16 may be above these reservoirs?

17 A. In most cases those are already measured or
18 were ^{partially} ~~particularly~~ measured in 1977. There are good
19 records where the actual diversion is not measured. The
20 department resorted to calculations based on the power
21 records, ^{the} pumps, ^{characteristics} per pumping, records.

22 Q. And how -- with regard to the estimating
23 diversions based on power records from pumps, how
24 accurate are those types of estimates?

25 A. Those are probably within the range of plus
26 or minus fifteen to twenty percent.

1 Q. Now, you say "probably fifteen to twenty
2 percent."

3 What factors would you have to look at to
4 refine that estimate of potential variance or error?

5 A. You'd -- one would have to look at the ~~rate~~^{rating}
6 curve for the pump and its efficiency and to estimate
7 that one would either need an actual efficiency test or
8 one could approximate the efficiency knowing the original
9 rating for the pump, head discharge rating, and the age.

10 Q. What kind of a range of actual pump -- I
11 guess we should say actual pumping plant efficiencies
12 could one encounter?

13 A. As a matter of judgment one could encounter
14 ranges of an overall efficiency of a diversion pumping
15 plant from fifty-five percent to eighty percent.

16 Q. Okay. Focusing in on the low end of that, is
17 it possible to have as low as forty percent efficiency on
18 a pumping plant?

19 A. Yes.

20 Q. How low can you go?

21 A. You can go very low if the owner wishes to
22 pay the bill.

23 Q. So we can go all the way down to maybe ten or
24 twenty percent?

25 A. I would say twenty would be a very low value.

26 Q. Okay. Well, if twenty is the low value, then

1 twenty to eighty is sixty percent, why wouldn't there be
2 a possible variation to fifteen percent as opposed to
3 fifteen to twenty percent?

4 A. One must -- or we have assumed, of course,
5 that it is in the owner's interest to keep the efficiency
6 up and thus minimize its power bill.

7 Q. You have some sound foundation for that
8 assumption being applied in this case?

9 A. No, I have no sound foundation for that in
10 this particular instance.

11 Q. Do you know when the efficiency tests were
12 taken for -- by the department or the Bureau of
13 Reclamation for their respective estimates of diversions?

14 A. No, I do not.

15 Q. Efficiencies could change from time to time,
16 could they not?

17 A. Yes.

18 Q. So in order to make a proper estimate you
19 would want to take a test somewhere pretty close to when
20 you were making your calculation?

21 A. That is correct.

22 Q. Did you make any review of the Department of
23 Water Resources' calculations to determine whether or not
24 the pump efficiency measurements were made?

25 A. No, I have not.

26 Q. And I guess you haven't really reviewed their

1 calculations either?

2 A. Not to that detail.

3 Q. With regard to diversions above the
4 reservoirs, are there some diversions that have taken
5 place because of the project's construction -- I use the
6 term project induced diversions; are there any above the
7 dam that you think would not have taken place had the
8 project not come into being?

9 A. None that I know of above the dams.

10 Q. Are there any below the dam that you know
11 about that could be categorized as project induced?

12 A. I don't know of any specifically.

13 I would say that there may well have been.

14 Q. And what would the nature of those be? I
15 mean, how does it occur?

16 A. Well, in the Sacramento Valley there have
17 been in effect firm water supply made available by the
18 projects. It is quite possible that there have been
19 lands irrigated that might not have been irrigated
20 otherwise because of the variation in available water
21 supply.

22 Q. Do you know what the extent of that could be?

23 A. As far as I know, there have been no studies
24 made of that.

25 Q. Could that involve as much as a couple
26 thousand acres in the Sacramento Valley?

1 A. With the qualification that my answer is
2 purely speculative, I would have to admit, yes.

3 Q. It could be a lot more than that if we are
4 going to speculate, huh?

5 A. Yes, I would say that's possible.

6 Q. With regard to the Feather River area, do you
7 have any feel for what that potential might be?

8 A. No, I do not.

9 Q. Do you know whether or not any adjustments
10 were made in the calculations of this project flow to the
11 Delta to take into account water uses that would fall in
12 the category of project induced?

13 A. No. The actual records of water use were
14 used wherever available and to the extent available.

15 Q. But wouldn't that -- if you used the actual
16 record, that would be of a diversion by somebody who
17 would not have been diverting had the project not put
18 this continuous water supply in the stream.

19 A. That is possible.

20 Q. So he would be included as an actual
21 diversion?

22 A. Yes.

23 Q. Okay. So there is no adjustment, that you
24 know of, that's been made to these calculations to sort
25 out the project induced possibility?

26 A. To the -- I am not aware of any studies that

1 have been made of what the level of development would
2 have been had the projects not been constructed and not
3 been in operation.

4 Q. Do you agree that that is a relevant
5 consideration when you start talking about project
6 benefits and payments for benefits?

7 A. No, I do not agree.

8 Q. Why isn't that a relevant consideration, in
9 your opinion?

10 A. Those are -- for two reasons, in my opinion;
11 one, those are either contract commitments or those
12 diversions are made under state granted water rights or
13 made from ground water underground water rights.

14 Q. So the project -- do you think it's right for
15 the projects to come in and claim benefits but disregard
16 burdens that came with them because there was a contract
17 or a water right?

18 A. May I ask for a repeat of the question?

19 Q. It was probably more in a statement than a
20 question.

21 But are you saying that it is your opinion
22 that it is proper for the water projects to seek
23 compensation for benefits while at the same time
24 disregarding burdens because there are contracts or water
25 rights?

26 A. I believe it is my opinion that all who

1 benefit should reimburse the Federal or State agencies
2 where the benefit is obtained.

3 Q. I assume that's your personal feeling?

4 A. It is.

5 Q. Do you think they should compensate for the
6 actual benefit which takes into account the balancing of
7 benefits and burdens to come down to a net benefit? Or
8 do you think they should just pay for benefit regardless
9 of detriment or burden caused by the project?

10 A. Well, when I said benefits, I meant net
11 benefits that have accrued because of the operation of
12 the projects.

13 Q. Okay. But net benefits, as you see them,
14 would not take into account project induced diversions?

15 A. Under my view, those who -- in the valley who
16 benefited from the projects should also pay for the
17 benefits obtained.

18 Q. You are saying those people ought to be
19 paying for those benefits, the people up on the river who
20 took --

21 A. For such benefits as they have benefited --
22 excuse my -- for such benefits as they have obtained or
23 have received.

24 Q. Okay.

25 MR. KLETZING: Most of them are.

26 THE WITNESS: That is true.

1 MR. NOME LLINI: Q. In this particular
2 calculation where the project flow has been calculated as
3 going to the Delta, do you agree there has been no
4 adjustment to take out the project induced flow with
5 regard to some diverters in the Sacramento Valley and
6 along the Feather River, right?

7 A. Again, may I ask for a clarification?

8 Q. Okay. I think you stated earlier that you
9 know of no adjustment being made in terms of determining
10 the impact on the Delta?

11 A. That is correct.

12 Q. Okay. So we have -- we do have people who
13 divert from the stream under an alleged riparian right,
14 do we not, upstream of the Delta in the Sacramento and
15 along the Feather?

16 A. That is correct.

17 Q. All right. Now, for those people it is
18 possible that they are benefiting from project flow
19 because they are experiencing flows on a more regular
20 basis or whatever other possibility there is.

21 A. Well, the riparians along the Sacramento are
22 benefiting -- have entered into contracts with the Bureau
23 of Reclamation for Central Valley Project water to firm
24 up their riparian right or to expand it. And they are
25 paying in accordance with the terms of the contracts.

26 Q. Are you saying that all of these diverters

1 along the Sacramento River have contracts for water
2 delivery?

3 A. I did not use the term all.

4 I believe, as I remember it, the Bureau made
5 a very extensive effort to identify all of the riparians
6 along the Sacramento River that were diverting from the
7 river under riparian right and to enter into contracts
8 with them to provide a firm water supply.

9 Q. All right. In this analysis, let's assume a
10 riparian along the Sacramento River signed a contract
11 with the Bureau of Reclamation to firm up his riparian
12 right and pay an amount to firm it up.

13 How do we know whether we should classify
14 that as a contract delivery from the project or a
15 riparian use that should be charged against natural flow?

16 A. The records of the Bureau of Reclamation,
17 together with the studies that were made in 1956, under
18 what at that time was called the Cooperative Study, and I
19 regret I do not have the exact date, but it was a very
20 extensive study --

21 MR. BABER: (Indicating)

22 MR. NOME LLINI: In the 1950's.

23 THE WITNESS: Thank you.

24 The report on the 1956 Cooperative Study
25 Program, entitled "Water Use and Water Rights Along The
26 Sacramento and In The Sacramento-San Joaquin Delta," in

1 March, 1957, is the reference.

2 I believe that we made a sincere and rather
3 comprehensive effort to identify all of the riparians
4 along the river and the extent of their riparian right.

5 Q. Do you know how that was used in this
6 particular calculation?

7 A. We used that so -- the Bureau records and
8 that source for identification of riparian diverters.

9 Q. What I'm concerned about is the split of that
10 diverter's water use, again what should be termed as a
11 contract diversion and what is actually a riparian
12 diversion that would have been taken -- taking place
13 regardless of the projects and properly chargeable
14 against natural flow.

15 A. I believe the Bureau's records make that
16 split.

17 Q. Did these calculations make that split?

18 A. We have attempted to do so.

19 Q. Where in that blue binder do you do this
20 splitting?

21 A. Well, I will have to refer to the other
22 tabulations table.

23 It is done in -- may I?

24 Q. Yeah.

25 A. It is to be found in the table labeled "D. S.
26 Sacramento Diversions By Reach," and it's numbered Number

1 24.

2 Q. All right. And that table reflects an
3 attempt to adjust out from the riparian diversion the
4 amount of water that should properly be characterized as
5 a project-related diversion, is that correct?

6 A. Yes.

7 Q. And you oversaw that calculation? I haven't
8 looked at that but --

9 A. I have discussed it with the department staff
10 and believe it to have been properly derived.

11 Q. With regard to project related water uses,
12 the project itself by adding more water to the stream
13 than would occur naturally would, in fact, and I'm
14 talking about below the dams now, result in greater
15 evaporative losses and increased seepage or percolation
16 from the river, would it not?

17 A. It is correct that the augmented flows in the
18 river could increase the consumptive use by riparian
19 vegetation, that is, natural riparian vegetation.

20 Q. And what about increased evaporative losses?

21 A. To some extent, yes.

22 Q. And that would be by reason of an increased
23 water surface, if the stream bank was tapered or
24 something like that?

25 A. That is correct.

26 Q. What about increased percolation?

1 A. That could occur. That could be a result.

2 Q. In these calculations was there any attempt
3 to adjust for those factors down below the dams?

4 A. That is an element that enters into or is
5 accounted for by the term unmeasured accretions and
6 depletions by reach.

7 Q. Okay. But, I mean, how do you take it out as
8 a project affect?

9 A. We have not attempted to do that.

10 Q. Is there any reason why that shouldn't be
11 done?

12 A. In my personal opinion, it is not necessary
13 because we are here concerned with the amount of water
14 that actually reached the Delta in July and August of
15 1977.

16 Q. Okay. I don't understand that because we are
17 trying to characterize the amount of water that reached
18 the Delta that is project water.

19 A. That is correct.

20 Q. Okay. And why wouldn't you take that into
21 account in that calculation?

22 A. One could attempt to take it into account.
23 It could be an extremely complicated and lengthy job.

24 Q. Okay. It's a lengthy, complicated job, but
25 from a logical and fairness standpoint it should be
26 adjusted out, shouldn't it?

1 A. May I answer in partial context to your
2 question?

3 Q. Yeah. I'll take your answer any way you want
4 to give it.

5 A. From a complete hydrologic analysis, yes, it
6 would be, possibly should be, taken out. Whether or not
7 it's fair, I offer no opinion.

8 Q. That surprises me because I always viewed you
9 as a fair man.

10 Why would you think it's fair not to account
11 for it?

12 A. I didn't -- may I correct the statement?
13 I did not say it was not -- that it was
14 necessarily not fair. I don't believe that I did mean
15 that.

16 Q. Okay. Let me ask it simply.
17 Is it unfair not to make that adjustment?

18 A. Under the circumstances, I would say it is un --
19 it would be unfair and unnecessary to make the adjustment
20 because, as I've said, we are here concerned with the
21 amount of water that actually reached the Delta from
22 various sources.

23 Q. Okay. You say that and you fold your arms,
24 but I'm not understanding that part of your reasoning.

25 I thought we just went through that, and you
26 agreed that in determining the amount of water that

1 actually reached the Delta, that to determine what part
2 of that water is project water, that this analysis should
3 be done, right?

4 A. ~~From an exact~~^{For} to the best possible estimate
5 of the amount of project water that reached the Delta, if
6 that were relevant, those induced affects would have to
7 be taken into account.

8 Q. Okay. Now, you said if that were relevant.

9 A. Uh-huh (yes).

10 Q. Don't you agree it is relevant how much
11 project water reached the Delta in July and August of
12 1977?

13 A. Not in the context of the issues in this
14 case, as I understand it, which, if I may offer my
15 opinion on that, we are here concerned, as I said before,
16 with the amount of project water that actually reached
17 the Delta in those two years --

18 MR. BABER: Those two months, right?

19 THE WITNESS: Those two months. Excuse
20 me.

21 MR. NOMEILLINI: Well, I agree with you.
22 I think you just explained that the amount of project
23 water that actually reached the Delta is a relevant
24 consideration in this lawsuit.

25 Q. Right?

26 A. As measured, yes, it is.

1 Q. Okay. And all we can measure is the flow
2 that was actually in the river?

3 A. That is correct.

4 Q. And that flow in the river at the measuring
5 stations where it came into the Delta was part natural
6 flow, part project flow, and probably part some other
7 flows, right?

8 A. It depends on how you define natural flow.

9 We have attempted to separate out ^{as} ~~to the~~ best
10 we can the difference in the water that reached the Delta
11 between that which could be attributed to the operations
12 of the projects versus that which otherwise occurred, and
13 again this all depends on how you define the term
14 natural.

15 Q. Okay. But, in any event, we don't have any
16 problem determining the element that's attributed to
17 project flow?

18 A. We have attempted to do so within reason.

19 Q. All right. And you agreed with me that in
20 determining project flow it was relevant to consider the
21 additional evaporative losses and seepage losses that
22 came about by reason of the project flow over and above
23 all the other flows, right?

24 A. For an exact estimate, may I go a little
25 further?

26 Q. Sure.

1 A. It would also be necessary to make the same
2 sort of determination with respect to the other sources
3 of water reaching the Delta, how much of that would be
4 lost and in what fashion.

5 Q. Sure, I would agree that it's relevant, but
6 we are looking at the project impact, and in this lawsuit
7 we are seeking compensation for the project impact.

8 A. As I understand the issues, the state is
9 seeking compensation for a quantity which is stated to be
10 the amount of State Water Project water that was diverted
11 in terms of quantity acre feet.

12 Q. We are going to get to that, and you are the
13 guy that's going to tell us how you get --

14 MR. BABER: You mean divert by each of
15 the defendants?

16 THE WITNESS: I beg your pardon?

17 MR. BABER: You mean divert by each of
18 the defendants?

19 THE WITNESS: Yeah.

20 MR. NOMEILLINI: Q. Back on the
21 calculations that were performed to determine project
22 inflow to the Delta in July and August of 1971.

23 You stated that you started at the dams, made
24 those calculations, or the department did under your
25 rough review. Then that was subtracted out from the
26 measured flow in the stream, and then diversions were

1 accounted for in the stream.

2 Right?

3 A. Yes.

4 Q. And some of those were actually measured,
5 some were estimated from pump records and PG&E records,
6 and were any simply estimated without the use of pump
7 records?

8 A. I can't answer that from memory. I'd have to
9 check the -- again, go back to the original computations
10 to be able to answer that question specifically.

11 Q. Now, with regard to unmeasured accretions,
12 you told us that that was the difference between the
13 gauging stations and that accounted for other flows and
14 depletions in between the stations, right?

15 A. It was a mass balance between the gauging
16 stations.

17 Q. And how were return flows handled?

18 A. They were included in the balance wherever
19 known and wherever measured, and in the Sacramento Valley
20 there are extensive measurements of the return flows.

21 Q. Is there any relevance to the estimates of
22 percentage return flow in Bulletin 132-78 to the
23 calculations that were performed under your supervision?

24 And I'll show you the Bulletin 132-78, page
25 17 (indicating).

26 A. No, I do not believe that we used those

1 percentages in this calculation because, as I stated,
2 most of the return flows are measured.

3 Q. And so they would end up between -- if they
4 were up above a measuring station, then they would end up
5 as an unmeasured accretion or as a measured return flow?

6 A. That's right.

7 MR. KLETZING: Say, could we -- we
8 haven't had a really break. Could we have a ten-minute
9 break?

10 MR. NOME LLINI: Sure.

11

12 (Brief recess)

13

14 MR. NOME LLINI: Okay. Back on the
15 record.

16 We just got finished talking about return
17 flows.

18 And you indicated that they were not, to your
19 knowledge, utilized in the calculations, is that correct?

20 A. Are you referring to the percentages?

21 Q. Right.

22 A. To the best of my knowledge, those were not
23 used in this latest series of studies.

24 Q. Okay. Do you think it's possible that
25 additional lands were devoted to agriculture within the
26 flood plane area because of the construction of the

1 various dams?

2 A. I think that is correct.

3 Q. Do you know in this study whether or not
4 those lands were categorized as a riparian use or as a
5 project-related diversion?

6 A. Unless they were actually riparian by some --
7 as a result of some study, they were not categorized as
8 riparian.

9 Q. If they were within the flood plane -- well,
10 do you know whether or not they were categorized as
11 riparian for the purpose of these calculations?

12 A. No, I do not. I have not looked at that nor
13 do I know at this point in time.

14 Q. Okay. So that if they were categorized as
15 riparian, then they would be charged against the natural
16 flow in these calculations, would they not?

17 A. That would have been the case.

18 Q. All right. And if they were project induced
19 riparian uses, then do you think it is fair to charge
20 them against the natural flow rather than a project flow?

21 A. Well, to answer that, I'll have to encroach
22 on the legal bit.

23 The riparian right existed whether the
24 project did or not.

25 Q. Okay. I asked you whether or not it was fair
26 to charge those against the natural flow as opposed to

1 the project waters for the purpose of the calculations in
2 this action.

3 A. (Pause) I would have to answer that by
4 saying that that is basically a legal question, and I
5 doubt that I'm competent to answer it.

6 Q. With all those gray hairs you've got to be a
7 judge of fairness.

8 And that's all I ask is that do you think
9 it's fair?

10 MR. KLETZING: He answered you.

11 MR. NOME LLINI: I know you think it's
12 fair, Russ.

13 MR. KLETZING: No. No. He answered
14 you.

15 MR. NOME LLINI: Well, he didn't answer
16 the question.

17 MR. KLETZING: He said he thought it was
18 a legal question that he --

19 MR. NOME LLINI: Well, "Do you think it's
20 fair" calls for an answer yes or no or an explanation.

21 MR. KLETZING: Well, it calls for
22 whatever he wants to say.

23 MR. NOME LLINI: Q. Well, is there
24 anything else you want to say on that question?

25 Do you think it's fair to charge those
26 against the natural flow rather than against the project

1 flow if, in fact, we've got some that fall in that
2 category?

3 A. If, in fact, those diversions were made under
4 a contract with the State or the United States, then I
5 would say it would not have been fair.

6 Not knowing the particular circumstances of a
7 particular piece of property, irrigated agricultural
8 land, I would not be able to answer it in specific terms.

9 Q. In calculating the amount of project water
10 that reached the Delta in July and August of 1977, how
11 were the return flows categorized?

12 What were they categorized as, natural flow
13 or project flow?

14 A. We made an attempt to distinguish between
15 project water induced return flows versus those return
16 flows which had their origin in the use of riparian flows
17 or other appropriative rights.

18 Q. Okay. And where is that determination
19 reflected in the document?

20 A. It is reflected in Table One entitled
21 "Natural Supply and Riparian Use, Sacramento Valley and
22 Delta, 1977," and, particularly, in line 27.

23 Q. In line 27, as you referred, it says, "Total
24 Sacto Valley return flow claimed for project supply."

25 And it's got fifteen point six million acre
26 feet for July --

1 MR. WHITRIDGE: I think that's the wrong
2 one, Dan.

3 THE WITNESS: Thousand. Thousand.

4 MR. NOMELLINI: Oh, is that thousand?

5 THE WITNESS: Yes.

6 MR. NOMELLINI: Q. Oh, okay. Fifteen
7 thousand six hundred for July, and 44,600 for August.

8 Is that correct?

9 A. That is correct.

10 MR. WHITRIDGE: Doesn't line seven have
11 fourteen point three and thirty-eight point six?

12 MR. NOMELLINI: Okay.

13 Q. Well, maybe you can explain that, Harvey.

14 Line 27 looks like it goes on across -- just
15 tell me what that project related return flow is for July
16 and August.

17 A. For July it is 15,600.

18 And for August, 44,600. That's for -- I was --
19 yes.

20 Q. Are those the right numbers?

21 A. Yes.

22 Q. Okay. All right. Now, how do you get the
23 15,600 return flow for July?

24 A. That is taking the total return flows and
25 adjusting that by the ratio between project supplied
26 diversions versus total diversions. You take the total --

1 in other words, we have a value for the total return
2 flows, most of which are major, like Colusa drain.

3 The total project supplied diversions were a
4 quantity, shall we say X.

5 The total use of water was Y.

6 So the project induced return flow would be
7 the total return flow divided by Y and multiplied by X.

8 Q. So you just prorated them based on project
9 diversion versus natural flow or total flow?

10 A. Total diversion.

11 Q. Okay. Project diversion versus total
12 diversion?

13 A. Uh-huh (yes).

14 Q. So if our project diversions are off, so
15 would this ratio be off?

16 A. Yes, that follows.

17 Q. How did you account for return flows from
18 ground water pumps along the river?

19 A. We did not make a specific correction on that
20 basis.

21 Q. Wouldn't that create a distortion in this
22 logical and fair approach?

23 A. To some extent it could.

24 Q. How extensive is the ground water pumping in
25 the vicinity of the rivers in the Sacramento Valley?

26 A. I would have to go back and read the reports

1 on that. I do not recall offhand.

2 Q. Do you have any feel to whether or not it was
3 higher in July and August of 1977, than it would have
4 been in a normal type of year?

5 A. I can only answer that that is a possibility.
6 It would be in accordance with normal experience.

7 Q. Was this your recommendation to prorate the
8 return flow based on the diversions?

9 A. It is my view that that is as reasonable a
10 method of getting at the values as possible.

11 Q. Well, don't you agree it would be more
12 reasonable to take into consideration the possible impact
13 of the ground water pumping contribution?

14 A. One could do that, yes.

15 Q. Well, don't you think that's more reasonable
16 to include that than just take the total diversions from
17 the stream and prorate the return flow?

18 A. If one, again, is to refine this to the --
19 and take into account every possibility, yes, one should
20 do that.

21 Q. Do you think it's insignificant? I mean,
22 this factor of the ground water pumping, do you think
23 that's insignificant for July and August of 1977?

24 A. Inasmuch as most of that ground water
25 pumping, which occurs along the river, and that is where
26 the affect is most pronounced, in fact, is supplied by

1 recharge from the river. It tends to, I think, begin to
2 cancel out.

3 Q. Well, let's assume it's supplied by recharge
4 from the river.

5 That in effect would be a diversion of sorts,
6 would it not?

7 A. That is correct.

8 Q. And in this proration of return flow, that
9 would be a diversion that would not be categorized as
10 project, correct?

11 A. One could so categorize it, yes.

12 Q. Well, it just seems to me that it's obvious
13 if that is like a diversion, that it would increase the Y
14 in the calculation that you described, and, therefore,
15 the project share of that return flow would be diminished
16 and properly so.

17 Do you disagree with that?

18 A. Well, may I think it through for a moment?

19 Q. Sure.

20 A. It would also increase the X.

21 Now, that would not --

22 Q. Sure, the X is the project share?

23 A. You would not come out with the same
24 percentage, that's true.

25 Q. From my standpoint for my clients it would
26 look to me like we would definitely want to see that

1 diversion accounted for in any probation because to do it
2 your way, you are going to end up with more return flow
3 attributed to the project because you're giving them
4 their percentage share without adding in that diversion
5 from the river.

6 A. If you assume that -- if you assume that the
7 ground water pumped adjacent to the river is supplied by
8 recharge of project water, you might get more return flow
9 because you would be increasing the total project
10 diversions a much higher percentage than you would be
11 increasing the total diversions.

12 Q. That's fine. If you want to approach it that
13 way, that's okay with me, too.

14 You think that that ground water -- the
15 ground water basins were filled up with project water and
16 that constitutes the project diversion?

17 A. No. I did not refer to what the ground water --

18 What I said was that the pumping along the
19 river is in effect a draft on the river and on the flow
20 in the river because of recharge.

21 Q. And --

22 A. It is true that the original amount of water
23 in the ground water basins was not project water.

24 Q. Okay. But for the purpose of these
25 calculations that you oversaw, any losses from the
26 channel, the depletions between the stations constituted

1 a reduction of the natural flow, did they not?

2 A. Yes, there would be -- they would constitute
3 a reduction of both, chargeable both to the project flow
4 and to the natural flow. A given molecule of water may
5 have been from that -- did recharge the ground water
6 aquifer. It may have originated in ^{natural} actual flow. It may
7 have originated in project releases.

8 Q. Can you show me in these calculations where
9 you charge part of the channel depletion to project
10 water?

11 A. I don't believe we did.

12 Q. Okay. And you told me earlier that you
13 didn't make any adjustment.

14 A. That's right.

15 Q. So, you know, you're not telling me the right
16 thing.

17 You are assuming in your own mind that it
18 would be fair to do this, but it wasn't done in that
19 calculation, was it?

20 A. No, it was not.

21 Q. Okay. So we started at the dams on the
22 various river points, and we calculated what we think was
23 natural flow, and we are going to put quotes around that.

24 Then as that water came down the river, we
25 measured and estimated diversions and we did this
26 estimate on return flows, and we charged all the

1 unmeasured accretions in the negative sense against the
2 project flow and the unmeasured accretions when they
3 added to the river.

4 Did we credit all of those to the natural
5 flow in your calculations? Do you know whether or not --

6 A. I will have to go back and make sure my
7 memory is good.

8 Q. Okay.

9 A. As I recall it, the unmeasured accretions and
10 depletions were considered as part of the natural flow.

11 I would like to say that I will attempt to
12 check that as I review my deposition, and if I was wrong,
13 I will note that that answer was wrong and where the
14 correct values may be found.

15 Q. Okay.

16 So now as we go down the river and we get to
17 the point, the last measuring station near the Delta on
18 the various rivers, and I realize we already covered
19 these other little tributaries, I think we are going to
20 put those to the side, we then have project water and
21 other water, huh?

22 A. Yes.

23 Q. Okay. Is the other water broken down between
24 natural flow and some other designation?

25 A. No.

26 Q. Okay. So we have project water and other

1 water, and then what do we do with that at the Delta to
2 determine the benefits --

3 A. The first charge against the other natural
4 flow or other water, as it has been characterized. The
5 first charge against that is for the Delta -- riparian
6 Delta use after satisfying the outflow requirements ^{and} in
7 the channel depletions.

8 Q. All right. So we've got other water. Then
9 we take away outflow and then we have the -- take away
10 the channel depletions.

11 A. Channel depletions.

12 Q. Okay. Focusing first on outflow, is it fair
13 to charge -- or did you charge all of the outflow to the
14 natural flow or this quote other water?

15 A. All of the outflow, which was allowed to flow
16 out of the Delta in order to meet the State Water
17 Resources Control Board objectives, was charged against
18 the other water as a first call.

19 Q. Okay. Was there any outflow not charged
20 against, and I'm talking about for July and August of
21 1977, was there any outflow not charged against the other
22 water?

23 A. *There was some outflow charged to project water.*
~~I don't recall that we charged it to any of~~
24 ~~the outflow project water.~~

25 Q. Are there any beneficiaries of the Delta
26 outflow in July and August of 1977, other than the Delta

1 riparian diverters?

2 A. The riparian diverters in the uplands and the
3 Delta -- ~~certain of~~ the Delta appropriators.

4 Q. The Federal Central Valley Project benefited
5 from the outflow in July and August of 1977, did they
6 not?

7 A. Well, as -- the Delta outflow was necessary
8 to maintain the quality in accordance with the State
9 Water Resources Control Board water quality objectives
10 under the Delta water Quality Control Plan as modified by
11 the Board under emergency conditions.

12 Q. Okay. I understand that statement, and I
13 understand what you're saying.

14 But, I mean, didn't the outflow give a
15 benefit to the Federal Water Project insofar as they
16 divert from the Delta?

17 A. It assisted in maintaining at a proper
18 quality at the Delta pumping plant, yes.

19 Q. Okay. And didn't the outflow benefit the
20 State Water Project in terms of their diversions?

21 A. My prior answer referred to the State Water
22 Project.

23 Q. Oh, okay.

24 What about the Federal Project?

25 A. The same is true.

26 Q. And what about the Contra Costa Water

1 District?

2 A. It is probable that the quality at the Delta --
3 at the Rock Slough pumps would not have been -- would
4 have been much worse had it not been for the outflow,
5 which is an indirect way of answering your question.

6 Q. The answer is yes, huh?

7 A. Yes.

8 Q. Okay. Can you think of any other
9 beneficiaries of the Delta outflow other than the Delta
10 riparians and then these three export projects that we
11 talked about?

12 A. Well, of course, the fish -- certain of the
13 State Water Control Board objectives have to do with the
14 protection of the fishery and wildlife resources, too.

15 Q. All right. How about recreation? Does
16 recreation benefit from Delta outflow?

17 A. I suppose, yes, to the extent that boaters
18 and waterskiers prefer to --

19 Q. -- recreate where there are no sharks?

20 A. True.

21 MR. KLETZING: Keep them out of
22 Stockton.

23 MR. NOME LLINI: We are talking about the
24 fish kind of sharks.

25 MR. KLETZING: Oh.

26 MR. NOME LLINI: Q. How about

1 navigation; does navigation benefit from outflow?

2 A. As a personal observation, I would have to
3 say I don't see how.

4 Q. Okay. With regard to charging all of this
5 outflow to other water, is it fair, in your opinion, to
6 make that charge of all the outflow to the other water
7 without some kind of allocation to the other
8 beneficiaries of outflow in July and August of 1977?

9 A. We made that charge on the direction of
10 counsel.

11 Q. Do you think it's fair?

12 A. I would have to say that I think in my own
13 personal opinion as distinguished from instructions, that
14 probably an allocation of the amount of outflow among the
15 wide variety of beneficiaries would be fair.

16 Q. Okay. You mentioned that you charged the
17 other water with outflow and channel depletion.

18 Now, how do you determine what the outflow
19 is?

20 A. Because it is impossible to actually --
21 physically measure the outflow. It is a calculated value
22 from the total inflow adjusted for channel depletions and
23 Delta consumptive use.

24 Q. Okay.

25 A. May I add to that?

26 Q. Yeah.

1 A. Part of the Delta consumptive use, of course,
2 is involved in the channel depletion that's evaporation
3 from the channel surfaces and the natural riparian
4 vegetation.

5 Q. So we take inflow and then we subtract
6 channel depletion --

7 A. You subtract the uses within the Delta.

8 Q. Okay. Channel depletion and other losses,
9 huh?

10 A. And Delta uses, consumptive uses. That is,
11 the consumptive use of applied water within the Delta.

12 Q. Okay. So we take inflow. You tell me what
13 you do with it to get outflow.

14 A. Inflow minus --

15 Q. Minus --

16 A. -- the channel depletions, which include some
17 consumptive use, minus the consumptive use within the
18 Delta of applied water. The residual is considered to be
19 the outflow.

20 Q. Okay. It appears to me that if you took
21 channel depletions and consumptive use, you'd be doubling
22 up on the deduction from inflow, would you not?

23 A. No, because channel depletion -- the
24 consumptive use considered there is only the evaporation
25 from the channel water surfaces and the consumptive use
26 of the natural riparian vegetation.

1 Q. Okay. All right.

2 Now, how was channel depletion measured?

3 A. It also is calculated value from the area --
4 from the area of the water surface and the evaporation
5 rate as determined from available evaporation stations
6 and the extent of what I have termed natural riparian
7 vegetation and the consumptive use of that.

8 Q. Okay. So it's not measured, it's calculated?

9 A. That is correct.

10 Q. And what about the consumptive use of applied
11 water?

12 A. That again --

13 Q. How do you get that?

14 A. That is based upon the best available
15 evidence we have, measurements of the actual amount of
16 water comsumptively used by transpiration of the various
17 crops and the acreages.

18 Q. And how did you participate in that
19 determination?

20 A. I did not. That is Doctors Henderson and
21 Pruitt that have done that work.

22 Q. Do you agree that were no measured depletions
23 or diversions into the Delta by the various Delta users?

24 A. Some of them were measured, I believe. I
25 believe Byron-Bethany diversions are measured, for one.

26 MR. BABER: By the District's own

1 records?

2 THE WITNESS: Yes.

3 MR. BABER: And were supplied to you?

4 THE WITNESS: That is correct.

5 MR. NOMELLINI: Q. Okay. So with the
6 exception of Byron-Bethany, do you know of any others
7 that were measured?

8 A. I do not recall any others.

9 Most . . . (witness shrugs shoulders)

10 Q. So you just depended on these other people;
11 you don't know whether that figure is right or wrong?

12 A. I have accepted ^{Henderson/Pruitt} their results and relied on
13 them for their statement.

14 Q. So if they are wrong, your further
15 conclusions are going to be wrong, which are based on
16 those then, huh?

17 A. That would be correct.

18 Q. Do you agree that the Delta channels, because
19 they are connected to the bay and the ocean, would always
20 have water in them absent inflow from the various
21 projects?

22 A. From a quantitative standpoint, that is
23 correct.

24 Q. So the project influence is really with
25 regard to the quality of the water then in the Delta?

26 A. That is the purpose of salinity control.

1 Q. In terms of this calculation of Delta
2 outflow, if there were other channel depletions that took
3 place that were not properly estimated below the
4 measuring points going into the Delta, then that outflow
5 figure could be high, could it not?

6 A. It could be.

7 May I add to my prior testimony ^{that} in the
8 calculation of outflow the exports must be deducted,
9 also. I failed to mention that.

10 Q. So you have to take inflow and subtract the
11 in-channel depletions, the consumptive use of a supplied
12 water within the Delta and the exports to reach the
13 calculation of outflow?

14 A. That is correct.

15 Q. Did you check the figures for the export
16 values for July and August of 1977?

17 A. No, I have not.

18 Q. Do you know whether or not the State figures
19 are the same as the Federal figures?

20 A. No, I do not.

21 I believe they are all published by the U. S.
22 Geological Survey in their reports.

23 MR. KLETZING: What do you mean the
24 State figures are the same as the Federal figures?

25 MR. NOMELLINI: The figures used by the
26 Department of Water Resources, I wanted to know whether

1 they were the same as the Bureau's figures. The Bureau
2 puts out a daily report that has figures in it.

3 MR. KLETZING: Oh, okay.

4 MR. NOMELLINI: And I was just wondering
5 if he made a comparison.

6 He said he didn't.

7 Q. Do you know where the figures came from that
8 were used in this calculation for export?

9 A. It came from the operation -- as far as the
10 State Water Project is concerned, it came from the
11 operation reports of the State Water Project.

12 Q. Do you know where the Federal figures came
13 from?

14 A. From the -- where within the Bureau hierarchy
15 I do not know. But we used the Bureau values of the
16 amount exported through the Tracy pumps.

17 Q. But you didn't check it?

18 A. And the Contra Costa Water District, also.

19 Q. But you didn't review those figures?

20 A. No, I did not. I did not.

21 Q. Did you even ask these people where they got
22 the figures or are you just assuming where they got the
23 figures?

24 A. I have asked them where they got them.

25 Q. Okay. And you were told that the State Water
26 Project figures came from the State reports and the

1 Bureau figures came from the Bureau?

2 A. That is correct.

3 Q. And where did the Contra Costa County Water
4 District --

5 A. The Contra Costa Water District diversion is
6 a Bureau diversion.

7 Q. Do they -- does the Bureau measure it?

8 A. It is measured, yes.

9 Q. But does the Bureau measure it?

10 A. I cannot say whether it is Bureau personnel
11 that actually measured it or District personal. I do not
12 know.

13 Q. But the figures came from the Bureau?

14 A. Yes.

15 Q. Okay. So you took inflow, you subtract
16 in-channel depletions and consumptive use of applied
17 water in the Delta.

18 A. And exports.

19 Q. And exports.

20 And you told me the consumptive use of
21 applied water in the Delta was calculated and given to
22 you by others.

23 Do you know whether or not the Delta was
24 treated in a consistent manner in that calculation?

25 A. Insofar as I am aware, yes.

26 Q. Are you aware of any distinction made in that

1 calculation between Delta uplands and lowlands?

2 A. Yes, there was.

3 Q. And what distinction was made there as
4 relevant to the calculation?

5 A. The first distinction, of course, is the
6 geographic distinction that the Delta uplands or those
7 areas supplied from the Delta above five feet above mean
8 sea level.

9 We did, based on certain studies made by the
10 Bureau, use a value for riparian uses in the Delta
11 uplands of twenty percent of the total use because, in
12 our opinion and based on the available evidence, there
13 are some riparian lands in the -- what have been termed
14 the Delta uplands.

15 Q. And so the assumption was made that twenty
16 percent of the Delta uplands are riparian?

17 A. That is correct.

18 Q. Or twenty percent of the water use in the
19 uplands was riparian?

20 A. Twenty percent of the water use is a better
21 way of putting it.

22 Q. Okay.

23 Did you check that calculation of the twenty
24 percent?

25 A. It has been checked against the available
26 studies that -- primarily those from the Bureau.

1 Q. But did you check it?

2 A. No, I did not.

3 Q. Do you think it's right?

4 A. I have no -- at this point in time I have no
5 basis for an opinion on that.

6 Q. Okay. Do you know whether or not urban use
7 in the Delta uplands was treated as just a wash?

8 A. No. We made a correction for the urban use.

9 Q. Okay. Tell me about that correction that we,
10 you and somebody else made.

11 A. Primarily these -- that estimate was made by
12 Doctors Henderson and Pruitt in estimating the
13 consumptive use factor to be applied.

14 Q. Okay. So Henderson and Pruitt estimated the
15 consumptive use factor to be applied, huh?

16 A. That is correct.

17 Q. And you are about to point to that adjustment
18 in those tables some place, huh?

19 A. I believe I can find it if you wish.

20 Q. Okay. If you could.

21 A. The summary of Delta consumptive uses is to
22 be found in Table Number 31.

23 Q. All right. What I'm concerned about is the
24 adjustment that you talked about with regard to the urban
25 use in the uplands.

26 A. Are you --

1 Q. You told me that Henderson and Pruitt --
2 first you told me that you used the term "we made an
3 adjustment in the urban use for the uplands."

4 Then I asked you to explain that, and you
5 said, "Henderson and Pruitt estimated the consumptive use
6 factor to be applied," and all I'm trying to do is
7 understand what the adjustment was that you're referring
8 to.

9 A. Well, there was a -- Henderson and Pruitt
10 estimated, on the basis of their experience and
11 information, what the net consumptive use of the urban
12 areas was.

13 I was incorrect when I said "we."

14 Q. Okay. And you think they made some kind of
15 adjustment in the urban area that changed the approach
16 from one of treating the urban area as a wash to some
17 other analysis?

18 Maybe you don't know. I'm just asking.

19 A. Well, I think one has to take into account
20 all those things. I don't believe that it would be
21 proper to regard it, if I understand your terminology
22 correctly, as a wash.

23 Q. Okay. I agree with you.

24 In previous depositions, if my recollection
25 is correct, that the State's people said that they
26 treated the urban use in the uplands as being a wash and

1 that the return flow was ignored because they felt the
2 urban use from the channel was about the same and,
3 therefore, they just ignored it.

4 MR. KLETZING: Oh, I don't think that's
5 what the testimony was before.

6 MR. NOME LLINI: Okay.

7 Q. Tell me how the urban return flows were
8 handled in your calculations, urban return flows below
9 the measuring points of inflow into the Delta.

10 MR. KLETZING: Well, let me tell you
11 what the testimony was before.

12 MR. NOME LLINI: Okay.

13 MR. KLETZING: Okay.

14 It was that -- the wash was that urban areas
15 receive their supplies from ground water or from outside
16 the Delta, and, therefore, their consumptive uses of
17 water from outside the Delta doesn't affect the mass
18 balance in the Delta. That's what they are talking about
19 was a wash.

20 MR. NOME LLINI: Q. Do you understand
21 what Mr. Kletzing says?

22 A. Yes.

23 Q. Do you agree that that was done in your
24 calculation?

25 A. No. We actually used the consumptive use of
26 the urban areas.

1 Q. Okay.

2 A. And included the supply from ground water as
3 well as import.

4 Q. Okay. So you went in, looked at the actual
5 consumptive use in these urban areas, looked at the
6 supply of water that came from the underground or
7 imported and took that into consideration?

8 A. That is correct.

9 Q. Okay. And what did you do with the return
10 flow?

11 A. In dealing with the Delta we have always used
12 the net effect of consumptive use -- consumptive demands.

13 Q. Okay. Let's take Stockton, for example.
14 What did you do with the return flow from the
15 Stockton sewage treatment plant?

16 A. I do not recall.

17 Q. If I told you it was ignored in the
18 calculation, do you think that's possible?

19 A. I have no opinion.

20 Q. Okay. You don't know?

21 A. I don't know.

22 Q. All right. In terms of the in-channel
23 depletions, you talked about riparian vegetation uses
24 and, I guess, evaporative losses from water surfaces.

25 All of those were charged against other flow,
26 is that correct?

1 A. Yes.

2 Q. All right. Don't those same losses apply
3 like outflow so that they should be charged against all
4 the users of that particular waterway or channel system?

5 A. I suppose that that could be done, yes.

6 Q. But I mean shouldn't it be done? Isn't that
7 one of those same things where you were probably
8 instructed by counsel to do it one way where a fair
9 approach would have been another?

10 A. It is -- well, to put it simply, in my
11 personal opinion, yes.

12 Q. Did you arrive at any opinions as to what the
13 water quality would have been in the Delta absent the
14 State Water Project in July and August of 1977?

15 A. As regards the water quality that would have
16 obtained in the Delta had the Federal Central Valley
17 Project and the State Water Project not been in
18 operation, I am depending on the work that has been done
19 and is being done by Dwight Russell of the department
20 staff in the utilization of the so-called ^{Fischer} Fisher models.

21 Q. So you didn't formulate your own independent
22 conclusion then?

23 A. No.

24 Q. So really what you did is you came in and
25 made some input as to how this various water balance
26 should be performed?

1 A. Yes.

2 Q. Okay. Now, you indicated earlier that you
3 were working on some investigation or working on
4 determinations of what the resulting water quality would
5 have been absent the State Water Project in 1977, is that
6 correct?

7 A. It is correct that I have not formed a final
8 opinion on that and will, in that regard, as I have just
9 stated, depend upon the results of the use of the
10 so-called ^{Fischer} Fisher models.

11 Q. So you are not doing any further work to come
12 to those --

13 A. I am not doing that.

14 Q. Okay. Do you have any opinion formulated in
15 your in your mind as to whether or not the Delta water
16 quality in July and August of 1977 would have been
17 suitable for agricultural purposes absent the State Water
18 Project alone?

19 A. No, I have no opinion on that.

20 Q. Do you have any opinion as to whether or not
21 the water quality in the Delta in July and August of 1977
22 would have been suitable for agricultural purposes absent
23 the Federal Central Valley Project and State Water
24 Project?

25 A. I believe its use would have been severely
26 impaired.

1 Q. Okay. Is that belief extended throughout the
2 Delta or limited geographically to particular areas?

3 A. It would, I think, depend upon the area
4 within the Delta --

5 Q. All right.

6 A. -- and the pattern of flow through the Delta.

7 Q. Do you know where Venice Island is in the
8 Delta?

9 A. Generally, yes.

10 Q. What do you think the -- what's your belief
11 with regard to the usability of water in that area absent
12 the Federal Central Valley Project and State Water
13 Project in 1977?

14 A. I think it would have been very seriously
15 impaired.

16 Q. And what about Mandeville Island?

17 A. Similarly, Mandeville Island.

18 Q. And how about Victoria Island?

19 A. Not -- let's see, Victoria Island is in the
20 south part of the Delta.

21 It would not have been as seriously impaired,
22 no, because --

23 Q. How about Union Island?

24 A. I have not looked at that one specifically,
25 but, again, I doubt that it would have been as severely
26 impaired as some of the more northerly islands.

1 Q. And what about the Palm Tract?

2 Do you know where Palm Tract is? It's right
3 by Rock Slough.

4 A. Well, yes, it would have been seriously
5 impaired.

6 Q. Okay. And what about Coney Island?

7 Cone Coney Island is right across from
8 Clifton Court Forebay.

9 MR. BABER: Right here (indicating).

10 THE WITNESS: It would have been
11 seriously impaired.

12 MR. NOMELLINI: Q. It would have?

13 A. Yes, as I recall the results of the modeling
14 tests we've run to date.

15 Q. What about -- I guess we've got -- what about
16 Byron-Bethany Irrigation District?

17 Do you know where that is?

18 A. Yes.

19 I think there would have been some
20 considerable impairment there.

21 Q. Do you think that the state has the right to
22 claim compensation for a benefit yielded by the Federal
23 Water Project?

24 A. No, I do not believe they have.

25 In other words, the State's right to claim
26 benefits should, I think, be limited to those benefits

1 which accrue because of the operation of the State
2 project.

3 Q. Are you familiar with the Coordinated
4 Operations Agreement between the State and the Federal
5 Government?

6 A. I read it several times, yes.

7 Q. And when you were a director, you worked with
8 the Federal Government, I guess, on an annual basis, at
9 least on coordinating the projects?

10 A. As a matter of fact, the first Coordinated
11 Operation Agreement or the predecessor agreement was one
12 that I signed.

13 Q. Is that the 19 -- what is it, '71?

14 MR. WHITRIDGE: '60, wasn't it?

15 THE WITNESS: May 16th, I believe, is
16 the date, 1960.

17 MR. NOMEILLINI: 1960. That was the
18 first one.

19 Q. And you participated in that?

20 A. Yes. I was one of the signatories.

21 Q. Was there always an effort to make sure that
22 the State project rights and Federal water rights were
23 not merged in any fashion in these agreements?

24 A. I think, yes.

25 Q. And that really these agreements were just to
26 coordinate operations as they impact the Delta?

1 A. Yes. And the in-basin uses above.

2 Q. Okay.

3 A. Where they were common.

4 Q. The Federal Government has always had a
5 tendency to jealously guard their water rights as such,
6 is that true?

7 A. That is correct.

8 Q. Do you know what the value of water was in
9 July and August of 1977?

10 A. I have not been asked to study that question.

11 Q. Do you know what it is, though?

12 A. No, I do not.

13 Q. Do you know what the state would have done
14 with water had the -- in 1977, had the water not gone for
15 Delta outflow?

16 A. If one assumes that the export water would
17 have been useable, I'm sure that there were many
18 contractors in the San Joaquin Valley that would have
19 been very happy to have had it.

20 Q. Do you know anything about the Federal water
21 bank that was set up during 1977?

22 A. No, I'm not aware of that.

23 Q. If I told you that the water bank could not
24 dispose of all the water it had available in 1977, do you
25 think that would be true?

26 A. If I knew what the values were and how they

1 were arrived, I would be able to offer an opinion.

2 Q. How about sixty dollars an acre foot?

3 A. I presume that that could have been achieved.

4 Q. Do you mean that there could have been water
5 left over at sixty dollars an acre foot?

6 A. It is possible.

7 I have no firm opinion on that, however,
8 because I have not studied it.

9 Q. Is it possible, in your mind, that the State
10 Water Project had it had more water in 1977, as a savings
11 from Delta outflow or otherwise, would have simply kept
12 it in storage in 1977, for use or possible use in '78?

13 A. As I recall the records of the various public
14 hearings and conferences that were held in connection
15 with the actions of the State Water Resources Control
16 Board and the publications of the director, the
17 department was concerned of retaining enough water in
18 storage to meet the demand in 1978, if 1978 had been a
19 succeeding dry year.

20 Q. And that would indicate that there is a good
21 possibility that if they had more water, they would have
22 tried to hold it for '78?

23 A. That is a possibility, and, in my opinion,
24 would have been a prudent action.

25 Q. And what kind of a year was 1978?

26 A. As I recall it, it was fairly wet and fairly

1 good run-off.

2 Q. And do you think the state could have spilled
3 the water that would have been saved in '77 in '78 and
4 allowed it to flow out to the ocean?

5 A. I would have to go back and check the records
6 of the storage in Oroville to be able to answer that
7 question yes or no.

8 Q. But it is possible?

9 A. It might have been possible.

10 Q. Do you know what the total diversions were
11 from the Delta by the State in 1977?

12 A. Again, they are to be found in one of these
13 tabulations.

14 Q. Okay. The question I would have is did you
15 know whether or not the State in 1977, took more water
16 out of the Delta than they put in from their storage?

17 A. I haven't made that balance, but I do not
18 believe it to have been the case.

19 Q. You wouldn't be off by nine hundred thousand
20 acre feet, would you?

21 A. I doubt it.

22 Q. How about 200,000?

23 MR. KLETZING: How about a hundred and
24 fifty acre feet?

25 MR. NOME LLINI: What is that number,
26 Russ? Is it a hundred and fifty thousand?

1 MR. KLETZING: No. A hundred and fifty
2 acre feet.

3 MR. NOME LLINI: Oh, no.

4 MR. KLETZING: I don't think there is
5 any question pending right now, Harvey, so . . .

6 MR. NOME LLINI: Yes, there is a
7 question.

8 Q. How much did the State divert from the Delta
9 in 1977, over and above their releases from storage?

10 A. I do not have that figure value in my memory.

11 Q. Okay. But you can calculate it from those
12 pieces of paper, huh?

13 A. It can be calculated, yes.

14 Q. Maybe you can do that at on your noon break.

15 But let me show you Bulletin 132-78, page
16 three (indicating).

17 Does that tell us anything about the exports
18 from the Delta versus the releases into the Delta by the
19 State Water Project in 1977?

20 A. Yes.

21 Q. All right. What's that tell us? What's that
22 number?

23 A. Speaking of the year as a whole, the exports
24 totaled eight hundred thousand acre feet.

25 MR. KLETZING: Is that the calendar year
26 or water year?

1 THE WITNESS: Russ, to answer your
2 question, I have to go back to the tabulation.

3 MR. NOME LLINI: Well, maybe now would be
4 a good time to break for lunch. We are pretty close to
5 lunchtime.

6 MR. KLETZING: That's true. Okay.

7 MR. NOME LLINI: Why don't we break for
8 lunch and, what, come back at one o'clock?

9 MR. KLETZING: Okay.

10 MR. NOME LLINI: And then maybe if you
11 get back early, you could look at those.

12 I would like to know what your determination
13 is from your calculations as to the exports from the
14 Delta versus the release of stored water into the Delta
15 by the State Water Project.

16 THE WITNESS: Are you referring to the
17 total year export or two months concerned?

18 MR. NOME LLINI: Yeah. No. The total
19 year.

20 THE WITNESS: Total year.

21 MR. NOME LLINI: And then later I'm going
22 to ask you about some of the impacts from month to month,
23 which I know you're an expert on.

24 Okay. Let's break for lunch.

25

26

(Whereupon the noon recess was taken at

1 12:00 p.m., after which the following
2 proceedings were had at 1:25 p.m.):

3
4 MR. NOME LLINI: All right. Back on the
5 record.

6 MR. KLETZING: I think Harvey has a
7 correction.

8 MR. NOME LLINI: Okay.

9 THE WITNESS: I gave you some figures on
10 the amount of the project water used in the Delta in July
11 and August --

12 MR. NOME LLINI: Okay.

13 MR. WHITRIDGE: Way back in the
14 beginning, I think.

15 MR. NOME LLINI: Yeah.

16 Q. It was project water supplied to the Delta in
17 July and August of 1977, huh?

18 A. Yeah. And those figures are incorrect.

19 Q. Okay.

20 A. I did not include the allocation of Delta
21 outflow, and there has been a correction made to the net
22 use to account for the return flow from the City of
23 Sacramento.

24 So the correct figures would be ^{two hundred fifty} ~~a hundred and~~
25 ^{eight thousand nine hundred} ~~thirty-five thousand five hundred~~ in July --

26 Q. A hundred and what?

1 A. ~~A hundred and thirty-five thousand five~~
 2 ~~hundred~~
 3 ~~hundred~~ in July.

4 And August would be ^{208,400} ~~61,500~~.

5 Q. Okay. And those are what now? Total project --

6 A. Those are the net use of applied water on the
 7 land, plus the allocation of the Delta outflow.

8 Q. Net use of applied water on the land, plus
 9 Delta outflow?

10 A. Plus Delta outflow.

11 Q. Okay. Did you have any changes with regard
 12 to what the project water was supplied to the Delta in
 13 July and August of 1977?

14 A. No. *Accept as stated in answer to previous question.*

15 Q. The two figures you gave me before were
 16 15,600 --

17 A. ~~Fifty-two thousand six -- I think.~~

18 Q. Okay. Let's see. Oh, okay.

19 It was ^{258,900} ~~79,600~~ in July and ^{208,400} ~~22,200~~ in August.

20 A. Right.

21 Q. Okay. That's the total project inflow into
 22 the Delta for those two months?

23 A. ~~Plus the correction of 3,000 in July and 2200~~
 24 ~~or something like that in August.~~

25 MR. KLETZING: No. That's what he said
 26 that wasn't the right for total in --

 MR. NOMEILLINI: Q. Okay. Give me the

1 right project inflow into the Delta for July and August
2 of 1977.

3 A. I just did. I just did.

4 Q. Okay. Give them to me. I missed them then.

5 A. ~~A hundred and thirty-five thousand five~~
Two hundred fifty eight thousand nine hundred
6 ~~hundred~~ in July and ~~61,200~~^{208,400} in August.

7 Q. Okay. I thought you just said that was the
8 net use of applied water on the land --

9 A. No.

10 I said what I gave you before, that includes
11 the net use of applied water, plus the Delta outflow, *plus exports.*

12 Q. Okay. So this is ~~one thirty-five five~~
two hundred fifty eight thousand nine
13 ~~hundred~~ and ~~61,200~~^{208,400} is project inflow --

14 A. Yeah. Yeah.

15 Q. -- to the Delta in July and August of 1977?

16 A. Right.

17 MR. WHITRIDGE: And then the other
18 figures you gave us before, you say, are the net use?

19 THE WITNESS: Those were the net use of
20 applied water, and there had been a correction applied to
21 that for the return flow from the City of Sacramento
22 sewage system that originated in project water.

23 MR. WHITRIDGE: Okay. And that
24 correction has been taken account of in these figures
25 that you gave us?

26 THE WITNESS: That's correct. It has

1 been taken account of.

2 MR. HILDEBRAND: As far as the channel
3 depletion enters into it.

4 MR. NOMEILLINI: Q. Well, you reduced
5 the flow at Sacramento by an amount from the American
6 River to the City of Sacramento, I guess, huh?

7 A. Well, there was some Bureau water, CVP water,
8 applied to the City of Sacramento, and of that some
9 percentage, thirty percent, I think is the figure used,
10 return -- was returned to the Sacramento River as waste
11 water effluent.

12 Q. And you subtracted that --

13 A. Added it.

14 We had not taken that additional supply into
15 account previously.

16 MR. WHITRIDGE: Add that to the project
17 supply?

18 THE WITNESS: Yes.

19 MR. NOMEILLINI: Oh, I see. You added it
20 to the project supply.

21 THE WITNESS: Uh-huh (yes).

22 Q. And those figures are on what page of that
23 table of the booklet?

24 A. Well, they come from, oh, what the heck,
25 there is a table here somewhere, it's called
26 "Distribution of Natural Supply to Sacramento Valley and

1 Delta Riparian Uses," which is -- it would be 46.

2 Q. Page 46?

3 A. Number 46.

4 Q. Okay. Number 46.

5 MR. WHITRIDGE: Table 46?

6 MR. NOME LLINI: Okay.

7 Q. Any other corrections you want to make?

8 A. Well, you asked for some other data which I
9 can't give you at the moment.

10 Q. Oh, you can't tell us what the total export
11 was from the Delta in 1977?

12 A. No.

13 You also asked for Oroville releases, which
14 can be obtained from Table F-1, which is Number 10, which
15 also includes the releases from all of the other
16 reservoirs in the State Water Project system.

17 Q. Can you tell me what the total State Water
18 Project release was for --

19 A. I cannot on the basis of information I have
20 present at this time.

21 MR. WHITRIDGE: This chart only has
22 seven months on it.

23 THE WITNESS: That's right. March
24 through September.

25 MR. NOME LLINI: Okay.

26 Q. Can you tell me what the release of stored

1 water was in May of 1977?

2 A. The release of stored water was 53,416 acre
3 feet.

4 That's at Oroville.

5 Q. And that's stored water, that's project
6 water, huh?

7 A. That was a decrease in storage.

8 MR. HILDEBRAND: That's not a release.
9 That's a change in storage.

10 THE WITNESS: That's a change in
11 storage, that's right.

12 MR. HILDEBRAND: Yes.

13 MR. NOMELLINI: Q. Okay. So you can't
14 give me the release of stored water then, huh?

15 A. Well, if you add -- take the evaporation from
16 that, you would have 50,664 is the amount of stored water
17 that was released to the river.

18 MR. HILDEBRAND: Does that then assume
19 no inflow?

20 THE WITNESS: No, that doesn't assume --
21 that's the amount of stored water that was released,
22 previously stored.

23 MR. NOMELLINI: Okay.

24 Q. All right.

25 MR. HILDEBRAND: Well, the point I'm
26 getting at is this says change in storage. It doesn't

1 say the release of stored water, and there is a
2 distinction there because the change in storage would be
3 presumably a net, and you have released then the inflow,
4 plus the reduction in storage, would you not?

5 THE WITNESS: Yeah.

6 The inflows are not shown in this book
7 (indicating).

8 MR. HILDEBRAND: So that isn't really
9 just a change in storage. It's a release from storage
10 then?

11 THE WITNESS: Yeah, it would be the
12 release of previously stored water.

13 MR. HILDEBRAND: It can't be both.

14 MR. NOMELLINI: Q. Okay. In other
15 words, the release of stored water is obtained by a
16 change in storage, plus some adjustment to take into
17 consideration the evaporation or percolation?

18 MR. HILDEBRAND: But it would also have
19 to take into consideration any inflow.

20 MR. NOMELLINI: No.

21 He's saying that the inflow is just a pass
22 through so the release of stored water, which is the
23 question I asked, is reflected by the change in storage
24 with some adjustment.

25 MR. HILDEBRAND: In that case the
26 language on the chart is incorrect because it says change

1 in storage.

2 MR. NOME LLINI: What --

3 MR. KLETZING: No.

4 Change in storage is the release of storage
5 if you adjust for evaporation. If you have less storage,
6 that's the amount that's released. That's what everybody
7 is saying, Alex.

8 MR. HILDEBRAND: If you let out 50,000
9 and 50,000 flowed in, the change in storage would be
10 zero.

11 MR. KLETZING: That's right. If the
12 change in storage is 50,000, then it's like if you have a
13 hundred thousand come in and let out 50,000, a hundred
14 and twenty-five thousand and let out fifty-five,
15 whatever. That's the release from storage, is the net.

16 MR. HILDEBRAND: I see -- in other
17 words, you're talking about not release from storage but
18 release of stored water?

19 MR. NOME LLINI: That's right. They are
20 saying change in storage is the net change of the water
21 that was stored in the reservoir.

22 Q. Okay. All right. So we can have this -- do
23 you have any idea whether there was more export than
24 releases of stored water for the State Water Project in
25 1977?

26 A. The basis of the information I have here I

1 have no idea.

2 Q. Okay in terms of Delta water use do you know
3 what would occur if the Delta levee systems in the
4 interior of the Delta were not maintained in 1977?

5 A. I have no idea.

6 Q. You don't have any idea that that land that's
7 within those islands is below water and would be
8 inundated with water?

9 A. I have no very -- I know full well that most
10 of the islands or many of the islands are very
11 substantially below sea level and would be, and many of
12 them have been inundated through failure of the levees.

13 Q. Do you know what would happen to consumptive
14 use of water in the Delta area if the lands were
15 inundated with water as opposed to what was being done in
16 1977?

17 A. I hadn't thought of it in that context so I
18 would not want to venture an opinion. It would be a
19 difference between the evaporation that would take place
20 from the then water surface as compared to the
21 consumptive use.

22 And I have not analyzed that particular
23 difference. It would be changed.

24 Q. Do you think it would be more from the water
25 body than from the agricultural operation?

26 A. It might be depending on the crop that would

1 be inundated.

2 Q. If I told you that it was about two acre feet
3 per acre more water consumed per year, do you think that
4 that's possible?

5 A. May I ask a question?

6 Q. Yeah.

7 A. By that statement do you mean that the
8 evaporation from the --

9 Q. From a water body.

10 A. -- from a new surface, new water surface
11 would be two acre feet more than the consumptive use of
12 the crops?

13 Q. Right.

14 MR. KLETZING: You said you hadn't
15 examined it so --

16 MR. NOME LLINI: But, I mean, he's a guy
17 that's got all of those gray hairs and he's been around a
18 million years, he's been all through this thing. I just
19 want to know whether he's got any opinion on it.

20 THE WITNESS: I would think it might
21 well be greater.

22 Whether two feet is the right value, I'm not
23 prepared to say at this time.

24 MR. NOME LLINI: I don't know whether
25 you've been given the evapotranspiration rates as
26 determined by Mr. Pruitt, but a look at those rates for

1 the Delta area would confirm that for you.

2 MR. KLETZING: I don't think that's
3 true.

4 Reading Mr. Pruitt's deposition you had a
5 long discussion of it and couldn't ever quite decide. It
6 apparently varied at different times of the year.

7 MR. NOMELELLINI: I don't think it varied.
8 It varied at different times of the year, but it was
9 always higher for the water body.

10 Q. At any rate, this savings in water, assuming
11 there was a couple acre feet per year, and the
12 maintenance of these levees has resulted in the savings
13 of two acre feet per acre of land in the Delta, do you
14 know who reached the benefit of that savings?

15 A. I could only speculate.

16 I would speculate that the other remaining
17 Delta water users would reap the benefit of it, plus
18 there might be some savings to the two projects.

19 On the other hand, just what would be the
20 affect on the needed outflow would be dependent on which
21 islands went under. So anything would be a speculation.

22 It would also depend on what time of the year
23 they went under, too.

24 The Andrus Island break was in June, as I
25 recall it.

26 Q. You indicated that you thought the various

1 water users should pay for benefits received from the
2 projects, is that what you said earlier?

3 A. I believe I said that.

4 Q. And that's a pretty strong belief on your
5 part, that whoever benefited should pay?

6 A. That is correct.

7 Q. And do you believe that benefits should be
8 paid even though they are not requested?

9 A. I believe there is an obligation to pay if
10 benefits can be demonstrated and payment is requested.

11 Q. So if I came over and paved your front yard,
12 thereby improving the value of your property, and you
13 didn't even want me to do it and I requested you to pay
14 me, you'd be willing to pay me?

15 A. That hypothetical example isn't quite
16 comparable.

17 Q. But that's what you said, though.

18 A. That is one interpretation of the words that
19 I said.

20 Q. All right. Well, what's different about that
21 then what happened in 1977?

22 A. In 1977 the benefit was, in fact, used, in my
23 opinion. That is, there was, in my opinion, the use of
24 project water.

25 Q. Do you know that any Delta user, in fact,
26 diverted project water on his land?

1 A. I know that -- with respect to the Delta as a
2 whole, I know that there was project water that went into
3 the Delta and became part of the total supply, which was
4 used.

5 Q. Okay. So you don't know that project water
6 was actually diverted by anybody but you know there was a
7 commingled water supply out in the Delta?

8 A. May I ask for clarification?

9 Q. Yeah.

10 A. May I ask what your definition is of project
11 water as you have used it in this question?

12 Q. Project water as being water to which the
13 projects are entitled.

14 A. May I ask for further clarification?

15 Q. Well, let's define it the way you want to
16 define it.

17 How would you want to define it? Stored
18 water released from the projects?

19 A. My definition of project water is I use it
20 here as water which was released from the storage
21 reservoirs and augmented to supply available for use for
22 various purposes in the Delta.

23 Q. Okay. What do you mean by augmented?

24 A. Increased.

25 Q. Increased the supply?

26 A. Yeah. Of useable water.

1 Q. All right. Did that happen in 1977?

2 A. In my opinion, it did.

3 Q. All right. How did that occur, physically?

4 I'm going to put aside quality now because I understood
5 that part of the testimony.

6 You know, we've got a water body that we are
7 running water through. That water body would be there
8 absent inflows.

9 A. That is correct.

10 Q. Okay. So how do you say it's augmented,
11 other than water quality? Are you saying that? Are you
12 saying that it is augmented by way of a change in water
13 quality?

14 A. I am saying that it was augmented to the
15 extent necessary to make a -- to produce a useable total
16 water supply.

17 Q. And that's water quality, right?

18 A. It gets back to water quality, what would
19 have been the case without that augmentation.

20 Q. Okay. So really in the Delta in 1977, we're
21 talking about the water quality?

22 A. That is a major concern.

23 Q. Well, I mean, is there a quantitative aspect
24 that's changed here? I thought we --

25 A. From the standpoint of a volume of water, no,
26 not significantly. There may have been minor changes in

1 elevation of the water level, minor changes in the amount
2 stored in the channels.

3 But by and large from just wet water, we did
4 not augment wet water.

5 Q. We are talking about water quality then?

6 A. Water quality is a major consideration in
7 this thing, and that's the -- and that is the basis upon
8 which the State Water Resources Control Board establishes
9 the water quality objectives under their water Quality
10 Control plans.

11 Q. Okay. Now we are going to get back to paving
12 your yard and improving, in some respect, your property
13 and the obligation for payment.

14 If the State and Federal projects did
15 anything in the Delta in 1977, they changed the quality
16 and allegedly improved the quality, right?

17 A. They at least did not -- they at least kept
18 the quality from deteriorating to the extent it would
19 have. It would have deteriorated if that water supply
20 had not been made available to the Delta.

21 Q. Okay. And you think that that constitutes a
22 benefit that should be compensated?

23 A. In my opinion, yes.

24 Q. Okay. Even though there is no request that
25 that water be released or mixed?

26 A. I believe, yes. In other words, --

1 Q. Is that a pretty strong belief on your part?

2 A. Yes, it is, and a long held belief, if I may
3 say so.

4 Q. No matter what you do, if somebody else
5 decides to dump water into the Delta and it improves the
6 quality of your water, you ought to pay, right?

7 A. The projects were built-in part for that
8 purpose.

9 Q. Okay. But, I mean, you think that any water
10 quality improvement that results from somebody else
11 commingling their water or releasing their water into
12 your water, mixing it with water that you would otherwise
13 divert, ought to be compensated?

14 A. If there is a demonstrable benefit.

15 Q. Okay. What's the demonstrable benefit?

16 I mean, what do you mean by that?

17 A. The prevention of decrease in yield or damage
18 to the land or damage to crops.

19 Q. Or in the case of M & I users decrease in
20 salts consumed by humans and so on and so on?

21 A. That is correct.

22 Q. And you think there ought to be compensation
23 regardless of whether or not you asked for it?

24 A. The -- may I mention statutes?

25 Q. Yeah. Sure.

26 You are an expert on the law, aren't you?

1 A. There are those that accuse me of so
2 maintaining.

3 The Delta Protection Act was enacted saying
4 that the provision of salinity control in the Delta is a
5 function of the State Water Project.

6 Q. In the Ivanhoe versus McCracken case, the
7 Supreme Court said salinity control for the Federal
8 Central Valley Project was non-reimbursable, didn't it?

9 MR. KLETZING: I think this is really
10 getting out of, you know, beyond deposition. This is
11 getting into a legal argument.

12 MR. NOMELLINI: No, it isn't. This man
13 is an expert on the history of the -- let's see -- state --

14 MR. KLETZING: No. No. He's not a
15 legal expert.

16 MR. NOMELLINI: Huh?

17 MR. KLETZING: He's not like any
18 Minasian. He is not a legal expert, just an engineering
19 expert.

20 MR. NOMELLINI: Just a poor old
21 engineer, huh?

22 MR. KLETZING: Just a poor old engineer.

23 MR. NOMELLINI: Q. Well, you agree that
24 the Ivanhoe versus McCracken case --

25 MR. KLETZING: Ivanhoe versus McCracken
26 held what it held. You can tell the Judge what it held.

1 MR. NOME LLINI: The Protection Act says
2 what it says.

3 MR. KLETZING: That's fine. And I
4 didn't think that added much either there.

5 I just don't think we should get this into a
6 legal discussion between an attorney and an engineer.

7 MR. NOME LLINI: It's a historical
8 discussion, not a legal discussion. It's just the facts.

9 Q. All right. So, anyway, anybody who receives
10 a benefit regardless of request ought to pay, and you, as
11 the representative of Contra Costa Water District, have
12 you suggested to your client that they should pay the
13 State Water Project for water quality improvements in
14 1977?

15 A. The Contra Costa Water District buys water
16 from the United States, the same as any other contractor
17 with the United States does.

18 Q. Well, what difference does that make if they
19 receive an improvement in quality due to the fact that
20 the State Water Project is operating; then under your
21 theory why should they not pay compensation to the state
22 for whatever that benefit is?

23 A. As I say, they are paying the United States,
24 and the United States did, in fact, provide some of the
25 project water that inflowed into the Delta.

26 Q. Okay. And the Delta water users who are

1 diverting by way of their riparian right had some natural
2 flow that came down into the channels into the Delta?

3 A. That is correct.

4 Q. Okay. So the only difference is a potential
5 improvement in quality to the Delta riparians and the
6 only difference is the improvement in the potential -- in
7 the quality to Contra Costa Water District.

8 A. And I would reiterate that the Contra Costa
9 Water District buys water from the United States and pays
10 the same rate for that water as everybody else.

11 Q. Well, what difference does that make?

12 MR. KLETZING: You're just -- this is
13 just an argument. He's asked and answered the question.

14 MR. NOME LLINI: No. I'm looking for an
15 explanation as to --

16 MR. KLETZING: You asked him twice, and
17 he gave the same answer twice.

18 MR. NOME LLINI: He hasn't given a reason
19 for the difference.

20 He's just saying that somebody is paying for
21 water so, therefore, they have a right to that water in
22 the same way that we have a Delta riparian that has the
23 right to take the water. Both those people have some
24 quality improvement as a result of State Water Project
25 water being commingled with the water to which they are
26 otherwise entitled.

1 Right?

2 THE WITNESS: Two matters that I would
3 like to -- two points I would like to make, if I may.

4 Number one, that as far as the Delta
5 riparians are concerned, we are not asking them to pay
6 anything for their share of the riparian supply.

7 We are only asking the Delta riparians where
8 State Water Project water was used to compensate the
9 State properly for that amount of water that accrued --
10 enured to their benefits.

11 Now, as far as the Contra Costa Water
12 District is concerned, that district is paying a
13 proportionate share of the cost of the Federal Central
14 Valley Project, according to the Federal Reclamation
15 laws and the contract.

16 MR. KLETZING: Do we have any idea about
17 the timing this afternoon?

18 MR. NOME LLINI: I figured four o'clock
19 is somewhere around the end of the day so you can get
20 back to Sacramento. But whatever you want to do
21 timingwise.

22 MR. KLETZING: All right. I just want
23 to call my office and --

24 MR. NOME LLINI: Do you want to break and
25 call them now?

26 MR. KLETZING: Yeah, why don't we get

1 some coffee and I'll --

2 MR. NOMELLINI: All right. I'm not
3 through with this subject.

4 Let's go off the record.

5

6 (Off-the-record discussion)

7

8 (Brief recess)

9

10 MR. NOMELLINI: Okay.

11 Q. On payment for benefits, then your firm
12 belief on payment, I gather, would provide that if the
13 Delta water supply, the project water in the Delta was
14 seventy-five percent from Federal Project and twenty-five
15 percent from the State Project, that if a Delta water
16 user paid something to the Federal Government for that
17 seventy-five percent, there wouldn't be any obligation to
18 pay anything to the State?

19 A. If he were -- if that water user were a
20 contractor with the Federal Government, I would agree
21 because he would be paying his share of the CVP.

22 Q. Which would be his share of the seventy-five
23 percent, right?

24 A. Well, whatever.

25 Q. Well, but, I mean, he wouldn't be paying
26 anything to the State, would he?

1 A. No, I don't --

2 Q. So that twenty-five percent is an incidental
3 benefit he doesn't have to pay for?

4 A. As it now appears, that is correct. It might
5 be very difficult to envision just how you would allocate
6 all of this, anyway.

7 Q. Well, --

8 A. It could be worked out.

9 Q. Okay. Conceivably the State could have sued
10 all Delta users; they picked out a few in this lawsuit,
11 but they could have sued all Delta users, right?

12 A. They could have.

13 Q. And they could have sued Contra Costa Water
14 District as well.

15 MR. KLETZING: The state did sue all
16 Delta users.

17 MR. NOME LLINI: No.

18 MR. KLETZING: Just about.

19 MR. NOME LLINI: They sued a lot of Does
20 and those kind of things. They didn't put any names on
21 them so only you can tell me --

22 MR. KLETZING: They sued all the
23 agencies.

24 MR. NOME LLINI: Only you can tell me
25 whether or not you sued everybody. You certainly didn't
26 name them in the lawsuit.

1 MR. KLETZING: They sued all of the
2 agencies that didn't have contracts.

3 MR. WHITRIDGE: They are not Delta
4 users.

5 MR. NOMELLINI: Well, I mean, that's
6 right.

7 Q. But they could have sued Contra Costa Water
8 District?

9 A. I presume they could have.

10 Q. But under your theory of benefit to be
11 compensated, they wouldn't have to pay because they are
12 paying the Bureau for Bureau water?

13 MR. KLETZING: Well, you know, they were
14 suing the -- for the quantities of water is all we are
15 suing for, and they paid for their quantity from the
16 Bureau.

17 MR. NOMELLINI: Quantities.

18 MR. KLETZING: Yeah.

19 MR. NOMELLINI: What the hell does
20 quantity have to do with it? The only difference is the
21 quality.

22 MR. KLETZING: Not really.

23 But I know Harvey went along with you to some
24 extent, but we haven't asked any damages --

25 MR. NOMELLINI: Your testimony is
26 different than Harvey's.

1 MR. KLETZING: No. But the Complaint
2 does not ask for damages for quality improvement.

3 It asks for the quantities, computed in a
4 general way the way these tables --

5 MR. WHITRIDGE: That's fine.

6 It's just a question of whether Contra Costa
7 Water District's was useable with or without the State
8 contribution. It's the same issue.

9 MR. NOME LLINI: Well, I think it's
10 clearly a quality question just because you calculate
11 your dollars that you want to seek based on quantity.
12 It's just a question of the quality. The quantity would
13 have been there.

14 MR. KLETZING: Well, not really.

15 MR. NOME LLINI: Not really.

16 Q. Do you agree the quantity would not have been
17 there?

18 A. I agree that there would have been water in
19 the Delta channels.

20 Q. Okay. Now, let's look at Contra Costa Water
21 District, for example.

22 And let's disregard quality. Let's make an
23 assumption that quality is not relevant.

24 Would they have quantitatively had all the
25 water they wanted without State Water Project's
26 contribution to the Delta in 1977?

1 A. From the standpoint of wet water, yes.

2 Q. Okay. I mean quantitywise they would have
3 had it all?

4 A. Water is always there at the Rock Slough
5 intake.

6 Q. Okay. So then --

7 A. Except that they were put under shortage
8 criteria in '77, by the Bureau. When the Bureau imposed
9 shortage restrictions, those restrictions applied to the
10 district as well as the other contractors.

11 Q. In other words, they were curtailed by way of
12 their agreement?

13 A. That's right.

14 Q. But there was nothing wrong with the quantity
15 of water in the Delta as to being able to supply them
16 with all of their needs?

17 A. There was wet water available.

18 Q. Okay. In ample quantity?

19 A. Except as restricted by the Bureau under its --
20 because they had -- the Bureau did impose shortage
21 restrictions.

22 Q. All right. I've got you there.

23 Okay. So the only difference really is the
24 quality.

25 A. That is the problem of that district.

26 Q. Okay. Now, let's go over to Venice Island

1 and Farmer Jones on Venice Island.

2 He would have had ample water, wet water,
3 regardless of quality available to him to take through
4 the siphons and put on the land?

5 A. There would have been water available in the
6 adjacent channels.

7 Q. Okay.

8 MR. KLETZING: Under his riparian
9 rights?

10 MR. NOMELLINI: Yeah. Under his
11 riparian right.

12 THE WITNESS: We have always assumed
13 that all of those islands had riparian rights.

14 MR. NOMELLINI: Q. So he could have
15 taken the water that was there and applied it, right?

16 A. He could have, had it suited him.

17 Q. If it was of suitable quality?

18 A. That he could use.

19 Q. Okay. So this whole thing boils down to
20 whether or not the water quality would have been useable
21 without the State Water Project in 1977, is it not?

22 A. That is an element of consideration, yes, in
23 my opinion.

24 Q. Well, isn't that really the bottom line?

25 For the Delta that is. I realize upstream or
26 whatever it would be different but . . .

1 A. Yeah, it's a valid consideration.

2 Q. Okay. So then in terms of Contra Costa
3 County, the water district over there, if the State Water
4 Project water would have made the difference between
5 useable and unusable water quality, then do you think
6 they should have had to pay the State?

7 A. If there was a demonstrable benefit to that
8 district from the State Water Project, yes.

9 Q. Okay. Even though they were paying the
10 Bureau?

11 A. Yes.

12 MR. KLETZING: Why don't we calculate
13 the quantity of project water that they used then?

14 THE WITNESS: Are you asking me?

15 MR. KLETZING: Yeah.

16 MR. NOME LLINI: You can't. I mean,
17 that's just drill. Somebody just spent a lot of time on
18 some paper, Russ. That's probably your idea more than it
19 is the engineer's.

20 Q. Okay. In terms of benefit derived from the
21 savings of water by reason of somebody operating and
22 maintaining levee systems and drainage systems out in the
23 Delta, if there can be a demonstrable benefit shown to
24 somebody, then you think they should pay for that
25 benefit, too?

26 A. I think in equity that sort of thing would

1 have to be taken into account.

2 Q. Okay. Do you have any idea what it would
3 cost to construct one of these levee systems?

4 A. I did know but I'd have to admit that right
5 now I don't remember.

6 I know that the Corps came up with a very
7 large figure.

8 Q. Yeah, they figured it would cost a billion
9 dollars to upgrade the levees.

10 A. Yeah, to project standards.

11 Q. And that's from where they are today.

12 What do you think it would cost to put them
13 in place today?

14 A. Several billion.

15 Q. Several billion dollars.

16 And over what period should that be amortized
17 to attribute a cost to that particular facility?

18 A. That depends in part on policy.

19 If it were federally funded, I suppose you
20 could make a case that it ought to be amortized over
21 fifty years or forty years.

22 Q. And what's the State do?

23 A. The State's amortized over fifty years from
24 the date of the last sale of bonds.

25 Q. So the State's fifty and the Federal is
26 forty?

1 A. General repayment period under the Feds is
2 forty years where repayment is required.

3 Q. And then you'd have to pick up an O and M, an
4 annual O and M on top of it, huh?

5 Okay. In terms of the project impacts on the
6 Delta, is there any detrimental impact caused by project
7 operation to the Delta?

8 A. Yes, I believe there have been some
9 detriments, particularly the lowered water levels in Tom
10 Paine Slough and some others.

11 Q. Are there any other detriments other than the
12 lowering of levels in some of these --

13 A. There is some increase in scouring, I
14 understand.

15 Q. Anything else?

16 A. No, I think those are the two principal
17 detriments.

18 Q. Do the project pumping plants ever induce
19 salinity intrusion?

20 A. There is a tendency under restrictive
21 conditions to ^{cause} increase the flow ^{to be upstream in} up the San Joaquin around
22 the end of Sherman Island.

23 Q. Do you think that occurred in July and August
24 of 1977?

25 A. I don't know. I haven't looked at the
26 results of the model tests that much yet in that depth.

1 Q. Have the projects caused any impacts on water
2 qualities in the Delta that would be considered to be
3 adverse?

4 A. Well, certainly when there is a reverse flow
5 induced by the project pumps, which has happened
6 occasionally, that would be a detrimental effect.

7 Q. How about return flows coming down the San
8 Joaquin from the west side of the valley.

9 A. Those return flows have certainly been
10 detrimental to the quality in the South Delta Water
11 Agency.

12 Q. What kind of impact have projects like the
13 deepening of the ship channels had on the Delta?

14 A. I can't answer that because I haven't
15 followed the channel deepening nor have I examined any
16 studies that have been made of what impact that has had.

17 Q. So you don't know whether or not they caused
18 salinity intrusion --

19 A. No, I do not.

20 Q. -- or not.

21 These projects in terms of their impact on
22 the Delta add water generally like in July and August to
23 the Delta to the natural flow, but they take water away
24 during other times of the year, don't they?

25 A. That is true.

26 Q. Is there, in your opinion, any detrimental

1 impact caused by the projects taking away water, for
2 example, in the spring?

3 A. Certainly, the storage of what we might term
4 flood flows or very high flows in the upstream reservoirs
5 has had an impact on the Delta in certain respects.

6 Q. Do you think the -- are you saying the
7 projects only store flood flows?

8 A. They only store that water which is not
9 needed in fulfillment of the project purposes or those
10 purposes which the project's operators wish to fulfill.

11 Q. Okay. But those are --

12 A. Or are obligated to fulfill.

13 Q. All right. They have permits and they have
14 conditions on their permits they have to adhere to,
15 right?

16 A. That is correct.

17 Q. Okay. Then they get to make some judgmental
18 decisions as project operators?

19 A. That is correct.

20 Q. Okay. But you had indicated that they stored
21 flood flows.

22 What I want to know is whether or not you're
23 saying that they only store flood flows?

24 A. No, I am not saying that.

25 Q. Okay. They store any water that they are
26 permitted to store that they deem appropriate for their

1 operations?

2 A. And that does not interfere with any of their
3 obligations.

4 Q. Okay. In terms of determining benefit and
5 detriment, do you believe that detriments caused by
6 reduction in flow in the spring, if there are any, should
7 be considered in that balancing to determine the net
8 benefit to be compensated?

9 MR. KLETZING: What are we talking
10 about? Every year is different.

11 MR. NOMELLINI: Let's talk about 1977.

12 THE WITNESS: Certainly, the benefits
13 and detriments would have to be balanced to see where it
14 comes out.

15 MR. NOMELLINI: Q. And so you'd have to
16 consider those as well?

17 A. You'd have to consider the impacts adverse as
18 well as beneficial of the projects on the Delta and other
19 water users.

20 Q. Okay. What do flushing flows do to the
21 Delta?

22 A. Well, as I understand it, you are still
23 moving sediment through the Delta out into Suisun Bay.

24 Flushing flows by themselves, I doubt, *do not provide*
25 particularly great benefit on the Delta unless they come
26 after there has been saline water intrusion.

1 In that case, yes, the flushing flows would
2 clean the Delta, so to speak, earlier than it would
3 otherwise occur.

4 The principal benefit, as I understand it, of
5 flushing flows accrued to Suisun Bay, San Pablo Bay, and
6 the remainder of the San Francisco Bay.

7 Q. What's the Delta pooling concept? Are you
8 familiar with that?

9 A. Yes.

10 Q. Did you develop that theory?

11 A. Yes, I did.

12 Q. Okay. Is it not true that a flushing type of
13 flow going through the Delta pool would improve the
14 quality that would allow this pool a certain amount of
15 time to degrade?

16 There is a carryover impact is what I'm
17 trying to say.

18 Is there a carryover impact of flushing flow?

19 A. There would be.

20 Q. How long of a carryover period are we talking
21 about?

22 In other words, what kind of time are we
23 talking about before we lose the affect of a flushing
24 flow?

25 A. I don't recall of any studies that have been
26 made to that.

1 So any answer I might give you would be
2 speculative.

3 Q. But there is some carryover of some kind --

4 A. Yes.

5 Q. -- on impact.

6 A. Once the Delta is flushed out, then that
7 affect would last possibly several months.

8 Q. Okay. Do you have any opinion as to how long
9 it takes water to seep into a Delta island?

10 A. Oh, I have no specific opinion on that.

11 Q. Okay. If we were getting water into these
12 islands from seepage, and I guess would you agree that we
13 have some seepage in these islands?

14 A. I agree.

15 Q. If the crops within the islands were
16 utilizing this seepage water in some manner, how long or
17 what would be the range of time elements, in your
18 opinion, for the water quality in the channel to reflect
19 itself inside the island where it's being used by the
20 crops?

21 A. I don't know of any studies that were
22 attempted to quantify that particularly.

23 I would, under certain circumstances, I could
24 see that this might happen with a month or two.

25 Q. So it could take a couple months?

26 A. It could take a --

1 Q. It could even take longer?

2 A. If there were a good sand layer formation
3 underneath the levee, it might be quite rapid.

4 Q. And it would vary depending upon the soil
5 types and, what, the head conditions?

6 A. Head conditions and how far the island --
7 interior of the island is below sea level.

8 Q. Is the State Water Project paid for by the
9 contractors?

10 A. All of the reimbursable costs are paid for by
11 the water and power contractors.

12 Q. Is there any loss to the State by reason of a
13 Delta user like Contra Costa Water District not paying
14 the State for benefit derived?

15 A. I suppose one could demonstrate some loss. I
16 have not seen it attempted nor have I attempted it.

17 Q. Would that loss be the contractor's loss or
18 the State itself?

19 A. The water and power contractors have to pay
20 all of the reimbursable costs as those costs are accrued.

21 Q. So the loss -- I'm just trying to distinguish --
22 are you saying that there could be a loss demonstrated to
23 the contractors or are you saying there could be a loss
24 demonstrated to the State of California?

25 A. As I said, the contractors must pay by under
26 their contracts. The amount of revenue derived from the

1 contracts must bear and pay for all of the reimbursable
2 costs.

3 Q. Okay. Putting the contractors aside and
4 looking only at the State, State of California, is the
5 State damaged by reason of -- and let's use my example --
6 Contra Costa Water District not paying the State for --
7 let's assume there was a benefit derived from water flow
8 in the Delta?

9 A. This is pure speculation again.
10 The damage, if it, in fact, existed, would be
11 very slight because of the various relatively small
12 amount of water used by that district.

13 Q. Okay. How would the State itself incur
14 damage?

15 A. They would not have -- might not have some
16 amount of water which could not be sold otherwise and
17 derive revenue.

18 Q. What difference would that make to the State?

19 A. Well, Mr. Nomellini, I understood you to say
20 that we were not going to distinguish between the
21 contractors and state.

22 Q. Oh, no. I was trying to distinguish between
23 the two. I was wondering whether there is a distinction
24 between the two.

25 I understand it if it goes back to the
26 contractors because any money that goes in the pot, they

1 don't have to basically pay for O and M --

2 A. Oh, yes, if there were a new source of
3 revenue or an additional source of revenue not being
4 realized at the present time, that would decrease the
5 demand on the existing contractors.

6 Q. There would be someone else to share O and M
7 with, is that the way that works?

8 A. Yes. The contractors pay both the cap --
9 return both the capital investment ^{with interest} and the O and M costs.

10 Q. But the capital costs wouldn't change?

11 A. Total capital costs would not change but the
12 capital cost allocated to the sale of water might change.

13 Q. Okay. All right. Now, if we separate the
14 State from the contractors, is there a damage to the
15 State itself?

16 A. I don't believe that there would be.

17 Q. In terms of incidental benefit, have you ever
18 heard that term in your years as Director of the
19 Department of Water Resources?

20 A. I have not only heard it, I have used it.

21 Q. All right. Is it correct that the Federal
22 Government with regard to operation of the Federal
23 Central Valley Project has taken the position that they
24 seek no compensation for incidental benefit that would be
25 derived in the Delta from water quality improvement in
26 meeting their export contract objectives at the Tracy

1 pumping plant?

2 A. As far as I am aware, the Bureau of
3 Reclamation has made no effort to collect from the Delta
4 water users for what we might term, as you have,
5 incidental benefits due to the degree of salinity control
6 which is maintained by the Bureau in cooperation with the
7 State.

8
9 Q. Do you believe that was a matter of policy or
10 just that they just didn't have the time to collect?

11 A. I don't -- I cannot say whether it's a matter
12 of policy, time or what.

13 All I can say is they haven't done it.

14 Q. Maybe even the law, right?

15 A. I don't --

16 MR. KLETZING: Do you know, you know,
17 what's gone on between the Federal Government and the
18 Delta on this?

19 THE WITNESS: No, I do not.

20 MR. NOME LLINI: Well, you dealt with the
21 Federal Government for twenty-five percent of those gray
22 hairs, haven't you?

23 THE WITNESS: Maybe fifty percent.

24 MR. NOME LLINI: Well, you do know. I
25 mean, being the Director of the Department of Water
26 Resources --

1 MR. KLETZING: The Federal Government
2 has had a lot of negotiations with Delta water users.

3 MR. NOMELLINI: Pardon me?

4 THE WITNESS: I believe that the Federal
5 Government has negotiated at least with the North Delta
6 Water Agency some time.

7 MR. NOMELLINI: Q. They have?

8 A. I believe so, by my memory. I have to
9 qualify it by that statement.

10 Q. Do you think Delta water users should pay for
11 incidental benefits to water quality as a result of the
12 State Water Project releasing water for fishery purposes?

13 A. May I have the question again, please?

14 Q. Yeah.

15 Do you think Delta water users should pay for
16 incidental benefits derived from the release of State
17 Water Project water for fishery purposes?

18 A. No. I believe the costs allocated to the
19 enhancement of the fisheries should be non-reimbursable
20 as they are in the State statutes -- under the State
21 statutes, I should say.

22 Q. So if this release was made into the Delta to
23 help fishery and it improved water quality for the Delta
24 users to their benefit, then they shouldn't have to pay?

25 A. I think that would be an equitable situation.

26 Q. How about the release of water for flood

1 control purposes and the incidental benefit that could
2 come from that?

3 A. No. A release of water under a flood control
4 operational criteria to the extent there are benefits,
5 no. Because that has to be done, anyway.

6 Q. Okay. What about releases for power
7 production purposes?

8 A. A release made purely for that purpose
9 without any regard to what secondary uses of the water
10 might be made, I would agree.

11 MR. KLETZING: Are all of these answers
12 if it's made purely for the purpose --

13 THE WITNESS: Yes. A single purpose
14 release.

15 MR. NOMEILLINI: Okay.

16 MR. KLETZING: But is that possible?

17 THE WITNESS: It's possible but not
18 probable in good project operation.

19 MR. WHITRIDGE: How is the purpose of a
20 release determined, Mr. Banks, in good project
21 operations?

22 Is it a fishery criteria that someone sits up
23 there and says, "I'm going to release this for some other
24 purposes, too"?

25 THE WITNESS: Well, as far as fishery is
26 concerned, the State Water Resources Control Board has

1 established certain quality objectives that need to be
2 met at certain times during the year for the protection
3 of the anadromas fishery, production of food and food
4 shrimp, and that sort of thing, and there it is possible,
5 in fact, entirely probable, that there would be times
6 when additional releases would have to be made to satisfy
7 those criteria.

8 MR. KLETZING: Well, if we are being
9 released from both fishery and agriculture, meeting both
10 purposes, then what do you do?

11 THE WITNESS: Most of us have generally
12 considered that the -- what counsel has called incidental
13 benefits.

14 In this case it would be a benefit accruing
15 to some water user as an incident to a mandatory action
16 for some other purpose. I think the general feeling is
17 that those incidental benefits under those circumstances
18 would not be compensable.

19 MR. NOMELLINI: Q. That's always been
20 my understanding of the department position, but Mr.
21 Kletzing obviously doesn't share that viewpoint.

22 A. Well, what I'm giving you, Counsel, is my own
23 personal views on many of these things.

24 Q. Right.

25 MR. NOMELLINI: Okay. I know Dave had
26 some questions. I think Baber has some, too.

1 MR. WHITRIDGE: I'll go through a few.

2 MR. NOMELLINI: I've got a couple of
3 exhibits I wanted to go back to. You want me to do these
4 now or wait until you guys get done?

5 MR. WHITRIDGE: If you want to get those
6 done, that's fine.

7 MR. NOMELLINI: Why don't we mark --
8 this is "Total Natural Supply Number Two, Table Number
9 Two," which will be Central Delta Water Agency Number 27.

10

11 (Whereupon Defendant's CDWA Exhibit 27
12 was marked for identification.)

13

14 MR. NOMELLINI: Q. Okay. Harvey, that
15 Number 27 there, how was this used in the calculations of
16 natural supply or project supply to the Delta?

17 A. Well, it in effect is a summary table --

18 Q. Okay.

19 A. -- of the previous calculations.

20 Q. So if we look at the Feather River natural
21 supply for July, we see the first line here, it says,
22 what, forty-two point two, "?

23 A. Yes.

24 Q. Okay. It says, "Without State Water
25 Project," then next to it it's got PG&E, natural flow at
26 Oroville, and then there is some other reference to the

1 table.

2 A. The ~~only~~ effect of PG&E on the natural flow
3 at Oroville is the fact that there is an agreement
4 between PG&E and the department as to the inner-
5 relationship of Oroville with the PG&E's operation of
6 Lake Almanor in that the State has agreed to satisfy some
7 of PG&E's downstream commitments for stored water during
8 the early part of the season to be repaid later.

9 So we have attempted to take that temporal
10 disruption, *into account.*

11 Q. How does that work? Let's assume we didn't
12 have the project, State Water Project.

13 Would we have greater natural flow coming --
14 by quote unquote natural flow I mean we would have PG&E
15 return flows and things like that.

16 A. You would have a little different time
17 distribution throughout the season.

18 Q. How would it affect July and August of 1977?

19 A. Probably it might have affected it -- it
20 would have increased the natural flow during the early
21 part of the season, probably lasting into July.

22 Q. So like the first couple weeks of July?

23 A. Something like that.

24 Q. How much are we talking about?

25 A. If you will turn to Table F-2, Number 11 --

26 Q. Okay.

1 A. -- and looking at the bottom two lines just
2 above the double line, double line, on the left hand it
3 is labeled "Total Diversions, rights from channel, rights
4 from storage."

5 In that year the State was releasing water
6 for -- to meet PG&E's storage water commitments well into
7 August.

8 Q. Hmmm.

9 A. And starting in August PG&E began releasing
10 from Almanor to repay the State for the stored water that
11 the State had advanced.

12 Q. And how do you tell that from those two
13 lines? You must be looking at something else.

14 A. You can't from those two lines.

15 Q. Oh, you just know that's happening?

16 A. I have looked at the situation before in
17 depth.

18 Q. And how much water are we talking about?

19 A. Well, in this case we are talking about maybe
20 ~~a hundred and ten thousand~~ ^{seventy eight thousand eight hundred twenty four} acre feet, something like
21 that.

22 Q. A hundred and ten thousand acre feet? We're
23 fighting over 31,000 acre feet, you know.

24 So you're telling me that if we didn't have
25 the State Water Project, we would have in the natural --
26 and quote, we are really talking about without State

1 Water Project flow in the Feather River, and we are
2 calling that roughly natural supply -- we would have had
3 ~~a hundred and ten thousand~~ ^{seventy eight thousand eight hundred twenty four} acre feet in July and August
4 spread out somehow?

5 A. What happened was, I repeat, what happened
6 was that the State advances stored water to satisfy
7 PG&E's stored water contract commitments early in the
8 year, in this case starting in June, and PG&E repays that
9 to the State later in the season from -- by discharges or
10 release of storage in Lake Almanor.

11 MR. BABER: Has that differed at all
12 since Diablo Canyon has been constructed?

13 THE WITNESS: I'm not aware. I don't
14 know.

15 MR. KLETZING: The ^{78,824} 110,000 would go the
16 other way, wouldn't it? Then they wouldn't have added in
17 July and August. It would have been ^{78,824} 110,000 less rather
18 than more.

19 THE WITNESS: No.

20 That ^{78,824} 110,000 or whatever figure it is, was
21 released to satisfy PG&E's contract commitments to its
22 water users under the Western Canal and the PG&E lateral.

23 Now, if the State had not released that for
24 those commitments, PG&E would have had to have released
25 from Lake Almanor to satisfy those.

26 MR. KLETZING: Well, in either case it

1 would have been used up on the Feather River some place,
2 wouldn't it?

3 THE WITNESS: Yes, it would have been.

4 MR. NOMESELLINI: The differential is
5 whether it's natural flow or natural supply or project
6 supply. That's the difference.

7 Right?

8 THE WITNESS: Yeah. You have a time
9 shift.

10 MR. NOMESELLINI: Right.

11 But, I mean, in terms of we are fighting in
12 this case -- in this case it's a peculiar case, we are
13 fighting over two months, and it apparently would make a
14 big difference in these two months.

15 THE WITNESS: It might have made some
16 difference.

17 MR. NOMESELLINI: Okay.

18 Q. If we only extracted the State Water Project
19 and left in the PG&E's operation, would the natural flow
20 in July of 1977 have been greater?

21 A. I think it would have been -- I have not
22 analyzed that, but my estimate as of the moment is that
23 it would have been slightly greater.

24 Q. Okay. By how many acre feet?

25 These are acre feet per month.

26 About how many acre feet in July greater?

1 A. I can't tell you.

2 Q. General magnitude.

3 Are we talking about two hundred acre feet or
4 are we talking about ten thousand or fifty thousand?

5 A. We are talking about something in the
6 thousands.

7 Q. In the thousands? Tens of thousands?

8 A. Possibly.

9 Q. Okay. And what about for August; would the
10 natural flow -- and I quote natural -- "natural supply,"
11 have been increased if we exclude only the State Water
12 Project and leave PG&E in there?

13 A. I doubt that it would make any difference in
14 August because that was a time that PG&E began to repay
15 the State.

16 Q. Okay.

17 MR. BABER: About the middle of August,
18 wasn't it?

19 THE WITNESS: Yeah, somewhere in there.

20 MR. NOMEILLINI: Q. Is it fair to throw
21 PG&E into this thing and do this calculations this way?

22 It would seem to me that it would be more
23 appropriate to only extract State Water Project impacts.

24 A. Well, yeah, I believe you have to throw it in
25 because it affects the amount of water released from
26 Oroville for natural flow, for flow that would otherwise

1 occur if Oroville had not been there.

2 Q. Okay. But this is -- looks to me like this
3 is done unfairly -- from our Delta viewpoint this is done
4 unfairly because it's taking water away from us. It made
5 the natural flow or natural supply less in July and
6 August.

7 What I'm asking is is this another one of
8 those things where you were directed by counsel to do it
9 this way or is this the way you think it ought to be
10 done?

11 A. I was not directed by counsel. And this --
12 in fact, I called some of the previous studies into
13 question on this because I did not like the way it had
14 been done.

15 Since we are trying to estimate the so-called
16 natural supply on the basis that everything would have
17 happened except the State and Federal reservoirs
18 projects, I see no particular criticism of this.

19 There may be other -- on restudying we may
20 change the values quite a bit, but the point of the fact
21 still remains that that amount of the water would have
22 gone to those users in any event because it is a
23 contractual commitment of PG&E.

24 Q. So you're saying it would have come down the
25 river, but it would have been diverted?

26 A. (Affirmative nod)

1 MR. BABER: Could I just ask where is
2 the Western Canal diversion point, do you know?

3 THE WITNESS: Well, at the moment I
4 believe Western Canal diverts out of --

5 MR. BABER: Thermolito Afterbay.

6 THE WITNESS: Thermolito Afterbay.

7 But it is an old, established right of PG&E.

8 MR. BABER: (Affirmative nod)

9 MR. NOMELLINI: Q. How about return
10 flow from that; how is that handled?

11 A. We have not considered that to be project
12 water. Therefore, the return flow that results from that
13 have been considered as part of the natural supply.

14 Q. They don't get prorated like you did that
15 other?

16 A. (Negative headshake)

17 Q. Why, because --

18 A. Well, we prorate.

19 Q. Oh.

20 A. Simply on the basis of whether it's a part of
21 the natural supply or project -- or resulting from the
22 use of project water.

23 Q. All right. Logically it would seem to me
24 that the way you've treated this, that you would count
25 that diversion as a project diversion because you're
26 sending water to PG&E's customers.

1 A. But getting repaid in terms of water.

2 Q. Okay. But when we look at the individual
3 month, we are sending the water out. So that's going to
4 be part of our X -- when we go back to our X over Y,
5 that's going to result in a greater share of that water
6 coming to the project of the return flow.

7 A. No. We have considered the diversions that
8 were made under PG&E's rights to be non-project water and
9 the return flows to be part of the project -- of the
10 natural supply available to riparians and other water
11 right holders from the natural supply.

12 Q. Okay. So the return flow comes in the pot
13 and gets divided up, but you didn't pick this up as a
14 project delivery; you still left it a PG&E delivery.
15 Okay.

16 Going back to that Exhibit Number 27 and
17 looking at the American River natural supply --

18 A. May I ask which table --

19 Q. Number 27. It's your number two in your
20 book.

21 See that American River natural supply?

22 A. Yes.

23 Q. It says, "Without CVP, SMUD, PCWA Natural
24 Flow at Fair Oaks," what's happening there?

25 A. The CVP facilities are Folsom Dam and
26 Reservoir, Nimbus Dam and Lake ^{Natomas} ~~Patomas~~ (phonetic) and the

1 Folsom South Canal.

2 Now, SMUD enters into it because of the water
3 made available and released from SMUD's reservoirs. Part
4 of that goes to supply the City of Sacramento's demand.
5 So that is a source of supply and demand -- of a demand
6 for a major water user.

7 The Placer County Water Agency enters into it
8 because under the agreement with the Bureau -- let me
9 explain the physical situation.

10 Placer County Water Agency reservoirs are
11 above Folsom and would be, if it's ever built, above
12 Auburn.

13 The Placer County Water Agency diverts from
14 the American just upstream of what would be, if ever
15 built, Auburn Reservoir; in other words, the plan to use
16 the head available due to water in Auburn to provide
17 their supply at the diversion by gravity.

18 In order to do that, they entered -- the
19 agency entered into an agreement with CVP that any water
20 not diverted for use that was released by their
21 reservoirs became part of the Bureau's supply for Folsom.
22 So in effect to some extent it's an additional Federal
23 storage on the stream and has been treated as such.

24 Q. Just because there was an agreement between
25 these two parties?

26 A. It becomes a part of the American River

1 project.

2 Q. Well, aren't you really claiming some natural
3 flow as project flow by that contractual maneuver?

4 A. I suppose one could look at it that way. We
5 didn't feel it -- we didn't believe that that was the
6 case.

7 Q. Well, I mean it may not be. I don't know.
8 But it sounded to me like -- I'm really asking you, is
9 there some natural flow being taken out of the
10 calculation by reason of that contractual action?

11 A. I don't believe so because it goes into
12 Folsom Reservoir and was accounted -- and is accounted
13 for in the impact of Folsom Reservoir on the natural
14 supply.

15 Q. Okay. Does it change the timing of the
16 natural flow?

17 A. Possibly a little bit. I'm not -- I have not
18 looked at that.

19 Q. Okay.

20 MR. NOMEILLINI: Let's mark this Table
21 NFF, it's really Number 9 in that booklet, dated 6-29-86,
22 we'll mark that Central Delta Water Agency Number 28.

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24 (Whereupon Defendant's CDWA Exhibit
25 Number 28 was marked for
26 identification.)

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MR. NOME LLINI: Q. Okay. Calling your attention to Number 28, Exhibit 28, it's really your Number 9, I guess, does this explain the PG&E affect at Oroville?

A. Yes, it incorporates the PG&E affect in line six after May.

Q. Okay. So the net operational affect of PG&E on the natural flow in July, if you look at line -- well, maybe you can explain to me -- what's line six tell us?

A. Line six tells you that starting in ^{June} ~~May~~ the operational affect of PG&E ^{would have been} was to include to increase the natural supply absent the project by ^{32,827} ~~62,617~~; in July by ^{46,114} ~~46,141~~ and in -- starting in August to decrease it by two-thousand -- 20,352.

Q. But since this is just at Oroville, then the diversions to the western canal would have offset this increase in natural flow at some point farther down in the calculations, huh?

A. I believe that to be true.

Q. Okay. One last couple of questions.

Assuming that the State Water Project in its diversions from the Delta -- well, strike that.

Do you agree that the State Water Project is benefited by operation of the Federal Central Valley Project in the Delta?

1 A. Would you --

2 Q. Is the State Water Project benefited by
3 reason of the operation of the Federal Central Valley
4 Project in the Delta?

5 A. Yes.

6 Q. Okay. And one of those benefits is an
7 improvement in water quality at the export pumps, right?

8 A. That is correct.

9 Q. Okay. Do you believe that the State should
10 compensate the Federal Government for that quality
11 benefited that they derived at the State pumps?

12 A. I assume that the State and the Bureau have
13 agreed on the proper division of water in this case under
14 the Coordinated Operating Agreement because the
15 Coordinated Operating Agreement in effect is a sharing of
16 responsibility for meeting in-basin demands, including
17 the demands in the Delta.

18 Q. Okay. What does that do for the benefit
19 derived by the State in terms of an improvement of water
20 quality?

21 A. The benefit derived by the State under that
22 is the fact that absent such an agreement and such
23 operation by the United States under the State law, the
24 State would have to meet the salinity control
25 requirements in the Delta by itself.

26 Q. Oh.

1 Do you think that the Federal Government
2 doesn't have an obligation to meet the State's standards?
3 I mean, there are a couple good courts have told us to
4 the contrary, including the Supreme Court of the United
5 States.

6 A. I have no desire to disagree with the courts
7 in any way, shape or manner.

8 Q. Okay. But what I'm trying to focus in on is
9 the obligation to compensate for the quality benefit;
10 that's all I'm trying to focus in on.

11 And we have --

12 A. There is a reciprocal benefit, you
13 understand.

14 Q. That's what I want to understand, why the
15 State, in this great concept of compensation for benefit,
16 even though you have water rights and everything else, if
17 you're benefited, there ought to be compensation. I want
18 to know how you handle that state benefit from the
19 Federal Project which has excess land laws and lots of
20 other goodies associated with it, and I want to know how
21 that is sorted out.

22 You think it's sorted out in the Coordinated
23 Operations Agreement?

24 A. I think it is sorted out to the satisfactions
25 of -- mutual satisfactions of the parties.

26 Q. You think the State is compensating the

1 Federal Government for quality benefit received?

2 A. The state and the Bureau are mutually meeting
3 a common obligation. And I understand, Mr. Nomellini,
4 that there is a question as to just what the obligation
5 of the United States is in the Bureau's minds, at least.

6 Q. I would agree with you there, that the
7 Bureau's mind may have some doubt that the courts have
8 decided the question fully and completely. But it's
9 getting more narrow as time goes on.

10 Okay. So you're saying that since there is a
11 Coordinated Operations Agreement whereby both parties
12 agree to meet water quality standards by providing an
13 agreed upon share water necessary to do that, that that
14 takes care of the question of compensation of quality
15 benefit to the State from the Federal water being
16 present?

17 A. By mutual agreement.

18 Q. That's the same kind of quality benefit that
19 we are talking about in this case, isn't it?

20 A. To the best of my knowledge, there has been
21 no mutual agreement on this matter.

22 I believe there is some degree of mutual
23 agreement with the North Delta Water Agency or has been.

24 With the remainder of the Delta, I am not
25 aware that that has been the case.

26 Q. Do you know if the North Delta Water Agency

1 paid any money to the State for water quality benefits in
2 1977?

3 A. I understand that there was some monetary
4 exchange.

5 Q. If there was none, would that change your
6 opinion as to what should be compensated in terms of
7 benefit?

8 A. No.

9 Q. That North Delta Water Agency contract that
10 you have in your mind, could that have been signed in
11 1981?

12 A. I presume it could have been. Whether it
13 would have been is another point.

14 Q. So you're saying that the signing of the
15 contract was in some way compensation for the benefit
16 derived in '77, even though no payment was made for
17 benefit in 1977?

18 A. I do not recall the exact details of the
19 agreement with the North Delta Water Agency.

20 Q. All right. That's fair enough.

21 MR. NOME LLINI: I have no further
22 questions.

23

24

EXAMINATION

25

26

BY MR. WHITRIDGE: Q. Mr. Banks, going
back, I have several questions I'll try to run through

1 quickly, but while you still have in front of you your
2 chart Number 9, I had one other question before we leave
3 that.

4 On line item five, it says, "Without SWP
5 natural flow at Oroville," and in July it shows a figure
6 of minus 3,873.

7 What does that represent?

8 A. It represents the fact that on the balance
9 that we have here in July the -- to that point the
10 natural flow would have been 3,873 acre feet less than
11 was actually measured as being in the channel of the
12 Feather River below the fish barrier dam and below the
13 return flow from Thermolito Afterbay.

14 Q. So what do you have here that shows that this
15 was less than what was actually measured? What is this
16 situation here?

17 A. Well, going down the columns, in July the
18 discharge to the Feather River at the Fish Barrier Dam,
19 which is discharged through the channel, there was ^{24,890}~~24,898~~
20 acre feet.

21 There was released back to the river at
22 Thermolito Afterbay 98,620, which means that the measured
23 flow in the channel below Thermolito Afterbay was in the
24 order of 123,510 or ^{SUM}some of those two.

25 The affect of the Oroville Reservoir and the
26 other reservoirs, including the change in storage and

1 evaporation, was to decrease the natural flow by a
2 hundred and twenty -- in that month by 127,383.

3 MR. NOME LLINI: How do you get less than
4 zero water of natural flow?

5 If we imagine the flow coming down the river
6 without a State Water Project, we are going to end up
7 with a minus?

8 THE WITNESS: I didn't say it was zero.
9 I said it would -- the net effect was to
10 decrease.

11 MR. NOME LLINI: Okay. But that
12 indicates to me there is some error if the net income is
13 going to reduce the flow to a minus number.

14 Doesn't that show us that you're
15 overestimating the State Water Project affect?

16 THE WITNESS: Oh, I don't believe so.

17 You were, in that month, let me show you, --

18 MR. NOME LLINI: That's all right.

19 You're right on it.

20 MR. WHITRIDGE: I just don't understand
21 it. Maybe somebody does.

22 MR. NOME LLINI: Harvey does, but I sure
23 don't yet.

24 THE WITNESS: Storage that month was
25 decreased by 206,000 acre feet -- I'll round these off.

26 Evaporation was 5,000 -- 5,500, roughly.

1 And there were similar changes in the other
2 reservoirs involved here.

3 So that the net reservoir affect was a
4 decrease of 202,200.

5 MR. NOMELLINI: Something has got to be
6 wrong with that.

7 THE WITNESS: No.

8 MR. NOMELLINI: I mean, there's got to
9 be -- I mean, how can you end up with a natural supply
10 less than zero?

11 MR. WHITRIDGE: Q. One through three
12 are measured flows, as I read them. One, two, three,
13 those are all measured flows --

14 A. That is correct.

15 Q. -- so the only one that could account for
16 this is number four, the net affect of State Water
17 Project, which ends you up with a filling less than the
18 measured flow.

19 Does that indicate in some way that the State
20 Water Project is taking more than natural flow?

21 A. No.

22 What it means is, in this case, that the
23 natural flow was increased in effect by the projects.
24 Where you see a negative resulted --

25 MR. NOMELLINI: Yeah, we can't increase
26 natural flow. Natural flow is absent the State Water

1 Project. The project is gone.

2 THE WITNESS: Let me rephrase that, if I
3 may.

4 The amount of water flowing in the channel
5 was greater by virtue of operation of releases from the
6 project than the natural flow would have been.

7 MR. NOME LLINI: Okay. I understand
8 that. Because that's talking about with project
9 condition. I understand that. We get releases of stored
10 water or some other affect, the project enhances flow in
11 the river. I got that. I understand that.

12 But now we are going back and we are saying
13 what the natural flow was, and we are taking a
14 measurement and we are subtracting out a project impact.

15 THE WITNESS: Yeah.

16 MR. NOME LLINI: And we end up with a
17 negative number for the natural flow.

18 THE WITNESS: We end up with a decrease
19 in what would have been the natural flow by virtue of the
20 project operation. We don't end up with a negative
21 natural flow.

22 Remember, we are doing a mass balance here.

23 MR. NOME LLINI: Okay. So you are taking
24 water away from the natural flow in this month?

25 THE WITNESS: Uh-huh (yes).

26 MR. NOME LLINI: With the project.

1 THE WITNESS: The natural flow would
2 have been three hundred and -- 3,873 acre feet less than
3 the 123,510, which was actually measured.

4 The 123,510 is the measured flow in the
5 Feather River --

6 MR. NOME LLINI: In '77?

7 THE WITNESS: In July of '77.

8 MR. NOME LLINI: Okay. That's project
9 flow and natural flow and everything else?

10 THE WITNESS: That's right.

11 MR. HILDEBRAND: Are we on this question
12 of the definition of natural flow being something other
13 than what's really natural flow? Is that what it's
14 getting into about? Or natural flow really isn't natural
15 flow as it's being used here. It's non-project flow.

16 THE WITNESS: That is correct.

17 MR. HILDEBRAND: So what he's saying is
18 that, as I understand it, correct me if I'm wrong,
19 Harvey, that the flow was 3800 more than provided by the
20 project flow.

21 MR. NOME LLINI: No.

22 THE WITNESS: No.

23 What this means is that going down to that
24 point we are talking about --

25 MR. HILDEBRAND: Yeah.

26 THE WITNESS: -- that 123,510, which is

1 the actual measured flow is 3,873 more than what we have
2 termed natural flow, and you're quite right, Alex, it's
3 the water that would be there without the projects.
4 That's what we are trying to --

5 MR. HILDEBRAND: So somehow the project
6 has resulted in some additional flow there over and above
7 natural flow from causes other than the operation of
8 Oroville, right?

9 THE WITNESS: Well, in -- to the point --

10 MR. HILDEBRAND: I can't understand how
11 that happens, but I think that's what you're saying.

12 THE WITNESS: If you'll look at Table
13 F-1, the next one, ten, you'll note on the first line in
14 July there was a very large ^{draft} ~~graft~~ on storage in Oroville,
15 ~~206,000~~ ^{206,081} on 81 acre feet.

16 MR. HILDEBRAND: Now, are you saying
17 that then results in some return gross which were not
18 included in the measured flows?

19 THE WITNESS: No. I'm saying that there
20 was a large amount of water released from storage at
21 Oroville which contributed to this 123,510, and the
22 contribution of that was 3800 -- was 3,873 more than as
23 we have used the natural term.

24 MR. HILDEBRAND: It gets all tangled up
25 in the use of the term.

26 MR. NOMELLINI: That means somewhere in

1 this calculation as you go down the river you create a
2 negative natural flow which I don't think physically can
3 happen. So maybe it's not important.

4 Maybe this was just numerically.

5 THE WITNESS: This is a mass balance,
6 and, I agree, it is difficult to understand.

7 MR. NOMELLINI: Is it correct, though?
8 I mean, is it right to do it that way?

9 THE WITNESS: In my opinion, it's a
10 straight mass balance calculation.

11 MR. NOMELLINI: But it would seem to me
12 that you'd have to limit it by you can't go less than
13 zero to play the game --

14 MR. HILDEBRAND: If you're really
15 talking about natural flow, it couldn't go less than
16 zero.

17 THE WITNESS: That's right.

18 We're not saying that this is less than zero.
19 What we are saying is that the natural flow was ^{119,637}119,673.

20 MR. BABER: What you're doing is
21 subtracting the 3873 from the 123?

22 THE WITNESS: (Affirmative nod)

23 MR. BABER: Could you explain to me
24 again the 127, Harvey, on line four?

25 THE WITNESS: Which line?

26 MR. BABER: Line four, July, '77.

1 MR. HILDEBRAND: Table nine.

2 MR. WHITRIDGE: Table ten.

3 THE WITNESS: That comes from the next,
4 table ten.

5 MR. WHITRIDGE: Q. Harvey, does this
6 figure, the minus 3873 have any affect or come into play
7 at all when we calculate farther downstream the
8 difference between natural flow and project flow in the
9 Delta?

10 A. ~~No.~~ It carries down because whole
11 calculation goes from upstream downstream. And so if you
12 make a correction here at this point, that impacts all
13 the way down.

14 MR. NOME LLINI: It's probably the way
15 this thing is defined, these words, "Without State Water
16 Project natural flow at Oroville," that's just -- there
17 might be a better way to define it. It's just a balance
18 carry forward number -- it's not a natural flow number.

19 THE WITNESS: That's right.

20 MR. NOME LLINI: It's not natural flow
21 without State Water Project because without State Water
22 Project, the PG&E down here, it's still 42,000.

23 THE WITNESS: You are quite right, Mr.
24 Nomellini.

25 MR. NOME LLINI: It's just the way that
26 thing is phrased.

1 THE WITNESS: Our wording leaves much to
2 be desired.

3 MR. HILDEBRAND: I think the wording
4 makes it impossible to understand exactly what's really
5 been done.

6 MR. WHITRIDGE: Q. One other question
7 on that exhibit, Harvey.

8 Do you know why lines eight and nine have
9 been basically lined out at the bottom of this?

10 A. Because Oroville -- the affect of Oroville
11 Wyandotte is felt above the Fish Barrier Dam. So the
12 affect of that is included in the major flow on line one.
13 In other words, the affect OWID returns to the river are
14 above the Fish Barrier Dam.

15 Q. And PG&E affect you only took out for March,
16 April and May and left it in?

17 A. Because those were direct flow diversions,
18 not stored water, under PG&E's old right.

19 Q. Okay. In other words, this agreement with
20 PG&E doesn't start exchanging until June, is that right?

21 A. PG&E has to satisfy its natural -- its
22 demands under its direct flow diversion rights out of
23 those rights. The state does not provide water for
24 those.

25 MR. NOMELLINI: Is this PG&E thing what
26 has been termed a loan of water by DWR to them?

1 THE WITNESS: In effect that's what it
2 is. It's an intra-seasonal loan of water from the State
3 to PG&E early on when the PG&E does not want to release
4 from Lake Almanor, repaid by releases from Lake Almanor
5 later on in the season. It's supposed to be completely
6 repaid by the end of October.

7 MR. NOME LLINI: So the -- in terms of
8 affect the department loaned them water in July and other
9 months, and got water back --

10 THE WITNESS: Starting in August.

11 MR. NOME LLINI: -- in August?

12 THE WITNESS: Right. But PG&E would
13 have had the water, but they would have lost power?

14 THE WITNESS: That is the reason for it
15 in PG&E's minds.

16 MR. NOME LLINI: So PG&E just benefited
17 by that exchange in terms of power production?

18 THE WITNESS: Uh-huh (yes).

19 MR. BABER: Saving up for peak times?

20 THE WITNESS: I beg your pardon?

21 MR. BABER: Were they not saving up for
22 peak times? Or do you have an understanding of it?

23 THE WITNESS: It's my understanding, and
24 I was not a party to those negotiations, is they wanted
25 to preserve the head at Almanor.

26 MR. NOME LLINI: Did the State get paid

1 for that benefit or was it just a loan?

2 THE WITNESS: They got paid -- let me
3 put it this way:

4 They got paid because they settled the
5 disagreement with PG&E this way. In other words, I
6 remember that there was some disagreement with PG&E on
7 how all of this would happen, be handled, and PG&E, of
8 course, has some very old rights which had to be
9 recognized in the operation of the State Water Project as
10 they have recognized all prior rights, including
11 riparians.

12 MR. NOME LLINI: So this was a settlement
13 of a dispute, not really a loan, huh?

14 THE WITNESS: Well, it is --

15 MR. NOME LLINI: This loan was made
16 pursuant to a settlement of a dispute?

17 THE WITNESS: That is correct.

18 I think that's right, isn't it, Russ? You
19 were there. I wasn't.

20 MR. KLETZING: I wasn't involved in the
21 1977 operation.

22 But the underlying contract, that's correct.
23 I'm not sure what was done in '77, exactly.

24 MR. WHITRIDGE: Okay. Are we through
25 with that?

26 Q. Harvey, I'd like to ask you a few questions,

1 and I know it's getting late so I am going to try to skip
2 over things pretty quickly so I may be skipping from one
3 thing to another. So stop me if you don't understand the
4 question, but generally I'm going to refer to some of the
5 things you already talked about earlier today.

6 First, you said that you haven't yet
7 completed your investigations of the State Water Project
8 alone in 1977.

9 A. That is correct.

10 Q. Do you have any idea when that will be done?

11 A. It has to be done very shortly since, I
12 believe, your trial is supposed to start --

13 Q. Okay.

14 A. -- in October. So it has to be done in the
15 next two weeks.

16 MR. WHITRIDGE: Will we have an
17 opportunity, Russ, to further discuss this with Harvey or
18 anyone else who is doing this prior to the trial as soon
19 as this work is done, the same as you are going to do
20 with Kelson?

21 MR. KLETZING: I don't really know what
22 you're referring to.

23 MR. WHITRIDGE: Well, we are referring
24 to trying to take out the affect of the State Water
25 Project as opposed to both projects. That's one thing
26 I'm referring to.

1 MR. KLETZING: We have not asked,
2 however, to do that or anybody else. We are not planning
3 to do it, no.

4 MR. BABER: Well, Russ, let me just say
5 that Harvey has mentioned that he's not completed his
6 figures yet in preparation of his expert testimony on
7 whether -- you know, how the SWP's elimination from
8 releases of water in July and August of '77, affects your
9 case. So he said he would be finished probably in two
10 weeks because the trial is coming up. We'd like to talk
11 to him maybe before the trial starts. That's what I
12 think we are driving at.

13 MR. KLETZING: Okay. On this point that
14 I don't think there is any more work going to be done on
15 it because we are not planning at this time to present
16 any evidence on that subject.

17 MR. BABER: Well, Harvey just said he'd
18 be finished in two weeks.

19 MR. KLETZING: There is evidence that
20 the State Project provided benefits to the Delta is
21 adequate.

22 MR. NOMELLINI: Is there anything left
23 that is ongoing or is Harvey wrong? He said there is
24 some ongoing stuff that is not yet completed.

25 MR. KLETZING: I don't know. What I
26 understand, Harvey, you are talking about is digging into

1 more into the numbers that we have given them, is that
2 correct?

3 THE WITNESS: Yeah.

4 MR. KLETZING: We have not asked Harvey
5 to present evidence beyond this and the background
6 information on how the State Water Projects in the Delta
7 were --

8 MR. WHITRIDGE: Q. So there may be some
9 further refinements of these tables, though, am I correct
10 in saying that?

11 MR. KLETZING: I don't know.

12 MR. NOME LLINI: Well, what is left to
13 do? Is there something left to do? You told us earlier
14 there was. Is there nothing left to do?

15 THE WITNESS: There are things left to
16 do. I want to check these tables more thoroughly than I
17 have to date.

18 MR. NOME LLINI: Are you planning to do
19 any analysis on your own in preparation for your own
20 expert opinion as to what the impact on water quality
21 would be in 1977, without just the State Water Project?

22 THE WITNESS: I would think that might
23 well be done, even though counsel has not asked for it.
24 In view of the questions that you have asked --

25 MR. NOME LLINI: You think that's
26 necessary for your preparation?

1 THE WITNESS: -- I would like to have a
2 little more definitive answer.

3 MR. BABER: All right.

4 MR. NOME LLINI: Well, it sounds to me
5 like the expert is expecting to prepare himself with more
6 studies prior to trial.

7 Whether you want them or not, Russ, I guess,
8 is -- I'm not sure that's relevant but --

9 MR. KLETZING: I don't know. You know,
10 I think there is a cutoff in discovery in about a week or
11 ten days.

12 MR. BABER: Yeah, but, Russ, it's your
13 own expert. That's why we are bringing it up.

14 MR. WHITRIDGE: Well, it's just a
15 question. You know, if he's not going to testify to
16 anything else other than what's in this book --

17 MR. NOME LLINI: We could depose him
18 daily so we are kept abreast of it right up until the
19 deadline.

20 MR. WHITRIDGE: Q. Harvey, have you --
21 I think you stated earlier that you consider yourself an
22 expert on water quality, is that correct?

23 A. No, not on -- necessarily on water quality in
24 the broad sense.

25 I do consider that I know something
26 considerable about the quality problems in the Delta.

1 Q. Okay. Have you published any works or any
2 writings that -- in regard to water quality in the Delta
3 or elsewhere?

4 A. I don't recall any. Let me look at the . . .

5 Q. Well, do you have -- is there a a copy of
6 your published writings there?

7 A. It's a copy of my file data.

8 Q. Do we have a copy of that? If you could
9 furnish us with a copy of that, then we could look and
10 see if there is any.

11 MR. KLETZING: Oh, sure, I think so.

12 MR. NOMELLINI: Maybe you gave it to us
13 already, Russ.

14 MR. KLETZING: I don't remember.

15 MR. WHITRIDGE: That's fine. That will
16 save us a lot of time. We can look into that ourselves.

17 Q. You said earlier, Harvey, that you
18 participated in a study with USBR after leaving DWR.

19 With regard to the Westside Study did that
20 relate to the Delta?

21 A. As I recall the report, it does discuss some
22 of the Delta problems as part of the overall west wide
23 water problems.

24 Q. What is the westwide water problems?

25 The west side of the Central Valley, is that
26 what it refers to?

1 A. No. In effect it is the Reclamation states.

2 Q. Oh, okay.

3 A. Which are the seventeen states west of the --
4 lying wholly ^{or partly west of 98} ~~part to~~ the western meridian.

5 Q. So that was a western United States study
6 rather than anything that might focus specifically on the
7 Delta, for example?

8 A. That is correct.

9 Q. I think you said earlier in connection with
10 this litigation that you are also analyzing the western
11 project with regard to the Federal and State, is that
12 correct?

13 A. No. If I said that, it was incorrect, and I
14 retract it.

15 We have looked at other projects which have
16 had -- which have had some affect on the Delta as an
17 ^{integral} ~~intrical~~ part of trying to evaluate the impacts of the
18 State and Federal Project because they are intermingled.

19 Q. Which specific projects have you looked at in
20 this --

21 A. Well, we've looked at PG&E projects. We've
22 looked at Placer County Water Agency, Sacramento
23 Municipal Utility District, among others.

24 Q. All right. Have you looked at large projects
25 on the San Joaquin system, such as San Francisco's Hetch
26 Hetchie Project, for example?

1 A. No.

2 We have taken the measured inflow after those
3 projects have taken their part out.

4 Q. Okay.

5 A. In other words, we've taken the measured
6 inflow in the Mokelumne.

7 Q. Okay. I believe you also said earlier that
8 in regard to the tributary inflows you made some
9 suggestions on those numbers after reviewing the staff
10 data.

11 Can you recall what those suggestions were?

12 A. They had to do with Stoney Creek and those
13 tributaries on the west side of the Sacramento Valley.

14 Q. And what was the general nature of the
15 suggestions?

16 A. That they be included in the analysis.

17 Q. They had been excluded previously, is that
18 correct?

19 A. They had been disregarded previously.

20 Q. All right. You stated that to take the
21 without project affect, I believe you measured the flow
22 in the river and adjusted out the project affect
23 generally, you stated.

24 Was this done at Vernalis on the San Joaquin
25 system?

26 A. No.

1 We assumed in the -- as far as the San
2 Joaquin is concerned, that the net effect during these
3 months of Friant Dam and -- to Lake Millerton, the net
4 effect of that is negligible as compared to what would
5 have been the situation without them because we believe
6 that if there were no Friant Dam, no Lake Millerton, no
7 exchange agreement, that the interests of the San Joaquin
8 Valley would divert nearly all of the water in the San
9 Joaquin at the ^{old Sack Dam} ~~Old Sac~~ location, in any event.

10 Q. That's in terms of flows, I gather, measured
11 flows?

12 A. That's right.

13 Q. I think you stated earlier that there is, in
14 your opinion, a detrimental affect on the quality in the
15 South Delta Water Agency as a result of the project
16 return flows coming into the San Joaquin River.

17 Was that taken into account at all?

18 A. It has been taken in -- the quality of the
19 San Joaquin River flow at Vernalis has been taken into
20 account in our quality analyses of the affects without
21 the projects, yes.

22 Q. How? In what way was that taken into
23 account?

24 A. We have assumed that as the quality -- as a
25 source of salts and other pollutants coming into the
26 south Delta.

1 Q. And you have taken those salts out for the
2 year 1977?

3 A. No. We have taken them into consideration.

4 Q. When you tried to calculate without project
5 in 1977, did you try to remove those salts?

6 A. No.

7 MR. NOMELLINI: You just said, yeah,
8 there's salts and that's how you took them into account?

9 THE WITNESS: Well, they are a part of
10 the analysis.

11 MR. NOMELLINI: But, I mean, nothing was
12 done to change it?

13 THE WITNESS: To change it, no.

14 MR. NOMELLINI: To change it.

15 MR. WHITRIDGE: Q. You said earlier in
16 regard to the detriments caused by the projects, you
17 mentioned lower water levels and increased in scouring;
18 what do you mean by increase in scouring?

19 A. Some of the Delta channels in the lower Delta
20 by virtue of the fact due to the Tracy and Delta pumps,
21 the velocities in those channels are greater than they
22 otherwise would be, and that has caused some scouring
23 of the bottom, some scouring of the
24 levees, so I understand.

25 Q. Does that have an affect in terms of water
26 quality?

1 A. It tends to increase the ^{turbidity} ~~tribidity~~ (phonetic)
2 of the water
3 ~~to divert it~~, and it increases the sedimentation in other
4 places.

5 Q. You mention in terms of the overall affect of
6 the project you felt that it would be equitable to
7 balance the benefits and detriments of the project, and
8 you mentioned things like detrimental impacts from
9 storage early in the year, that sort of thing.

10 Have you made this balance for 1977?

11 A. I have not.

12 Q. Okay. What have you done to take into
13 account the detriments caused by the projects for 1977?
14 Anything at all?

15 A. Nothing at all specifically.

16 I understand that the department is
17 negotiating with the South Delta Water Agency on the
18 solution to the lowered water level problem.

19 Q. Did you take into account in your 1977
20 investigations the affect of the CVP on net downstream
21 flow through the southern Delta?

22 A. That is -- comes out of the model studies
23 which the department has made.

24 Q. All right. Are you familiar with the
25 different models that are being used generally in --

26 A. In a general way, yes.

1 Q. Do you have any opinions on Delta --
2 different Delta models and their accuracy?

3 A. Well, the accuracy of the model's results
4 depends on where you are in the Delta. I would say that
5 the ^{Fischer} ~~Fisher~~ models give a reasonably good -- and I'm not
6 prepared to say whether that's within plus or minus ten
7 percent overall or plus or minus twenty -- but a
8 reasonably good simulation result of various assumptions
9 as to inflows, salt loadings and that sort of thing.

10 Q. Are you aware of the comparison, say, of the
11 detail of that model in return to the southern Delta and
12 the area basically south of Highway 4 as to, compared to,
13 say, for example, a southern Delta fine flow model
14 developed by RMA or also used by the State Department of
15 Water Resources?

16 A. I have not had an opportunity as yet to
17 examine the results of Dr. Orlob's model work. I have
18 not had time to do it.

19 Q. Are you aware generally with the
20 configuration of the model and its --

21 A. In a general sense, yes.

22 I would add that I personally am not a
23 modeler.

24 Q. Would you have any opinion as to whether it's
25 more detailed or possibly more accurate in regard to the
26 southern Delta?

1 A. I don't know.

2 And, as I say, I have not had an opportunity
3 to check the Dr. Orlob's results as yet.

4 Q. When you measured consumptive use of applied
5 water in the Delta and calculated it, did you account for
6 lands within the Delta that are irrigated from the Delta
7 Mendota Canal, such as the Westside Irrigation District?

8 A. I don't believe so. I'd have to check that
9 out. I do not recall.

10 Q. I assume you would use the same analogy for
11 these lands as you did with the Contra Costa County Water
12 District; if they have a contract for the CVP and they
13 are using the water, they shouldn't have to pay for the
14 State releases; would you feel the same -- similar if you
15 have land within the Delta --

16 A. Similar situations should be treated
17 similarly.

18 Q. Do you know how much Stanislaus return flow
19 bypasses the Vernalis gauge and is utilized on Delta
20 lands or have you analyzed this?

21 A. No, I do not know.

22 Q. Do you know how much well water was used on
23 Delta lands in 1977, within the Delta?

24 A. Yes, we have estimates of that which are
25 shown in here.

26 Q. Where are those shown?

1 A. They are shown on Table DO, number
2 forty-five.

3 Q. It's number forty-five?

4 A. Number forty-five.

5 Q. And where is that shown on that table?

6 A. Under "Water Supply" at the top and under
7 that general heading it says, "Delta tributary streams
8 precipitation of Delta service area, urban requirement
9 imported or from wells."

10 Q. Okay. But what about the well water used by
11 Delta farmers within the Delta; do you have any figures
12 or calculations on that?

13 A. No. That has been taken care of in the
14 computation of net consumptive use.

15 MR. HILDEBRAND: What was the basis for
16 that computation?

17 THE WITNESS: We have not attempted to
18 separate out the deep wells of the Delta as yet.

19 MR. HILDEBRAND: How about the wells
20 that were drilled during '76 and '77, specifically, for
21 the purpose of augmenting water supply and improving
22 water quality?

23 THE WITNESS: No. We have not taken
24 that into account. We have not considered it.

25 MR. WHITRIDGE: Q. In regard to this
26 column here, it says, "Urban requirement imported from

1 wells;" does that take account of the sewage outflow from
2 these urban uses that's used on Delta lands and derived
3 from outside the Delta?

4 A. No, it does not.

5 Q. What does that take account of exactly then?

6 A. Again, taking into account that we have dealt
7 with net consumptive use in all of our calculations.

8 Q. Have you calculated how much sewage outflow
9 was used on Delta lands and was derived from outside the
10 Delta?

11 A. No, I have not.

12 Q. You've mentioned the City of Sacramento, I
13 guess; was any calculation made for the City of Tracy or
14 City of Manteca, other domestic areas?

15 A. No.

16 Q. Going back for a minute to this benefit,
17 detriment analysis, and just kind of getting your general
18 feel, I think you said the Delta water users should pay
19 for net benefits from the CVP and SWP, I believe you
20 stated earlier.

21 Is it your feeling if a south Delta water
22 user, for example, who is experiencing increased salinity
23 due to projects on the average or experiencing
24 intermittent loss due to pump loss or export pump
25 draw-down, should those be an expert against the projects
26 in balancing?

1 A. Yes, they should be considered in balancing.

2 Q. In terms of incidental benefits we spoke
3 about not too long ago, if someone doesn't request water
4 but gets benefit by virtue of an otherwise required
5 release, would you consider that an incidental benefit?

6 A. I believe we discussed the question of a
7 release made specifically for the benefit of the fish and
8 wildlife resources of the western Delta and for the
9 ~~anadrom~~^{anadromas} fish runs. I would say that any benefit received
10 by the water users incidental to that increased outflow
11 would not -- should not be charged.

12 Q. But isn't it by nature an incidental benefit
13 if you're getting a release of water that you haven't
14 otherwise requested?

15 A. I go back to my statement that under the
16 Delta Protection Act, the function of the project is to
17 provide an adequate water supply for the Delta water
18 users.

19 Q. And that function has to be carried out
20 regardless of whether they request it or have any
21 interest in it or want it or whatever?

22 A. From the standpoint of the overall good, yes,
23 I believe so, and that has been so interpreted.

24 And it is my interpretation, if I again may
25 voice a legal opinion, that has what is implied by the
26 Appellate Court decision in the Delta water cases.

1 MR. HILDEBRAND: Were the emergency
2 standards in 1977 intended to protect out agriculture?

3 THE WITNESS: That's my understanding.

4 MR. NOMELLINI: Do you know whether
5 those standards -- do you know what those standards were?

6 THE WITNESS: I do. I have reviewed
7 them very recently, but I do not remember the exact
8 quantities or the standards.

9 MR. NOMELLINI: Okay. Do you know what
10 stations those standards applied to?

11 THE WITNESS: ^{Emmeton} ~~Emeton~~ for one.

12 MR. NOMELLINI: I mean in July and
13 August of '77.

14 THE WITNESS: Yes.

15 MR. NOMELLINI: The emergency standards?

16 THE WITNESS: Yes.

17 MR. NOMELLINI: You think they applied
18 to Emmeton?

19 THE WITNESS: As I recall it, yes, but I
20 have to say that I have -- my memory on that is not very
21 good.

22 MR. HILDEBRAND: Did those standards in
23 any way address protecting of the south Delta?

24 THE WITNESS: As I recall it, the
25 problem with the south Delta was mentioned, and I believe
26 you testified at the hearings.

1 MR. WHITRIDGE: Q. Were there any
2 standards located within the southern Delta, that you
3 know of?

4 A. I do not remember, frankly.

5 MR. BABER: Do you remember if anyone
6 from Byron-Bethany Irrigation District testified at the
7 hearings?

8 THE WITNESS: No, I do not remember from
9 the transcript of the reporter of the conferences and
10 hearings.

11

12

EXAMINATION

13

14

15

BY MR. BABER: Q. Mr. Banks, let me see
if I can ask you a couple of questions here while
everybody is looking around.

16

17

18

MR. NOMELELLINI: Yeah, I've got that
Bulletin 132-78 at table one lists the various plans that
were in effect in '77, and I'll show that to you.

19

20

21

22

But there was an interim plan and then there
was an emergency regulation, and it sounds to me like
your comments are oriented towards that interim plan
(indicating) more than the emergency regulation.

23

24

MR. KLETZING: I think he would need to
see the regulation, not the Bulletin's excerpting of it.

25

26

MR. NOMELELLINI: Do you think that
bulletin would mislead the witness, Russ?

1 MR. KLETZING: I have no idea what it
2 has or in what context it's using.

3 But I looked at the emergency plan recently,
4 too, and I saw ^{Emmeton} ~~Emeton~~ in it.

5 MR. NOME LLINI: The emergency
6 regulation?

7 MR. KLETZING: Yeah.

8 MR. NOME LLINI: Hmm. I thought it was
9 just Clifton Court Forebay and Rock Slough.

10 MR. KLETZING: I don't think so.

11 MR. NOME LLINI: You think it's got
12 ^{Emmeton} ~~Emeton~~ in it, huh?

13 THE WITNESS: No, it does not. I was
14 wrong.

15 MR. NOME LLINI: Well, then Russ must be
16 wrong.

17 MR. KLETZING: Do you have the emergency
18 regulation there --

19 THE WITNESS: Yes.

20 There was --

21 MR. KLETZING: -- or just the bulletin?

22 THE WITNESS: At Clifton Court there was
23 none. Terminous, there was none. San Andreas landing
24 none. Rio Vista, none.

25 At Clifton Court the twenty-eight day mean
26 chloride concentration was equal to or less than three

1 hundred milligrams per liter.

2 At the Tracy pumping plant the same value was
3 equal to or less than two hundred.

4 MR. KLETZING: Where are you reading
5 from?

6 THE WITNESS: Bulletin 132-78, Appendix
7 E, Table Number One.

8 MR. KLETZING: I don't think that
9 necessarily -- I don't think that reflects the emergency
10 regulations. That may be what they considered controlled
11 project operations or something, but I think you have to
12 look at the emergency regulations.

13 MR. WHITRIDGE: Those are the ones that
14 the State would decide to recognize at that time.

15 MR. KLETZING: I mean, I don't know.
16 You have to look in the text and see what they said table
17 one was, but I don't think that -- I looked at it, and it
18 did have -- it had several parts, including standards at
19 the various internal Delta places.

20 MR. NOMELLINI: Are you trying to tell
21 us, Russ, that some of these state publications can't be
22 relied on?

23 MR. KLETZING: I think it's probably for
24 whatever it says. I don't know what it says, you know.
25 You're the one that suggested that it reflected the
26 emergency regulations. It may just be what they

1 controlled operations at particular times.

2 MR. WHITRIDGE: Why don't go you ahead,
3 Bill. It's getting pretty late.

4 EXAMINATION

5 BY MR. BABER: Q. Mr. Banks, I'm Bill
6 Baber, one of the attorneys, representing Byron-Bethany
7 Irrigation District, who is a named defendant in this
8 lawsuit, and I have a few subjects I'd like to cover with
9 you.

10 I'll try to be brief.

11 First, I've got a copy of this 1956
12 Cooperative Study Program, apparently of which you are a
13 author, and it's dated March of 1957.

14 And I understand it consisted of the Bureau
15 of Reclamation had some input to the project, is that
16 correct?

17 A. Yes.

18 Q. And then yourself on behalf of the Department
19 of Water Resources?

20 A. Yes.

21 Q. And then the Sacramento water users and water
22 association?

23 A. That is correct.

24 Q. And the point of this whole effort in 1956
25 was to settle water rights along the Sacramento River and
26 the Sacramento-San Joaquin Delta, is that right?

1 A. That was the original intent, to make an
2 investigation to obtain and compile and analyze the data
3 necessary for a settlement.

4 Q. Also, of water rights in the Delta such as
5 those belonging to Byron-Bethany Irrigation District?

6 A. As appropriative rights, yes.

7 Q. All right. Now, if I look through this
8 bulletin, on page fifty there is a part of the bulletin
9 called "Allocation Studies."

10 Do you have any memory of that?

11 A. No, unfortunately, I do not.

12 Q. All right. Well, let me read you part of it
13 and just see if you can tell me what it means.

14 It's on page fifty. It's under the category
15 "Allocation of responsibility for salinity control."

16 There is a paragraph here that says, "There
17 may be differences of opinion, both as to the relative
18 responsibilities for salinity control among the
19 governmental agencies concerned and among groups of water
20 users and as to the degree of control that should be
21 provided.

22 "There may also be various opinions regarding
23 alternative economical and reasonable alternative methods
24 of providing water of good quality for diversion from the
25 Delta.

26 "No attempt is made in this report to analyze

1 these matters because it appears that such determinations
2 are beyond the scope of an engineering study and are in
3 the realm of arbitrary compromise. Therefore, no
4 specific method of allocation of responsibility for flood
5 control is suggested in this report."

6 Now, would your opinion as given by yourself
7 and the Bureau, apparently, and the Sacramento River
8 Delta Water Association, would that hold true today, in
9 your opinion?

10 A. I believe it still holds true. It is still a
11 matter of extreme controversy.

12 Q. Do you believe as well that the matter of
13 allocation of responsibility for salinity control in the
14 Delta is beyond the scope of engineering study?

15 A. I believe that engineering studies can
16 contribute information leading to a decision of that
17 type.

18 But the decision is in part a political
19 decision and in part a matter of a decision at the
20 highest levels of the agencies concerned.

21 The Director of Water Resources on the one
22 hand, as far as the State is concerned, and the Secretary
23 of the Interior on behalf of the government, of the
24 Federal Government.

25 Q. This opinion was given by you and these other
26 two agencies in this 1956 Cooperative Study.

1 Based on that decision I'd like you to look
2 at this engineer's opinion, dated August 27, '86, from
3 Emil Leary. And if you'd just look at it to yourself and
4 let me know when you're finished and tell me if you agree
5 with it or not (indicating).

6 A. The questions you raise are -- may or may not
7 be valid as to the -- whether or not the irrigation
8 district would have -- could have continued to use the
9 water.

10 There was, as we have discussed previously at
11 this deposition, there always is water in the Delta
12 channels.

13 Q. So you agree then with Mr. O'Leary's opinion
14 that there was sufficient quantity of water for the
15 district to use without the release from SWP facilities?

16 A. From the standpoint of quantity, that is
17 correct.

18 Q. All right. Now, let's go into quality.

19 You notice Mr. O'Leary says that from a
20 quality standpoint the water would have been useable for
21 Byron-Bethany purposes in its diversion in July and
22 August of '77?

23 A. I noted that.

24 Q. Do you disagree with that?

25 A. I do not know.

26 Q. All right. I realize you haven't completed

1 your opinions on just considering that the SWP would not
2 contribute its releases from project -- from its project
3 facility in July and August of '77.

4 But I think you indicated that you were going
5 to have some opinion on that within a couple of weeks.

6 A. I will have an opinion on that in conjunction
7 with Dr. Henderson as regards the quality that actually
8 did exist versus that which would have existed.

9 At the moment I do not have that opinion.

10 Q. You don't have that opinion right now?

11 A. No, I do not.

12 Q. All right.

13 When you complete your work, would you be
14 making an opinion specifically with regard to
15 Byron-Bethany Irrigation District?

16 A. My opinions will be relative to various areas
17 within the Delta of the southern and southwestern
18 portion.

19 It certainly is an area which does have
20 significant differences from the rest to warrant a
21 special opinion with respect to that area.

22 Q. Okay. The reason I'm asking is we're
23 obviously short to trial, and I've got to tell my client,
24 who is Byron-Bethany, and they want to know.

25 And I want to talk to Mr. O'Leary as well,
26 let him know what your opinion is.

1 A. All I can say at the moment, Mr. Baber, is I
2 have no opinion.

3 Q. Okay. On this 1956 Cooperative Study that
4 you involved yourself in on behalf of the State and then
5 on behalf of the Bureau on behalf of the Delta Water
6 Users Association, was Byron-Bethany a part of that
7 study?

8 A. I do not recall.

9 Q. I've looked through this. I know my
10 grandfather was the head of that Delta Water Users
11 Association at the time, but I don't see anything in here
12 that indicates Byron-Bethany was a part of the study, and
13 I haven't asked him yet.

14 So you don't --

15 A. I just simply do not recall what happened
16 thirty-odd years ago.

17 MR. KLETZING: Was your grandfather
18 named Baber?

19 MR. BABER: Yeah.

20 MR. KLETZING: I don't remember him.

21 MR. BABER: Yeah, he was I. I'm III.

22 He passed away in '68.

23 Q. So you have no --

24 A. I have no recollection.

25 Q. All right. Now, how about a contract that
26 Byron-Bethany entered into with the State in '64, taking

1 their diversion facility from Italian Slough to the
2 intake channel; are you familiar with that?

3 A. No, I'm not. That was several years after my
4 tenure as Director.

5 Q. You left the department in '61?

6 A. Early '61.

7 Q. Let me give you a little background on it.

8 You know the intake channel was constructed
9 by the State some time in the early sixties?

10 A. Yes.

11 Q. And the channel was going to be constructed
12 over Italian Slough facilities, which was Byron-Bethany's
13 diversion spot, and the State and the district arrived at
14 some kind of an agreement settling condemnation
15 proceedings brought by the State to go over the top of
16 the District's Italian Slough facilities.

17 And as a part of that agreement, the
18 diversion spot was changed from Italian Slough to the
19 intake channel.

20 Have you seen the district pumps on the
21 intake channel itself before the aqueduct facilities?

22 A. No, I have not.

23 Q. They are approximately a mile easterly of the
24 aqueduct pumps, the District's pumps off the north and
25 south side of the intake channel.

26 Now, What I'm concerned about is there was a

1 contract entered into, and I'll show it to you.

2 It was entered into in 1964 on May 4, and I'd
3 like you to read paragraph four if you would, and then
4 I'll ask you a couple questions about it (indicating).

5 MR. KLETZING: You probably should read
6 the "whereas" clauses, too.

7 THE WITNESS: There aren't very many
8 whereas clauses, Russ.

9 MR. KLETZING: They explain what the
10 contract is for.

11 MR. BABER: Q. All right. Harvey, do
12 you see that last sentence of paragraph four that says,
13 "No charge shall be made by the State"?

14 A. Yes, I saw that.

15 Q. Regardless of the source of the water pump?

16 A. I would interpret that to mean that no charge
17 would be made because the district is allowed to pump
18 from the intake channel.

19 Q. Why then would the language be in there about
20 no charge regardless of the source of water diverted by
21 the district from the pumps?

22 What does "source" mean to you?

23 A. I suppose there must be some records around,
24 memoranda and so forth in the department files which
25 would indicate the intent of that. I am not aware of
26 them because, as I said, that is somewhat after my

1 tenure.

2 Q. You had no negotiations or input on the
3 construction of this contract then, is that correct?

4 A. No, none.

5 Q. Now, let me go back to Mr. O'Leary's
6 statement if I could --

7 MR. NOME LLINI: Let me ask a question on
8 that.

9 MR. BABER: Sure.

10 MR. NOME LLINI: Isn't this lawsuit
11 really the question of what was the source of water,
12 either the water came from the bay or natural flow or the
13 State Water Project or Central Valley Project or somebody
14 else's project?

15 It would seem to me that that contract
16 language says, hey, you are moving over here so we are
17 always going to be commingled with state water, and we
18 shouldn't charge you just because we are putting you in
19 with all of our water.

20 THE WITNESS: I am not in a position to
21 interpret the contract language, frankly. I wouldn't --

22 MR. NOME LLINI: Well, Baber, I think
23 they ought to dismiss you.

24 MR. BABER: I've been asking for that
25 for six years, Dan.

26 Q. So you're in disagreement with Bill O'Leary's

1 statement, and I'll hand you to you again -- well, strike
2 that.

3 Could you point out for me where you disagree
4 with anything that he opines on in that written
5 statement?

6 A. Well, I'm not in a position to say I concur
7 or disagree with such statement as "The district has
8 never refrained from using Delta water because of its
9 quality."

10 I am not in a position to say that -- to
11 agree or disagree with the statement, "It would have used
12 water during the period regardless of drought conditions
13 and regardless of the impact of the SWP."

14 Q. Now, let me stop you there.

15 If both of those statements were true, if you
16 would assume both of those statements, which are actually
17 factual statements which you wouldn't have any knowledge
18 of, if they were, in fact, true, would you agree with Mr.
19 O'Leary's opinion?

20 A. That is, of course, a legal opinion, and if
21 there were -- I go back to the statement -- compensation
22 should be required whether -- in those cases where there
23 is a demonstrable benefit.

24 Whether there was a demonstrable benefit in
25 this case, I am not in a position to say.

26 MR. NOMELLINI: From State Water Project

1 water?

2 THE WITNESS: Yeah.

3 MR. NOMELLINI: Not from a Federal Water
4 Project water?

5 THE WITNESS: We are here concerned only
6 with State Water Project water.

7 MR. BABER: All right.

8 Q. And, of course, regardless of whether or not
9 the district had requested it?

10 A. Well, as I said, the State -- the legislature
11 has declared that the State Water Project has the
12 function of providing water supply from the Delta,
13 including in cooperation with the United States' salinity
14 control.

15 Q. I understand that, but that's getting into
16 the legal area then.

17 Let me direct you back, if I could, Harvey,
18 to Bill O'Leary's statement.

19 If those two facts that we talked about five
20 minutes ago were, in fact, true, you assume them to be
21 true, would you agree with O'Leary's statement as an
22 engineer, not a lawyer?

23 A. If those facts -- if his statements are, in
24 fact, demonstrably true --

25 Q. His factual statements --

26 A. His factual statements --

1 Q. All right.

2 A. -- then there is a question as to
3 compensation.

4 Q. What do you mean there is a question as to --

5 A. As to the obligation for compensation.

6 Q. You mean there is -- then there is a question
7 as to whether Byron-Bethany must pay the State?

8 A. That's -- I think I certainly am -- almost
9 said that directly. At least, that is a logical
10 inference to be drawn from what I said.

11 MR. KLETZING: Which facts are you
12 referring to?

13 MR. BABER: He mentioned two.

14 THE WITNESS: Byron-Bethany has -- in
15 effect is saying under this or O'Leary is saying it on
16 their behalf, has always had a useable water supply from
17 the standpoint of quality.

18 Furthermore, that he believes that it would
19 have used water during that time regardless of drought
20 conditions and regardless of the impact of CVP.

21 As I interpret what he's saying there, that
22 he did not believe that the degree of deterioration of
23 quality in the channel and their source of water was so
24 severe that they could not have used it, it would have
25 been so severe that it would not have been absent the
26 SWP, have been so severe that they could not have used

1 the water. I believe that's the intent of what he said.

2 MR. BABER: Yeah, you're correct.

3 All right. Thank you.

4 No further questions.

5 MR. NOME LLINI: Let me follow-up on
6 that.

7

8 FURTHER EXAMINATION

9 BY MR. NOME LLINI: Q. I'm going to read
10 you a statement which I just want to see if you agree
11 with it or not.

12 A. May I ask by whom?

13 Q. I'm going to tell you by whom after you tell
14 me whether you agree or not.

15 MR. KLETZING: No. You can tell him by
16 whom first.

17 MR. NOME LLINI: Oh, I don't want to give
18 away the secret.

19 MR. KLETZING: We are not playing
20 \$64,000 --

21 MR. NOME LLINI: Let me read it to you.

22 "It appears that the liability arises when
23 water is delivered by the SWP specifically for the use of
24 Delta water users which allows Delta users to use water
25 that they could not otherwise use due to salinity."

26 MR. KLETZING: That's part of the Figone

1 opinion, just one sentence.

2 THE WITNESS: That's F-i-g-o-n-e.

3 MR. KLETZING: The Wonder opinion,
4 Wonder opinion, Wonder.

5 MR. WHITRIDGE: Wonder as in
6 Wonderbread.

7 MR. NOME LLINI: Q. Do you agree with
8 that statement there?

9 The reason I read it, after listening to you,
10 it sounded pretty close to what you're talking about.
11 That's why I read it.

12 A. Well, the question of whether liability
13 arises or not is strictly a legal question.

14 MR. KLETZING: He said a lot of other
15 things than that. Asking for one sentence out of context
16 I think is rather difficult.

17 MR. NOME LLINI: I'm not sure if it's out
18 of context, but I just wondered if you agreed with it.

19 A. Would you read it again, please?

20 Q. "It appears that liability arises when water
21 is delivered by the SWP specifically for the use of Delta
22 water users which allows Delta users to use water that
23 they could not otherwise use due to salinity."

24 A. I would tend to agree with that, yes.

25 Q. It helps draw the line between demonstrable
26 benefit that you've been talking about and just some

1 other benefit.

2 And this statement says if they could have
3 used it otherwise, then there is no obligation for
4 payment.

5 A. That's essentially what I've said, I believe.

6 Q. Okay. A harder question.

7 Do you believe that a release to meet -- of
8 the State Water Project to meet State Water Resources
9 Control Board standards could give rise to an obligation
10 for payment?

11 A. I do.

12 Q. Okay. How about if those standards are
13 conditions of the permit?

14 MR. KLETZING: They are always
15 conditions of the permit. That's the only ones that
16 there are in the Delta.

17 MR. NOMEILLINI: Well, okay.

18 How about conditions precedent to the permit
19 as opposed to conditions subsequent?

20 MR. KLETZING: They are just conditions.
21 In this case there was an emergency order. So I don't
22 know that that's really relevant.

23 THE WITNESS: Well, if we go back -- it
24 we -- may I talk a little bit about statutes?

25 MR. NOMEILLINI: Yeah.

26 THE WITNESS: If we go back to the

1 purposes of the Water Quality Control Board Plan, and
2 this was emphasized by the Appellate Court decision in
3 the Delta cases, the State Water Resources Control Board
4 set standards to protect beneficial uses. That's why
5 they are set.

6 If they set a standard that requires releases
7 to meet it, then I would think presumptively that is for
8 the benefit of the water users and would be necessary to
9 keep the water of a quality suitable for the beneficial
10 uses.

11 Q. Okay. You're familiar with the decision in
12 the Delta cases, as you've called it, which is that
13 Raccinelli's appellate decision?

14 A. I have read it.

15 Q. Doesn't it say that if the State Board says
16 you make these releases and enhance water quality for
17 someone else, that they could do so without there being an
18 obligation for payment?

19 MR. KLETZING: It also said they could
20 put an obligation for payment.

21 I really think --

22 MR. NOMEILLINI: I don't disagree with
23 you. I just want to see --

24 MR. KLETZING: I really think that's out
25 of line trying to ask him about the Raccinelli decision.

26 MR. NOMEILLINI: He mentioned the Delta

1 decision, I didn't.

2 MR. KLETZING: I don't care. I still
3 think it's out of line.

4 MR. NOMELLINI: He apparently utilizes
5 that in forming some of his opinions as to payment
6 obligation.

7 Okay. I agree it's unfair to argue law with
8 you at length but --

9 THE WITNESS: I enjoy it.

10 MR. NOMELLINI: Q. Okay. In terms of
11 overall accuracy of this endeavor in which you have been
12 brought into or in which you have been engaged, I guess,
13 in some fashion as a consultant, we talked about the
14 accuracy earlier of the storage measurements and those
15 things. We had plus or minus ten percent, I think.

16 Then we talked about pump flow measurements,
17 and we -- or diversions, and we know that those vary.
18 Some of them could vary more than that.

19 Then as we come on down into the Delta we get
20 into this consumptive use thing and somebody's prediction
21 of what the amount of water would be used by a crop in
22 the -- in July and August, and, in fact, conclude from
23 that that there was a channel depletion in July and
24 August because we know that we didn't measure, except for
25 maybe Byron-Bethany.

26 What do you think the overall accuracy of

1 this kind of approach is?

2 A. Probably somewhere between plus or minus
3 fifteen to twenty percent overall.

4 Q. So you would -- you've got to remember now
5 you also agreed that outflow was all charged to these
6 people rather than allocated. Do you still think fifteen
7 to twenty percent accuracy is --

8 A. That's my best judgment as of the moment.

9 Q. Okay. So fifteen or twenty percent accuracy
10 but assuming the assumptions are correct the way it's
11 done, huh?

12 A. See, all of this rests upon stream flow, and
13 the best stream gauging station, according to the USGS,
14 is plus or minus five percent, which is the best rating
15 that the USGS gives a stream gauging station.

16 And you're quite right when you get to
17 consumptive use. The inherent --

18 Q. How far off do you think an individual
19 evapotranspiration rate for a particular crop could be?

20 A. In any given month, probably plus or minus
21 fifteen percent.

22 Q. Fifteen?

23 A. Uh-huh (yes).

24 Q. How about fifty-seven, do you think that's
25 possible for something as simple as field corn in July?

26 A. Fifty-seven percent?

1 Q. Yeah.

2 A. I would think that if the estimate is
3 fifty-seven percent off --

4 Q. From somebody else's -- some other expert's
5 estimate.

6 A. Experts, if I may interject a somewhat
7 facetious comment, tend to disagree even as some other
8 professions do.

9 There is a great deal of data on field
10 experiment on, for instance, corn in the Delta.

11 I would think that consumptive use of crops
12 in the Delta should be -- estimates of that should be
13 within plus or minus fifteen percent.

14 Q. Yeah, I agree.

15 And if they weren't, something is pretty
16 wrong, huh?

17 A. I do not like to criticize others.

18 Q. Well, how about estimates of consumptive use --
19 of the unit values of consumptive use for urban areas; do
20 you think they could be off as much as a hundred percent?

21 A. Depending on how they are applied.

22 If you are using the consumptive use values
23 for single family residences applied to estates, yes, it
24 could be.

25 Q. So that wouldn't surprise you?

26 A. That would not surprise me.

1 Q. But the field corn kind of bothers you?

2 A. Yes.

3 Q. Okay. You might, in your spare time, compare
4 Table 11 from Bulletin 168 with Mr. Pruitt's
5 determination. We've gone through it at length in other
6 depositions, but I only raise that so that your estimates
7 of accuracy, when we ask you again later at trial, will
8 take into consideration some of these fine little things
9 that we found out during the course of depositions.

10 MR. NOME LLINI: All right. I have no
11 further questions.

12 I thank you, Mr. Banks, for your patience.

13 MR. KLETZING: I have a couple.

14

15

EXAMINATION

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A. If the major requirement for the releases is
for another purpose, I would say the agricultural benefit
is incidental.

1 Q. What's the major requirement?

2 A. Under non-emergency conditions, the
3 requirements which the board has standard for fish are
4 the -- are what controls the releases that are necessary
5 and the outflow from the Delta that must be maintained.

6 Now, power -- the releases from power under
7 certain circumstances are not -- would not be sufficient
8 to meet the other quality demands.

9 Q. Suppose the requirements for fishery and
10 agriculture are the same -- require the same outflow --

11 A. Well, a logical, rational approach would be
12 to quantify each.

13 Q. But if the fishery is ten second feet more,
14 then there would be no charge to agriculture?

15 A. Well, I think ten second feet is --

16 Q. Well, how much more would the fishery have to
17 be?

18 A. I'd say two to five hundred at least.

19 Q. And then there wouldn't be any charge for
20 agriculture, in your opinion?

21 A. There would be a question as to the equity of
22 charging agriculture under those circumstances, in my
23 opinion.

24 Q. Okay. Considering that the Delta is
25 connected with the bay, what was the purpose of
26 calculating the quantity of project water used by Delta

1 water users?

2 A. To have a basis for compensation.

3 Q. Well, how?

4 Your answers to opposing counsel's question
5 made it a little unclear.

6 A. I'm not sure, Russ, exactly what your
7 question is.

8 Q. Okay. Well, these calculations on the
9 forty-five tables determine the natural inflow into the
10 Delta and the riparian use.

11 A. That's right.

12 Q. And how does that relate to compensation?

13 A. The Delta water users use more water than was
14 available to them from the residual so-called natural
15 flow reaching the Delta. So that the difference between
16 what was actually used and the amount available to them
17 on the residual amount of natural flow available in the
18 Delta becomes the basis for calculating -- estimating
19 compensation.

20 Q. For the quantity of water?

21 A. Yes. For the amount of project water which
22 was used.

23 Q. All right. But you were asked questions
24 about whether it wouldn't have been there, anyway, since
25 it was connected to the bay, and, of course, it stayed
26 connected to the bay in 1977.

1 Does that affect that conclusion?

2 A. No, because our studies show that the water
3 would have been entirely unusable --

4 Q. Well, just forgetting quality.

5 It actually was useable in 1977 --

6 A. I said it would have been unusable absent the
7 releases of project water.

8 Q. But aside from quality considerations, would
9 the quantity that they used beyond their natural flow be
10 compensable considering that the Delta is connected to
11 the bay?

12 A. I'm not exactly sure what you mean.

13 If, without the releases from the two
14 projects to the Delta they could have irrigated and made
15 their crops, then there is a question to whether that is
16 compensable or not, whether there would have been any
17 benefit due to the release.

18 Q. "By irrigated and made their crop," now are
19 you talking about applied the quantity or adequate
20 quality?

21 A. I'm talking about applying wet water as it
22 would have occurred in the channels.

23 MR. BABER: Which is quantity, right?

24 MR. NOME LLINI: No. That's quality.

25 THE WITNESS: No. It's a combination.

26 MR. NOME LLINI: Well, wet water -- well,

1 it's his testimony. Well, water is --

2 MR. BABER: He said it was a
3 combination.

4 MR. NOME LLINI: -- is water, just
5 molecules of water, ignoring the quality.

6 MR. KLETZING: Okay. I don't have
7 anything else.

8 MR. BABER: I understood you to say,
9 Harvey, that it was a combination, right?

10 THE WITNESS: Well, frankly, I don't see
11 how you can divorce the quantity from the quality aspect,
12 frankly.

13 MR. BABER: Right.

14 MR. NOME LLINI: I want to ask about
15 that.

16 MR. KLETZING: I think we could -- well,
17 all right.

18 MR. NOME LLINI: Well, we might as well
19 finish up. I only have a few more minutes on the same
20 question.

21

22 FURTHER EXAMINATION

23 BY MR. NOME LLINI: Q. You agree, don't
24 you, that in 1977, absent the flow of the State Water
25 Project into the Delta, that there would have been ample
26 wet water in the channels of the Delta?

1 A. There would have been water which could have
2 been diverted.

3 Q. Okay. And that would also have occurred
4 absent both the State Project water releases and the
5 Federal Central Valley Project water releases?

6 A. That is correct.

7 Q. So we've got wet water in the channels
8 without a quality aspect to it.

9 So ignoring quality the farmers in the Delta
10 in 1977, could have diverted water onto their lands in
11 the same quantity that they diverted in 1977?

12 A. If the water was there available for
13 diversion.

14 Q. Okay. So they could have diverted it?

15 A. (Affirmative nod)

16 Q. The only thing that would have prohibited
17 them from diverting that water in the physical aspect
18 would have been its suitability for their particular use,
19 right?

20 A. That's correct.

21 Q. Okay. So if it would have been unusable in
22 quality, then as a practical matter they couldn't have
23 made the diversion?

24 A. They would not have made them.

25 Q. They would not have made them as a practical
26 matter. Okay.

1 So if it was a useable quality, then quantity
2 doesn't even enter the picture? In fact, compensation
3 doesn't even enter the picture?

4 A. If it would have been useable, a useable
5 supply of water for the farmers' needs, absent the
6 operations of the project, both during July and August,
7 1977, and the prior months, if it would have been useable
8 for the farmers' needs without those projects, been no
9 releases from Shasta, been no releases from Oroville,
10 none from Folsom, then I would see no basis for claiming
11 compensation.

12 Q. Okay. All right. So then if we make the
13 assumption that the water was unusable in quality --

14 A. Or would have been.

15 Q. -- would have been unusable absent, in this
16 case we are talking about the State Water Project, right,
17 absent the State Water Project, the water quality would
18 have been unusable, then quantity comes into play in
19 terms of a method of calculation of the damage?

20 A. That is right.

21 Q. It is really not a quantity factor because
22 there is water, lots of water in the channels, but you do
23 that to calculate --

24 A. Well, quantity is the basis upon which the
25 State is claiming compensation.

26 Q. Okay. It's a method of approaching the

1 compensation question then?

2 A. Yes.

3 Q. Okay.

4 In a couple of your comments there you threw
5 in both the State and the Federal Project together, and
6 after repeating that if there was no water from Shasta
7 and no water from Folsom you said, well, and its useable
8 quality would have been useable quality, then there
9 shouldn't be any compensation.

10 Focusing in on this case where we are talking
11 about the State making a claim for compensation, if
12 without the State Water Project contribution to the Delta
13 the water quality would have been useable for all of the
14 uses by these farmers, do you think there is any
15 obligation to compensate the State?

16 A. Since the effort of maintaining quality in
17 the Delta is a joint -- and has been for a long time -- a
18 joint effort between the United States and the State, and
19 was in 1977, July and August and the prior months, then I
20 think there is a basis for the State claiming
21 compensation.

22 Q. Without the Federal Government involved in
23 the action?

24 A. The Federal Government was involved in the
25 action.

26 Q. In this action?

1 A. Not in -- oh, I'm sorry, I misunderstood your
2 use of the term action.

3 No, the Federal Government was not involved
4 in this litigation, as far as I know.

5 Q. Does the State have the right to bring an
6 action on behalf of itself and the Federal Government?

7 MR. KLETZING: That's a legal question.
8 You really have been over there pretty much.

9 MR. NOMELLINI: Not this part. This is
10 new ground.

11 MR. KLETZING: Okay. Anyway, that's a
12 state question.

13 MR. NOMELLINI: This is State and
14 Federal -- hey, as a Director he negotiated the
15 agreements.

16 MR. KLETZING: That's a legal question.
17 That's objectionable.

18 MR. NOMELLINI: You think that's a legal
19 question?

20 MR. KLETZING: It certainly is in --

21 MR. NOMELLINI: Let me ask it in a way
22 that it's not a legal question.

23 Q. Do you know of any agreement between the
24 State of California and the Federal Government with
25 regard to operation of the State Water Project and the
26 Central Valley Project that authorizes the State to bring

1 an action for and on behalf of the Federal Government?

2 A. No, I know of no such agreement.

3 MR. KLETZING: He's never done so.

4 MR. NOMELELLINI: Q. Do you know of any
5 such agreement that allows the State to bring an action
6 in its own right for and on behalf of a jointly conveyed
7 benefit of the two projects?

8 A. No. I know of no agreement which treats that
9 particular subject. No.

10 Q. Okay. Now, you had concluded in your own
11 mind that water quality in the Delta in various locations
12 would have been unusable absent the State Water Project
13 and Federal Water Project operations.

14 What kind of water quality, in your opinion,
15 is unusable?

16 A. It depends on the crop and the type of soil
17 and the stage in the growth of the plants.

18 Q. If I told you all those things, would you
19 then be able to tell me what water quality was unusable?

20 A. I think I could find out.

21 Q. How about field corn in July at the tasseling
22 stage on peat soil?

23 A. I think that is answered by the report of the
24 corn investigation, which I do not have here. There is a
25 report which tends to answer that.

26 Q. But do you know what that water quality is?

1 A. I remember a figure of three and a half
2 ^{millimhos}~~millimose~~ E C.

3 Q. You think three and a half ^{millimhos}~~millimose~~ is
4 unusable?

5 A. According to, as I understand and read the
6 results of the corn investigation, it would have impaired
7 the yield.

8 Q. Does impairment of yield make it unusable?

9 MR. KLETZING: Dan, let's set a 4:45
10 deadline, huh?

11 MR. NOMELLINI: Okay. That gives me
12 five more minutes.

13 Q. Does impairment of yield, in your opinion,
14 constitute water quality as being unusable?

15 A. It's not unusable. However, it does have an
16 economic detriment in the fact that the yield is not as
17 great.

18 Q. I would agree.

19 But I mean at what point in terms of
20 detriment does the water quality become unusable?

21 A. That depends on the extent of the reduction
22 in yield that the grower is willing to accept.

23 Q. So it's really a judgmental call by that
24 particular grower?

25 A. To a certain extent by whoever is
26 responsible.

1 MR. NOME LLINI: Okay. I have nothing
2 further.

3 MR. BABER: Nothing.

4 MR. WHITRIDGE: All done.

5

6 (Whereupon the deposition recessed at had 4:42 p.m.)

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Signature of Witness

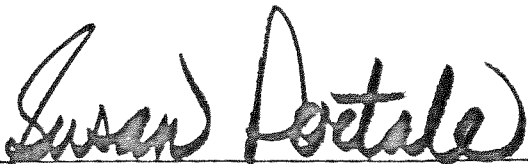
Subscribed and sworn to before me
this _____ day of _____ 1986.

Notary Public in and for the County
of San Joaquin, State of California

1 STATE OF CALIFORNIA)
2 COUNTY OF SAN JOAQUIN) ss.

3
4 I, SUSAN PORTALE, Certified Shorthand
5 Reporter of the State of California, do hereby certify:

6 That on the 23th day of September
7 the hour of 9:10 a.m., the witness herein named,
8 HARVEY BANKS, appeared before me as a Notary Public for the
9 purpose of giving his deposition; that after the witness
10 was duly sworn by me in all respects as required by law, I took
11 down in shorthand notes the said witness' testimony and the
12 proceedings had at the time of the giving of such testimony;
13 that I thereafter transcribed my shorthand notes of such
14 testimony by computer-aided transcription, the above and
15 foregoing being a full, true and correct transcription
16 thereof, and a full, true and correct transcript of all
17 proceedings had and testimony given.

18
19 
20

21 Notary Public in and for the County
of San Joaquin, State of California

22 * QUALITY COMPUTERIZED TRANSCRIPTION *
* -by- *
23 * PORTALE & ASSOCIATES DEPOSITION REPORTERS *
* 211 East Weber Avenue *
24 * Stockton, California 95202 *
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25 * SUSAN PORTALE, CSR No. 4095 *
26

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November 14, 1986

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WHS
~~CONFIDENTIAL~~

In Re: State of California vs. Contra Costa County
Water Agency, et al.

Deposition of: HARVEY BANKS.

Dear Mr. Nomellini:

Please be advised that the deponent in the
above-entitled case has corrected the deposition as
per the attached copies.

Very truly yours,

Susan Portale
Susan Portale
Deposition Officer

Encl.

cc: Russell Kletzing, Esq.
David Whitridge, Esq.
Cressey Nakagawa, Esq.
William H. Baber, Esq.

DATE REC. <u>11/18/86</u>	DATE BD. _____
FILE # _____	
DR. / _____	C O D E

STATE OF CALIFORNIA VS. CONTRA COSTA COUNTY WATER AGENCY, et al.

Superior Court of California, County of San Joaquin
No. 282495

CORRECTIONS TO TRANSCRIPTION OF DEPOSITION OF

HARVEY O. BANKS

Taken 23 September 1986 at Stockton, California

<u>Page</u>	<u>Line Number</u>	<u>Correction</u>	<u>Reason</u>
6	6	Strike "did" and insert "was".	Proper verb.
7	6	Strike "and" and insert a comma after history.	See next correction for line 7.
7	7	After the word "facilities" insert "and operations."	To complete scope of evidence and testimony to be presented.
11	1	Strike "Leeds Hill-Herkenhoff" and insert "Leeds, Hill & Jewett".	Correct name.
17	22&23	Strike the words "within the conclusion that the summary is only".	Remove redundant wording.
20	5	Strike "79,600" and insert "258,900"	Correct value.
20	7	Strike "23,200" and insert "208,400"	Correct value.
23	7	After the word "diversions" insert "and measured return flows".	To complete explanation of methodology.
27	4	After the word "reservoir" add "and the State Water Project Reservoirs upstream"	To make explanation complete.
27	17	Strike "of" and insert "-".	Correct terminology.
28	18	Strike "particularly" and insert "partially".	Correct word.

done to here

28	21	Before the word "pumps" insert the word "the", strike the "s" on "pumps", insert after the word "pump", "characteristics"; strike the word "per"; after the word "pumping", strike the "period" and insert "records".	To complete explanation.
29	5	Strike "rate" and insert "rating".	Proper word.
33	13	Strike the words "underground water".	Redundant words.
41	4	Strike the words "from an exact to" and insert "for".	Clarification of wording.
42	9	Strike "to the" and insert "as".	Clarification of wording.
43	11	Strike the word "quantity".	Redundant word.
54	6	Strike the word "actual" and insert "natural".	Correct word.
56	6	Strike "in" and insert "and".	Correct word.
56	23&24	Strike the sentence and insert new sentence, "There was some outflow charged to project water."	Correction.
57	3	Strike "certain of".	Correction.
62	12	Strike "their" and insert "Henderson/Pruitt".	Clarification.
63	7	After the word "testimony" insert "that".	Clarification.
71	20	Strike "Fisher" and insert "Fischer".	Correct name.
72	10	Strike "Fisher" and insert "Fischer".	Correct name.
81	24&25	Strike "one hundred thirty five thousand five hundred" and insert "258,900".	Correction.
82	1&2	Strike "one hundred thirty five thousand five hundred" and insert "258,900".	Correction.
82	3	Strike "61,500" and insert "208,400".	Correct value.

82	13	After the period insert "accept as stated in answer to previous question".	Clarify answer.
82	16	Strike the answer.	Incorrect.
82	18	Strike "79,600" and "22,200" and insert "258,900" and "208,400".	Correct values.
82	22/23	Strike the answer and insert "answered in previous question".	Corrected answer.
83	5&6	Strike the words "a hundred and thirty five thousand" and "61,200" and insert "258,900" and "208,400".	Corrected answer.
83	11	Strike the period and insert "plus exports".	Complete answer.
83	12/13	Strike "one thirty five five hundred" and "61,200" and insert "258,900" and 208,400.	Corrected answer.
109	21	Strike "increase" and insert "cause"; Strike "up" and insert "to be upstream in".	Clarification.
112	24	After "doubt" insert "do not provide".	Supply missing words.
116	11	Strike "various".	Superfluous word.
117	9	After "investment" insert "with interest".	Complete explanation.
123	2	Strike "only".	Unnecessary word.
123	10	After "disruption" strike the period and insert "into account".	To complete sentence.
124	20&21	Strike "a hundred and ten thousand" and insert "78,824".	Correct answer.
125	3	Strike "a hundred and ten thousand" and insert "78,824".	Correct answer.
125	15	Strike "110,000" and insert "78,824".	Correct answer.
125	17	Strike "110,000" and insert "78,824".	Correct answer.
125	20	Strike "110,000" and insert "78,824".	Correct answer.

130	26	Strike "patomas" and insert "Natomas".	Correct word.
133	11	Strike "May" and insert "June".	Correction.
133	12	Strike "was" and insert "would have been".	To correct wording.
133	13	Strike "62,617" and insert "32,827".	Correct value.
133	14	Strike "46,141" and insert "46,114".	Correct value.
133	14&15	Strike "two thousand".	Superfluous words.
138	19	Strike "24,898" and insert "24,890".	Correct value.
138	24	Strike "some" and insert "sum".	Correct word.
143	14	Strike "graft" and insert "draft".	Correct word.
143	15	Strike "206,on81" and insert "206,081".	Correct value.
144	19	Strike "119,673" and insert "119,637".	Correct value.
145	10	Strike "No".	Incorrect answer.
154	4	Strike "part to" and insert "or partly west of"; strike "western" and insert "98".	Correct answer.
154	17	Strike "intrical" and insert "integral".	Correct word.
156	9	Strike "Old Sac" and insert "old Sack Dam".	To correct name.
158	1	Strike "tribidity (phonetic)" and insert "turbidity".	Correct word.
158	3	Strike "to divert it".	Superfluous wording.
159	5	Strike "Fisher" and insert "Fischer".	Correct name.
163	9	Strike "anadrom" and insert "anadromas".	Correct word.
164	11	Strike "Emeton" and insert "Emmaton".	Correct name.
166	4	Strike "Emeton" and insert "Emmaton".	Correct name.
166	12	Strike "Emeton" and insert "Emmaton".	Correct name.

197 2 Strike "millimose" and insert "millimhos". Correct word.

197 3 Strike "millimose" and insert "millimhos". Correct word.

Note: Throughout the transcript the word "affect" has been used in numerous places when the word should have been "effect". See for instance page 26 lines 21 and 25.

HOB:st:26:02

A handwritten signature in cursive script, appearing to read "Harvey O. Banks", written over a horizontal line.

Harvey O. Banks, President
Harvey O. Banks, Consulting Engineer, Inc.

(43)

DATE REC. 12-8-86 DATE 12/9/86
BD

SUPERIOR COURT OF THE STATE OF CALIFORNIA
FOR THE CITY AND COUNTY OF SAN FRANCISCO

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STATE OF CALIFORNIA)
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 vs.)
)
 CONTRA COSTA COUNTY WATER AGENCY,)
 et al.,)
 Defendants)
 -----)

No. 765609

WAB

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DEPOSITION OF HARVEY O. BANKS (Continued)
Monday, November 3, 1986, 9:40 a.m.

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SUPERIOR COURT OF THE STATE OF CALIFORNIA
FOR THE CITY AND COUNTY OF SAN FRANCISCO

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STATE OF CALIFORNIA)	
)	
Plaintiff,)	
vs.)	No. 765609
)	
CONTRA COSTA COUNTY WATER AGENCY,)	
et al.,)	
Defendants)	
-----)	

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DEPOSITION OF HARVEY O. BANKS, continued, taken by the defendants in the offices of the California Department of Water Resources, 1416 - 9th Street, Sacramento, California, 95814, commencing at 9:40 a.m., on November 3, 1986, before Alice Book, Certified Shorthand Reporter.

MR. KLETZING: We will continue the stipulations we had at the beginning with the exception that it is stipulated that Alice Book be given the same powers and authority as a notary.

---o0o---

STIPULATIONS

It is hereby stipulated by and between Plaintiff and Defendants, by counsel, that the witness be examined pursuant to and by virtue of the provisions of Sections 2016, 2018, 2019, and 2021 of the Code of Civil Procedure of the State of California, subject to all legal objections being reserved until the time of trial, save and except objections as to the form of the question.

1 That all objections as to the qualifications of
2 the Notary and any and all irregularities in the manner of
3 administering the oath are waived; that the reporter has
4 the rights of a notary.

5 That if the witness should be instructed not to
6 answer questions propounded by counsel, it shall be deemed
7 that the Notary Public has instructed the witness to
8 answer, and that the witness still refused to do so on the
9 instruction of counsel.

10 That deposition exhibits will be appended to the
11 depositions and that true copies may be so appended with
12 full force and effect as if they were the originals
13 subject to all rulings of the court on admissibility.

14 That the deposition shall be read, corrected and
15 signed prior to the time of trial, and if not, it may be
16 used with the same force and effect as though it were read
17 and signed pursuant to the Code of Civil Procedure Section
18 2019(e) which is hereby waived. Said deposition may be
19 signed before any Notary Public and all objections as to
20 the qualifications of any such Notary are waived.

21 That this stipulation is deemed to be the written
22 stipulation required by Section 2019(a)(2) of the Code of
23 Civil Procedure.

24 ---o0o---

25 HARVEY O. BANKS,

26 having been sworn, testified as follows:

E X A M I N A T I O N

1
2 BY MR. BABER:

3 Q This is a continuation of Mr. Banks' deposition of
4 September 23, 1986, which is about a month and a half ago.

5 A Not quite a month and a half, but almost.

6 Q At that time we were looking at a pretty quick
7 trial date for this case. Since we deposed you on the 23rd
8 of September, the trial was continued from the 14th of
9 October to start on the 15th of December, and one of the
10 areas that I am interested in talking to you about is at
11 your deposition on the 23rd of September you said that you
12 were going to do some additional studies and come up with
13 some conclusions on whether or not the qualify of the
14 water used by certain area defendants in this case, and
15 particularly the Southwestern Delta area, and you didn't
16 say uplands or lowlands, but my client, Byron-Bethany, is
17 in the uplands.

18 You were going to make some additional studies to
19 see whether or not the water by Byron-Bethany, diverted in
20 July and August of '77 would have been of a usable quality
21 without any input from the State Water Project facilities,
22 and that's what I'm primarily interested in.

23 Do you have a copy of your previous deposition, by
24 any chance?

25 A Yes, I do.

26 Q Would you turn to page 171, lines 13 to 17. You

1 reaffirm that testimony; isn't that correct, there is no
2 problem with the quantity of water which was diverted by
3 Byron-Bethany in July and August of '77 regardless of
4 whether or not the State Water Project furnished any water
5 in those months?

6 A From the standpoint of wet water, that is merely
7 water consisting of molecules of water plus whatever other
8 constituents happen to be in there; yes, there was water
9 there.

10 Q Okay. Now from the standpoint of quality, and I
11 get into that a little bit with you on page 171 of the
12 transcript of that deposition, and then you see, carrying
13 over to page 172, lines 1 to 11 -- let's say lines 1
14 through 21 --

15 A May I interject?

16 Q Sure.

17 A That I have not had an opportunity as yet to
18 discuss this with Dr. Henderson, I regret to say.

19 Q Okay. But going a little further on in that
20 deposition, outside of the point where you say you are
21 going to discuss it with Dr. Henderson, let's say page
22 172, lines 12 to 21, do you recall those questions and
23 answers?

24 A Yes, I do.

25 Q Okay. You have no opinion as to the water quality
26 diverted by Byron-Bethany in July and August of '77?

1 A The only data that I have with respect to your
2 question, if I understand it correctly, and as I
3 understand your question, it is, absent the projects, that
4 is the storage of --

5 Q Okay, when you say "the project," I want to
6 confine it to the one project, the State Water Project. I
7 would like you to separate out the Central Valley Project.
8 Let's leave Shasta Dam and all the federal projects out of
9 this. All I'm interested in is the State Water Project.

10 A Well, may I go ahead?

11 Q Sure.

12 A In view of the fact that the coordinated operation
13 agreement now has been approved by the Congress and will
14 be signed, so I understand, by the State and by the
15 Bureau, or the representative of the Secretary of Interior
16 later this month, I do not see just how you can separate
17 out now when it will be a matter in effect of law that the
18 State and the Bureau operate together in a coordinated
19 fashion to meet the water quality objectives as
20 established by the State Water Resources Control Board in
21 accordance with their water quality control plan, as I
22 say, as it may evolve out of the hearings next year.

23 Q And they will continue on for another three or
24 four years, I think, probably?

25 A At least.

26 Q That I am interested in, though, Harvey, and the

1 reason I want you to separate the State Water Project from
2 the Central Valley Project is this lawsuit.

3 A I understand.

4 Q I understand there's a COA and it is going through
5 the political mechanisms right now, and may be approved
6 now, and when they have a contract.

7 What I am interested in is this particular lawsuit
8 because the Central Valley Project or the federal
9 government is not a party to this lawsuit, and I believe
10 when we deposed you in September, you agreed that the
11 Central Valley Project is not a party to this lawsuit, and
12 the State Water Project was simply trying to collect its
13 benefits, and the reason --

14 MR. KLETZING: I don't think he agreed to that at
15 all.

16 MR. BABER: I think he did.

17 MR. KLETZING: He agreed it is not a part, but not
18 that the State Water Project was trying to collect Central
19 Valley Project benefits. That's not a correct
20 characterization of anything I read.

21 MR. NOMELLINI: You mischaracterized Mr. Baber's
22 statement. He is talking about state benefits, the State
23 trying to collect for state benefits. It will sort itself
24 out.

25 A May I continue?

26 MR. BABER: Q Sure.

1 A As I understand it, the procedure has been and the
2 whole study has proceeded on the assumption of the total
3 benefits, whatever those may be, or whatever obligation
4 there may be, to provide salinity control, that the State
5 was only claiming 25 percent of that obligation, and the
6 calculations have all been based upon the fact of the
7 total obligation or benefits, whichever term you prefer,
8 of that total the State was only claiming credit for 25
9 percent.

10 Q Let me go into that for a minute since you brought
11 that up. Let me tell you that my client, Byron-Bethany,
12 diverted 17,256 acre-feet of water in July and August of
13 1977.

14 Now, how much of that water would you say -- well,
15 strike that. How much benefit would the State be entitled
16 to from the diversion by Byron-Bethany of 17,256 acre-feet
17 of water in July and August of '77?

18 A Well, in the first place, assuming we proceed with
19 that, it will be necessary to allocate to Byron-Bethany
20 whatever their appropriative right may be from the water
21 supply that reaches Byron-Bethany intake that originates
22 in water other than that placed into the Delta from
23 storage in total by the Central Valley Project and the
24 State Water Project, and ultimately whatever the portion
25 may be of water placed in the Delta by the State Water
26 Project.

1 Q Okay. What you are talking about is going through
2 all the numbers that you went through at the last
3 deposition; correct?

4 A All of the calculations have been based upon
5 satisfaction of the prior rights as first call on the
6 other water, or natural flow if you wish to use that term.

7 Q Okay. And notwithstanding your opinion that the
8 quantity of water would have been available for
9 Byron-Bethany's diversion regardless of the State Water
10 Project facilities; right?

11 A Yes. I believe that there was so much natural flow
12 in July and August that reached the Delta and was to be
13 split up among those having prior rights to that water. In
14 addition to that, there was State Water Project water plus
15 Central Valley Project water in total placed in the Delta
16 and, in my opinion, some of that water was diverted by the
17 various Delta water users. I cannot tell you exactly how
18 much of that 17,000 acre-feet that you quoted originated
19 or was involved with the diversion of water that had been
20 placed in the Delta.

21 Q Okay.

22 A At this point in time, I offer no opinion as to
23 what proportion of that 17,000 acre-feet or thereabouts
24 that was due Byron-Bethany under their prior rights to
25 that water from the natural flow. I do not know what that
26 is at this point in time.

1 Q Okay. Of the 17,256 acre-feet they diverted in
2 '77, July and August, I think you commented at your last
3 deposition that the central Valley Project considers it a
4 non-reimbursable expense. Do you remember that? In other
5 words, the 75 percent released by the Central Valley
6 Project is a non-reimbursable cost.

7 MR. KLETZING: I don't think he said that either.

8 A If I said that, I was in error.

9 MR. BABER: Q It is a reimbursable cost?

10 A As it turns out, as I understand it, under the
11 COA, it will be reimbursable. Whether or not it was at the
12 time, in July and August of '77, is purely a legal
13 question and I am not competent to answer that.

14 EX A M I N A T I O N

15 BY MR. NOME LLINI:

16 Q Assuming it was non-reimbursable in July and August
17 of 1977, the federal water in the Delta, to the extent it
18 benefited Delta users, how do you segregate out the
19 State's share? They want 25 percent of a benefit that's
20 non-reimbursable.

21 A As I recall, under the prior annual agreements,
22 the Bureau and the State had agreed to provide whatever
23 degree of salinity control was, in fact, provided, and
24 that in the accounting for that amount of water it was
25 agreed between the State and the Bureau that 25 percent
26 was State water and 75 percent was federal water.

1 And although I have not seen the bill, it is my
2 understanding that under the approved COA that split of
3 water and the accounting for the amount of water for that
4 is part now of the COA, but I must say I have not yet had
5 an opportunity to read the bill.

6 Q Going back to 1977 in July and August, you are
7 saying, I gather, that the coordinated operating agreement
8 in effect at that time said that the burden for
9 maintaining Delta water quality was 25 percent State, 75
10 percent federal. Is that what you are saying?

11 A That is what my understanding is.

12 Q Okay. Have you reviewed the agreement?

13 A No, I have not.

14 Q Have you ever reviewed that agreement?

15 A I am sorry to say I have not.

16 Q If I told you that the agreement provided that the
17 State was entitled to 25 percent of the surplus water in
18 the Delta and the federal government was entitled to 75
19 percent of the surplus water in the Delta, do you think
20 that's consistent with your understanding of the
21 agreement?

22 MR. KLETZING: It's incorrect.

23 MR. NOMELELLINI: Well, I am asking him.

24 A Mr. Nomellini, I must ask for clarification as to
25 what you meant by the term "entitled". That is not what I
26 said. I did not use the term "entitled," and in order to

1 answer your question I would respectfully ask
2 clarification as to your meaning of the word "entitled."

3 MR. NOMELLINI: Q In your understanding of the
4 coordinated operating agreement in effect in 1977, did the
5 State and the federal government reach any agreement as to
6 their respective rights as between themselves to take
7 surplus water from the Delta?

8 A May I ask a further clarification?

9 Q Sure.

10 A You are using the term "entitlement."

11 Q I didn't use the term "entitlement" that time.

12 A You are also using the term "right."

13 Q I am talking as between those two, was there any
14 agreement as to the share of surplus water from the Delta?

15 A I do not believe that the term "share" was used. I
16 believe the intent of all these agreements has been a
17 share of the responsibility to provide salinity control.

18 Q Do you believe that the federal government was
19 committed to maintaining Delta water quality in July and
20 August of 1977?

21 A I don't believe, based upon my understanding and
22 recollection, I don't believe that up until the COA, or
23 coordinated operation agreement, had the status of
24 approval by Congress, I don't believe there has ever been
25 a commitment to provide salinity control or a part thereof
26 by the United States irrespective of any conditions.

1 In the dealings that I have had with the Bureau on
2 behalf of some of my clients, the Bureau has always up
3 until very recently, the Bureau has always maintained that
4 they had no legal obligation to provide salinity control,
5 but their position has always been they will provide their
6 share of the water for salinity control so long as it does
7 not interfere with the other obligations of the Central
8 Valley Project.

9 Now, that is based on my dealings with the Bureau
10 on behalf of the Contra Costa Water District.

11 Q So, your understanding was that it was a
12 commitment -- well, you don't like the term "commitment."
13 It was an agreement to provide water so long as it didn't
14 interfere with their project operation?

15 A That has been my understanding, as I said, in my
16 work with the Bureau on behalf of Contra Costa Water
17 District.

18 Q Assuming that the federal government did provide
19 75 percent of the water in July and August of 1977, and
20 assuming that it was a non-reimbursable provision, how do
21 you segregate out the benefit between the State and the
22 federal government?

23 A By virtue of their agreed-upon sharing of the
24 responsibility for salinity control that was provided and
25 the project waters that were provided to achieve that
26 degree of salinity control called for by the State Water

1 Resources Control Board Water Quality Control Plan.

2 Q Is the commitment for this 75/25 a daily
3 commitment?

4 A As I recall and understand, there was an
5 accounting each year of it. I don't believe it was a daily
6 accounting.

7 Q You think it was a yearly accounting?

8 A Over the year there was a certain amount of water
9 which was estimated to have been provided jointly by the
10 projects.

11 Q Now you indicated that you have not had a chance
12 to talk to Henderson. Who is Henderson? Did he have a
13 heart attack? Somebody told me he suffered a heart attack.

14 MR. KLETZING: He had a small stroke, but he is in
15 Sri Lanka.

16 MR. NOMEILLINI: Q Now, you haven't done any
17 further studies since our last deposition with you?

18 A That is correct.

19 Q Are you planning to do any further studies?

20 A I would have to say in view of the fact that the
21 COA now has the status of a legal document on behalf of
22 the federal government; no, I see no reason to do it.

23 Q What difference does that make for this lawsuit?

24 A It doesn't, but it also is an agreed-upon split of
25 the sharing of the responsibility for salinity control now
26 written, as I understand into the federal statutes. It's

1 always been an obligation of the State Water Project under
2 the Delta Protection Act, that there be provided salinity
3 control by the State Water Project in cooperation with the
4 United States. And I believe that's found in Section 12200
5 of the Water code.

6 Q I am going to ask it again, so what has that got
7 to do with July and August of 1977?

8 A According to all of our calculations project
9 water, and I am using "project" in the broad term, there
10 was provided salinity control through the release of
11 stored water, or water from storage to use Mr.
12 Hildebrand's terminology, there was water released from
13 storage to provide a certain degree of salinity control.

14 E X A M I N A T I O N

15 BY MR. BABER:

16 Q You mean from both projects?

17 A From both projects, and we have taken the
18 position, if I may use that term, based upon custom and
19 now law, that 25 percent of that is the legal
20 responsibility of the State Water Project.

21 Q So then, mechanically, as a practically matter,
22 you make no attempt to differentiate between the State
23 Water Project and the Central Valley Project water
24 released in July and August of 1977?

25 A We know how much was released from storage from
26 Oroville Reservoir through the hydrologic study. There was

1 a total amount that flowed out of project water for the
2 purposes of salinity control, and as I said, we have taken
3 that position that 25 percent of that water was to be
4 provided by the State Water Project.

5 Q Regardless of what you are claiming in this
6 lawsuit?

7 A As I understand it, we have used that value of 25
8 percent of the total responsibility to be provided by the
9 State Water Project.

10 E X A M I N A T I O N

11 BY MR. NOMELLINI:

12 Q I want you to answer the question, but if you want
13 to state a view, that's fine.

14 A Well, my view is that it isn't a question so much
15 of entitlement as it was that there was a definite
16 responsibility for the State Water Project to provide
17 water for salinity control, and we have by virtue of
18 custom and now law, used the fact that of the total amount
19 of water for salinity control, 25 percent was the
20 responsibility of the State Water Project.

21 Q Did the State provide 25 percent of the water in
22 July and August of 1977 for salinity control?

23 A I cannot say whether that is the actual number of
24 acre-feet provided because it was a coordinated operation,
25 a joint operation.

26 Q Well, you said before that the sharing was not a

1 daily type of sharing. You said it was an annual
2 accounting.

3 A It's an annual accounting based upon the amount
4 provided, 25 percent of that was allocated to the State
5 Water Project.

6 EXAMINATION

7 BY MR. BABER:

8 Q Let me just pick up for a minute. Harvey, in your
9 deposition on page 172, lines 12 to 22, you say at lines
10 19 to 21 that the Southwest Delta -- you don't say
11 specifically Southwest, but you are referring to that, I
12 believe, is an area which has significant differences from
13 the rest to warrant a special opinion with respect to that
14 area. Do you still maintain that?

15 A It has, I believe, certain distinct character-
16 istics, for instance, an appropriative right.

17 Q Well, I understand your testimony to mean not in
18 the area of water rights paper, but in the area of areas,
19 geographic area differences.

20 A Well, much of it is in the Delta highlands, yes,
21 or the high land.

22 Q Do you have any, can you tell me now, does it
23 still warrant a special opinion or do we fall into the lot
24 with everybody else?

25 A Well, permit me to say that since you have raised
26 the question, we will have to examine that. I am sorry to

1 say, I have not had an opportunity to follow up further on
2 that to this time.

3 Q Would you be able to examine it at any time prior
4 to the trial of this case?

5 A Permit me to say what may seem to be a facetious
6 remark, knowing you are going to query, yes.

7 Q When do you think --

8 A I'll mark that carefully.

9 Q Thank you. Do you think you would have any opinion
10 down within a couple of weeks prior to trial?

11 A I believe so, yes.

12 MR. BABER: Okay. Russ, can we make provision to
13 talk to Harvey again, you know, like December 1 or 2?

14 MR. KLETZING: What is the question?

15 MR. BABER: He may have a special opinion and, in
16 fact, he will have a special opinion regarding the
17 Southwest Delta geographical area, as I understand it.

18 A Well, what I intended to say, and permit me if I
19 may --

20 MR. BABER: Sure.

21 MR. BABER: Q Was in view of the questions that
22 have been raised that I will make a study, specific study
23 of that to see if it does justify any different treatment
24 than anybody else.

25 Q Okay. Now you bring that up, let's go into the
26 treatment, what kind of treatment would we be getting?

1 A As fair a treatment as I can possibly give as a
2 professional expert witness.

3 Q Okay. And the treatment would essentially be a
4 charge for water quality delivered or improved, however
5 you look at it each year; is that correct?

6 A May I ask for clarification? Do you mean you are
7 asking for an analysis over a long period of time or just
8 July and August?

9 Q July and August of '77. Let me get back into this
10 area of O'Leary's engineering opinion. Between the time of
11 your deposition on the 23rd of September and now, have you
12 reached any other conclusions with regard to that opinion?

13 A No.

14 Q The testimony you gave on the 23rd of September is
15 still the same?

16 A On the basis of what I know now, yes.

17 Q All right. Let me get into the area of maybe
18 benefits and detriments for a minute. On the 23rd of
19 September you testified that you strongly believe that all
20 users of -- see if I have this right -- all users of water
21 in a drought year or, let's say, a drought year, whatever
22 that is, I guess, should pay if they benefit, should pay
23 some fair share of money to the State if the State
24 requests them to pay it; is that your belief?

25 A Yes, I believe -- since my last deposition on the
26 23rd of September, I spent some time reviewing the

1 statutes and reviewing work that has been done already
2 under the Central Valley Project Act, and under the
3 Davis-Dolwig Act. The only purpose or functions of the
4 State Water Project that are to be filled and that are
5 non-reimbursable are the costs allocated to the
6 enhancement of fish and wildlife, and the cost allocated
7 to their creation. Everything else is reimbursable, and it
8 appears to me out of my work with the legislature some 20
9 odd years ago, plus the statutes as they pertain, that all
10 other functions are to be reimbursed.

11 MR. NOMELLINI: Well, except flood control.

12 A I failed to mention that particular cost has been
13 borne by the United States.

14 MR. BABER: Q Is that an incidental benefit?

15 A No, it's not an incidental benefit. As a matter of
16 fact, flood control is a major function and a major
17 benefit of the storage at Oroville and the storage in
18 three reservoirs upstream.

19 EXAMINATION

20 BY MR. NOMELLINI:

21 Q Was any part of the release of water in July and
22 August of 1977 for enhancement of fish and wildlife?

23 A To the extent that the degree of salinity control
24 did improve conditions and did, in fact, enhance fish and
25 wildlife resources, it would be. I regret to say I did not
26 as yet look at what the Department has stated to the

1 legislature is the non-reimbursable cost due to the
2 enhancement of fish and wildlife resources.

3 Q So you are telling me you don't know what part of
4 the water claimed by the State for July and August of 1977
5 was, in fact, non-reimbursable because it was for
6 enhancement of fish and wildlife?

7 A I had not examined those reports at that time.

8 Q Assuming there was some, how would that affect
9 your calculations in this particular case?

10 A That total amount of costs of the project
11 facility's storage, that is, would have been
12 non-reimbursable and it would have been the residual that
13 would have been reimbursable among the various functions
14 served.

15 Q Which means what to us in this particular lawsuit?
16 How would that affect the damage calculation in this
17 lawsuit?

18 A To the extent that the cost, to simplify, at
19 Oroville Reservoir, was borne by the general fund, that
20 much less of the cost would be allocated to the other
21 economic functions, which includes irrigation and that
22 type of function.

23 Q All right. Maybe I don't understand your function
24 in this lawsuit, but you have been retained by the
25 Department of Water Resources as an expert in this
26 particular case; have you not?

1 A Yes, I believe so.

2 Q What do you understand to be the scope of your
3 respnsibilities in this case?

4 A What I was requested to do was to testify as to
5 the amount of project water which redounded to the benefit
6 through salinity control.

7 Q Okay. Don't you think that involves the question
8 of what part of that water was for enhancement of fish and
9 wildlife?

10 A We had not gotten down to that point as yet.
11 Ultimately, of course, assuming that the courts find these
12 things reimbursable, then there will have to be the
13 allocation of costs that were made by the department
14 responsive to the Davis-Dolwig Act will have to be
15 calculated, yes. That has not been done yet.

16 Q Have all the costs of the project operation for --
17 I'm talking about State Water Project -- for 1977 already
18 been allocated?

19 A Yes. The department has to, as I recall the
20 statute, the department has to report to the legislature
21 each year as the non-reimbursable costs.

22 Q And whatever was reimbursable has been allocated
23 already; right?

24 A The residual, yes, has been allocated under the
25 separable costs remaining-benefits method as far as
26 storage is concerned.

1 Q So let's assume we have got some water in July and
2 August that was released for enhancement of fish and
3 wildlife that is, in fact, non-reimbursable, what
4 difference would that make in terms of the calculation of
5 damages claimed against the Delta water users?

6 A As I understand it, the department has said that
7 water is worth, whatever was diverted and used in the
8 Delta for the benefit of the Delta water users, whatever
9 that quantity was, the department has placed a value of
10 \$60 per acre-foot on it.

11 Q So it doesn't make any difference whatsoever that
12 part of that water was for enhancement of fish and
13 wildlife?

14 A We have allocated a portion, a quantity which is
15 now not dollarwise, because I have had nothing to do with
16 that and if I recall correctly another expert has been
17 retained to quantify the costs of that water to the state.

18 Q All right. We have got \$60 per acre-foot, which is
19 alleged to be the fair market value of water in July and
20 August of 1977; right?

21 A So I understand.

22 Q Okay. Let's assume that some part of the water
23 released from storage in July and August of 1977 was for
24 enhancement of fish and wildlife, a non-reimbursable
25 function for the State Water Project.

26 A We are talking dollars now?

1 Q We are talking dollars. Okay, how is that going to
2 change your calculation of damage or the claim against the
3 Delta water users?

4 A Well, there are two steps to this. One is
5 quantifying the amount of State Water Project water that
6 was diverted and used, whatever the amount was, over and
7 above the basic rights to natural flow. Then the dollar
8 value of that has been calculated as the fair market value
9 of that water because, if I understand correctly, that is
10 what it could have been sold for.

11 Q Okay, let's assume that in July and August of
12 1977, ten percent of the water released from storage was
13 for enhancement for fish and wildlife. All right, how are
14 you going to account for that in the allocation of the
15 damages claimed against the Delta water users?

16 A May I ask for clarification? Are you referring to
17 the dollar value or are you referring to the quantity
18 value upon which the dollar value was based?

19 A Either one. I am just trying to understand how you
20 are going to deal with that if, in fact, there was some
21 water released from storage for enhancement of fish and
22 wildlife in July and August of 1977.

23 A There was -- let's see if I can explain it. As we
24 see it, there was, according to our calculations so much
25 natural flow that reached the Delta. There was so much
26 project water in addition to the natural flow that reached

1 the Delta. Now the natural flow was split up as being the
2 property, shall we say of the prior rights, particularly
3 the riparians, of which let us assume user A had a prior
4 right to whatever that natural flow was, had a prior right
5 to, say, 10,000 acre-feet, to use a figure. That
6 particular user actually diverted and used 12,000
7 acre-feet.

8 Now let me emphasize these are hypothetical
9 figures.

10 So we have estimated that the amount of project
11 water that was used in total was 2,000 acre-feet, and 25
12 percent of that we have allocated as the responsibility of
13 the State Water Project, and that means 500 acre-feet, so
14 the amount of water to be paid for was 500 acre-feet, and
15 other studies have quantified the fair market value of
16 that at \$60 an acre-foot.

17 Q So it doesn't make any difference in your
18 calculation that ten percent of the water hypothetically
19 released from storage in the State Water Project was for
20 enhancement of fish and wildlife?

21 A It doesn't enter into this particular calculation
22 as we have estimated it.

23 Q Let's assume that all of the water released from
24 storage in July and August of 1977 was for enhancement of
25 fish and wildlife, that still wouldn't change your
26 calculation; would it?

1 A Unless the cost per acre-foot was based upon the
2 actual cost allocated, and I do not know, and I believe --
3 may I ask Mr. Kleting if I am correct, that this was done?

4 Q If you want to swear him in, I don't mind having
5 him as a witness. I would like to cross-examine him a
6 little bit.

7 A As I understand the calculation of the \$60 an
8 acre-foot, it was based upon the fair market value of that
9 water. May I point out, too, that if there is required so
10 much water to be allocated to the enhancement of fish and
11 wildlife, I'm talking now of water quantity, and the Delta
12 water users diverted and used project water, that means
13 that more water has to be released from storage to provide
14 the water for the enhancement of fish and wildlife.

15 Q Are you telling me even if all the water released
16 in July and August in 1977 was for enhancement of fish and
17 wildlife, it would make no difference whatsoever in the
18 calculation of damage in this case?

19 A It would make no difference if everybody in the
20 Delta refrained from diverting any project water.

21 Q Let's assume that they diverted the water from the
22 Delta as occurred in July and August of 1977, and I am
23 going to ask it again, and if you don't want to answer it,
24 you tell me, and then we will go to court and get a court
25 order ordering you to answer the question, but the
26 question is squarely put to you.

1 MR. KLETZING: Well, if you are asking him for an
2 impossible question.

3 MR. NOMELLINI: No, I am not. I am asking him a
4 hypothetical question to understand his calculation of
5 damages in this case.

6 MR. KLETZING: But it is impossible that the water
7 that is diverted by Delta users could be allocated to fish
8 and wildlife.

9 MR. NOMELLINI: That isn't true at all. I mean, if
10 we are talking about releases of stored water, we
11 understand that concept; right?

12 A Let me try to answer it. I'm not sure --

13 MR. NOMELLINI: Okay.

14 A -- I will be able to. Oroville is up here 100
15 miles upstream. Fish and wildlife flows are that which
16 flow out. So that in order to have this much flow out to
17 fish and wildlife, and there is so much used here in the
18 Delta, let's neglect export now and only consider the
19 Delta, what has to be released up here is the amount of
20 project water that needs to flow out here for the overall
21 benefit of fish and wildlife in order to create the
22 salinity gradient that's necessary, plus an amount of
23 water diverted by the Delta water users from the amount
24 released from storage at Oroville for their benefit.

25 MR. NOMELLINI: Q Fine. Let's say all the water
26 released from storage was for enhancement of fish and

1 wildlife.

2 A All right.

3 Q That is non-reimbursable; right?

4 A That particular allocation would be non-reim-
5 bursable.

6 Q And there wouldn't be any requirement of anybody
7 to reimburse that?

8 A For that particular allocation of costs.

9 Q Okay.

10 MR. BABER: If that were ten percent, there would
11 be ten percent that would be non-reimbursable because they
12 released it for fish and wildlife purposes?

13 A For that which was released for that particular
14 purpose and flowed out of the Delta for that particular
15 purpose.

16 MR. NOMELETTI: Q There's not cost to be
17 recovered then; any benefit that came from that particular
18 release to some third party incidentally would not result
19 in any obligation for payment; would it?

20 A In my opinion, it would.

21 Q It would?

22 A Yes.

23 Q Okay. And how would that come about?

24 A Forgive me, because it's going to sound facetious,
25 but it isn't intended that way. If you require 150,000
26 acre-feet of project water to flow out of the Delta for

1 the benefit of the enhancement of fish and wildlife, and
2 the Delta water users need to divert project water over
3 and above their basic right to natural flow of another
4 100,000, that means 250,000 has to be released up here.

5 Q Don't you agree that the Delta has water in it at
6 all times?

7 A I agree the Delta has wet water.

8 Q So the only difference is going to be in the
9 quality; right?

10 A Excuse me, may I think that one through?

11 Q Sure.

12 A Because that is a crucial point, as I understand
13 it. Certainly as compared to conditions without any
14 projects, the water that was in the Delta channels in July
15 and August in parts of the Delta would not have been
16 usable, so, in effect, the salinity control plus the
17 amount of water that was released into the Delta for Delta
18 use improved the wet water in the channels to the degree
19 that it served its purpose for irrigation.

20 Q So it could have been utilized whereas otherwise
21 it couldn't, and, therefore, there is a quantitative
22 aspect to it?

23 A We have elected to use quantity as surrogate.

24 Q Okay. Now, let's assume that ten percent of the
25 water released from storage in July and August of 1977 was
26 for the purpose of enhancement of fish and wildlife, and

1 that the water would have been otherwise usable throughout
2 the Delta, how would your calculation of alleged damage as
3 against Delta water users been done in that case?

4 A Well, the ten percent of which you speak was water
5 released up here and flowed out. Granted that taking it
6 from the standpoint of quality, that ten percent did have
7 an effect upon quality, no question about that. Any
8 increment that you allow to flow out of the Delta or you
9 provide to flow out of the Delta, does, and the purpose of
10 it is to maintain certain quality conditions. That's why
11 you do it.

12 Q Okay. How would you address the damage
13 calculation, if at all, as against Delta water users if we
14 had that particular case, ten percent?

15 A That particular aspect comes about due to the
16 value of the water. In other words, whatever the total
17 cost was in that year due to the storage operation,
18 maintenance, all that sort of thing, and as allocated out
19 among the various functions served, if the cost allocated
20 to fish and wildlife were ten percent, that would be
21 rather high, I think, but we can hypothesize that, then,
22 the residual cost has to be allocated among other users of
23 the project facilities.

24 Q Well, how would that affect the damages in this
25 particular case?

26 A If we were to approach the cost of that water from

1 the standpoint of the cost allocation, there would be less
2 cost allocation.

3 Q But you agree you are not approaching it from that
4 standpoint?

5 A That is right.

6 Q Therefore --

7 A The position has been taken that we will value the
8 water used by the Delta, actually used, diverted and used,
9 will be based upon fair market value of the water as the
10 value of the water was at that time.

11 Q Do you think that's fair?

12 A The State would have gotten that amount of money
13 from other sources. There were plenty of buyers for water
14 at that time, so I understand. I was not --

15 Q But the amount of water that was used depends upon
16 whether or not it was usable in the prior state; right?

17 A There is a connection there.

18 Q Well, you said there was?

19 A Yes.

20 Q And you said that if it was otherwise unusable,
21 then there was more water used by the Delta because the
22 threshold of usability was reached in quality.

23 A Would you repeat that statement?

24 Q Do you agree that for the Delta to use more water
25 than they would otherwise use, the difference in the
26 before condition would have to be unusable and after the

1 additional water from storage were released, it would have
2 to be of usable quality?

3 A Yes.

4 Q Because if it was usable all the time, there's no
5 more water actually used; right?

6 A That is correct.

7 Q The water released for enhancement of fish and
8 wildlife, if the before condition was of usable quality;
9 if, before the ten percent of water releases from storage
10 for enhancement of fish and wildlife, the water would have
11 been of usable quality, then isn't it fair to say that the
12 Delta uses should not be in any way charged for the water
13 for enhancement of fish and wildlife?

14 MR. KLETZING: Before what?

15 MR. NOME LLINI: Before release of storage for
16 enhancement of fish and wildlife.

17 MR. KLETZING: Before June?

18 MR. NOME LLINI: No, in the prior condition?

19 MR. KLETZING: What prior condition?

20 MR. NOME LLINI: In the without condition, without
21 the release.

22 MR. KLETZING: You are talking about without the
23 project?

24 MR. NOME LLINI: No, on the release of stored water
25 for enhancement of fish and wildlife, if the water quality
26 in the Delta would have been usable, then there should be

1 no charge to Delta users for that water released from
2 storage for enhancement of fish and wildlife.

3 Do you agree?

4 A If I understand your hypothesis, yes. Now, may I
5 explain or mention what I understand your hypothesis was?

6 MR. NOMELLINI: Q Certainly.

7 A If we assume that absent the projects any release
8 from the projects, that the water in the channels was of
9 usable quality and the users suffered no detriment, and
10 they could use all they wanted of that quality under their
11 priority right, then there would be no obligation, that's
12 right.

13 Q Okay. My hypothesis was that absent the release of
14 stored water for enhancement of fish and wildlife, that
15 the water quality was otherwise usable in the Delta, would
16 there be any obligation for Delta users to pay for the
17 water released from storage for enhancement of fish and
18 wildlife?

19 A May I ask a question for clarification?

20 Q Sure.

21 A Are you assuming that there would be no release
22 from the projects for any purposes?

23 Q No, I am assuming that all releases for other
24 purposes. I am trying to find out your answer to whether
25 or not there is an obligation on the part of the Delta
26 water users to pay for water released for fish and

1 wildlife enhancement under those circumstances?

2 A If I understand your assumption as to the physical
3 condition, those costs allocated to water for fish and
4 wildlife enhancement would be non-reimbursable by statute.

5 Q Right. And do you agree that the Delta users
6 should not be charged for any part of that water under the
7 example that I gave you where the water would have been of
8 usable quality for all their purposes absent that release
9 of water for fish and wildlife enhancement?

10 A No, that particular portion of the total cost
11 would be non-reimbursable.

12 Q And the Delta users should not be charged for it?

13 A Again, let me emphasize the basis of my answer,
14 that the costs allocated to that particular function of
15 the project and that gets to the amount of water we are
16 talking about, that particular portion would not be
17 reimbursable under the provisions of Section 11900 , et
18 seq., in the Water Code.

19 Q Do you think Delta water users should have to pay
20 \$60 per acre-foot for that quantity of water?

21 A We are saying, as I understand it, that there was
22 water placed in the Delta by the projects and diverted by
23 the Delta water users in excess of their basic right to
24 the natural inflow to the Delta, and that to the extent
25 that they diverted water over and above their natural
26 flow, their natural right or riparian right to the natural

1 flow, that they do owe the State compensation for that
2 amount of excess water diverted and used.

3 MR. NOME LLINI: Alice, would you read back my
4 question so I can see if I can get an answer from Harvey
5 on that question.

6 (The reporter read the question as
7 follows: "Do you think Delta users should
8 have to pay \$60 per acre-foot for that
9 quantity of water?")

10 MR. NOME LLINI: Q Released from storage for fish
11 and wildlife enhancement in the example that I gave you
12 where without that release the water would have been
13 otherwise usable?

14 A No, the cost allocated, to repeat, the cost
15 allocated to that particular function, in accounting for
16 the project cost, that particular element of cost is not
17 reimbursable.

18 Q Okay. So Delta water users shouldn't have to pay
19 for it under those circumstances?

20 A From the standpoint of cost allocation, that is
21 right.

22 Q Okay. Now, how is that cost reflected in the fair
23 market value of water?

24 A I have not performed that calculation. I believe
25 I'm correct in that the department has retained -- I'm not
26 sure whether it is John Teerink, I believe it is John

1 Teerink, to make that particular calculation as to the
2 fair market value.

3 I have not consulted with that particular expert.

4 Q You would agree that the fair market value
5 approach would totally ignore the fact that there might be
6 some non-reimbursable costs associated with water released
7 from storage; right?

8 A I would agree that fair market value doesn't
9 necessarily take that out. In other words, it's what the
10 water is worth on a water market at that time?

11 Q Okay. You said "not necessarily." I mean, how does
12 fair market value account for the non-reimbursable costs
13 in a project?

14 A It does not enter into that particular
15 calculation.

16 Q Okay. So the "not necessarily," we can strike
17 that?

18 A Yes.

19 Q Okay. Now in July and August of 1977, do you know
20 whether or not there was any release of water from storage
21 for enhancement of recreation?

22 A I do not know that. As I said previously, I have
23 not examined the allocation made by the department of
24 costs for that year and reported to the legislature. I
25 will do so, however.

26 Q All right. Now that we understand non-reimbursability

1 and usability of water in the Delta due to quality, let's
2 assume that the Federal Water Project is operated in the
3 Delta to meet its Tracy standards, and that as a result of
4 that operation, water quality throughout the Delta in July
5 and August of 1977 would have been usable. Why should the
6 Delta water users pay anything to the State for water in
7 July and August of 1977 under those hypothetical
8 conditions?

9 A I will try to answer that. If we hypothesize that
10 the United States, through the Federal Central Valley
11 Project, provided all of the water necessary for salinity
12 control, which in part would dictated by the water quality
13 objective requirements at the Tracy pumps, to reiterate,
14 if we assume or hypothesize that all of that water was
15 furnished by the United States and none whatsoever was
16 provided by the State, you would be quite correct.

17 Q That wasn't my hypothesis. My hypothesis was that
18 absent the State Water Project's operation as specifically
19 focusing in on the federal government meeting their Tracy
20 standards, that the water quality in the Delta for all of
21 these defendant agricultural users would have been usable
22 in all respects, why should there be a payment made to the
23 State?

24 A May I try to explain?

25 Q Yes, as long as you don't change my hypothesis.

26 A Well, to answer that particular point first, I'm

1 not --

2 MR. KLETZING: You can change his hypothesis if
3 you want to. There is no law against changing attorney's
4 hypothesis.

5 MR. NOMEILLINI: Other than to ask the question
6 again and again and again.

7 MR. KLETZING: That's unrealistic.

8 A Let me say this, put my own personal opinion on
9 this, and maybe it will answer your question.

10 MR. NOMEILLINI: Q That's all we have been getting
11 is your personal opinions; right? We are getting your
12 personal opinions.

13 A Yes.

14 Q Okay. Is there any other opinion that you are
15 giving to us in this testimony?

16 A No.

17 Q Okay. Now, go ahead and continue to put your own
18 personal opinion on it.

19 A I would say that when the Delta water users divert
20 and use water in excess of their prior right to the
21 natural inflow to the Delta, then they should recompense
22 the State for at least the State's share of the water that
23 was provided so that they could divert over and above
24 their right to the natural flow, and that is the best
25 explanation I can give you of my particular professional
26 opinion on this particular aspect.

1 MR. KLETZING: Harvey, we have been going quite a
2 while. Do you need a coffee break?

3 MR. NOMELLINI: That's okay, I will pick right up
4 where I left off here. No problem. What do you want, five
5 minutes?

6 MR. KLETZING: Sure.

7 (Recess)

8 MR. NOMELLINI: Q Well, Harvy, now that you have
9 been able to deliberate over a cup of coffee, the question
10 I asked you prior to the break, and I will note for the
11 record Russ wanted the break, not Harvey.

12 MR. KLETZING: I asked Harvey if he wanted a cup
13 of coffee and he said he did, so obviously, he did.

14 MR. NOMELLINI: No, he didn't. He just sat there
15 silently.

16 A But it was nice.

17 MR. NOMELLIN: It was welcome anyway.

18 Q If, in the absence of the State Water Project, the
19 water would have been usable for all of the purposes of
20 the defendants in July and August of 1977, why should they
21 pay the State for water used in those two months?

22 A Let me say what I understand you to mean, that
23 assuming that the United States, through the Central
24 Valley Project, had provided whatever project water might
25 have been necessary to enable the Delta water users to
26 have a water supply, the United States had been solely

1 responsible, had that been the case, then obviously,
2 whether or not there was any compensation demanded or
3 requested would have been up to the United States and not
4 the State under that particular assumption.

5 Q Okay. So the reason for there being a claim, well,
6 one of the reasons for there being a claim for payment
7 under the circumstances was the State participated in the
8 responsibility for salinity control?

9 MR. KLETZING: There isn't any claim for payment
10 for improvement of water quality, for salinity control.

11 MR. NOMELLINI: There isn't?

12 MR. KLETZING: No.

13 MR. NOMELLINI: Q Harvey, is that true?

14 A I'm not -- would you say that again, Russ?

15 MR. KLETZING: There isn't monetary claim in this
16 case for salinity control. It's just for water quantities.
17 It's right there in the complaint.

18 A That is correct, that the amount of compensation
19 has been based upon the estimate of the amount of State
20 Water Project water flowing into the Delta that was
21 actually diverted and used by the Delta water users.

22 MR. NOMELLINI: Q Okay. The calculation of
23 damages is based on a quantification analysis; right?

24 A That is correct.

25 Q Did you hear what Russ said, though, he said there
26 was no claim made for water quality benefits. Do you agree

1 there?

2 A I agree that the basis for compensation has been
3 based upon quantity and not on quality.

4 Q Now that's calculation; right?

5 A That is calculation.

6 Q Okay.

7 A It is a method --

8 Q Let's stay right on Russ's question. Isn't the
9 claim really based on a quality benefit?

10 A It is based in part upon the Delta outflow
11 required to meet the State Water Resources Board water
12 quality objectives.

13 Q But that is because the water quality would have
14 been unusable without that release; right?

15 A That is our opinion, right.

16 Q Isn't that a quality benefit?

17 A One can look at it that way.

18 Q Absolutely, it is. When you go from usable
19 quality, I mean, when you go from unusable quality to
20 usable quality, that's a benefit; isn't it?

21 A Yes.

22 Q So Russ is all wet when he says there is no claim
23 based on quality; right?

24 A The only answer I can give you is that the
25 basis --

26 Q For the damage calculation --

1 A -- is quantity.

2 Q Is quantity.

3 A That is correct.

4 Q But the problem is not a quantity problem.

5 A The problem of the Delta is and always has been
6 the problem of potential salinity intrusion.

7 Q And that is the quality problem.

8 A That is quality.

9 Q So, if there is no claim in this case for quality
10 improvement, then there's no case; is there?

11 A I don't believe, Mr. Nomellini, that I am
12 qualified to answer that one since it's purely a legal
13 question.

14 Q It maybe calls for a conclusion on the part of the
15 witness.

16 You do agree that if there was no quality change
17 as the result of project operation, there would be no
18 basis for damages; would there?

19 A If the quality remained usable without any inflow
20 from the projects, that would be correct.

21 Q Okay. Going back now on the Federal Water Project
22 operating in the Delta and the water quality resulting
23 from that in July and August of 1977, that it
24 hypothetically would have been usable for all the
25 purposes, you were beginning to answer my question as to
26 why there should be a payment to the State. Do you want to

1 tell me why there should be a payment to the State?

2 A Because the problems of the Delta have been agreed
3 to between the Bureau and the State that they would do
4 that, meet the Delta needs by coordinated action as
5 required by statute as far as the State is concerned, and
6 the Bureau elected to do that on its own initiative, at
7 that time.

8 Q If the Bureau was doing that on its own initiative
9 at that time without any legal requirement and the Delta
10 had usable water quality, why should there be a payment to
11 the State?

12 A Because it was a cooperative effort.

13 Q So because two people, two junior water users
14 decided to cooperate in some respect, that creates the
15 payment obligation on the part of the Delta?

16 A As I said, under the Delta Water Projects Act, the
17 State is directed by the legislature in coordination with
18 the Bureau of Reclamation in the operation of the Federal
19 Central Valley Project, the State is directed to provide
20 salinity control as a cooperative effort.

21 MR. KLETZING: You are basing these questions on
22 an assumption that isn't true, so it doesn't make any
23 sense.

24 MR. NOMEILLINI: Q Do you believe that the water
25 quality in the Delta absent the State Water Project would
26 have been usable for agricultural purposes in July and

1 August of 1977, that's with the federal projects?

2 A We have never investigated that. I cannot answer
3 that question positively.

4 Q What is your intuitive feeling on that?

5 A My intuitive feeling, and it is purely intuitive,
6 is that there would have been substantial improvement in
7 quality due to the operation of the Federal Central Valley
8 Project. Whether or not it would have maintained the
9 quality in a usable condition throughout the Delta, I
10 cannot say at this time.

11 MR. BABER: Will you be able to say at the time of
12 trial?

13 A In my opinion, it isn't necessary under the
14 circumstances.

15 MR. BABER: Why isn't it necessary?

16 A Because there is an agreed-upon program of action
17 with an agreed-upon allocation of the amount of water
18 required.

19 MR. NOMELLINI: Q Focusing in on that, is it your
20 understanding that this agreement is applicable to July
21 and August of 1977? Let's assume for the months of July
22 and August, the two months, that all the water released
23 from storage to the Delta was federal water, do you think
24 the State would still have a claim for 25 percent?

25 A No, not under that hypothetical situation.

26 Q Why not?

1 A If the State provided no water, what basis for
2 claim would it have?

3 Q Let's say they provided the water later in the
4 year and they met their average for the year, the annual
5 amount.

6 A We are talking about in this case specifically
7 July and August?

8 Q So you would look at it monthly then?

9 A In this case, under it being the subject of
10 litigation, I believe we have to.

11 Q So, in preparing for trial, did you look to see
12 what part of the water released from storage in July of
13 1977 was provided by the State as opposed to the federal
14 government?

15 A We have made such studies of the relative amount
16 of water.

17 Q I am asking about you now.

18 A I have reviewed what the staff has done.

19 Q And what is your --

20 A It could be traced down, I have not reduced it to
21 a percentage.

22 Q Do you remember what the numbers were?

23 A No.

24 Q How about for August?

25 A No.

26 MR. NOMEILLINI: Okay, that's all I have.

E X A M I N A T I O N

1
2 BY MR. WHITRIDGE:

3 Q Just one or two. Mr. Banks, I got here a little
4 bit late so I may not have understood completely, but I
5 heard you, in response to a question from Mr. Baber, I
6 believe you stated that you intended to do some further
7 study in regard to the Southwest Delta as to whether that
8 should be given some special treatment; is that correct?

9 A I did so state and I would add, if I may, I'm not
10 sure that under the circumstances as they now exist,
11 whether that's going to be required. I do not know. It
12 depends on, in my opinion, the basis of the rights.

13 Q What area were you referring to there as the
14 Southwest Delta?

15 A I believe the question was raised with respect to
16 Byron-Bethany Irrigation District.

17 Q Would the same questions be presented in regard to
18 Union Island?

19 A I believe we have considered Union Island to have
20 a strictly riparian right.

21 Q I see. I understand. You are speaking in terms of
22 special treatment -- in view of the questions raised, you
23 were referring there to special treatment in regard to
24 Byron-Bethany because they have an appropriative right?

25 A Yes.

26 Q I have here a list that was provided us, a list of

1 backup documents for Harvey Banks' testimony, and one of
2 them that's listed, and I am familiar with many of them,
3 is one that is called American River Watershed Model,
4 Central District Memorandum Report, March, 1984. Are you
5 familiar with that?

6 A No, I am not familiar with that one.

7 Q You have not reviewed that?

8 A No, I have not.

9 MR. WHITRIDGE: Could we get a copy of that, Russ?

10 MR. KLETZING: Yes, I expect so. I think it just
11 shows the evaporation or something like that.

12 MR. NOME LLINI: Of what?

13 MR. KLETZING: Ther reservoirs'.

14 MR. NOME LLINI: The reservoirs on the American?

15 MR. KLETZING: Yes, I think that's all it is. Does
16 it have a number?

17 MR. WHITRIDGE: March, 1984, was the date.

18 MR. NOME LLINI: We expect Harvey to be intimately
19 familiar with that by the time we get to trial.

20 MR. KLETZING: Okay.

21 A If I may comment, I will have to look it up to see
22 how relevant it is.

23 MR. WHITRIDGE: I just couldn't figure out what it
24 is.

25 MR. NOME LLINI: You might ask your attorneys to
26 counsel with you when they prepare the list of documents

1 you are going to rely on.

2 MR. WHITRIDGE: I have no further questions.

3 MR. BABER: I have nothing further.

4 EXAMINATION

5 BY MR. KLETZING:

6 Q I have a few. With regard to Byron-Bethany
7 Irrigation District, the district bases its rights solely
8 on appropriative rights, pre-1914 appropriative rights,
9 and as Mr. Baber said, they diverted 17,256 acre-feet in
10 July and August. Do your calculations show that there is
11 enough water to satisfy riparian rights in the Delta
12 during July and August?

13 A No.

14 Q Of natural flow.

15 A No.

16 Q If I tell you that under the law riparian rights
17 have to be satisfied before appropriative rights, would
18 there have been any natural flow available to satisfy
19 Byron-Bethany's 17,256 acre-feet?

20 A No.

21 Q On that basis, would 25 percent of that have been
22 State Project water that we are claiming?

23 A Yes, in accordance with our procedures and
24 agreements with the Bureau of Reclamation.

25 Q Okay, With the understanding that counsel hasn't
26 asked you to do any other study concerning Byron-Bethany

1 or the Southwest Delta, is there anything more that you
2 now have in mind doing concerning that area?

3 A Not from a physical standpoint as far as I can
4 see.

5 Q Well, is there anything that you would be doing
6 that Bill Baber might want to depose you on later?

7 MR. NOMELLINI: He forgot the words "not
8 necessarily."

9 A Would you ask the question again, please, Mr.
10 Kletzing?

11 MR. KLETZING: Q Are you going to do any more
12 study on the Southwest Delta before trial?

13 MR. NOMELLINI: I remember that answer, he said
14 "not physically."

15 A Let me reword that, not from a physical
16 standpoint.

17 MR. KLETZING: Q Are you going to do anything
18 that Bill Baber would, you know -- I'm trying to determine
19 if we need any more depositions so we can avoid another
20 one like the one that happened down in Stockton of their
21 expert who hadn't done anything.

22 A As I see it now, no, I do not. I was not aware up
23 until this time that their rights were entirely
24 appropriative.

25 Q Okay. Now I want to ask you just about quality --
26 excuse me, let me start again. I am going to ask you just

1 about quantity, amounts of water.

2 MR. NOMEILLINI: Now, wait a minute, you wanted to
3 ask just about quality, and now you want to ask just about
4 quantity.

5 MR. KLETZING: Yes, I misspoke. I want to ask just
6 about quantity, amounts of water.

7 Q Totally disregarding any effects that the state
8 and federal projects or either of them may have had on the
9 quality, did the agricultural users in the Delta divert
10 project water during July and August of 1977?

11 A In my opinion, yes.

12 Q Did the projects have to release stored water in
13 excess of the natural flow in amounts necessary to meet
14 those diversions?

15 A May I ask for clarification?

16 Q Yes.

17 A By diversions, do you mean the actual amount of
18 water diverted and put on the land?

19 Q Yes, the amount of project water put on the land.

20 A Yes, there had to be water released from upstream
21 storage and flow into the Delta in order to meet the
22 quantity requirements in total of the Delta water users.

23 Q Then, irrespective of quality, should the Delta
24 users pay for the stored water that they diverted and put
25 onto their land?

26 A In my opinion, yes. And may I add to that, that

1 subsequent to my deposition on the 23rd of September, I
2 did review the various documents and statements concerning
3 the obligation of reimbursement for water use in the Delta
4 over and above rights to natural flow, and came to the
5 conclusion that that was an obligation under the statute
6 in this state.

7 Q What was?

8 A For reimbursement compensation.

9 Q Okay. Now, a few minutes ago in answer to some of
10 Dan's questions, you said, though, that the quantity
11 calculation, the amount of project water, the quantity, at
12 \$60 an acre-foot was just a surrogate for quality
13 improvement. That's different than what you just told me.

14 Did you mean to say that?

15 A I will try, first, to answer that indirectly, Mr.
16 Kletzing, subject to further clarification. The actual
17 physical situation of supply to the land in the Delta is
18 extremely complicated and has both quantity and quality
19 aspects. We have elected in analyses for compensation to
20 have based it on a quantitative estimate of the amount of
21 project water that flowed into the Delta and was diverted
22 for use on the land.

23 Q That was the benefit to the water users; wasn't
24 it, to take that project water and put it on their land?

25 A Yes.

26 Q Wasn't there a separate and distinct benefit to

1 them from the improvement in quality as compared to what
2 it would have been without the project?

3 A Would you repeat the question, please, Mr.
4 Kletzing?

5 Q Wasn't there an entirely separate benefit to the
6 water users because of the improvement in quality; that
7 is, in addition to the stored water that was put on their
8 land?

9 A I believe there was in that the quality of water
10 available in the offstream channels, some of which flowed
11 into the islands underneath the levees and was available
12 for subirrigation, and the quality of that water was
13 improved or was better than would have been without the
14 release of project water into the Delta.

15 Q Okay. Now, I want to talk just about quality for a
16 moment. If Delta agricultural users have received improved
17 water quality when the projects have to release water for
18 other purposes, is there any reason that the Delta users
19 should get a free ride and not pay for a share of that
20 attributed to their water quality improvement?

21 A I believe I have stated previously that in my
22 opinion benefits derived from the operation of the project
23 should be reimbursed by those that benefit except to the
24 extent that such benefits have been declared by the
25 legislature to be non-reimbursable for certain specific
26 types of benefits; flood control, the enhancement of fish

1 and wildlife and recreation, which have been declared
2 non-reimbursable.

3 Q Now, Judge Figone made a decision that is now no
4 longer law, and Dan has referred to those benefits as
5 incidental if some other purpose such as fish and wildlife
6 was being served, and argued that they shouldn't pay for
7 it. Do you think they should or shouldn't pay for the
8 water quality improvement if some purpose such as fish and
9 wildlife is also being met?

10 A As I said previously, subsequent to my deposition
11 on September 23, I have spent some considerable time
12 reviewing the statutes, reviewing the obligations of water
13 users, and I believe that again, to the extent that the
14 projects provide an additional water supply in the Delta
15 over and above everything else, such as the outflow for
16 fish and wildlife and recreation, to the extent that water
17 is diverted and used over and above the riparian rights,
18 or if there is any available for appropriative rights,
19 then that excess over and above or in excess of the amount
20 of water available from natural flow for prior rights,
21 there should be compensation for that additional amount.

22 Q So, do you think that the Delta users should pay
23 for incidental benefits as they have been defined?

24 A To the extent, as I said, that the Delta water
25 users divert in excess of the amount of water available
26 under their prior rights from natural flow, then I think

1 the Delta water users should pay for that.

2 Q Okay. Switching fields to the Sacramento River,
3 in your previous deposition there was considerable
4 discussion of the use of water by native vegetation,
5 evaporation and increased seepage because of the
6 operations of the projects; that is, in maintaining higher
7 water levels in the river, stored water raising the river
8 level.

9 Could you characterize the quantities that might
10 be involved in this in relation to the total flows of the
11 Sacramento River? Would it be a lot or hardly any?

12 A I believe it is relatively a very small amount. I
13 have not attempted to quantify it except to, it is
14 partially an intuitive value, for example, the distance
15 between the levees at normal water surface is, say,, 300
16 feet, the levee water side slope is two to one, therefore,
17 if the water levels are raised by, say, two feet, then the
18 increment of widths, within the channel would be four feet
19 -- wait a minute, would be eight feet, which is a very
20 small proportion of the channel width, the water surface
21 width that would be there otherwise.

22 Similarly, I do not believe that an additional two
23 feet of head on the streambed would increase the
24 percolation through the streambed to any significant
25 degree considering the total amount of water that would be
26 flowing in the channel.

1 Q And in relation to the accuracy of the gaging
2 stations on the Sacramento River, would this be something
3 that would make sense to take into account?

4 A In my opinion, no, when one considers all of the
5 measurements that enter into this complex calculation.

6 Q Okay. Now, let's assume for this question that
7 there is increased use on riparian land on the Feather and
8 Sacramento Rivers due to flood control provided by the
9 State and Federal Projects, on riparian land adjacent to
10 the stream in the floodplain, is it fair in the
11 calculations you did to consider this use as part of the
12 use of natural flow?

13 A We have considered that all riparian lands have a
14 right to their share of the natural flow, and that
15 includes the riparian lands within the levee system.

16 MR. KLETZING: Okay, that's all I have.

17 MR. NOME LLINI: I am going to have about an hour
18 to two hours, is my estimate, of questioning based on your
19 questioning here. It's seven minutes to twelve and I have
20 a luncheon meeting here in Sacramento at twelve. Now, do
21 you want to take Harvey at 1:30 this afternoon or do you
22 want to schedule him for another time?

23 MR. KLETZING: He has come from out of town twice.

24 MR. NOME LLINI: Okay. Do you want to come at 1:30?

25 A We may as well finish if we possibly can.

26 MR. NOME LLINI: Okay. Do you want me to start and

1 use these seven minutes?

2 MR. KLETZING: Fine with me.

3 A May I correct some prior testimony?

4 MR. NOME LLINI: Sure, that's what we are going to
5 be dealing with.

6 A I am not referring to that.

7 MR. NOME LLINI: Oh.

8 A In previous testimony I mentioned another expert
9 retained by the State for the purpose of providing studies
10 of the value of water, and I mentioned John Teerink. I was
11 incorrect. The proper name was Herbert Graydanus.

12 MR. NOME LLINI: Okay. Do you want to break for
13 lunch or go five minutes more?

14 MR. KLETZING: Go ahead.

15 E X A M I N A T I O N

16 BY MR. NOME LLINI:

17 Q Harvey, since your last deposition, have you had
18 any conversations with the attorneys for the Department of
19 Water Resources concerning your testimony?

20 A Yes, we discussed it.

21 Q Let's take each one of those. When was your first
22 conversation with regard to testimony and with whom did
23 you have it?

24 A Let me look at my diary.

25 Q I'm going to ask you about each conversation and
26 when and with whom, and the contents thereof, so let's

1 start with the first one since your deposition.

2 A I discussed my deposition with Mr. Kletzing on the
3 29th of October. We discussed the matter of quality versus
4 quantity, for one thing. We discussed the matter of use by
5 riparian lands within the levees. I believe those were the
6 two principal things, as I recall it.

7 Q Did he suggest that you change your testimony?

8 A No. He asked for clarification and as I indicated
9 previously in the interim, I had reviewed the various
10 statutes and other pertinent documents relative to the
11 obligation to recompense the State for the cost of the
12 project.

13 Q Referring to the discussion on the 29th of
14 October, was anyone else present during that discussion?

15 A No, there was no one else present.

16 Q So just you and Russ Kletzing?

17 A That is correct.

18 Q Do you recall what he said to you in that
19 conversation?

20 A He asked me, he did not say anything to me. He
21 asked questions.

22 Q And what questions did he ask?

23 A Very similar to the ones he has asked now.

24 Q And did you answer those questions?

25 A I tried to.

26 Q Those were the same questions basically you were

1 asked during the course of the deposition; were they not?

2 A Some of them were.

3 Q All right. When was the next conversation you had
4 concerning your deposition with the attorneys for the
5 Department of Water Resources?

6 A That was the only conversation.

7 Q Did you have any conversation with Mr. Kletzing
8 today concerning testimony at this deposition?

9 A No. Permit me to correct that. We did have some
10 discussion during lunch, but not prior to the deposition.

11 MR. BABER: You mean during the coffee break?

12 A Coffee break, excuse me.

13 MR. NOMELLINI: All right, why don't we break for
14 lunch and come back at 1:30.

15 (Noon recess)

16 MR. NOMELLINI: Q Okay. We left off, Harvey,
17 talking about discussions you had with representatives of
18 the Department of Water Resources concerning your
19 testimony at the prior deposition. You indicated you had a
20 meeting on October 29 or thereabouts with Russ Kletzing,
21 and you had a discussion where he asked you a series of
22 questions about the testimony.

23 Do you recall specifically any of those questions
24 that he asked you at that time?

25 A Well, we discussed the question of quantity versus
26 quality to some extent.

1 Q Do you recall what his statements were?

2 A No. I know what my answers were, which are the
3 answers I have given you this morning.

4 Q You gave them to me this morning. What about the
5 answers you gave Kletzing?

6 A The same idea. As I told you, I had in the interim
7 reviewed the statutes to refresh myself with those and
8 came to the conclusion that I have stated a couple of
9 times anyway.

10 Q Now what about the discussion today? You said you
11 had a conversation during the coffee break, I think you
12 said lunch break, but somebody corrected that, that it was
13 a coffee break. What was that conversation?

14 A Well, we discussed the situation of Byron-Bethany,
15 the fact that it is operated under appropriative rights,
16 relatively early, but nonetheless, appropriative rights.

17 Is that a pre-1914 right?

18 MR. BABER: Yes, it is. It is pre-1914, May of
19 1914, they did their posting.

20 A Got in in advance of December 19th.

21 MR. BABER: Before the commission act went into
22 effect.

23 MR. NOMELLINI: Q Was anything else discussed
24 other than Byron-Bethany Irrigation District?

25 A Not that I recall.

26 Q So you had no discussion about your earlier

1 testimony pertaining to quality in terms of damages?

2 A No, not this morning.

3 Q Okay. So the only thing this morning that had
4 anything to do with this deposition was Byron-Bethany?

5 A That is correct.

6 Q Now you said that Delta water users' rights were
7 limited to the water available from natural flows; is that
8 correct?

9 A That is the riparian rights and the appropriative
10 rights.

11 Q Can you explain to me what you mean when you say
12 "natural flow" in that context?

13 A We have used it in the context, that it is the flow
14 that reaches the Delta without the effects of the
15 projects; in other words, there is a volume of water that
16 reaches the Delta which has its origin other than in the
17 project waters stored in the reservoirs.

18 Q So that would be non-project flow?

19 A Yes.

20 Q That is what you define to be natural flow?

21 A As we have used it here, yes.

22 Q And that's the way your calculations are done?

23 A Yes.

24 Q You are sure of that?

25 A Reasonably so, sir.

26 Q Okay, and you are representing to us that you do

1 know how your calculations are done?

2 A Yes.

3 Q Do you do them yourself?

4 A No.

5 Q So return flow from PG&E projects, groundwater
6 pumpers, all of that is part of the natural flow?

7 A Not all of it. Well, excuse me, I'm sorry. Let me
8 retract that. From the sources that you just mentioned,
9 that is correct. The return flows which we have attributed
10 to the use of project water in the Sacramento Valley is
11 classed as project water.

12 Q Okay, and you indicated that with regard to
13 Byron-Bethany Irrigation District's appropriative right,
14 that since there was inadequate natural flow in July and
15 August of 1977, there would be no water available for them
16 as well?

17 A That is right.

18 Q And you don't disagree -- well, okay. You would
19 agree; would you not, that an appropriator can acquire
20 rights by prescription beyond the natural flow that we
21 could define as water naturally flowing through the river
22 system without the aid of someone else's projects, be they
23 private or otherwise?

24 A Yes, I believe that an upstream appropriator can
25 acquire a right by prescription against downstream
26 riparians by virtue of interference or as against some

1 other appropriator as well.

2 Q All right. Now with regard to the flow of water in
3 the river and the impact of project operation on that flow
4 in terms of increasing the losses from the stream system,
5 either due to evaporation or seepage, you went through an
6 example of a 300-foot-wide streambed with two-to-one side
7 slopes, and you had concluded that an additional couple of
8 feet of water would not make very much difference. I think
9 you said it would be eight feet.

10 A Let me clarify what I said. I said that adding to
11 the corpus of the water in the channel, if it raised the
12 level two feet, that would increase the width of the water
13 surface by eight feet.

14 Then, I also said that in my opinion adding two
15 feet to the water surface by virtue of project flow would
16 not increase the streambed percolation significantly in
17 comparison to the total overall quantities that we are
18 dealing with here.

19 Q In other words, you are saying dealing with these
20 losses when we are talking about millions of acre-feet,
21 it's not too significant; is that what you are saying?

22 A I am saying that these losses in comparison with
23 the volume of water with which we are dealing flowing into
24 the Delta is a minor amount.

25 Q Okay. You would agree that the increase of two
26 feet in head could be a very significant change in seepage

1 in a given channel under certain circumstances?

2 A Yes, I would agree under certain circumstances
3 that would be correct.

4 Q And in July and August some channels that are
5 tributary to the Delta would be dry under the extreme year
6 conditions; would they not?

7 A For those that are tributary to the Delta, we have
8 either included that where measured as a measured inflow,
9 or it is included or excluded as the case may be in the
10 unmeasured accretions and depletions.

11 Q Okay. Let's look at the Feather River. Did the
12 Feather River historically always have water in it in July
13 and August?

14 A I haven't checked that. I would think that there
15 would be some water flowing in it even in a very dry year,
16 but I want to emphasize I have not checked the record for
17 that particular situation.

18 Q What would the range be, in your opinion, of
19 seepage from the Feather River without project as compared
20 to with project in July and August?

21 A I have no idea of a specific value.

22 Q Could it be as much as twice as much seepage with
23 the project as without it?

24 A I doubt very much it's of that magnitude.

25 Q If we had to pick a range, what would we pick?

26 A This is pure speculation, but I would think that

1 there might be some increase in seepage that possibly
2 might increase it by as much as 15 to 20 percent. I would
3 point out that for the purposes of this study, we have a
4 measurement at the downstream end of the Feather and we
5 have used that, so the seepage is automatically taken into
6 account.

7 Q How does seepage relate to the height of water?

8 A The greater the depth, the greater the hydraulic
9 head on the interface between the water in the stream and
10 the streambed.

11 Q Is it a direct relationship?

12 A Generally not. There is some slight increase.

13 Q I mean, if you had twice the head, would you have
14 twice the seepage?

15 A In my opinion, no.

16 Q Do you know what the formula is for computing
17 seepage of that nature?

18 A It depends entirely on whether or not you have a
19 mound built up under the streambed.

20 Q Do you know whether or not we have such a mound
21 under the Feather River?

22 A No, I do not.

23 Q With regard to the changes in head condition --
24 well, okay, you said with regard to the changes in
25 seepage, you thought the range might be 15 to 20 percent.

26 A In the Feather because so much of that is in high

1 gravel beds.

2 Q If we did not have a mound built up under the
3 stream, what would the relationship be between the head
4 and seepage?

5 A It would tend to be linear.

6 Q So if we had twice as much head, we would have
7 twice as much seepage?

8 A The tendency would be in that direction.

9 Q Do you know what kind of water levels would be
10 expected in the upper reaches of the Feather River project
11 in July and August?

12 A No, I do not.

13 Q A couple of feet?

14 A It might be below the major points of diversion.

15 Q And above the major points of diversion?

16 A It would probably be somewhat more.

17 Q Do you think with the project that we could get a
18 situation where we doubled the head?

19 A If there was sufficient water released from
20 storage.

21 Q How about July and August of 1977, do you know how
22 deep the water was?

23 A No, I do not.

24 Q My query is, it seems to me like it wouldn't be
25 hard to get 100 percent increase in seepage on that river
26 in July and August, and I'm just trying to -- you said 15

1 to 20 percent, and I just wondered why that's the range if
2 that's really --

3 A It's purely speculative and based on some
4 experience elsewhere. I have made no calculations in that
5 regard. As I said, we do use a gaging station near the
6 mouth of the Feather and we have used that as the measure
7 to correct for storage releases and evaporation. They have
8 used that corrected value as the natural flow reaching the
9 Sacramento River.

10 Q Don't you use the individual reaches of the
11 Feather River to determine what the project flows impact
12 is on the river system?

13 A Yes, because we have to take inflows into account.
14 We have to use reaches.

15 Q But you are saying the seepage in the Feather
16 River above Nicolaus is of really no relevance in this
17 calculation?

18 A My statement was that we have used the recorded
19 flow near Nicolaus.

20 Q Okay. If you only have the recorded flow at
21 Nicolaus, what did you do to determine how much of that is
22 project flow versus non-project flow unless you examine
23 the rest of the stream upstream of that?

24 A We have attempted to track the water downstream
25 from Oroville and from the return from Thermalito
26 Afterbay, track that downstream by reach where we had

1 gaging stations and taken the unmeasured accretions and
2 depletions by each reach.

3 Q Well, the unmeasured accretions and depletions,
4 all that is is the difference of the number of what the
5 measurement is.

6 A That is correct, but it accounts for the water
7 that ultimately reached the Sacramento River via the
8 Feather in July and August.

9 Q So it is relevant in the determination of what is
10 project flow at Nicolaus?

11 A In our opinion, it would not have been necessary
12 to make that type of adjustment.

13 Q Because the higher it is the better it is in terms
14 of the amount of project flow reaching Nicolaus: right?

15 A Would you --

16 Q I mean, isn't it an advantage to your clients to
17 have greater amounts of project flow reaching Nicolaus on
18 the Feather River?

19 A We have not approached it in that fashion, Mr.
20 Nomellini.

21 Q I am not sure you can assure me of that in any
22 meaningful way.

23 A Well, I can't, except to tell you that is my
24 opinion and my intent.

25 Q Okay. But you didn't do the seepage or unmeasured
26 accretion calculations on the stream?

1 A No, these calculations have been done by the
2 department staff and I reviewed them to make sure the
3 methodology is satisfactory to me.

4 Q And you don't think the project increased seepage
5 in July and August of 1977 by an amount in the Feather
6 River over 20 percent?

7 A That is my considered opinion based upon what I
8 know now.

9 Q And you wouldn't have to make any calculations to
10 support that?

11 A I don't believe it necessary.

12 Q All right. Now with regard to evaporative losses
13 from the river, you said increasing eight feet at the side
14 of a 300-foot channel, that was your example, you said
15 that wouldn't be very significant.

16 A That's an increase in surface area under that
17 hypothetical example of, I said, 2.7 percent.

18 Q Now, let's get down at the bottom of this river
19 where we end up with no flow versus two feet of flow, that
20 would be a significant difference; wouldn't it?

21 A Yes, that could be.

22 Q So, if the water in the river would have otherwise
23 had a trickle in it or been dry, it would make one heck of
24 a difference?

25 A Under that extreme example, that is correct.

26 Q And that stream channel could range anywhere from

1 a 300-percent increase to 300 times as much; could it not?

2 A I will say it could be under that extreme
3 condition, it could be a significant amount.

4 Q If we had a dry stream that was 300 feet wide, it
5 was dry, and then we put water across 300 feet,
6 evaporative losses could be 300 times --

7 MR. KLETZING: Which one of these streams was dry,
8 the Sacramento or the Feather?

9 MR. NOME LLINI: I am going to ask that next.

10 Q Am I right conceptually?

11 A Yes, except under those extreme conditions the
12 probabilities are that the water would be confined to a
13 relatively small portion of the streambed. It would not be
14 spread over the whole thing.

15 Q So that with project operations, it would still
16 be --

17 A With any releases with which we are concerned
18 here, I think it would still be relatively confined.

19 Q Unless we had a real flat channel with a slight
20 gradient?

21 A Yes.

22 Q Like we have downstream from Oroville Dam?

23 A Well, it could be. It would be a highly variable
24 situation.

25 Q But you don't want to say it could be 300 times as
26 much?

1 A No, I don't want to speculate that it could be
2 that much.

3 Q But it could be?

4 A It could be significant under extreme flow
5 conditions.

6 Q Now is it your opinion that it's highly unlikely
7 that the Feather River downstream of Oroville Dam would
8 have been dry during July and August of a critical year?

9 A I can't speculate on that on the basis of what I
10 know now. I would want to examine the historical
11 streamflow records and reconstruct the inflow to the
12 reservoir and see what that would have been.

13 Q Okay. How about on the American River, do you
14 think the American River was ever dry in a critical year
15 during July and August?

16 A I know of no records that shows it was dry. I
17 think that before Folsom was placed in operation there
18 were times when the flow was as low as 250 second-feet in
19 the American. I know of no record where it was dry.

20 Q How about in the vicinity of Yuba City?

21 A I do not know.

22 Q Okay. You indicated that accuracy of the
23 measurement of the Sacramento flow is not significant when
24 one considers all of the measurements. What did you mean
25 by that?

26 A I do not recall having made that particular

1 statement.

2 MR. KLETZING: Neither do I.

3 A Would you repeat your question?

4 MR. NOMELLINI: Q Yes. I was asking what you
5 meant when you say the accuracy of measurements of the
6 Sacramento River flow was not significant when one
7 considers all of the measurements?

8 MR. KLETZING: I think you wrote something down
9 wrong.

10 MR. NOMELLINI: What do you think his statement
11 was?

12 MR. KLETZING: I don't know, but I don't think it
13 was that. It may have been that the amount of evaporation
14 and seepage was small then in relation to all of the
15 measurements. I don't know.

16 A I believe I did make that statement that Mr.
17 Kletzing just said.

18 MR. NOMELLINI: Q Okay, but you do believe then
19 that the accuracy of the measurements of the Sacramento
20 River flow is very important?

21 A Well, those measurements as recorded by the 'USGS
22 are the bases, fundamental bases for the entire study.

23 Q And those measurements are very important?

24 A Very.

25 Q And what would the range of accuracy be of those
26 measurements?

1 A As I recall from the USGS records, and I have the
2 USGS reports with me and I can look it up if you wish, the
3 classification that the USGS gives for the accuracy of
4 those particular stream-gaging stations --

5 Q Okay, can you give it to me for the Sacramento at
6 some point near the Delta?

7 A This is the Sacramento River below Wilkins Slough
8 near Grimes, and the record is excellent, which would mean
9 in USGS terminology plus or minus five percent.

10 Q Okay. What about somewhere down near Sacramento,
11 what would that measurement be?

12 A Sacramento at Sacramento, the record is good above
13 8,000 cubic feet per second and fair below.

14 Q Do you know what the flows were in July and August
15 of 1977?

16 A The mean flow in July at Sacramento is given as
17 8,248 second-feet, and for August it is 7,687.

18 Q Okay, so good would be what range?

19 A Above 8,000.

20 Q I mean what percentage accuracy is the good
21 rating? You said excellent was five.

22 A Good, I think that classification is plus or minus
23 ten percent.

24 Q What about fair?

25 A Fair is plus or minus 15 percent, I think that's
26 right. The USGS has a classification system, if I can find

1 it. In the USGS terminology excellent means that about 95
2 percent of the daily discharges are within five percent;
3 good means within ten percent; and fair means within 15
4 percent. Then they have a further classification of poor,
5 which means that the daily discharges are of less than
6 fair accuracy.

7 Q Okay. Then if the inflow into the Delta for the
8 month of August were within 15 percent on the Sacramento
9 River, what do you think the overall accuracy of this
10 analysis that you have reviewed by the department is in
11 view of the 15 percent possibility on just the Sacramento
12 River flow alone?

13 A You mean on the basis of those calculations or the
14 overall analysis?

15 Q The overall analysis has got a lot of other
16 calculations in it that have substantial variance; do they
17 not?

18 A I believe I quoted in my opinion in the prior
19 deposition and I am not sure what I said at that time, but
20 my opinion as of the moment, which may or may not be
21 exactly the same as I quoted before, is that we are
22 probably dealing overall considering all of the
23 measurements that enter into the calculation, probably
24 plus or minus 15 percent.

25 Q How can you say that focusing in on August now,
26 where we have a 15-percent possible variance in the

1 measurement of the river flow alone?

2 A That's very close to being -- that's only a little
3 ways below what they classify as good.

4 Q Wouldn't we, in terms of evaluating the accuracy
5 of the study, wouldn't we have to think of the possibility
6 that there is a 15-percent error here and in some other
7 calculations there is a 15-percent error? Wouldn't they
8 compound? Wouldn't they add up?

9 A Not necessarily. Any one of them is plus or minus.

10 Q I mean in terms of setting a range of the
11 accuracy, wouldn't we have, you know, a compounding of
12 these numbers?

13 A You might have a compounding under certain
14 circumstances; nonetheless, where you had a good record
15 you would weight that in proportion to the contribution
16 from that source and where you had an excellent record you
17 would weight that in accordance with the contribution.

18 Q The Sacramento River is a fairly significant
19 source to the Delta in July and August of a critical year;
20 is it not?

21 A That is correct.

22 Q So we would weight that fairly high?

23 A Well, certainly, because that's where the major
24 portion of the flow is.

25 Q Okay. So, if we had a 15-percent possible error in
26 the measurement of the Sacramento River and we had, let's

1 say, a 60-percent possible error in the evapotranspiration
2 crop figure for, let's say, corn in August of 1977,
3 wouldn't we in analyzing the accuracy of the determination
4 of the damage resulting from that watering of the corn
5 have to consider that those two errors do add?

6 A No, I don't believe they would add necessarily
7 because one at any given time might be plus and the other
8 one might be minus. These are the limits within which 95
9 percent of the measurements fall, from the mean five
10 percent plus, from the mean five percent minus.
11 Ninety-five percent of the measurements fall within that
12 range.

13 Q So why wouldn't we have a range that runs from
14 zero to 15 percent for error of the Sacramento River flow?
15 Wouldn't that be a fair way to characterize that?

16 A No, using the terminology of the USGS, as I said,
17 here is the mean, here is a difference of five percent
18 minutes, less a difference of five percent plus, and the
19 records fall within that range. That does not mean that
20 every measurement of the Sacramento River at Sacramento is
21 necessarily five percent off the mean. That isn't the way
22 it is recorded.

23 Q Does that mean it could be off completely; in
24 other words, both the extreme, the mean and the other are
25 all wrong?

26 A No.

1 Q How do you check the measurements of the
2 Sacramento River?

3 A There are several methods of checking that. There
4 is a measurement -- the USGS measures it together with the
5 Department of Water Resources.

6 Q How do we know it's right? How do you check it?

7 A There is no good absolute way of checking
8 streamflow measurements.

9 Q So this variable that you gave us is simply an
10 expression of the relationship of the readings to the
11 mean?

12 A Yes, it falls within that range. Ninety-five
13 percent of the measurements fall within that range. Some
14 of them might be exactly on the mean, and it's possible.

15 Q What does that tell us about the accuracy of the
16 measurements? You have convinced me, I think, that it
17 doesn't tell us anything about the accuracy of the
18 measurements.

19 A No, it doesn't.

20 Q So we don't know whether the measurement is
21 accurate or not because there's no other way of checking
22 it?

23 A We do know that the USGS in their measurements and
24 the department use the best techniques and methodologies
25 that are available for that particular purpose at this
26 particular time.

1 Q Do you know whether they, in fact, employed that
2 methodology in July and August in 1977?

3 A No, I do not.

4 Q Do they use a physical measuring device of some
5 kind in connection with their measurements?

6 A Yes.

7 Q Do you know what they use?

8 A As far as I know, they are still using the old
9 current meter.

10 Q You mean the old worn-out current meter?

11 A I used the "old" in the sense that current meters
12 of that type have been used for many many years.

13 Q You mean propeller current meters?

14 A Yes, in effect, except it doesn't look like a
15 propeller. It's activated by cups on a wheel rotating on a
16 vertical axis.

17 Q And those things work perfectly all the time --
18 according to Russ, he's your reliable source, I imagine,
19 on that subject?

20 A They work all right if they are calibrated
21 regularly.

22 Q And if they are not, what kind of error can we get
23 involved in?

24 A Well, you can get involved in substantial error if
25 the cups are bent or the vertical shafts are bent, or
26 something of that nature, but I do believe that the USGS

1 uses the best technology there is available.

2 Q And like other humans they are always perfect in
3 everything they do all the time; right?

4 MR. KLETZING: You didn't go around and bend those
5 cups; did you, Dan?

6 MR. NOMELLINI: I, frankly, didn't know what to
7 bend until just a minute ago.

8 A The cups can be bent.

9 MR. NOMELLINI: Q How do we know that wasn't the
10 case here? You are very comfortable relying on this
11 information?

12 A Well, let me answer in this way, and I do not
13 intend to be facetious, those are the records we have.

14 Q For better or for worse. I agree there's some
15 merits using the only records we have. I understand that.
16 I know that may be the only thing.

17 Has any attempt been made by you to determine the
18 reliability of that particular record?

19 A No, but as I say, the USGS is the expert in the
20 world on that sort of thing. My own inclination is to rely
21 on those records.

22 Q For lack of a better, I may very well rely on
23 them, too, but that still doesn't say that they are
24 accurate and, therefore, the range of five percent, ten
25 percent, fifteen percent really didn't help us at all in
26 determining the accuracy of this analysis.

1 A No, it really doesn't.

2 Q Okay.

3 A It's just a measure of the possible distribution
4 of measures.

5 Q Okay. Now let's go back to the question I think I
6 asked you before, what do you think the range of accuracy
7 is of measurements of the Sacramento River flow?

8 A At Sacramento?

9 Q Yes, at Sacramento.

10 A Knowing the characteristics of the flow at
11 Sacramento, I would say that the accuracy is within 15
12 percent.

13 Q Do you know whether or not a cross-section at the
14 gaging station is taken each time there's a measurement?

15 A In effect, yes, because the depths of water at the
16 point where the velocity is measured is also measured at
17 the time.

18 Q How was this test actually conducted? Is it from a
19 cable or bolt, or what do they do in the Sacramento River,
20 and I am talking about at Sacramento in July and August.

21 A The water stage recorder is located on the left
22 bank a thousand feet upstream from the I Street Bridge and
23 half a mile downstream from the American River. To answer
24 your question, there are two measurements made. Number one
25 is the height of the water, the water stage which is
26 recorded on a water-stage recorder, and periodically there

1 are actual measurements of the discharge made with a
2 current meter, and that is related to the water stage at
3 that time, so that the net result of all of the
4 measurements and the stage is that you get a rating curve.

5 Q Okay. Let's say we take August of 1977, and we
6 want the flow. We have got the average flow for the month.
7 Were there instantaneous daily flows measured at
8 Sacramento?

9 A I do not believe so. It would not be normal
10 practice.

11 Q So how often would they go out and measure during
12 the course of this month to determine this monthly flow?

13 A They might not measure it at all during that
14 particular month, that is the actual measurement of the
15 quantity of water passing. I do not know whether they do
16 or not.

17 Q You are our expert, you know.

18 A Well, I have not gone to the USGS and gone through
19 the records of their measurements, which is the only way
20 you could tell.

21 Q Is there a continuous recorder at the gaging
22 station?

23 A Yes.

24 Q So the elevation would be recorded continuously?

25 A That is correct.

26 Q And you don't know how often they go out there

1 with a flow meter?

2 A I am just going to look to see how many
3 measurements they made during the year.

4 Q At that Sacramento station?

5 A Yes.

6 Q Okay.

7 A In this particular report they do not include the
8 number of actual streamflow measurements that were made.

9 Q All right, and that report is what -- USGS Survey
10 Water Data Report CA77-4?

11 A Yes.

12 Q All right. I gather then that my concern for
13 change in channel configuration is a realistic concern; is
14 it not?

15 A I do not know how much the channel changes at the
16 I Street Bridge. In some high velocity streams there may
17 be a substantial change during high flows, but I do not
18 know.

19 Q We would have to know how often they have checked
20 that at that station to really get an idea as to what that
21 possible variance would be; would we not?

22 A Yes. You would have to procure the actual
23 streamflow measurement records made by the USGS and the
24 data that were actually physically measured, and that
25 would be the depth of the water at points across the
26 channel and the velocity at those points.

1 Q The thing that was crossing my mind is I know
2 there's significant boating traffic in July and August on
3 the Sacramento River and physically how they would do this
4 on a regular basis without substantial interference in the
5 process was something that had me baffled, and I know you
6 engineers are very ingenious in your methods. However, how
7 do you think they did it if they did do it in those
8 months?

9 A As I recall, the actual measurement point by point
10 is made at the I Street Bridge and, of course, if the
11 hydrographers see a boat approaching, they pull their
12 current meter up and get out of the way. Where the
13 measurements are made from an overhead cable, it gets a
14 little more difficult.

15 Q Okay. With regard to the questions of quantity
16 versus quality, I believe you answered in response to
17 Les's questions after he said to put quality aside; in
18 other words, quality is not a factor, did the project
19 provide water to Delta water users in July and August of
20 1977?

21 A In our opinion, and based upon our analysis, yes.

22 Q Okay, but based on your analysis, would wet water
23 have been there anyway?

24 A Wet water would have been there anyway, as we have
25 defined wet water.

26 Q Okay. So, if we just strike water quality, let's

1 forget about water quality, the farmer in the Delta in
2 July and August of 1977 would have had water regardless of
3 the project?

4 A He could have pumped wet water.

5 Q Okay. And with the project you are saying he had a
6 mixture of water?

7 A That is right.

8 Q Probably. You don't know, in fact, that farmer A
9 actually had a mixed quantity of water; do you?

10 A Based upon our analysis there was a mixture of
11 project water and wet water throughout the Delta.

12 Q Okay, but if we ignore water quality, isn't
13 project water wet water? We are ignoring water quality
14 now. Russ said ignore water quality and I think he
15 confused you in his questioning is why I am pursuing this
16 in detail. He says to ignore water quality. Isn't the
17 project water wet water?

18 A The only way I can answer that, Mr. Nomellini, is
19 to say that there were substantial quantities of project
20 water flowing into the Delta and, in our opinion, the
21 water that was, in fact, diverted and used was a mixture
22 of what we have termed natural flow and project water
23 during July and August.

24 Q Okay. With the assumption that we are ignoring
25 water quality, isn't project water just wet water?

26 A I'm not sure I understand your question.

1 Q Okay. If we are going to ignore water quality as a
2 basis for a hypothetical question, is project water wet
3 water? The term "wet water" came from you, Harvey. You
4 said the Delta would have wet water without the projects.

5 A That is correct.

6 Q Okay, wet water.

7 A There would have been water in the channels.

8 Q All right. Now with the projects operating, but
9 ignoring water quality --

10 A There would be water in the tunnels.

11 Q Okay, but it wouldn't be wet water?

12 A Not as we have been using that term.

13 Q Okay. Ignoring water quality, tell me the
14 difference between project water and wet water.

15 A As I have used the term "wet water," for lack of a
16 water term, that refers to water which occurs in the
17 channels absent any contribution from the projects.

18 Q Okay. If we ignore water quality, there wouldn't
19 be any quality difference between project water and wet
20 water; would there?

21 A That is correct. If you completely ignore any
22 aspect of quality, water in that case would be water.

23 Q Okay, we are just playing the logical game here.
24 We are going to ignore water quality. Russ wanted you to
25 ignore water quality earlier and I want you to ignore
26 water quality now. If we ignore water quality, what

1 benefit is derived by a Delta farmer from pumping wet
2 water versus project water?

3 A Under the hypothesis that has been stated where we
4 are ignoring any aspect of quality, any value to quality
5 whatsoever, then water is water.

6 Q So, if we ignore water quality, there is no issue
7 of damage in this particular case in July and August of
8 1977; is there?

9 A Under the assumption that has been made here, that
10 quality is of no concern whatsoever, under that
11 assumption, logically I would have to agree with you.

12 Q Okay. So you were right earlier when I asked you
13 the question, is it not true that quantity only enters the
14 picture for this particular case in July and August of
15 1977 considering the quality changes as the result of
16 project flows that quantity only enters the picture as a
17 method of calculation of the damage.

18 A I think that is correct.

19 Q Now with regard to incidental benefit from water
20 released for other purposes, do you believe that there is
21 an obligation for payment for the incidental benefits
22 received from State Water Project releases to enhance fish
23 and wildlife, if without that release the water would have
24 been of usable quality anyway?

25 A I'm not sure that I can answer that question
26 categorically. May I go back and give my rationale again

1 on this whole problem?

2 Q Sure. And if you need explanation, the first time
3 we took your deposition you felt that incidental benefit
4 from a release for some other purpose was not compensable
5 in any respect, and that is a non-reimbursable type of
6 thing.

7 Then you came back and today you have qualified
8 that and I thought what you are saying is that if it makes
9 the difference between usability of water quality to the
10 farmer in the Delta, then maybe there should be some kind
11 of compensation.

12 All I am trying to do is understand your testimony
13 because to me it sounds like there has been a change. I'm
14 not sure if there is. I just want to understand what you
15 are saying.

16 A Well, may I go back a little bit?

17 Q Yes.

18 A What I said was subsequent to the 23rd of
19 September, based upon the discussion at that time I felt
20 it necessary to go back and review the statutes and all of
21 the policies that have led up to this, and there are a
22 number of them.

23 Q Okay, what did you review specifically?

24 A I reviewed the Central Valley Project Act.

25 Q In the Water Code?

26 A In the Water Code. There is a provision there

1 which requires the department to establish rates for water
2 and power which will repay the project. There's the
3 Davis-Dolwig Act which says that fish and wildlife
4 enhancement, not mitigation, not protection, but
5 enhancement, those allocated to that, those allocated to
6 recreation are to be non-reimbursable, and the Delta
7 Protection Act, all of which are in effect imbedded in the
8 state wwater contracts for water, and those contracts were
9 approved by the courts in the Marquardt case before bonds
10 could be issued.

11 Now, getting back to what I envision as a basis on
12 which payment would be requested, in the first place the
13 Delta lands including Byron-Bethany lands, have some basic
14 rights. The riparians have a right to their allocated
15 share of the natural flow, then that goes to the
16 appropriators. That fixes the amount to which they have an
17 inherent right, the aggregate being the natural flow that
18 comes in plus a portion of that for the Delta outflow.

19 Now over and above that, there could be this case:
20 Here is Oroville, here is the Delta outflow, water is
21 released. We will draw two arrows and say I am going to
22 use blue and green water for this. Blue water will be
23 released down and flow out in order to maintain salinity
24 control. Primarily here we are talking about fish and
25 wildlife and recreation.

26 Green water will be released in addition to that

1 in order to meet the needs of the Delta lands over and
2 above what they have a basic right to in the natural flow.

3 And the fact that in those cases where additional
4 water has to be released to flow down for diversion by the
5 Delta lands, in my opinion, that reimbursable.

6 Q With regard to the blue water, let's assume we
7 have a diverter right on the Sacramento River on the route
8 to the ocean. Adding the blue water into the green water
9 and the water that was there before, the wet water, that,
10 in effect, dilutes whatever salt would be there; does it
11 not?

12 A Well, we are in this case concerned with the salt
13 that could migrate upwards through Suisun Bay.

14 Q Okay. Well, I mean, isn't there an improvement in
15 the water quality that is related to the blue water for
16 the guy that is on the Sacramento River?

17 A The improvement in quality for anybody along the
18 Sacramento, I think is very small because that is
19 excellent water to start with.

20 Q Okay, let's say it's small. There would be no
21 obligation for compensation in that particular case; would
22 there, for the blue water?

23 A No, because he is diverting under his riparian
24 right.

25 Q Okay. If the difference was large, he wouldn't
26 have to compensate for the blue water; would he?

- 1 A That would be a matter of policy.
- 2 Q Let's assume it's large, but it doesn't make any
3 difference in terms of usability of the water.
- 4 A That improvement and quality has no beneficial
5 effect on it.
- 6 Q I am asking you.
- 7 A It might not. I doubt that it would --
- 8 Q Let's assume it has a beneficial impact.
- 9 A It if increases the productivity, then I think
10 there should be some effort made to get some compensation
11 for it.
- 12 Q Even though it was released for what the
13 legislature said was a non-reimbursable function.
- 14 A Remember, I said for the purposes of illustration
15 I used two colors of water, one which was released
16 specifically for the benefit of enhancement of fish and
17 wildlife.
- 18 Q That's the blue water.
- 19 A The green water comes out of the outlet from
20 Oroville, flows on down and is diverted -- maybe some of
21 it is diverted along the river.
- 22 Q Did you make any analysis of whether or not crop
23 production in the Delta area in July and August of 1977 by
24 these defendants was improved because of the release of
25 State Water Project water?
- 26 A I have not because that was the function of Dr.

1 Henderson.

2 Q But you do think that's a relevant consideration,
3 I gather?

4 A I think any benefit that is over and above that to
5 which they are entitled under their riparian rights or
6 their appropriative rights -- and this is a personal
7 opinion, let me interject -- should be compensable.

8 Q Just like when I come over and pave your front
9 lawn.

10 A Well, I do not agree that those two situations are
11 quite comparable.

12 Q The difference being what?

13 A The difference being primarily that the statutes
14 require repayment for the project.

15 Q If there was a statute that sais when I come over
16 and pave your yard, you have to pay me?

17 A If there were such a statute --

18 Q Then you would think that's fine?

19 A I might object to it during the course of the
20 passage of the act.

21 Q But you think that would be fine once it's passed?

22 A If that's what the statute says, then we
23 supposedly would have to live up to it.

24 Q And your legal wisdom would not see any
25 constitutional difficulty with that type of approach?

26 A There might be.

1 Q So you now have changed your testimony on
2 incidental benefit from water released specifically for
3 some other purpose to one as saying, yes, you have to pay
4 for water if you get a benefit out of it?

5 A In my opinion, that is correct.

6 Q So it doesn't make any difference whether it is
7 released for another purpose of specifically for your
8 purpose in your new opinion?

9 A That's correct.

10 Q And it doesn't make any difference whether it was
11 released for non-reimbursable function; right?

12 A Right.

13 Q So you and Russ Kletzing are now birds of a
14 feather.

15 A I'm not sure that Mr. Kletzing would like that
16 analogy.

17 MR. KLETZING: I think he has you almost convinced
18 of that.

19 MR. NOMELLINI: He has me convinced he spent some
20 time talking to you and changed his testimony based on it.

21 A May I assure you that my conclusion on this is
22 arrived by myself from an analysis of the history of the
23 statutes and all of the policies that have been
24 implemented, some of which I formulated myself.

25 MR. NOMELLINI: Okay. Well, you did have an
26 entirely different position when we took your deposition

1 which was also under oath and which was done, you know, in
2 an atmosphere where Mr. Kletzing questioned you at that
3 time on this very same subject. Okay.

4 So there's no difference between blue water and
5 green water?

6 A Well, it all comes out of the same --

7 Q I mean, in your example you pay for blue water and
8 you pay for green water, and the question is whether or
9 not you benefited from it.

10 A The question is does the State and/or the Bureau,
11 as the case may be, have to release excess water to
12 satisfy the demands of the Delta water users which are
13 greater than their basic rights to the natural flow.

14 Q Okay. They don't use any more water than they
15 would otherwise use provided the water was usable in the
16 first place; do they?

17 A Well, I think --

18 Q Let's --

19 MR. KLETZING: Let him answer the question.

20 MR. NOMELLINI: Q Okay, go ahead.

21 A I think that if the water in the channels were of
22 usable quality that there would be enough in the channels
23 to satisfy the riparian rights and the appropriative
24 rights and, therefore, they would not need any project
25 water.

26 Q And they shouldn't have to pay then?

1 A If that's the case.

2 Q Okay. Now let's analyze that. The water is usable.
3 They have enough to satisfy their quantity needs and
4 quality needs. It's usable.

5 A Okay.

6 Q And you are saying they don't use any more water
7 just because the quality is improved.

8 A I would say that if there had been a quality
9 improvement so that that water became more valuable by
10 reason of increased crop production or some other reason,
11 then ideally and logically, those particular farmers
12 should pay for those benefits received.

13 Q Even though they don't use any more water?

14 A If the quality is significantly improved and
15 results in greater crop production than if it hadn't been
16 improved, then ideally and logically they should
17 compensate the State for it, or the Bureau, as the case
18 may be.

19 In this case, however, the Bureau has not asked
20 for compensation.

21 Q Well, any time the State wants to improve that
22 quality, those people ought to pay for it; is that what
23 you are saying?

24 A I doubt very much the State will ever be in the
25 position of releasing water more or less on its own
26 initiative solely to improve quality for the Delta so long

1 as the water is usable otherwise, and there was no threat
2 of saline water intrusion.

3 Q What difference does that make if the farmer
4 benefits? If he gets greater production, what difference
5 does it make what the threat of salinity intrusion is?

6 A It doesn't.

7 Q So it doesn't make any difference. So any time
8 there is a quality improvement, if that's of some benefit
9 to the farmer, then he ought to pay for it?

10 A As I interpret the agreements which were reached
11 with the North Delta Water Agency, that, in effect, is
12 what is what they are paying for, is a better quality of
13 water.

14 Q Well, that has a limit. They are paying for a
15 minimum water quality; aren't they?

16 A They are paying a fixed fee per acre as I
17 understand it, because the State has guaranteed to release
18 sufficient water at that time so that the chloride
19 concentration at Emmaton would not exceed 14000 milligrams
20 per liter.

21 Q What happens if it is a lot better than that? Do
22 they pay more money? Let's say it gets all the way down
23 because of releases from the State down to 500 parts per
24 million at Emmaton, are they going to pay more money under
25 your understanding?

26 A If that were to happen, as I said, logically that

1 would be the case. From a practical standpoint, I don't
2 believe the State will ever release more water than is
3 necessary to meet the water quality objectives that have
4 been established according to law.

5 Q Well, they might voluntarily want to improve their
6 water quality at the pumps and maybe the water quality
7 standards are going to be lower than that.

8 A May I ask, what was the second part of that
9 statement that you just made?

10 Q That the water quality standards might be lower
11 than they want to provide at their pumps.

12 A That's probably the case, they will be, yes.

13 Q So I am just giving you an example of how they
14 would make releases higher than water quality standards.

15 A There's a practical reason why this may well never
16 been done because it will be extremely difficult to
17 administer.

18 Q Do you think it is okay in this particular case?

19 A We are basing this, as I said, upon our estimate
20 of the amount of additional water which was placed in the
21 Delta and which was diverted and used by the Delta water
22 users over and above their basic riparian and
23 appropriative rights as to the natural flow.

24 Q Which is based on the assumption that the quality
25 would have been unusable --

26 A That's our opinion.

1 Q -- in the absence of project water.

2 A That's our opinion that it would be unusable
3 starting about in June, maybe a little earlier and
4 continuing through July and August.

5 Q Okay. Then you think that water quality benefits
6 should be compensated so long as it produces a benefit in
7 terms of profit or greater yield to the farmer except
8 where it is impossible to do so, like in the North Delta
9 Water Agency?

10 A I believe that there is a reasonable equitable
11 manner for the Delta water users to compensate the State
12 and I will limit this to the State at the moment, for the
13 benefits that they have received, and I think following up
14 on the type of analysis that we have made for this case
15 where we have attempted to quantify the amount of project
16 water that flowed into the Delta and was diverted, an
17 amount in excess of the basic right to the natural flow,
18 is the logical equitable way of getting at it, and as I
19 interpret what was done with respect to the North Delta
20 Water Agency, that, in essence, is the way that was
21 approached there.

22 MR. KLETZING: Are we going to get to Dwight
23 Russell this afternoon?

24 MR. NOMELLINI: I don't know.

25 MR. KLETZING: Is Jerry Orlob coming?

26 MR. WHITRIDGE: He is going to be here about

1 three.

2 MR. NOMELLINI: Q Would you agree then that all
3 improvement of water quality need not be compensated for?

4 A In equity, that would be true. Let's assume that
5 the water in the Delta channels contained 100 milligrams
6 per liter of chlorides, just to use that one parameter,
7 there is no point in increasing that. That's as good as
8 you need for any reasonable use. So there has to be limits
9 on this.

10 Q So, if we improved it from 100 to 60-parts-per-
11 million chlorides --

12 A I don't believe --

13 Q There shouldn't be any compensation?

14 A I don't believe that that degree of increase under
15 those circumstances would convey any particular benefit.

16 Q Okay. What about, let's say the Contra Costa Water
17 District, which services industry and urban areas, what
18 kind of parameters are we going to go put on that for
19 compensation to the State for water quality improvement?

20 A None. We have not at any time considered that the
21 federal contractors would be obligated to the State.

22 Q Why not?

23 A They are the federal contractors, of which Contra
24 Costa Water District is one and they are paying for the
25 federal Central Valley Project, the contractors plus the
26 power users.

1 Q But that shouldn't make any difference. They are
2 paying for the water just like the farmer in the Delta
3 bought his riparian land and has an entitlement to water.
4 Now somebody is putting water in there that improves that
5 water quality.

6 A Under a particular set of circumstances in July
7 and August of 1977.

8 Q Well, okay. We are talking equity now. We are
9 talking about improving water quality that benefits them,
10 and for that industry over there I could imagine that 60
11 parts per million could make a big difference choridewise
12 in one of those industrial processes.

13 A Yes.

14 Q So they ought to pay for their respective benefits
15 under this?

16 A They are paying for water and there is part of
17 that payment that goes for paying for the federal Central
18 Valley Project costs.

19 Q Yes, but that's only part, that's only 75 percent
20 of the water in the Delta. That doesn't pay for the other
21 25 percent; right? This is what you have told us.

22 A That's very true.

23 Q So they ought to pay Kletzing the 25 percent?

24 A Your people are not being asked --

25 MR. KLETZING: I am not providing them any water.
26 I don't understand why they would pay me.

1 MR. NOME LLINI: Because you improved their water
2 quality and they would not have been able to divert to
3 make that paper, Russ.

4 MR. KLETZING: You are equating --

5 MR. NOME LLINI: Without the improvement in quality
6 that you gave them.

7 MR. KLETZING: Are you equating me with the State?
8 I only -- only Louis V can say that, not I.

9 MR. NOME LLINI: Well, I view you in almost the
10 same light. Why wouldn't they pay for the benefits under
11 your great equitable scheme of things? They only
12 contracted with the federal government. They are probably
13 only paying ten or twelve dollars 'an acre-foot. The
14 alleged value here is \$60. They are getting a real
15 windfall and they are getting significant benefit. Why
16 shouldn't they pay the State?

17 A Then, on that rationale, the Arvin-Edison Water
18 Storage District in Kern County should pay the State.

19 MR. KLETZING: Wasn't the quality at Antioch where
20 they dilute something like 2,000 parts per chloride or so?
21 I mean, you know, we are in kind of a never-never land.

22 A Well, may I comment on this?

23 MR. NOME LLINI: After your testimony, I would be
24 interested in asking Kletzing questions on this
25 never-never land because I think that's where he has this
26 entire lawsuit, but the distinction I don't understand.

1 Why should not Contra Costa Water District pay the State
2 for the benefit they get from this so-called 25 percent?

3 A I have to be careful not to argue with you.

4 MR. NOMELLINI: Q You can argue with me. I am
5 easy to argue with.

6 A You who also benefit from the federal Central
7 Valley Project are not being asked to pay for the federal
8 Central Valley Project.

9 Q That is right.

10 A As a practical matter of getting this, the water
11 users under each project, if they pay for that project,
12 then it's about as equitable and rational an approach as
13 you can get.

14 Q I would much rather pay \$4 than \$60.

15 A I can't respond to that.

16 Q As long as something is paid to somebody, that's
17 okay with you?

18 A That is correct. I do not believe from the stand-
19 point of a water manager overall that the present
20 situation is not equitable, but the Bureau has elected not
21 to seek compensation for such water as they may use from
22 their storage from the benefit of the Delta.

23 Q Some of us believe that there's some legal basis
24 to that.

25 A The legal basis -- well, forgive me, I'm sorry,
26 under the circumstances I have no basis for making a legal

1 statement.

2 Q Now let's assume that the Delta is entitled to
3 receive the water quality benefit from the federal project
4 without compensation. Let's assume that's our entitlement
5 and that is similar; is it not, to contra Costa Water
6 District being entitled to receive federal water for the
7 modest payment that they make. It's an entitlement; is it
8 not, both are entitled to have water quality benefits from
9 the federal government.

10 A If it were correct, and I have no basis for saying
11 that that assumption is correct, if it were correct, then
12 by statute and policy of the Secretary of Interior,
13 subject, of course, to review and --

14 Q The Supreme Court of the United States.

15 A And whatever, if there were a policy on a sound
16 legal basis that the Bureau would provide its contractors,
17 including the share of water for fish and wildlife
18 enhancement and other uses without compensation, then --

19 Q It would be the same thing?

20 A Yes.

21 Q So this whole question of whether or not the Delta
22 water users in July and August of 1977 should pay the
23 State of California anything depends upon whether or not
24 the federal government's obligation to provide salinity
25 control in the Delta is non-reimbursable?

26 A I don't believe, Mr. Nomellini, that I said that.

1 Q Okay. Let's go through it again. Assuming that the
2 federal government was obligated to provide the Delta
3 water users with usable water quality in July and August
4 of 1977 without compensation due to some law, subject to
5 review of the highest court in the nation, let's assume
6 that they have adjudicated that as a fact, that there is
7 no obligation for reimbursement to the federal government,
8 the Delta is entitled to that water quality.

9 Under those circumstances, do you think Delta
10 water users should have to compensate the State?

11 A If your assumption were, in fact --

12 Q Let's assume it is, in fact, correct.

13 A All right. On that assumption, then I think there
14 would be a question.

15 Q A question?

16 A Yes.

17 Q You are not sure? Why can't you say the same thing
18 like for Contra Costa Water District? You felt very
19 comfortable that they shouldn't have to do it, but under
20 my hypothetical, which I even had the Supreme Court of the
21 United States blessing it for you --

22 MR. KLETZING: But they are not parallel.

23 MR. NOMEILLINI: I will get your testimony at the
24 next deposition when we swear you in, Russ, and I
25 particularly want to ask you about certain conversations.

26 A There's a certain degree of logic in your

1 presumption under the conditions you have assumed.

2 MR. KLETZING: But you even said that Contra Costa
3 Water District pays for their water. The Delta doesn't.

4 MR. NOMELLINI: They pay taxes.

5 MR. KLETZING: How are they at all comparable? You
6 say it is modest payment. That may be your opinion. The
7 district doesn't think it is so modest.

8 MR. NOMELLINI: What difference does it make if it
9 has got to be provided by law? People on welfare get money
10 from the government, you know.

11 MR. KLETZING: This is ridiculous.

12 E X A M I N A T I O N

13 BY MR. WHITRIDGE:

14 Q I wanted to just go back to one thing. I think you
15 said just a little while ago in talking about the
16 situation that if water became more valuable and results
17 in greater crop production, then the farmers should
18 compensate the State for it even if it is usable before
19 that and he diverts no more water; is that correct?

20 A I said ideally that should be the case. As I
21 recall it, I did qualify it because, as I said
22 subsequently, it would be very difficult to quantify that.
23 As a practical matter of trying to seek compensation on
24 that, it would be a little on the difficult side.

25 Q If that were the case, wouldn't it be more logical
26 to measurement payment by the amount of crop improvement

1 than by the amount of water diverted, if they didn't
2 divert any more water than they otherwise would?

3 A Under the assumption you stated where the water in
4 the adjacent channel available for diversion was still
5 within usable limits, yes.

6 Q Because in that case, I assume the benefit is not
7 in having more water, but in having better production.

8 A Right.

9 Q You are paying for benefits and that's how you
10 have to measure your benefits?

11 A That is correct.

12 EXAMINATION

13 BY MR. BABER:

14 Q Harvey, just a couple of questions on a little
15 different concept. The lawsuit, as I look at it now, is
16 the State seeks to recover money for actually some kind of
17 a contract that they have with the federal government, the
18 COA, as opposed to the quantity of water which was
19 delivered to the Delta and specifically Byron-Bethany in
20 July and August of 1977.

21 Do you follow me in what I am getting at?

22 A I think I do.

23 Q From what you have been telling us today, the
24 State is entitled to recover 25 percent of the water
25 delivered to the Delta in July and August of 1977 because
26 of this contract they have with the federal government.

1 A I don't believe I used the term "contract." I
2 think the terms I used were that you now have a statute
3 and an agreement between the State and the Bureau based
4 upon that statute, under which the two agencies agree to
5 assume a certain proportion of the responsibility for
6 meeting Delta needs.

7 Q I see. So then, regardless of whether the water
8 diverted by Byron-Bethany in July and August of 1977 would
9 have been usable without State Water Project facilities,
10 the State Water Project is still entitled to payment?

11 A The two agencies cooperated in providing the
12 releases from storage necessary to meet the Delta needs,
13 including the needs for salinity control.

14 Q Okay. I don't think that answers my specific
15 question, but it's in the ballpark, as they say.

16 Q It's as good as I can explain it at the moment.

17 Q But again, the State Water Project wants payment
18 because of this agreement they have with the federal
19 government to share in salinity control 75 percent/25
20 percent? Is that generally right?

21 A I would not word it that way.

22 Q Okay. Give me your wording.

23 A I would say that the State seeks payment because
24 there was water released from Oroville for the benefit of
25 the Delta during July and August. There was a total value
26 of water, part of which was released from Oroville, and

1 based on the agreement between the State and the Bureau,
2 of this total block of water we are assuming that 25
3 percent of that in accordance with the agreement will be
4 allocated to the State Water Project and 75 percent will
5 be allocated to the Central Valley Project. This is a
6 legal interpretation, so I may not be qualified to state,
7 but we do not seek payment because there is that
8 agreement. That is merely an agreement on how we split up
9 the responsibility for providing the necessary water.

10 MR. BABER: Okay.

11 E X A M I N A T I O N

12 BY MR. NOME LLINI:

13 Q On that same question, so the agreement has
14 nothing to do with it?

15 A Other than as a basis for allocating
16 responsibility.

17 Q Okay. Why wouldn't you just look at the
18 contribution from Oroville to the Delta in July and August
19 of 1977 and evaluate that if you are not going to depend
20 on this agreement at all?

21 A We are depending on the agreement as a basis for
22 allocating responsibility.

23 E X A M I N A T I O N

24 BY MR. BABER:

25 Q Don't you have to prove unusability of water
26 diverted by these Delta users you have sued, in July and

1 August of 1977?

2 A You are asking my personal opinion?

3 Q I am asking you to be a little bit of a lawyer
4 here.

5 MR. KLETZING: I object to that question.

6 MR. NOME LLINI: He has been acting like a lawyer
7 for the last two depositions.

8 MR. KLETZING: I objected to some of those, too.
9 The question is objected to, you don't have to answer
10 that. You don't have to answer legal questions.

11 MR. NOME LLINI: In your engineering opinion.

12 MR. BABER: Q Yes, in your engineering opinion,
13 doesn't the water have to be unusable from a quality
14 standpoint in July and August of 1977 before the State
15 Water Project is entitled to any payment or to claim any
16 benefits?

17 A I think we have to put in some evidence to that
18 extent in order to demonstrate that there has been some
19 benefits accruing.

20 Q Now, what in the way of benefits did the State
21 Water Project show for July and August of 1977?

22 A All we are trying to show is that there was so
23 much water from the combined project.

24 Q I mean exclusive of that, let's forget the Central
25 Valley Project.

26 A May I have your question again, please?

1 Q What in the way of benefits can the State Water
2 Project show that is bestowed upon the Delta users in July
3 and August of 1977 exclusive of the Central Valley
4 Project?

5 A Well, I think we will be able to show that there
6 was substantial benefits to the Delta water users overall.
7 We will be able to show that there was water released from
8 Oroville that flowed down into the Delta. That, we will
9 show.

10 Q Okay. Now let me get into another area.

11 MR. NOME LLINI: But you can't show that there was
12 a benefit related to the flow of State Water Project water
13 into the Delta by itself?

14 MR. KLETZING: He doesn't have to.

15 A Well, what we will show is that there was benefit
16 and based upon overall benefit and based upon the
17 long-standing allocation of responsibility as between the
18 Bureau of Reclamation on the one hand, and the State on
19 the other, that the State claims that 25 percent of the
20 overall benefit accrued from the State Water Project.

21 E X A M I N A T I O N

22 BY MR. NOME LLINI:

23 Q I understand that, but on the question, can you
24 show a benefit from the State Water Project in July and
25 August of '77 separated from this connection with the
26 federal project, albeit Russ tells you that you don't have

1 to?

2 A We could probably, if it were necessary in the
3 opinion of counsel to show that. We probably could make a
4 pretty fair estimate of it, yes.

5 Q That there was a benefit?

6 A In my opinion, yes, but to be facetious for a
7 moment, if you will permit me, if I didn't believe that, I
8 wouldn't be here.

9 Q Well, that may have been an error on your part.

10 E X A M I N A T I O N

11 BY MR. BABER:

12 Q Wouldn't the benefits have to go to certain areas
13 within the Delta if you are talking about just the State
14 Water Project releases exclusive of the federal project or
15 Central Valley Project?

16 A It would be very difficult to physically separate
17 the two streams of water as they flow into the Delta. They
18 are thoroughly mixed by the time they get to that point.

19 Q I understand that, but I would like you to assume
20 for this lawsuit that you have to separate the two because
21 the Central Valley Project is not a party to this
22 legislation.

23 MR. KLETZING: That's a non sequitur.

24 MR. BABER: That's very much a sequitur.

25 MR. KLETZING: That is basically a legal argument,
26 but we don't think it makes any difference whether they

1 are a party or not, and the court has so held.

2 MR. NOMELLINI: That is right because you are only
3 going to look to the benefits of the State Water Project
4 water as you so represented to the court so often.

5 MR. KLETZING: Right, which is 25 percent of the
6 total, as Harvey has said. If he said it once this
7 afternoon, he has said it 15 times.

8 MR. BABER: Q Okay, let me get into the blue
9 water and green water. Specifically with Byron-Bethany
10 Irrigation District you have never seen the location of
11 the district's pumps, have you?

12 A No, I have not.

13 Q All right. I will tell you they are a mile east of
14 the export pumps for the State.

15 A A mile east, okay.

16 Q In the channel.

17 A The intake channel from Clifton Court to that
18 great pumping plant.

19 Q Right, in that huge pumping plant, which is now
20 awaiting installation of four more pumps, I understand.
21 And what I am concerned about is --

22 MR. NOMELLINI: Isn't that the Harvey Banks'
23 pumping plant? I was going to say humungus, but we will
24 call it Harvey O. Banks.

25 A It's a good pumping plant.

26 MR. BABER: Q I walked through for the first time,

1 by the way, about three months ago and checked that all
2 out, and what I am concerned about is does blue water ever
3 reach the intake channel? You define blue water as outflow
4 water released by the State Water Project; right?

5 A That quantity of water does not reach export
6 pumps, no. Now whether a particular blue molecule gets
7 over there, I cannot say.

8 Q It could; right?

9 A It could, yes.

10 Q Okay. How about green water?

11 A Our whole presumption is that to the extent that
12 Byron-Bethany diverted water in excess of what they had a
13 water right to from the natural flow, our presumption is
14 that green water did get over there.

15 Q Okay. And how does that intake channel work? It's
16 some mechanism of drawing the water through Clifton Court
17 into the export pumps so the State then can fulfill its
18 contract obligations south?

19 A Hm-hmm.

20 Q Is there any detriment to the district that you
21 can foresee in July and August of '77 by the operation of
22 those pumps?

23 A I am not aware of any at the moment. I have not,
24 however, let me be clear, made any particular study of
25 that possibility.,

26 MR. BABER: I have nothing further.

E X A M I N A T I O N

1
2 BY MR. NOME LLINI:

3 Q Do you know, Harvey, what river regulation is
4 under federal law?

5 A I don't. As far as I am aware, the term has never
6 been specifically defined. It was first used, I believe,
7 in the case of Hoover Dam and Lake Mead because that was
8 authorized for river regulation below Hoover Dam
9 downstream. I believe that the Appellate Court in its
10 decision on the Delta water purpose said specifically that
11 river regulation included salinity control.

12 Q Do you know if river regulation is a non-reimbur-
13 sable function under federal law?

14 A To the extent that any costs have been allocated
15 to flood control, that has been wholly a federal expense
16 up to the recent statute which has been passed by Congress
17 on the omnibus water bill. I do not know whether the
18 President has signed that bill yet or not.

19 Q But river regulation in 1977 was non-reimbursable;
20 wasn't it?

21 MR. KLETZING: That's a legal question. That whole
22 thing has been in the courts for years.

23 MR. NOME LLINI: That doesn't mean that Harvey
24 doesn't have a firm opinion on it.

25 MR. KLETZING: Well, it is still a legal question.

26 MR. NOME LLINI: Are you objecting?

1 MR. KLETZING: I object to it.

2 MR. NOMEILLINI: Q Okay. Harvey, when you were
3 Director of the Department of Water Resources, did you
4 ever have any discussion with the federal counterparts
5 concerning river regulation?

6 A No.

7 Q Do you know whether or not you had assumed in your
8 actions that river regulation was non-reimbursable?

9 A We assumed that the costs the federal Central
10 Valley Project allocated to navigation on the Sacramento
11 and to flood control were non-reimbursable.

12 Q And what part of the cost was allocated to
13 navigation?

14 A I do not recall.

15 Q Do you recall that there was some?

16 A Yes.

17 Q And what did that comprise; I mean, what made up
18 the benefits to navigation?

19 A Improved navigation.

20 Q I mean, was it more water in the channel?

21 A The requirement, as I recall it now, and I haven't
22 looked at it in years, the requirement was a minimum flow
23 of 4,000 second-feet for navigation at Knights Landing,
24 and I would like to repeat I have not looked at that
25 particular aspect of it in 20 odd years.

26 Q Do you think the State is entitled to claim 25

1 percent of any benefits derived from that federal release
2 from water users along the river?

3 A No, because as I recall the agreement between the
4 two agencies, it says that they assume the responsibility
5 for in-basin uses and it would be very difficult for the
6 State to provide any benefits above the mouth of the
7 Feather.

8 Q How about with regard to downstream from the mouth
9 of the Feather, do you think the State can claim 25
10 percent of the incidental benefits from that release of
11 federal government for river regulation?

12 MR. KLETZING: What release are we talking about?

13 MR. NOME LLINI: 4,000 cubic feet per second.

14 MR. KLETZING: He didn't say there was a release
15 of 4,000.

16 A Much of the time it requires no release from
17 storage because there is enough natural flow there other
18 than water released from storage.

19 MR. NOME LLINI: Q But you did say there was an
20 allocation to river regulation for navigation?

21 A There is an allocation of the costs of the federal
22 Central Valley Project, one element of which is an
23 allocation to navigation.

24 Q Okay. Isn't that an allocation of storage costs?

25 A Yes, essentially.

26 Q Okay, so there is some stored water that is

1 released to maintain that navigation requirement?

2 A As necessary at any particular time.

3 Q Okay. Now with regard to that release, so Russ can
4 understand it, is the State entitled to claim compensation
5 for 25 percent of the benefit resulting from that release
6 downstream from the mouth of the Feather?

7 A No, I don't believe so.

8 Q Okay, why not?

9 A Because the State is not releasing any water for
10 that particular purpose. Furthermore, the additional water
11 that those water users may use or may need over and above
12 their basic riparian right, or other users, is supplied
13 from the Central Valley Project. I don't believe, as I
14 recall it, that the State provides any water supply below
15 the mouth of the Feather down to the Delta.

16 MR. KLETZING: I am a little confused. Isn't
17 Knights above the mouth of the Feather?

18 A Yes, I believe it is, Russ.

19 MR. KLETZING: And there wouldn't be any releases
20 at the mouth of the Feather.

21 MR. NOMELLINI: Q But they come down to Knights
22 Landing and get in the Sacramento River, and then come on
23 down below the mouth of the Feather; right?

24 A The flow maintained at Knights Landing for
25 navigation flows on down and goes into the Delta.

26 MR. KLETZING: But after Knights Landing, they can

1 be diverted to something else.

2 A They may be so long as the navigation requirements
3 are met. The one criteria that's quoted is the requirement
4 of a minimum of 4,000 second-feet at Knights Landing.

5 MR. NOME LLINI: Q What about when that same water
6 gets to the Delta, assuming it does, can the State claim
7 25 percent of it, the benefit for 25 percent of it?

8 A What the State claims is -- let me go back. I
9 think it is incorrect to use the term "claim" with respect
10 to that. I think I have stated repeatedly --

11 Q Steal 25 percent?

12 A -- that what we are dealing with here is an
13 allocation of responsibility to accomplish certain things,
14 and that is not the same as a claim, in my opinion.

15 MR. KLETZING: We never used that word "stealing"
16 in relation to the Delta.

17 MR. NOME LLINI: I think you ought to change your
18 pleading. It would be more appropriate.

19 MR. KLETZING: We don't say the Delta stole the
20 water, we just say they diverted it.

21 MR. NOME LLINI: Q With regard to that water
22 released for river regulation by the federal government,
23 assuming it enters the Delta, is the State entitled to
24 reimbursement from Delta water users for 25 percent of the
25 benefit received by reason of that flow from the federal
26 government?

1 A If that were the only water reaching the Delta,
2 there had been no release for the benefit of the Delta or
3 that resulted in benefit for the Delta from that release
4 from Oroville, then I would tend to agree with you.

5 Q And you would say they were not entitled to it
6 under those qualifications?

7 A With this hypothetical example, right.

8 MR. KLETZING: Were navigation controls in effect
9 in the summer of 1977?

10 A I don't know, Russ. I would have to go back. Let's
11 see what the situation was at Knights Landing.

12 Well, I thought there was a streamflow record at
13 Knights Landing here, but I don't see it.

14 MR. KLETZING: That's all right.

15 MR. NOME LLINI: It's not critical to me.

16 MR. KLETZING: I just wanted to make it clear that
17 it hadn't been established anyway that they were in
18 effect.

19 A I can give you Wilkins Slough.

20 MR. NOME LLINI: Q Where is that relative to
21 Knights Landing?

22 A Unfortunately, Mr. Nomellini, we don't have a map
23 here. The minimum flow at Wilkins Slough was 5870
24 second-feet in July and 4,060 in August.

25 MR. NOME LLINI: Q You are not suggesting that is
26 relevant to the question of what the flow was at Knights

1 Landing; are you?

2 A Not until I see a map.

3 MR. NOME LLINI: Okay, that's fine. I have nothing
4 further, unless Russell wants to get into something else.

5 MR. BABER: I have nothing further.

6 MR. WHITRIDGE: I have nothing.

7 MR. NOME LLINI: Okay, thank you, Harvey.

8 MR. BABER: Thank you, Harvey.

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HARVEY O. BANKS

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STATE OF CALIFORNIA)
) ss.
County of Sacramento)

On this _____ day of _____, 1986,
before me, _____, a Notary Public in and
for said County, personally appeared:

HARVEY O. BANKS,

known to me to be the person whose name is subscribed to
the within deposition, and acknowledged that he has read,
corrected and executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand
and affixed my official seal the day and year first above
written.

Signature of Notary
My Commission expires:

1 REPORTER'S CERTIFICATE

2

3 STATE OF CALIFORNIA)
4 County of Sacramento) ss.

5

6 I, ALICE BOOK, Certified Shorthand Reporter,
7 hereby certify, that I was duly appointed and qualified to
8 take the foregoing deposition of HARVEY O. BANKS;

9 That acting as such reporter, I took down in
10 stenographic shorthand writing the testimony given and
11 proceedings had;

12 That I thereafter caused to be transcribed said
13 stenographic shorthand writing into typewritten longhand;
14 that the foregoing pages contain a full, true and correct
15 transcription thereof, and a full, true and correct
16 transcription of the testimony given and proceedings had.

17 Dated this 25th day of November, 1986

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19 ALICE BOOK, CSR NO. 43

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