STATE WATER RESOURCES CONTROL BOARD

PUBLIC HEARING ON AMENDED JOINT PETITION OF THE IMPERIAL IRRIGATION DISTRICT AND THE SAN DIEGO COUNTY WATER AUTHORITY FOR APPROVAL OF A LONG-TERM TRANSFER OF CONSERVED WATER PURSUANT TO AN AGREEMENT BETWEEN IID AND SDCWA, AND APPROVAL OF CHANGES IN POINT OF DIVERSION, PLACE OF USE AND PURPOSE OF USE UNDER PERMIT NO. 7643 (APPLICATION 7482).

TUESDAY, APRIL 30, 2002
9:00 A.M.

CAL EPA BUILDING
SIERRA HEARING ROOM
SACRAMENTO, CALIFORIA

REPORTED BY: ESTHER F. SCHWARTZ
CSR 1564

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SACRAMENTO, CALIFORNIA

TUESDAY, APRIL 30, 2002, 9:00 A.M.

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CHAIRMAN BAGGETT: Good morning.

This is the first day of Phase II of the hearing regarding the petition of Imperial Irrigation District and San Diego County Water Authority for a long-term transfer of conserved water.

For those of you who were not present during the Phase I or need information about this hearing, I will repeat some of the background information about this hearing and the way in which we will conduct this. I am Art Baggett, Chairman of the State Water Resources Control Board. To my right is my colleague, Richard Katz. We will be assisted by Dana Differding, staff counsel, Andy Fecko, environmental scientist, and Tom Peltier, senior engineering geologist.

This hearing is being held in accordance with the notice of hearing dated February 2, 2002, and by my subsequent letters ruling on procedural matters. The purpose of Phase II of this hearing is to receive evidence on the issue whether the petition changes would unreasonably affect fish, wildlife or other instream beneficial uses of water.

A court reporter is present to prepare a transcript of the proceedings. Anyone who would like a copy of the

transcript must make separate arrangements with Esther. To assist the Court Reporter, if you could please speak into the microphone and push the little button where it says "push," make the little green light go on, it would be appreciated. If you have a business card and you haven't appeared before in Phase I, if you could hand it to the Court Reporter, that helps her in getting the transcripts done.

Before hearing cases in chief and the parties, we will hear an opening statement from any parties who have not submitted direct testimony and do not present a case in chief. Parties will present their cases in chief in the following order: Imperial Irrigation District, San Diego County Water Authority, Colorado River Indian Tribes, Salton Sea Authority, Regional Water Quality Control Board. Then we have the coordinated cases of Defenders of Wildlife, National Audubon Society, California, Planning and Conservation League, National Wildlife Federation and Sierra Club of California, followed by the County of Imperial and Mr. Larry Gilbert.

At the beginning of each case in chief the party may make an opening statement briefly summarizing the party's position and what the party's evidence is intended to establish. After any opening statement we will hear testimony from the party's witness. Before testifying

witnesses should identify their written testimony as their own and affirm that it is true and correct. Witnesses should summarize the key points in their written testimony and should not read their testimony into the record.

Direct testimony will be followed by cross-examination by other parties, Board staff, myself and my colleague. We will hear cross-examination in reverse order, starting with Mr. Gilbert and ending with Imperial Irrigation District. Mr. Du Bois and the California Farm Bureau will follow Mr. Gilbert. I will permit redirect testimony limited to the scope of the cross-examination and then recross limited to scope of the redirect testimony.

After all the cases in chief are completed, the parties may present rebuttal evidence for Phase I and II. I encourage the parties to be efficient in presenting their case and in conducting cross-examination. I may not allow repetitive testimony or cross-examination. Except where I approve a variation, we will follow the procedures set forth in the Board's regulation and the hearing notice.

As in Phase I, we will strictly enforce the time limitations on parties' presentations. All opening statements are limited to 20 minutes for each party. With limited exceptions witnesses will have a maximum of 20 minutes to summarize their direct testimony, not to exceed a total of two hours for all witnesses presented by each

party. As set forth in the April 18th letter to the parties, I have granted an additional 20 minutes to Dr. John Eckhart and Ms. Laura Harnish and an additional ten minutes for Dr. Rodney Smith and an additional ten minutes to Dr. Timothy Krantz.

Cross-examination will be limited to one hour per witness or panel of witnesses. I may allow more than two hours for a party's case in chief or for more cross-examination upon showing of cause. Oral closing arguments will not be permitted. An opportunity will be provided for submission of written closing briefs, and we will set that briefing schedule at the close of the hearing.

At this time I would like to invite appearances by the parties who will be participating in Phase II of the hearing and did not participate in Phase I. Will those making appearances, please state your name, address and whom you represent so the Court Reporter can enter this information into the record. Again, if you have a business card it would be helpful for the reporter.

Salton Sea Authority.

MR. KIRK: Tom Kirk, Salton Sea Authority.

CHAIRMAN BAGGETT: Just state your address for the record.

MR. KIRK: Tom Kirk, Executive Director of Salton Sea

Authority, 78-401 Highway 111, Suite T, La Quinta, California, 92253-2066.

I do have a quick question on procedural matters, or do you want to cover that after introductions?

CHAIRMAN BAGGETT: Let's wait until we get introductions.

Regional Water Quality Control Board.

Phil is not here.

National Audubon Society.

MR. WAGNER: I am Keith Wagner with the National Audubon Society, California, from the Law Office of J. William Yates. Address is 8002 California Avenue, Fair Oaks, California, 95628.

Mr. Bill Yates will also be here later to continue representation of National Audubon Society.

CHAIRMAN BAGGETT: Thank you.

Planning and Conservation League.

MS. DOUGLAS: Karen Douglas, Planning and Conservation League, 926 J Street, Suite 612, Sacramento, California 95814.

CHAIRMAN BAGGETT: Thank you.

National Wildlife Federation.

MR. DOYLE: Kevin Doyle, National Wildlife Federation, 3500 Fifth Avenue, Suite 101, San Diego, California 92103.

CHAIRMAN BAGGETT: And Sierra Club of California.

Anybody here from the Sierra Club?

With that I will now administer the oath. Will those who plan on testifying in Phase II of this hearing, please stand and raise your right hand. Whether you were here in Phase I, we will do Phase II all again.

(Oath administered by Chairman Baggett.)

MS. DELFINO: Kim Delfino with Defenders of Wildlife. I will also be doing cross-examination. 926 J Street, Suite 522, Sacramento, California 95814.

CHAIRMAN BAGGETT: Anyone else we are missing?

Any housekeeping procedural issues for Phase II before we begin? I know, Mr. Kirk, you had one.

MR. KIRK: Just a minor one that I discussed with your counsel just before the hearing began. That is, we put a request in for extension of time. That was denied. That is okay. I think we can cover our issues within the time allotted. One minor change that I referred to in my letter to you, that was to redesignate me as an expert witness. We have presented -- I have presented direct testimony, and I expect the other parties would like to cross that direct testimony, so I assume that would be acceptable.

CHAIRMAN BAGGETT: If there is no objection.

MR. SLATER: No objection.

CHAIRMAN BAGGETT: So designated.

MR. KIRK: Thank you.

CHAIRMAN BAGGETT: Thank you.

Any other procedural issues?

If not, we will now begin with the case in chief. We will have opening statements from parties who will not present a case in chief.

California Farm Bureau.

MR. RODEGERDTS: Mr. Chairman, I misunderstood yesterday. I thought that we would give our opening statement if we are not going to present witnesses at the progression, in other words that we would give it at that point when we would have otherwise have presented witnesses in our case in chief.

CHAIRMAN BAGGETT: Does anybody have a problem with that?

MR. SLATER: No objection.

MR. RODEGERDTS: Thank you.

I am sorry for the misunderstanding.

CHAIRMAN BAGGETT: Same with Mr. Du Bois?

MR. DU BOIS: Same.

CHAIRMAN BAGGETT: Okay. We will then put you with, probably back with Mr. Gilbert, the trio at the end here. Very good, so you can follow along when his time comes along.

We will now start with testimony. Imperial Irrigation District.

MR. OSIAS: Thank you, Director Bagget, Director Katz, staff. I will give a 20-minute opening statement now for Phase II.

Did I say something wrong again?

MEMBER KATZ: He calls him your Honor; you call me Director.

MR. OSIAS: I didn't call him your Honor.

MEMBER KATZ: And you were right.

MR. OSIAS: I will get one thing right.

Thank you very much.

The purpose of this phase is to answer the question that you recited: Will the change in point of diversion, will the change in place of use or will the change in purpose of use have an unreasonable affect on fish, wildlife or other instream uses.

If he can put up Exhibit 1A.

As this Board heard in Phase I, there is a sequential ramping of reduced diversions into Imperial under the proposed transfer for purposes of generating conserved water to transfer to both San Diego and to Coachella and/or MWD. The question regarding unreasonable environmental effects relates to this chart in the following way: You will see that the top band on Exhibit 1A in yellow is the 1988 IID/MWD Conservation Agreement which went through an independent environmental review and mitigation, and that

project is complete and has been operating for many years. And there is no issue presented today with respect to the effects of that transfer.

Similarly, the orange band, which you will see three, is the All American Canal lining project pursuant to special federal legislation. That has gone through independent environmental review, and that conservation and transfer proposal is not part of the petition for change before the Board. So we are here really to focus on the step down related to the green, the IID/San Diego, and to the dark blue or purple which is the IID Coachella.

The answer to the question is there an unreasonable effect on fish, wildlife or other instream uses is no. The evidence will so demonstrate.

Remember, the question is not whether there is any effect anywhere, but rather is the effect unreasonable and is it on instream fish, wildlife or other uses.

Why is the answer no? There are many facts and circumstances which this Board has to take into account, especially because the standards is one of reasonableness. It is circumstance specific. The evidence is substantial and much of it has been submitted already and uncontroverted in Phase I. For example, the IID has a water for Colorado River diversion and use. IID use is currently very efficient and reasonable.

San Diego, Coachella and Metropolitan have inadequate or unreliable supplies and have looked to Imperial as a supply source for additional water. IID, as the source of the water, protects impacts to other areas of the state, including the San Francisco Bay-Delta. Should the IID transfer not occur, Southern California would have to increase its demands on the State Water Project to replace Colorado River cutbacks. These are circumstances which this Board can weigh in determining whether this transfer has unreasonable impacts. Both Professor Thompson and DWR representative Steve Macaulay alluded to the need to avoid California Bay-Delta impacts.

Fourth, the transfer helps solve a serious California problem with respect to reducing its Colorado River use to 4.4 million acre-feet. It provides Metropolitan Water District with 15 years of extra Colorado River surplus. It benefits San Diego and Coachella with increased reliability and finally, but most importantly, it is a benefit to Imperial Irrigation District by improving on-farm and IID district system efficiency to essentially its maximum realizable amount. It insulates IID, therefore, because of the efficiency improvements, from future reasonable use requests and challenges with regard to its water right. It preserves the productivity of the engine of the Imperial Valley ag economy and it stimulates the local economy with

conservation purchases, labor and activity.

All that evidence has come in and there has been no evidence in opposition.

The environmental focused opposition today suggests that this Board should, it is hard to tell, but either deny the petition for change or condition it because of primarily concerns regarding negative effects to and surrounding the Salton Sea.

Several important facts to remember. First, the water is diverted from the Colorado River pursuant to the IID water right, and there is no evidence of any significant instream effect on the Colorado River. There is a change in point of diversion from Imperial to Parker Dam, which will reduce flow in the river in an insignificant amount. Dr. Mesghinna testified, I believe, in Phase I perhaps four inches, which in light of the fluctuations just in Imperial's use and diversions, which we can see from our favorite Exhibit 11, which is still up, is very much lost in the noise of the Lower Colorado River. There is no evidence of any substantial instream effect.

Second, although the standard focuses on fish, wildlife or other instream uses, most of the environmental evidence submitted focuses on the Salton Sea. Remember, the Salton Sea has no water right. There will be no evidence that it does. The Salton Sea has no ability to request or demand

farmers order a certain amount of water or any water. And yet the Salton Sea inflows from tailwater and tile water, matters you heard in Phase I, is totally dependent on the amount of orders that farmers submit, and we can see that they fluctuate dramatically.

The IID and its farmers have the absolute right to recapture and reuse that water pursuant to their water right. Their water right is not burdened with a public trust restriction for the Salton Sea because the land under and adjacent to the Salton Sea was never owned by the State of California when California was admitted to the union. A factual predicate to the establishment of a public trust. It is not, therefore, a public trust waterway.

However, notwithstanding this lack of essentially legal standing on behalf of the Sea, the IID and the transferees have not been insensitive to the effects. Again, the standard here is whether they are unreasonable, not whether there are any.

With respect to the Salton Sea and other areas affected by the transfer, the IID will meet the Endangered Species Act under the United States laws and California Endangered Species Act permits has been in negotiations with Fish and Wildlife and Department of Fish and Game to obtain them. In such negotiations has had to agree to certain conditions and mitigation in order to convince those agencies that the

impact level on endangered species and protected biology is appropriate under those standards. This Board can rely on those permits in determining whether there is an unreasonable effect.

In order to analyze what effects the facts will show that the IID, as a lead agency in conjunction with the Bureau of Reclamation as a lead agency, prepared a comprehensive joint Environmental Impact Report and Environmental Impact Statement. It was to evaluate the environmental impacts of the transfer and as part of that project to also evaluate the Habitat Conservation Plan which would be adopted in connection with obtaining those endangered species permits and compliance.

The EIR/EIS has been introduced into evidence. We have witnesses here who played key roles in its preparation. And it will reveal and they will inform the Board of the following:

The status quo at the Salton Sea is currently an elevation of minus 228 feet with about 46 parts per thousand salinity. As compared to, for example, ocean water which is 35 parts per thousand. They will also disclose as does the EIR/EIS that scientific literature about tilapia survival in saline environments suggests that they may not survive in salinity from anywhere to 30 to 120 parts per thousand. A less than precise range. We know that they're still there

now, so apparently the authors of the lower range are in error.

In any event, there is still a fishery in the Salton Sea, and that fishery under the no-project alternative is doomed. Salinity will increase and elevation will decline under the status quo. There is the hopes for a Salton Sea restoration project. That, of course, can change the status quo.

The petition for change before you and the transfers is not the Salton Sea restoration project. Nor is it its burden to become the Salton Sea restoration project.

Sixty parts per thousand, within that range of 30 to 120, is predicted by some to be a critical salinity point for fish reproduction or survival. Under the no-project alternative that is predicted to take place between the years 2018 and 2030. At that time the Salton Sea will have dropped under the no-project alternative by two and a half to five feet. With the project salinity of 60 parts per thousand is predicted to be reached between 2011 and 2014.

That is the change that most have focused on. It shortens by seven to 16 years, or if you compare means, by 11 years the date we get to 60 parts per thousand. Under the project, when we reach 60 parts per thousand, 2011 to 2014, the Sea has also dropped by two and a half to five feet. So there is no elevation change as of the date that

60 parts per thousand is reached. But the fish are impacted at that level, we think, of course, we are not sure.

Now, as I mentioned, the EIR/EIS contains a Habitat Conservation Plan whose purpose is to preserve essentially the fish eating bird species. The focus on the fish is not exclusively, but is in many senses primarily concerned with the fish being a food source for the Pacific Flyway, in particular brown pelicans and white pelicans, skimmers, I forget the first name, and cormorants. The Habitat Conservation Plan within the EIR/EIS contemplates two possible approaches.

First, a pond and fish hatchery approach so that when the Sea can no longer sustain the fishery, the birds can be fed through the pond and hatchery. This actually would prolong the survival of the bird species beyond the current predicted demise because of salinity increases without the project. The hatchery and ponds are to sustain the species through the life of the project, that is up to 75 years.

The second approach that is analyzed in the HCP is to use replacement water to the Sea so that the fishery is maintained because the salinity is kept low by not cutting off flows.

Now, no one has offered to buy conserved water as a replacement water. Not the environmental agencies, not the Salton Sea Authority, not the United States. But it is the

preferred approach by the environmental communities because, of course, it leaves the status quo of the Sea in place, but has a dramatic impact on the status quo of the valley. That replacement water is suggested to be supplied from fallowing; that is, the taking out of the agricultural production of a substantial acreage of farmland in Imperial; 75,000 acres of prime farmland is suggested to be fallowed to create 300,000 acre-feet to transfer, and the mitigation water to keep the Sea where it is now and to stop the effects of the transfer. That is 125 square miles of fallowed farms.

This would cause substantial economic disruption. Dr. Smith, who will testify tomorrow, has submitted testimony on this fact. It will cost Imperial Valley hundreds of millions of dollars in consequences, adverse consequences, to fallow that much farmland. It will also deny the IID the benefits for which it sought the project in the first place. Fallowing will do nothing to improve IID's efficiency. It will do nothing to insulate it from future challenges for reasonable use. It will create incentives for others to keep coming back to the IID as a water supply source.

For efficiency improvements, as we heard from Dr. Mesghinna, there is a cap. You can only become so efficient. After that people will shop for conserved water

somewhere else. For fallowing water the only cap is when Imperial has no more water left to use. That is not a future that the Imperial Valley looks forward to and suggests, therefore, that fallowing is an inappropriate device to either create conserved water or to create conserved water for the Salton Sea.

The Salton Sea Restoration Act, which is IID Exhibit 60, states in Section 101, Paragraph 3, the words of Congress. That in exploring options for the restoration of the Salton Sea transfers out of the basin and reductions in inflows of up to 800,000 acre-feet per year are to be assumed. Congress did not intend the IID/San Diego transfer, the QSA or the Colorado River Use Plan to be held hostage to the Salton Sea restoration.

Your Honor, your Honor, that is a habitat.

Mr. Directors, the evidence will easily demonstrate that the effects to the instream fish, wildlife and other beneficial uses fall well below the unreasonable standard, especially in light of the mitigation that will be required in connection with the EIR/EIS. In evaluating that reasonableness this Board has received substantial evidence of the need for the transfer, the benefits of the transfer and the importance of the transfer which it can use in making that determination.

Thank you.

CHAIRMAN BAGGETT: Thank you.

Ready for the witnesses?

MR. OSIAS: Yes, if we can have Dr. Eckhart and Ms. Harnish take the witness stand.

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DIRECT EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

BY MR OSIAS

Dr. Eckhart, Ms. Harnish, you have both taken your seats with rather large binders in front of you.

Could you tell us what those are.

MS. HARNISH: This is the EIR/EIS on the water conservation transfer and HCP.

MR. OSIAS: Do you also have with you Exhibit 54 which is your written testimony?

MS. HARNISH: Yes, we also have those.

MR. OSIAS: Dr. Eckhart, do you have yours?

DR. ECKHART: Yes, I do.

MR. OSIAS: Let me ask you to verify Exhibit 54 is your written testimony?

MS. HARNISH: Yes, it is.

DR. ECKHART: Yes, it is.

MR. OSIAS: It is prepared under oath and signed under oath by both of you?

DR. ECKHART: Yes.

MS. HARNISH: Yes.

MR. OSIAS: You prepared Exhibit 54, your testimony, together; is that correct?

MS. HARNISH: That is correct.

DR. ECKHART: That is correct.

MR. OSIAS: Do you have any corrections to make?

DR. ECKHART: Yes, I do.

On Page 37, Line 21, parts per trillion should be changed to parts per thousand.

MR. OSIAS: PPT is parts per thousand?

DR. ECKHART: That's correct.

MR. OSIAS: For the record, the EIR/EIS is Exhibit 55.

Now, Dr. Eckhart, could you briefly summarize your extensive resume with respect to the relevant education and experience that you brought to this project?

DR. ECKHART: Yes. I have over 30 years of experience in water resources and water rights engineering. I have a Ph.D. with specialty in water resources, and a degree actually in civil engineering. My Master's also is in civil engineering with a specialty in groundwater hydraulics and hydrology.

I recently have changed employment from the Imperial Irrigation District to CH2MHill where I am vice president at CH2MHill and I am in charge of water resources programs in Southwestern United States. As far as Imperial Irrigation District, my previous employer, I was the water manager

there for a little over a year, and I was also the program manager for this transfer when I was at IID.

I have worked on other complex hydrologics, hydrology, environmental processes in other parts of the United States, and I've also worked overseas on various irrigation, drainage and water resources projects.

MR. OSIAS: Ms. Harnish.

MS. HARNISH: Yes. I am water resources planner. I have been doing water resources and environmental planning for about 15 years, primarily with CH2MHill. I worked on a number of complex EIR/EIS's primarily focusing on water resources projects.

MR. OSIAS: With the Board's permission, I'd just like to direct the questions to the panel. They have different background. They can field them either way.

Would you describe for us CH2MHill's role or assignment with respect to the EIR/EIS and HCP?

MS. HARNISH: CH2MHill was hired to prepare the EIR/EIS and HCP on the water conservation and transfer project.

MR. OSIAS: What did it do? How did it do that?

MS. HARNISH: How did we do that?

MR. OSIAS: Yes.

MS. HARNISH: Well, the first thing we did was work to establish what the project was, to define the project. Then looking at all of the technical resource areas that are

required by CEQA we established the existing settings for each of those resource areas. From that we worked to establish what the or identify what the impacts for the project would be.

MR. OSIAS: Would you describe this as a small project?

MS. HARNISH: No. This was a very, very large, complex, lengthy project and undertaking for an EIR/EIS.

MR. OSIAS: How long did it take to prepare?

MS. HARNISH: We were hired in 1998. So it's been three years and a few months. We figured it out.

MR. OSIAS: Do you know how many people worked on the project?

MS. HARNISH: At least 50 people. I think probably more over the course of the project have worked on it. Over 40,000 hours were required, have been required to date to prepare this Draft EIR/EIS and HCP.

MR. OSIAS: Ms. Harnish, you didn't prepare the entire EIR/EIS?

MS. HARNISH: No, I didn't.

MR. OSIAS: Neither did you, Dr. Eckhart?

DR. ECKHART: No, I did not.

MR. OSIAS: Could you tell us then more specifically what each of your roles were with respect to this EIR/EIS?

DR. ECKHART: My primary role in this EIR/EIS was the hydrology and related water resources aspect of this

document, and also I represented IID in the consultations and negotiations with the U.S. Fish and Wildlife Service and California Department of Fish and Game.

MR. OSIAS: Ms. Harnish?

MS. HARNISH: I became involved in the last year. I worked on the alternative analysis directly with the author of that section and was also involved in, as a project manager, in the remainder of the document.

MR. OSIAS: Other specialists were brought in, not brought although that may be true, also within CH2MHill worked on this; is that right?

DR. ECKHART: That's correct.

MR. OSIAS: Beside the two of you, can you describe what kind of expertise they brought to the project?

MS. HARNISH: We had air quality experts, noise experts, transportation engineers, numerous biologists, hydrologists, modelers, various types of engineers, geologists, archeologists, recreational planners, agricultural engineers, landscape architects for the aesthetics, economists and a variety of planners. The complete list of the preparers is included as Section 7 of the document.

MR. OSIAS: In addition to this EIR/EIS, there are other related environmental review activity going on; is that correct, that you are familiar with?

MS. HARNISH: Yes.

MR. OSIAS: You have a graphic of that. Could you tell what page that is on?

MS. HARNISH: That is on Page 1-33, Figure 1-12.

MR. OSIAS: We will put that up.

Maybe while we are waiting, can you tell us why the project includes also the HCP?

MS. HARNISH: The project includes the HCP because it is intended to mitigate for a majority of biological impacts.

MR. OSIAS: So there was an assessment of both the transfer impacts and, because you're doing Habitat Conservation Plans for species impacts, you also have to assess what the Habitat Conservation Plan does; is that correct?

MS. HARNISH: Correct. We are evaluating the impact of HCP.

MR. OSIAS: That is why it is made part of the same document?

MS. HARNISH: Yes.

MR. OSIAS: The Notice of Intent, was that 1999; is that right?

MS. HARNISH: The Notice of Intent preparation, yes.

MR. OSIAS: One for NEPA and one for CEQA, right?

MS. HARNISH: Yes.

MR. OSIAS: I guess I should have asked.

This is a joint CEQA/NEPA document?

MS. HARNISH: Yes.

MR. OSIAS: Sort of took parallel state and federal track?

MS. HARNISH: Yes.

MR. OSIAS: How did you describe the project for purposes of assessment, in general? Term? Volume?

MS. HARNISH: We talked about the quantity of water that would be transferred, the amount -- the ramp up schedule of when the water would be transferred, where the water would go. And there are some different scenarios of how or where the water would go depending on if including -- under the QSA or apart from the QSA.

MR. OSIAS: What volume do you use?

MS. HARNISH: 300,000 acre-feet, up to 300,000 acre-feet.

MR. OSIAS: The low end for this project was what?

MS. HARNISH: 130-.

MR. OSIAS: Is that project an alternative or is that the project?

MS. HARNISH: Well, it is both. The project can be up to 330-, could be 130-. We also looked at alternatives that were less. The analysis of impacts that were for the proposed project, we looked at 300- because we wanted the

worst case.

MR. OSIAS: When this project started, for assessment purposes, had the QSA been entered yet?

MS. HARNISH: No.

MR. OSIAS: So at that time the 130- to 300- was for San Diego, right?

MS. HARNISH: Correct.

MR. OSIAS: Then when the QSA came out, did you amend the project description for purposes of amending it?

MS. HARNISH: Yes.

MR. OSIAS: How?

MS. HARNISH: We added a scenario where 200- would go to San Diego and 100- would go to Coachella Valley and for MWD.

MR. OSIAS: With respect to other environmental reviews that are going on, this --

Is this a table or a figure?

MS. HARNISH: Figure.

MR. OSIAS: This figure --

CHAIRMAN BAGGETT: We will be here tomorrow if we can answer that.

MR. OSIAS: We need a Phi Beta Kappa.

CHAIRMAN BAGGETT: Phi Beta Kappa?

MR. OSIAS: I didn't ask.

Could you just quickly walk us through this figure?

MS. HARNISH: The intent of this figure was to sort of unravel the complex interrelationships between all of these different projects that are ongoing on a parallel environmental track.

So the QSA shown on the left and it includes this project, the water conservation and transfer project and HCP, the Coachella canal lining, the All American Canal lining and several other components.

MR. OSIAS: It is being reviewed in a Draft QSA PEIR?

MS. HARNISH: That's right. That Draft QSA PEIR was issued, I believe, in January as well. Their comment period ended in March, and they are currently preparing a final. That is the program document for this project level EIR/EIS.

MR. OSIAS: CH2MHill is not the consultant on that?

MS. HARNISH: No, we are not.

MR. OSIAS: Going to the middle of the figure?

MS. HARNISH: The middle of the figure is this project, the IID water conservation transfer project and HCP, and the components of the project are listed there in yellow. What is shown in the green are the QSA portion and the change of point of diversion which is part of this project, but is being evaluated in the IA EIS by the Bureau of Reclamation.

MR. OSIAS: So we don't get into EIEIO --

MS. HARNISH: The IA is the Implementation Agreement.

MR. OSIAS: And the EIS is the Environmental Impact

Statement?

MS. HARNISH: Correct.

MR. OSIAS: I'm sure everyone behind me knows more about this subject than I do.

MS. HARNISH: I apologize.

MR. OSIAS: That's all okay.

And that is references down here in the middle block. And we also have up at top the IOP.

What does that stand for?

MS. HARNISH: That's the Inadvertent Overrun Program. That is also a federal action as is the Implementation Agreement for the change in point of diversion. Those are being -- that is why they are being evaluated in the Bureau's Environmental Impact Statement on the Implementation Agreement.

MR. OSIAS: And the Inadvertent Overrun Program is not limited to Imperial Irrigation District; is that correct?

MS. HARNISH: No, it is not.

MR. OSIAS: Moving off of this figure, then, thank you.

How did you determine how to describe the no-project alternatives, which I guess to a layman would be the status quo?

DR. ECKHART: That was the challenge of this project. The status quo, when it comes to the type of resources that

we are dealing with here, and as you can see in the figure behind me, IID has very, very variable --

MR. OSIAS: That is Exhibit 11, IID 11.

DR. ECKHART: -- has a variable, highly variable, use off water and also resulting return flow to the Salton Sea. In addition, what we noted, when we looked at this project, is that there was actually a changing resource. So with the high variability and the change of the resource, it was a real challenge to try to figure out how to determine what -- how to figure out what the effects of this transfer would be to the existing environment.

So as a result of that, we decided that he needed to define the existing conditions. Based on those existing conditions, project forward into the future, realizing that we had to capture the variability of this resource and then measure that variability and that resource with the projects, both the alternatives and the proposed projects.

MR. OSIAS: In addition to IID's variable use, there are other contributors to Salton Sea water?

DR. ECKHART: That is correct.

MR. OSIAS: Those are?

DR. ECKHART: Coachella is a primary contributor, and then we have natural drainage and subsurface drainage to the Salton Sea, as well as variable evaporation.

MR. OSIAS: And Mexico?

DR. ECKHART: And, of course, Mexico.

MR. OSIAS: Is there variation within each of those sources as well?

DR. ECKHART: Each one of those sources is highly variable. This projection, is that what you call your baseline?

DR. ECKHART: Yes. The projection is what we would call the baseline from which we would measure the proposed project and the alternatives against.

MR. OSIAS: What you are trying to do is compare the affect of the project for the entire period of time; is that right?

DR. ECKHART: That's correct.

MR. OSIAS: And I think Ms. Harnish identified you used the term of the project for that comparison; is that right?

DR. ECKHART: That's right.

MR. OSIAS: How long did you do that for?

DR. ECKHART: Up to 75 years.

MR. OSIAS: Which is your understanding of the term?

DR. ECKHART: Correct.

MR. OSIAS: What year did you use as the presumed start date?

DR. ECKHART: This effort, this analysis effort started in '98-99. So at that point, we started all the analysis in the year 2000, and at that time we assumed that the transfer

was to begin in year 2002.

MR. OSIAS: When the report describes, as my opening statement did, that the project may cause salinity to hit 60 parts per thousand between 2011 and 2014, that is actually a year too soon, given that the project hasn't started yet; is that right?

DR. ECKHART: That's correct.

MR. OSIAS: So a correction would be, both in my statement and in the report, adjusting for real time. If it starts in 2003, then we would hit 60 parts per thousand in 2012 to 2015?

DR. ECKHART: That's approximately correct.

MR. OSIAS: The baseline doesn't change, right, because that is a no-project?

DR. ECKHART: That's correct.

MR. OSIAS: You used a data source, a data period, I guess, is that right, for the variability?

DR. ECKHART: That's correct. In order to analyze and do a prediction of what the future might look like, we looked at all the past data and found that for the analysis that we did required an enormous amount of information. So we confined our analysis period, our base analysis period, to the years '87 through '98 because that is the years in which we had all the electronic available data, data available from IID. And, remember, we started the modeling

in '98-99 time frame.

MR. OSIAS: Let me have you flip to Page 17 of your testimony. That is Exhibit 54. You'll see at top of the page for the both of you two columns of topics or categories I guess what you call them.

What is the purpose of specifying these categories? Maybe Ms. Harnish would be the best person.

MS. HARNISH: These are the categories recommended by CEQA that should be evaluated in an EIR.

MR. OSIAS: For each of these categories was the project compared to the baseline?

MS. HARNISH: Yes, it was. Well, I mean, I want to qualify that, I guess. Not for the projected baseline. Some resource area did not have a projected baseline. We used the existing condition.

MR. OSIAS: That difference would take place because there is no projected change in that condition?

MS. HARNISH: Correct.

MR. OSIAS: For example --

MS. HARNISH: Cultural resources is a good example. We are not projecting change in cultural resource.

MR. OSIAS: And it does have this variability?

MS. HARNISH: Correct.

MR. OSIAS: Either by category you used a protection like hydrology, I suppose; is that correct?

DR. ECKHART: That's correct.

MR. OSIAS: Or the status quo as is like for cultural, correct?

MS. HARNISH: That is correct.

MR. OSIAS: And the EIR/EIS summarizes your conclusions for each of those categories somewhere, does it not?

MS. HARNISH: Yes, it does in the Executive Summary Table, ES1. Also the very beginning of each technical resource has a table that summarizes the impacts.

MR. OSIAS: ES1 is found on Page 17?

MS. HARNISH: I believe that is correct.

MR. OSIAS: That table also indicates the conclusion you reached, is that right, with respect to impacts?

MS. HARNISH: That's correct.

MR. OSIAS: Overall you found a variety of impacts, ranging from beneficial to significant; is that correct?

MS. HARNISH: They range from beneficial to significant and unavoidable.

MR. OSIAS: And everything in between?

MS. HARNISH: And everything in between.

MR. OSIAS: Let's focus, if we could, for a minute on the Salton Sea effects. Maybe, Dr. Eckhart, you could give us a brief description of sort of how the Salton Sea is currently affected in the areas of elevation, salinity, species biology today, what is going on, sort of the status

quo, and then how the project influences that?

DR. ECKHART: The Salton Sea is, as I mentioned before, a changing resource. And that changing resource, based on historically what's happened and what we believe will happen in the future under a no-project situation, will be changing as we see it is today.

For example, one of the things that we know is happening in Salton Sea is that the salinity is increasing. And that is for obvious reasons in that there is essentially no outlet to the Sea other than evaporation. All of the flow that goes into the Sea, which carries a certain percent salt load, only clean water evaporates off the Sea. Therefore, you see salinity increasing in the Sea, concentration, plus the mass balance changes within the Sea.

Elevation. Elevation is changing. You'll see today, in fact, that the elevation will fluctuate for many reasons due to the farm economy. Rainfall, you'll notice that we are pretty much in a drought cycle within a desert. We haven't had much rain lately. So you are seeing some minor change in the Sea which is going down.

If you look at what we think will happen in the future, based on the conditions that we project forward, we think that Sea is going to continue to go down. And as our analysis showed, we, in fact, think at the end of 75 years

that Sea will be down another seven feet. That is because of several things that we've assumed that we think are correct in the future that will happen to the Sea. Of course, as elevation goes down, you expose surface area.

MR. OSIAS: What are those assumptions that you projected into the future that you think are correct?

DR. ECKHART: The assumptions that we used to project forward in the future, the first one is that, as you mentioned earlier, the '88 IID/MWD agreement has just reached full implementation within the last few years. Most of that conservation, system conservation, as a result of that, most of those savings are subsurface savings. So what you are seeing now is you're finally seeing the effects of the '88 agreement to the Sea, and we haven't seen the full effects yet, to date.

MR. OSIAS: Slow down.

Why is it that subsurface effects have not been seen yet?

DR. ECKHART: Because of the rate of velocity, if you will, of the flow within the subsurface, within the aquifer, which is truly not an aquifer, but the subsurface within IID. The water moves very slowly. So as we, for instance, line a canal, you cut that seepage off. And as that seepage flows to the Sea, it takes several years, in fact, for that to reach the Sea, and we are starting to see those effects.

And to date that transfer was designed to move up to 110,000 acre-feet.

In the last year or two it's moved approximately 109. The impacts to the Sea from our analysis have shown that it's impacted the Sea a little over 50,000. So in our projection forward we know that the next 50,000 will be felt over the next 75 years. So that is one of the things we projected forward within our analysis.

Another thing that we projected forward is the fact that if you look at the municipalities within the Imperial Valley, their water use has increased over the last many years. So rather than using an average or just projecting that same use forward that it has historically, what we assumed is that their water use would be the same or nearly the same as it was the last three years.

What we do is we projected that use forward, assuming that the last three years would be typical of what would happen in the future. That is probably conservative because there is probably going to be more water use from those municipalities.

The other thing that we used in that projection is the fact the U.S. Bureau of Reclamation has stated in their analysis of the Colorado River that salinity will increase in the Colorado River. It's currently in the 750 parts per million category. And they assume it was going to increase

in IID Dam 879. As a result of that, what we have is a positive impact in that our analysis shows that for agriculture to be viable within the valley, there is going to be more salt entering the valley, and, therefore, as a result of that, there is going to have to be more leaching to leach that salt out of the soil.

So as a result of that, we have also made adjustments into the future for more diversions so we can keep the salinity of the soil approximately where it is today.

MR. OSIAS: That actually increases the flow to the Sea some?

DR. ECKHART: That's correct.

And the final adjustment, as we move into the future and we know from the current drought period that we are in and the implementation by the Bureau of administering California 4.4, we increased river administration also as a fact for the projection in the future. And as a result, anytime the ag users would exceed 3.85, we would curtail the amount that IID and Coachella would get from the Sea. So those are also included in the projections as we move forward in time.

MR. OSIAS: I have put up on the screen several figures which are found on Page 3.0-17 of the EIR/EIS.

Do you have that in front of you?

DR. ECKHART: Yes, I do.

MR. OSIAS: The left-hand column is called project baseline, and can you tell us what this is a graphical depiction of?

DR. ECKHART: Yes. What we have here is we have three areas that we are looking at and evaluating of the Salton Sea. Those are surface elevations, surface area and salinity. What you are seeing is the colors in this represent the variability within which our analysis has taken place.

So if you start at the center, move out, the center of these, I like to call them feather diagrams, but these diagrams, the center would be the medium -- the average, let's call it, the average prediction for what we believe would happen to the proposed baseline.

The red color would be one standard deviation, and the green would be the 95 percent confidence interval.

MR. OSIAS: Within the edges, outside edges of the green, there is 95 percent confidence that the predicted event will occur; is that correct?

DR. ECKHART: That's correct.

MR. OSIAS: Within the edges of the red, what is that confidence level?

DR. ECKHART: That is one standard deviation which in this case is equivalent to about 80 percent.

MR. OSIAS: Within the red band you are about 80

percent confident or there is a one in five chance that you are wrong?

DR. ECKHART: Yes.

MR. OSIAS: The mean, what is the confidence level for the mean, roughly?

DR. ECKHART: Roughly the confidence for the mean would be about 50 percent.

MR. OSIAS: So the baseline projection for surface elevation in any given year is determined by using the horizontal access in the top figure on the left, correct, for the year, and the vertical axis shows the elevation, and it will range between the edges of that feather, is that how you would read that?

DR. ECKHART: That's correct.

MR. OSIAS: So if we come down to the salinity chart, which we will have the operator raise slightly, if we want to predict the baseline for when we would hit 60 parts per thousand, you would, what, draw a horizontal line across from the 60,000 vertical axis to see the range of years?

DR. ECKHART: That's correct. The horizontal line from the 60,000 milligrams per liter or 60 parts per thousand.

MR. OSIAS: So with 95 percent confidence that prediction is between what and what?

DR. ECKHART: That prediction is between years 2018 and 2030.

MR. OSIAS: If we -- the right-hand column, although we've cut the top off, that is the project using 300,000 acre-feet?

DR. ECKHART: That's correct. 300,000 acre-feet is conserved and all 300,000 is transferred out of the valley.

MR. OSIAS: You can see that these feathers are much narrower. Can you explain why?

DR. ECKHART: One of the primary reasons the feathers are much narrower is just the scale of the graphs.

MR. OSIAS: So for those of us who are graphically impaired, the vertical column -- let's use the top one for surface elevation, it is covering a different distance; is that right?

DR. ECKHART: That's right.

MR. OSIAS: You had to compress the graph?

DR. ECKHART: Yeah. We had a different vertical axis because of the change in -- the vertical part of that graph was so great that we just couldn't fit it on this page, so we changed the scale.

MR. OSIAS: That is why it shrinks, it is not that these are more precise?

DR. ECKHART: That's correct, not more precise.

MR. OSIAS: Let's go down to salinity again. If we say when do we expect with a 300,000 acre-foot project all leaving Imperial, when do we expect to hit 60 parts per

thousand?

DR. ECKHART: The range is between years 2011 and 2014.

MR. OSIAS: That is assuming a start date in 2002, right?

DR. ECKHART: That's correct.

MR. OSIAS: You earlier said that would become 2012 to 2015?

DR. ECKHART: That's correct.

MR. OSIAS: Then you did the same analysis for the project assuming it was 230- rather than 300-; is that correct?

DR. ECKHART: That's correct.

MR. OSIAS: Is that found on the next page or two?

DR. ECKHART: Two pages.

MR. OSIAS: Maybe you can just give us the answer if it is for the 230,000 project with respect to salinity.

DR. ECKHART: For salinity?

MR. HATTAM: Alternative two or three?

MS. HARNISH: Alternative three.

MR. OSIAS: The left-hand column.

DR. ECKHART: If I'm reading my graph correctly, it is from 2009 to 2013.

MR. OSIAS: Again, you'd shift that one year?

DR. ECKHART: Shift that one year.

MR. OSIAS: So it is about the same as 300-?

DR. ECKHART: That's correct.

MR. OSIAS: You said that for both the 300,000 and the 230-, I suppose, you assumed all the water was transferred out of Imperial.

Does it make a difference whether it's transferred to Coachella or San Diego?

DR. ECKHART: Yes, it does.

MR. OSIAS: Could you tell us the difference?

DR. ECKHART: The difference primarily is at the end of 75 years. You are seeing the largest differences over time. Because what happens is when you start this process, you are ramping up at about the same scale. So the earlier differences are not much difference between the two projects. As you go out over time you see the larger differences.

MR. OSIAS: When water is transferred to Coachella, does it not drain back into the Sea?

DR. ECKHART: The difference with Coachella is that as we were told in our analysis from Coachella that that water would be used for recharge or in lieu of use of groundwater. As a result of that, for the first many years, in fact, from the data we received from Coachella, approximately 40 years that that water would be recharging their aquifer, and there would be essentially very little

return flow to the Salton Sea from the use of that water by Coachella. As a result, you will see no difference in the Sea between the 300- and the 200-.

MR. OSIAS: Or between the location, between Coachella and Salton Sea for, what, the first 40 years?

DR. ECKHART: Approximately 40 years.

MR. OSIAS: Thereafter it starts to make a difference?

DR. ECKHART: Yes, it does.

MR. OSIAS: In the project projections, let's do the 300- one, I guess, it is the easiest, you used -- did you use the ramp up schedule that we are so fond of looking at on Exhibit 1A?

DR. ECKHART: Yes, we did.

MR. OSIAS: You didn't assume that all 300,000 was transferred on day one?

DR. ECKHART: That's correct, we did not.

MR. OSIAS: Did you assume, though, that the impact to the Sea in that first year where 20,000 is transferred, was, in fact, 20,000?

DR. ECKHART: Yes, we did.

MR. OSIAS: I thought I heard you say earlier that with respect to the '88 agreement, where, for example, system improvements were done, those impacts are not even yet all hitting the Sea; is that right?

DR. ECKHART: That's correct.

MR. OSIAS: And the project as described in EIR, does that include both system and on-farm?

DR. ECKHART: Yes, it does.

MR. OSIAS: Is it possible that impacts could be delayed by doing system first?

DR. ECKHART: Yes.

MR. OSIAS: This is a new exhibit, not yet marked, Director Baggett. It will be our next in order which is IID 66.

Dr. Eckhart, Are you familiar with this picture?

DR. ECKHART: Yes, I am.

MR. OSIAS: Many aspects of it are too small to see. You see the -- first of all, tell me what it is and why you know what it is?

DR. ECKHART: When I was the manager of the water department of IID, this chart was prepared for me to show me visually where the interceptor systems were conducted and what canals were affected by the '88 agreements.

So what you see is, this would show us all of the effects or, I am sorry, the projects that were implemented during that agreement. And the colored areas that you are seeing are the three interceptor systems that were constructed.

MR. OSIAS: When you say color, there is yellow, a tan and a green?

DR. ECKHART: That's correct.

MR. OSIAS: There is, also too small for everyone to see, the canals which were lined both by Met and by others which we can ignore for the moment. They are on the chart, right?

DR. ECKHART: That's correct.

MR. OSIAS: Now, for example, if you did a system improvement south of that bright green interceptor --

You see where I'm looking?

DR. ECKHART: Yes, I do.

MR. OSIAS: -- and it captured somehow seepage or other subsurface flow, what do you project the time length would be before that impact hit the Sea?

DR. ECKHART: When you are doing system projects, say interceptors or lining of canals, you're basically saving the subsurface seepage. And so what we are looking at is the timing for that subsurface seepage to reach the Sea. And based on groundwater analysis that have been performed for IID, as you move south through the District, more towards the south end, that period longer than when you are closer to the Sea, of course. As I recall, the timing would be anywheres from five to as high as ten years, because we are looking at very tight soils for that flow to move through. It is a long period of time for that effect to be felt, and that is what we are seeing in the '88 agreement

from some of that work.

MR. OSIAS: Obviously, if you move to a system improvement between the tan and the green, that would hit the Sea sooner because it's farther north toward the Sea?

DR. ECKHART: That's correct.

MR. OSIAS: Do you have a time estimate in there?

DR. ECKHART: Again, the estimate would be -- we can almost cut that in half, for instance, so that could be one to five years.

MR. OSIAS: Now when you did your impact analysis -- actually, let me back up.

The project allows IID to choose what kind of conservation to do?

DR. ECKHART: That's correct.

MR. OSIAS: Within two categories?

DR. ECKHART: Correct.

MR. OSIAS: And they are?

DR. ECKHART: System and on-farm.

MR. OSIAS: That flexibility was preserved to the District, so you analyzed it, right?

DR. ECKHART: That's correct.

MR. OSIAS: In the impact analysis that you showed in those feather diagrams you used the ramp up for the schedule, you said, right?

DR. ECKHART: That's correct.

MR. OSIAS: You made the assumption that the impact would be felt the same year as the conservation, correct?

DR. ECKHART: That's correct.

MR. OSIAS: Why did you make that assumption?

DR. ECKHART: The reason we made that assumption is that for efficiency-type conservation for on-farm that is focused pretty much on the surface water runoff from the fields, which is definitely immediate, within a year time frame. So we felt that if you are conserving water in a year where you're conserving surface runoff, that would be removed from the Sea in that same year.

MR. OSIAS: So if you did 300,000 acre-feet on-farm, that is what your impact comparison would show, right?

DR. ECKHART: That's correct.

MR. OSIAS: Since IID might do that, it was important to assess that circumstance, correct?

DR. ECKHART: That's correct.

MR. OSIAS: If it did some system, the timing is what changed, right?

DR. ECKHART: That's right.

MR. OSIAS: Ultimately there is the same acre-foot impact?

DR. ECKHART: That's correct.

MR. OSIAS: But when it hits varies?

DR. ECKHART: That's correct.

MR. OSIAS: IID has preserved for itself in its contract the decision as to what time to do system versus on-farm?

DR. ECKHART: As I understand the contract, yes.

MR. OSIAS: Your analysis tried to use the outside impact edge, which is all on-farm; is that right?

DR. ECKHART: Yes. We tried to use a reasonable worst case.

MR. OSIAS: Now you were here when I addressed in my opening statement some comments about salinity effects on fisheries, and, too, Ms. Harnish.

Would one of you address why we care about salinity in the Sea, vis-a-vis what happens to species?

DR. ECKHART: We care about that in the environmental process because of the effect to the covered species that we are -- that IID is asking the Fish and Wildlife Service and the California Department of Fish and Game for endangered species permits. And those bird species, in fact, use the Sea, the piscivorous birds, particularly use the Sea to eat the fish. And, of course, as the fish -- as the Sea changes its salinity, those fish will decrease and maybe disappear which means there will be no more food left for those birds.

MR. OSIAS: Piscivorous, is that a term of endearment?

DR. ECKHART: Not to me.

MR. OSIAS: What does it mean?

DR. ECKHART: It essentially means fish eating birds.

MR. OSIAS: What species are those that are found at the Sea?

DR. ECKHART: Biologists tell me those are the white and brown pelican, black skimmers and cormorants.

MR. OSIAS: You are not a biologist?

DR. ECKHART: I am not a biologist.

MR. OSIAS: You were directly hands-on on the hydrology analysis in the EIR?

DR. ECKHART: That's correct.

MR. OSIAS: Someone else from CH2MHill, Ms. Harnish, did the biology work?

MS. HARNISH: That's correct.

MR. OSIAS: The two of you are familiar with what they did?

MS. HARNISH: We're familiar.

DR. ECKHART: Yes.

MR. OSIAS: What are the fish species in the Sea?

MS. HARNISH: Tilapia, corvina, sargo, croaker and the pupfish.

MR. OSIAS: Which of those species are native fish, by native I mean native California fish?

DR. ECKHART: Pupfish.

MR. OSIAS: And the others are from where, if you know?

DR. ECKHART: I don't know. I've been told that tilapia are from Africa, but I don't know.

MS. HARNISH: I don't know where they are from.

MR. OSIAS: But they are not native?

MS. HARNISH: Not native.

MR. OSIAS: Do the birds eat all of them? I don't mean do they consume every one of them, I mean will they eat any of them?

DR. ECKHART: As I understand from the biologists, pelicans, when they get hungry enough, will eat anything. But the Sea has an abundance of tilapia, and they definitely prefer the tilapia.

MR. OSIAS: Does the EIR/EIS reference the fact that the CH2MHill did a literature survey of the impact of salinity on either fish or tilapia in specific?

DR. ECKHART: I don't think the draft does. In the process of consultation with the Fish and Wildlife Service and the California Department of Fish and Game, we have just completed that literature review. So I can't recall if it is cited in this document.

MR. OSIAS: Maybe I should take a quick detour.

Tell me about the process in connection with the HCP for consultation with U.S. Fish and Wildlife and California Department of Fish and Game.

DR. ECKHART: Consultation process is to use our analysis to determine the effects on the habitats and then move from the effects of those habitats to the effects to the species. The HCP, the Habitat Conservation Plan, is then used for us to determine the mitigation that would be used for all of the species that we have decided we would like to cover in the permits that we are requesting.

So we have been meeting for a little over a year now to determine what those mitigations are for those various habitats and species that would be affected.

MR. OSIAS: You go to those meetings?

DR. ECKHART: Yes, I do.

MR. OSIAS: And others?

DR. ECKHART: Other biologists from CH go to those, and we have other specialists who attend those, also.

MR. OSIAS: Are the meetings jointly with Fish and Wildlife and Fish and Game?

DR. ECKHART: Yes, they are.

MR. OSIAS: What kind of specialists do they have present?

DR. ECKHART: The meetings that we attend, pretty much the agency, the wildlife agencies will use their biologists.

MR. OSIAS: And has that process in any way influenced the use of 60 percent per thousand as a benchmark?

DR. ECKHART: Yes, that process has. In fact, in developing the mitigations the 60 parts per thousand has been questioned many times as to the level of mitigation and whether we should mitigate to 60 parts per thousand, 70 parts per thousand, 50 parts. It's why the literature research was done, to try to determine if there is a magic number, and that is my use of terms, where the tilapia would disappear from the Sea.

MR. OSIAS: Maybe you should give me the summary of your literature review since I referred to it in the opening statement.

DR. ECKHART: As I recall from the literature review, several authors suggested that tilapia could not survive in a saline water ranging from 30 parts per thousand to 120. They would disappear, if you will, not survive in water ranging from 30 parts per thousand to 120 parts per thousand.

MR. OSIAS: How was -- what is the Fish and Wildlife or Fish and Game's perspective on that range?

DR. ECKHART: The perspective is obvious, that the minimum part, because we know that he have tilapia in the Sea, so we realize that the 30 parts per thousand must not be an accurate number.

So their perspective is they still think 60 could be a number, but they're unsure of that, because there is

literature that says those fish could survive to 120.

MR. OSIAS: How are you handling that with respect to the consultation process with the wildlife agencies?

DR. ECKHART: How we are handling that is biology of this issue, the 60 parts per thousand, has higher variability and higher unknowns than apparently our hydrology. At least we can put probability and statistics to our hydrology because we have data to back that up.

So the way we are using these numbers is that instead of trying to guesstimate whether 60 or 70 parts per thousand, we are mitigating to the 95 percent confidence intervals on the hydrology rather than the medians.

MR. OSIAS: Now to get the permits will you need a definitive plan?

DR. ECKHART: Yes.

MR. OSIAS: That plan is to accomplish what?

DR. ECKHART: That plan is to fully mitigate for the impacted species, the covered species.

MR. OSIAS: And the species are more than the pelicans, correct?

DR. ECKHART: Ninety-six species.

MR. OSIAS: How was that species selection generated?

DR. ECKHART: As I understand, the biologist looked at the species that potentially were in the valley, and over the 75 years, through an analysis they performed, they

determined that during the 75 years there was potential for those species not already listed, they could be listed. So remaining species could be listed. That is where the 96 comes from.

MR. OSIAS: You're familiar with the notion of a no-surprises protection?

DR. ECKHART: Yes.

MR. OSIAS: Could you explain for those of us who are not in the endangered species business what that means?

DR. ECKHART: The -- I will not profess to be an expert on the literature. But the no-surprises issue here is that essentially what we want to do is we want to determine the mitigation up front so that down the road when a species would be listed, we have already covered the mitigation for that. So, therefore, there would be no more expenditures of funds needed later on in the process because we have mitigated that up front and, hence, comes the idea of no-surprises.

MR. OSIAS: To get no-surprises assurances you need to reach agreement with the Fish and Wildlife Service; is that right?

DR. ECKHART: That's correct.

MR. OSIAS: That is the consultation process you are doing?

DR. ECKHART: That's correct. And includes California

Department of Fish and Game.

MR. OSIAS: And has that process identified a method or more than one method to mitigate for that list of species?

DR. ECKHART: Yes, it has.

MR. OSIAS: And why don't you tell me about that.

DR. ECKHART: We have identified several habitats and then specific species that we will be mitigating for because of the nature of the species. So, for example, what we have is those species that use the drains. And as a result of the transfer, we realize that there will be an analysis that shows that there could be an increase in salinity. So the mitigation is being proposed for those species that use the drains is a constructed wetlands. And so the HCP, and the position where we are right now, would be constructed in the range of 109 to 650 acres of wetlands. That would be full habitat replacement for all the drains within Imperial Valley.

MR. OSIAS: So the species who depend on the drains will have a new home?

DR. ECKHART: That's correct.

MR. OSIAS: Has the same approach been used with respect to the Salton Sea?

DR. ECKHART: Salton Sea is a very similar approach. We have two approaches to the Salton Sea. And then, of course, you have various habitats around the Salton Sea. If

you look at Salton Sea water, just look at the water, we have two approaches that we're talking about.

One of them is a habitat, a hatchery habitat replacement. And another one is make-up water. So in those two approaches we have defined what we would be required for full mitigation. And, of course, we have taken into account in both cases the baseline. In other words, when will those fish and those birds no longer be in the Sea. The advantage of the habitat hatchery replacement or hatchery habitat replacement is that the proposal now is that we would actually keep the birds there toward -- for the entire 75-year process, project.

So what we would be doing is stocking fish to the Sea. As the Sea gets to a salinity that the fish can no longer reproduce, then as the Sea gets to a higher salinity when the fish no longer survive, the hatchery would put fish in the pond, and the birds could use those ponds. And that would be maintained for the entire 75.

Under approach two --

MR. OSIAS: Let me stop you right there.

When you say hatchery, someone is going to raise the fish, then?

DR. ECKHART: That's correct.

MR. OSIAS: That will be the source of either planting live fish in the Sea or planting them in a pond?

DR. ECKHART: That's correct.

MR. OSIAS: The birds will, if it is the Sea, fish in the Sea, and if it is in the pond, fish from the pond?

DR. ECKHART: That's correct.

MR. OSIAS: And the other approach?

DR. ECKHART: The other approach is water replacement, if you will, based on the effects of the transfer to the Sea. And any type of conservation could be done, but at this point we have analyzed that water replacement coming solely from the Imperial Valley. And the idea here is to replace one for one with the effect of the transfer to the Sea until the Sea would reach the 60 parts per thousand. Actually, I'm sorry, not 60. It would be when the Sea -- when baseline at 2030. In other words, we are using the 95 percent confidence interval. So our replacement water would be putting the Sea to the year 2030 to allow for that 60 parts per thousand issue of variability.

By year 2030, at the year 2030 there would no longer be replacement water put into the Sea because that is when historically we believe that the fish no longer survive in the Sea.

MR. OSIAS: Let me back you up a minute.

The IID can, you said, do one of two things in terms of categories, on-farm or system?

DR. ECKHART: That's correct.

MR. OSIAS: From an environmental perspective if efficiency improvements are put on-farm, is there any difference to the environment of what kind of efficiency improvements put on?

DR. ECKHART: As far as the types of things put on-farm, the affect to the environment if I look at the drains, for example, the effects to the drains would make no difference.

MR. OSIAS: So if you did a pump back system, which we heard a lot about last week, or dead level or lots of irrigators to slow down tailwater, from the Salton Sea and the drain perspective no environmental difference?

DR. ECKHART: That's correct.

MR. OSIAS: Now there has been an analysis of creating conserved water by fallowing for transfers as well; is that right?

DR. ECKHART: That's correct.

MR. OSIAS: Ms. Harnish, that is an alternative that the EIR covered?

MS. HARNISH: Yes, it is.

MR. OSIAS: Could you tell us the difference, let's just say, to the drain and the Sea from creating water by efficiency versus creating water by fallowing? Either one of you.

DR. ECKHART: The difference, and you can help, Laura,

the difference is in efficiency-type conservation you are focusing primarily on the surface water runoff, as we refer to as the tailwater. So in efficiency-type conservation, if a farmer conserves one, one acre-foot, on the field that is tailwater. So that means that there is a one acre-foot reduction to the drain and also means, of course, that he is going to reduce his delivery by one.

Of course, what that means is is for efficiency conservation and for every acre-foot conserved there is an acre-foot impact to the Sea. So if he conserves 300,000, there would be a 300,000 acre-foot impact to the Sea.

MR. OSIAS: If instead you stopped all flow to the farm and transferred that entire flow to a transferee, what is the impact to the Sea?

DR. ECKHART: The impact is different for fallowing because if you look at what is delivered to the farm at the headgate, what you do is essentially cut off the entire flow to that field and the only impact to the Sea is what was historically running off that field or ending up in the drains, in the subsurface.

So that is somewhat less, obviously, than that full amount that was delivered. So the impact to the Sea is less. Our analysis shows that is roughly by one-third.

MS. OSIAS: So if we used the simple example, if a farm were to receive six acre-feet per acre and two of it left

the farm by tailwater and deep perc or whatever, and you cut off the tailwater and the perc to transfer, the Sea would lose two and you'd have two to transfer, right?

DR. ECKHART: We would lose two and we would have four to transfer.

MR. OSIAS: If you only transfer the tailwater?

DR. ECKHART: I'm sorry. Yes.

MR. OSIAS: The Sea would lose two and you'd transfer two?

DR. ECKHART: Yes.

MR. OSIAS: If you stop all delivery to the farm, which was otherwise six, the Sea would lose two, but you'd have six to transfer?

DR. ECKHART: That's correct.

MR. OSIAS: What we hear about fallowing is, geez, only a third of the impact, using my simple example; is that correct?

DR. ECKHART: That's correct.

MR. OSIAS: Now, of course, when we talk about the impact, we are talking about species other than human beings?

DR. ECKHART: That's correct.

MR. OSIAS: If you stopped farming, either to create conserved water or to create mitigation water, are there other impacts that happen in the Imperial Valley, Ms. Harnish?

MS. HARNISH: Yes. You're talking about fallowing?

MR. OSIAS: Yes.

MS. HARNISH: There would be socioeconomic effects.

MR. OSIAS: Some of those are analyzed in the EIR/EIS, correct?

MS. HARNISH: That's correct.

MR. OSIAS: Was there consultants used or experts within CH2MHill for that?

MS. HARNISH: Yes, there were experts, economists, that modeled what the effects would be.

MR. OSIAS: That wasn't you?

MS. HARNISH: Was not myself, no.

Mr. OSIAS: You are familiar with him?

MS. HARNISH: Correct.

MR. OSIAS: Now, maybe going back then, if you use a replacement water strategy for your HCP, how much water do you need to put into the Sea until the year 2030?

DR. ECKHART: If it is fallowing?

MR. OSIAS: What is the range?

DR. ECKHART: The range would be, under efficiency conservation, would be 300,000. Under a hundred percent fallowing, it would be approximately a hundred thousand. So 100- to 300,000.

MR. OSIAS: Depending on how you create the conserved water for transfer, it would affect on how much you have to

create for replacement water mitigation; is that right?

DR. ECKHART: That's correct.

MR. OSIAS: The range is one to three in round numbers?

DR. ECKHART: In round numbers.

MR. OSIAS: Are the costs of either of these HCP approaches in the EIR/EIS?

DR. ECKHART: They are not.

MR. OSIAS: Why not?

DR. ECKHART: At the time that the draft was produced we had not completed all of the details of the consultation with wildlife agencies.

MR. OSIAS: Are the costs the subject of negotiations with the wildlife agencies?

DR. ECKHART: Currently they are, yes.

MR. OSIAS: Maybe you can, given that we are in the sum up light period, give me just a very quick what are the cost factors that go to the hatchery and fish replacement approach and what are the cost factors that go to the replacement water approach?

DR. ECKHART: The hatchery habitat replacement, of course, requires either building a large hatchery or purchasing the fish from a commercial producer. It also requires that we build the ponds for those fish to be stocked in, and then you have the 75 years of operation maintenance for both of those.

MR. OSIAS: On the replacement water side, what are the costs?

DR. ECKHART: Replacement water side would require the purchase, if you will, of that water. So those costs would be whatever that water could be purchased for the replacement.

MR. OSIAS: If you do efficiency conservation, do you need to do socioeconomic -- actually, strike the word "need." If you do efficiency conservation is there a negative socioeconomic impact?

MS. HARNISH: No, positive.

MR. OSIAS: If you do either replacement water mitigation or creation of transferred water by fallowing, is there a socioeconomic impact? I think you said yes.

MS. HARNISH: Yes.

MR. OSIAS: And it is negative?

MS. HARNISH: Correct.

MR. OSIAS: When you go to cost, if you are on the fallowing side or replacement water side, would there be a cost for socioeconomic mitigation as well?

DR. ECKHART: Yes, there would.

MR. OSIAS: Thank you.

CHAIRMAN BAGGETT: Thank you.

Twenty-four seconds.

MR. OSIAS: I could use them.

I would like to offer into evidence their testimony.

CHAIRMAN BAGGETT: We'll wait until we get to the cross.

Thank you.

With that, let's take ten minutes. We'll come back with cross-examination beginning with Mr. Gilbert.

(Break taken.)

CHAIRMAN BAGGETT: We are here. With that, let's begin cross-examination starting with Mr. Gilbert.

You are up.

MR. GILBERT: Thank you, Mr. Chairman.

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CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

BY MR. GILBERT

MR. GILBERT: A few questions probably first for Dr. Eckhart.

In the system improvements that were discussed some earlier are there two different kinds of system improvements contemplated?

DR. ECKHART: There are at least two, two different kinds.

MR. GILBERT: Could you mention what those two are, the two main ones?

DR. ECKHART: I don't know if the two main ones, but the ones we have spent a lot of time looking at were, of

course, interceptor systems and then regulating, reregulating reservoirs.

MR. GILBERT: Did you also consider seepage on some of the main canals?

DR. ECKHART: Yes, that would be another type.

MR. GILBERT: Regarding the lateral interceptors, that may be a kind of unusual term. Can you tell us what a lateral is and what you are intercepting?

DR. ECKHART: Yes. Actually on the exhibit behind me.

MR. OSIAS: 66.

DR. ECKHART: -- 66, you will see Imperial Irrigation District's canal system. And what they distinguish is the difference between main canals and laterals. So essentially what you have is main canals that feed lateral canals. And the lateral canals essentially will deliver the water to the farmers. And in order for the Irrigation District to meet the farmer needs, there is water delivered to the farmer that would include, within the lateral system, any allowances for what I call carriage losses. As a result of that, at the end of that lateral, you have carriage losses that will either end up spilled into the drainage system or, in this case, if a lateral interceptor is built, that interceptor will actually intercept those flows, move those to a reregulating reservoir, and from that reregulating reservoir that water is then put back into

other canals systems for reuse.

MR. GILBERT: This water that is used to ensure that the deliveries are as ordered, some of that might be unused and otherwise would go out the end of the lateral and into the drainage system?

DR. ECKHART: That's correct.

MR. GILBERT: And then it would flow directly into the Sea?

DR. ECKHART: That's correct.

MR. GILBERT: Thank you.

While you were manager of the District, did you become familiar with what it took to construct a lateral interceptor system?

DR. ECKHART: I would first like to correct, I was not manager of the water District. Manager of the water department.

MR. GILBERT: Right.

Thank you.

DR. ECKHART: I did become somewhat familiar with what it took to construct lateral interceptors.

MR. GILBERT: Could you tell us how long it takes to design and construct one of these lateral interceptor systems?

DR. ECKHART: The range, as I recall, most of these were completed before I was the water manager. But as I

recall, it would be anywheres from one to two years.

MR. GILBERT: And so when they are completed, they begin to conserve the water?

DR. ECKHART: That's correct.

MR. GILBERT: Thank you.

A couple questions about tilapia. They seem to be on our mind quite a bit lately.

Either of you know if tilapia include pupfish in their diet?

DR. ECKHART: I have been told by biologists that most fish will be aggressive and will eat other fish. So I would assume that tilapia could eat pupfish.

MR. GILBERT: Thank you.

Are you familiar that when the water temperature gets down to or below 60 degrees that they begin to have a serious time surviving?

DR. ECKHART: As I understand from the biologist, yes.

MR. GILBERT: It would be likely that the temperature in these ponds would be below 60 in the wintertime and even closer to 50?

DR. ECKHART: It depends on the pond configuration. In fact, with smaller pond sizes we actually can keep the temperatures what they are in the delta as they are today. So depending on pond size, pond configuration, you know, if you have a large pond with little flow through, you are

obviously going to have a heat problem and it is shallow. If you have smaller ponds with higher flow through, you can keep the temperatures cooler.

MR. GILBERT: The Salton Sea is a large body of water, and it doesn't tend to have a temperature fluctuation as a shallow body of water would?

DR. ECKHART: Because of the depth, yes, that is correct.

MR. GILBERT: Regarding the conservation of water and the expenditure of some of the funds and the socioeconomic impacts that that would have.

When you did the analysis on the socioeconomic impacts of the expenditures for conservation, did you assume that much, if not most, of those moneys would go to landowners as opposed to farmers? I don't know which one of you is more qualified to answer this.

DR. ECKHART: I don't know the answer to that.

MS. HARNISH: I don't know the answer to that question. If you let me see, if we can quickly find it.

MR. OSIAS: I assume, Mr. Gilbert, when you said farmers you meant tenants?

MR. GILBERT: Those that are actually locally operating the land as opposed to those who owned it.

MS. HARNISH: I am not sure if that level of assumption is documented here, so I don't think we can answer the

question right now.

MR. GILBERT: Okay.

Maybe I could pose it as a plausible. If it were analyzed that way, and I believe that it was, since a considerable number of landowners do reside outside of the valley, the economic impacts to the valley would be different if the payments went to the landowners as opposed to if they went to local farmers for immediate expenditure in the area?

DR. ECKHART: I assume, based on your assumption, that most of the landowners would be outside the valley and the payments would go to the landowners, then you could potentially have a different impact than if the money was going to landowners that live in the valley.

MR. GILBERT: Or if it were used for incentive payments for farmers and they used that money for improvements to their fields or irrigator management, that sort of effort, that would also have an impact on the local economy as opposed to the payments going to landowners that resided outside the valley?

DR. ECKHART: Yes, I think that is correct.

MR. GILBERT: Did the EIR analyze any specific conservation plan, especially the on-farm features of it?

DR. ECKHART: The EIR/EIS actually analyzed the effects of all of the conservation plans.

MR. GILBERT: Methods of conservation as opposed to conservation plans?

DR. ECKHART: It analyzed all the methods of conservation.

MR. GILBERT: You did not analyze any plan as whether it would be effective or what type of water, whether it would result in fallowing or efficiency improvement?

DR. ECKHART: The analysis actually assumed that farming activities would continue as they are today and that was projected into the future. And in that analysis what was assumed is that cropping patterns would be what they are today and irrigation techniques would be pretty much what they are today.

On top of that what was analyzed then is potential conservation methods and changes to the runoff from the fields as a result of those. So as far as effectiveness, through that analysis, what we determined is how much, at least with the assumptions we made in the analysis, how much could be conserved from system conservation and how much could be conserved from on-farm conservation.

MR. GILBERT: For the on-farm conservation you assumed in the one instance that it would be done through efficiency improvements. You did not analyze any plan would result in that effect?

MR. OSIAS: Let me just object for a moment. Are you

referring to -- you are not referring to the HCP's or anything?

MR. GILBERT: No. EIR.

MR. OSIAS: What plan are you talking about?

MR. GILBERT: Any conservation plan. The District has proposed a conservation plan, but I'm wanting to point out whether or not that plan was analyzed in the EIR.

MR. OSIAS: There is no conservation plan.

CHAIRMAN BAGGETT: Can you refer to a specific plan? Title? I think it is vague. They need to know what plan.

MR. GILBERT: Was the plan that the IID proposed in November and December of last year actually analyzed as to its effects?

DR. ECKHART: Our analysis analyzed the effects of conservation methods. And in that analysis what was assumed, it was randomly distributed over the valley, and random conservation techniques were used. We did not analyze in this document any implementation of those conservation methods.

MR. GILBERT: I think that is all my questions.

Thank you, Mr. Chairman.

CHAIRMAN BAGGETT: Thank you.

Mr. Du Bois.

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CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

BY MR. DU BOIS

MR. DU BOIS: Mr. Eckhart, have a few questions of you. You indicated that it would be several years before the effects of canal lining would reduce the seepage flow into the Salton Sea; is that correct?

DR. ECKHART: Correct. Depending on where you are in the valley.

MR. DU BOIS: That is the aspects for which I wish to question you. Are you aware of the tile drainage system that is employed by most farms in Imperial?

DR. ECKHART: Yes, I am.

MR. DU BOIS: And do you believe that there are many of the canal lining projects that are not closely accompanied physically by tile drainage systems?

DR. ECKHART: I actually don't know. I can't tell you for every canal lining what is the relationship to tile drains in the fields are. I don't know that relationship. I know that in some locations there are, obviously, tile drains next to canals. I don't know what the percentage or distribution of that is.

MR. DU BOIS: In those cases where there are tile drainage systems located adjacent to canals, do you anticipate that it would be many years before the affect of canal lining would be felt by flows to the Salton Sea in

those areas that have functioning tile lines presently?

DR. ECKHART: The relationship is going to be highly variable. Because what happens is, depending on the size of the canals lined and the depth of that canal in relationship to the tile drainage, you may have seepage, which I think we are seeing that actually goes below the tile drains in the Sea. So every situation is different. So I am not saying that there are certain, probably smaller canals, that were lined that some of the seepage may have been picked up by the tile drains. But you still have a delay of flow. The conductivity of that water through the ground, it will still be delayed as opposed to direct.

MR. DU BOIS: But you would agree that those areas where tile lines are adjacent to the canals that the effect would be felt fairly promptly on the Salton Sea?

DR. ECKHART: The effect would be felt sooner. I am not going to say "promptly," because I don't know what that word means. It is either immediately or time delayed.

MR. DU BOIS: Do you have in mind a figure that would approximate the number of miles of canals which have already been lined versus the number that are subject to lining under a more stringent conservation program?

DR. ECKHART: You know, I actually don't recall the number of miles that are lined. But I do recall in our analysis there are very few miles of canals left that could

be lined that could conserve water.

MR. DU BOIS: Thank you.

The system changes that you spoke of, it's my impression that they, in addition to giving the landowner better water service, that they also reduce the, I think the term that is used by the District is, spillage to the Sea or canals that don't have an interceptor and have surplus water in them, they customarily spill water into the Sea; is that not correct?

DR. ECKHART: Yes. If you're referring to lateral interceptors. Because of the operation of the water within that lateral, yeah, that if it is not intercepted by a reregulating reservoir or lateral interceptor system, it would spill into the drain system and essentially eventually make its way to the Sea.

MR. DU BOIS: That effect would be felt the year that the interceptor is installed, would it not?

DR. ECKHART: That is correct.

MR. DU BOIS: This EIR is characterized as a draft and as a draft, does it have standing? What is the difference between a Draft EIR and a Final EIR?

MR. OSIAS: So long as they are not asked to give a legal conclusion to that.

MS. HARNISH: I can't speak to the standing issue, but the way the CEQA and NEPA process works is you issue a

draft, and it is out for public review. In this case we had 90 days of public review where many people, I think including yourself, submitted comments. That comment period ended on Friday last, April 26. We are now reviewing those. We will respond to those comments. Potentially revise the document in response to those comments. And then there will be a final document issued potentially at the end of this month -- end of next month, May.

MS. HARNISH: End of this month is today. End of next month.

MR. DU BOIS: Are you aware of the number of responses you got to your invitation for comments?

MS. HARNISH: I don't have an exact number, no. It was several.

MR. DU BOIS: Do you anticipate there will be changes made in the Draft EIR?

MS. HARNISH: I can't say for certain yet. As I said, the period just closed on Friday. We haven't had a chance to completely go through all of the comments.

MR. DU BOIS: One question that I would like to have answered. I know that I should ask you, Dr. Eckhart.

You are aware there are wetlands projects that have been or are being constructed in the New River?

DR. ECKHART: The projects I'm aware in the New River are actually water quality projects. So they are put there

for water quality enhancements as opposed to habitat enhancement.

MR. DU BOIS: I wanted to ask you if in your opinion there would a possibility that wetlands projects, in either the New River or the Alamo or some of the various tributaries to the New River which may or may not flow water, but they are not useful for agriculture, if it would be feasible to construct wetlands projects in those locations?

DR. ECKHART: I really can't address that. It would be an assumption on my part. Because wetlands construction requires lots of physical things to be required out there. So I really can't answer that question exact.

MR. DU BOIS: I am thinking about areas like the Fig Lagoon or Gleason Wash or tributaries around west and north of Selig where the ravines cut in 1903 or 1905 are wastelands, and I am wondering if any discharging was given to those areas as locations for wetlands rather than to use existing agricultural land?

DR. ECKHART: We actually have not determined exactly where the constructed wetlands will be built. Actually, everything is open at this point. However, the Fish and Wildlife Service and California Department of Fish and Game prefer those wetlands construction be next to the refuge that is already there at the south end of the Sea so that it

can be managed with efficiencies.

MR. DU BOIS: One of my concerns is that when less surface runoff goes into the Sea that the effects of tile effluent will be much more marked, much more obvious. And I wonder have you given any consideration to the rapidity with which the fish habitat would deteriorate when surface runoff is decreased to the Salton Sea?

DR. ECKHART: You will have to clarify which and where fish habitat.

MR. DU BOIS: Fish habitat, I think the only fish habitat we have that is significant is in the Sea itself. So that is what I am referring to.

DR. ECKHART: First of all, I disagree with you. Going through this process, the most important fish habitat we have in the valley is the pupfish habitat, which is the drains that go directly to the Sea, plus the Sea. So that is the most important habitat, fish habitat, that we've been dealing with at this point. The fish habitat in the Sea have been purely and simply for feeding birds.

MR. DU BOIS: The pupfish, the salinity of our tile drains is a salinity level at which the pupfish would survive?

DR. ECKHART: The mitigation that is being proposed in the HCP is an adaptive management process. These are the drains to the first check that go directly to the Sea. The

adaptive management process that is being proposed in the HCP in this document is that that water quality will be monitored. And there is no question when you do efficiency conservation that you concentrate the tile water constituents in the drain.

And so the affect to the pupfish will be monitored. In other words, the water quality will be monitored. And if it looks like that is becoming a critical aspect, then included in that mitigation is splitting out of drain water in all of those drains so that we provide better water quality for the pupfish habitat.

In addition what is included in mitigation is that as the Sea recedes, the pupfish will no longer want to go into the Sea because it is too salty. So we don't want to isolate those pupfish populations. So the other mitigation being proposed is we are going to cross-connect all those other drains so that those pupfish can move from drain to drain without moving into the Sea.

MR. DU BOIS: Are there any figures available or known to you as to the number of pupfish that would be required to make that maintained?

DR. ECKHART: As I understand from the biologist, and I am smiling as I say this, pupfish are very hard to capture count and be accounted for. So in my year of consultation with both wildlife agencies we have never known the exact

numbers of pupfish. But the idea is to maintain them at existing or increased levels as we move into the future.

MR. DU BOIS: The objective would be to maintain an unknown number of pupfish?

DR. ECKHART: Through the adaptive management process, what we are going to do, what is required in that process, is the monitoring of those species and the determination of their viability and their numbers. So we will then match that.

Now the idea here is to match habitat for habitat.

MR. DU BOIS: Who would be the decision maker on whether your effort was great enough or whether the reduction was acceptable in quantity of fish?

DR. ECKHART: This is in reference to the pupfish?

MR. DU BOIS: Yes.

DR. ECKHART: The HCP is set up such that there is a committee composed of IID, California Department of Fish and Game and U.S. Fish and Wildlife Service. And they will be responsible for implementing the effectiveness of this program. Through the HCP process, we have estimated what all of those mitigation costs will be, and those costs are available to that committee for their use for the conservation measures for these fish. There will be a fixed amount that is available to them. Ultimately, IID is responsible for meeting the requirements of the

effectiveness of the permit and Fish and Wildlife Service and Cal Fish and Game will oversee that. But through the HCP process that mitigation amount will be capped.

MR. DU BOIS: Would those funds provided by the IID be -- are they limited by agreement to $15,000,000?

DR. ECKHART: Those funds meaning which funds?

MR. DU BOIS: Available for habitat protection.

DR. ECKHART: As I understand the agreement, they are available for environmental mitigation. So all of the environmental measures would be those dollars, environmental dollars, would be available for all the environmental mitigation.

MR. DU BOIS: Your recollection is that figure $15,000,000?

DR. ECKHART: As I recall, there are two levels, and the first level is 15,000,000.

MR. DU BOIS: That decision would be made before other investments are made by the District for the transfers?

DR. ECKHART: As I understand from the Board of Directors, the process will be that once we finished the final negotiations of the HCP and environmental process, we will know the cost of all of the mitigation, required mitigation. At that point the board of directors can decide how those expenditures will be met, which may or may not mean that outside funds will be needed.

MR. DU BOIS: Thank you.

There is a statement in the EIR or EIS that I would think requires some explanation, and that is Chapter 3.4, Page 13. I think the reference indicates that fallowing is consistent with agricultural land uses. And I believe we -- no one has a definition of fallowing, so it is a very difficult thing to pin anyone down on.

But what was the thought that went behind that statement?

MS. HARNISH: Where are you looking?

DR. ECKHART: Which line? I am on the page, which line are you looking at?

MR. DU BOIS: My note says Chapter 3.4, Page 13. Unfortunately, I don't have my copy of the book here where it's underlined.

MS. HARNISH: The thought here is that fallowing does not convert the land use to something other than agricultural designation. The impact of fallowing to ag lands is addressed in Chapter 3.5, Agricultural Resources, where it is found to be significant, unavoidable impact if permanent fallowing is implemented because it would convert prime farmland to a different designation.

If fallowing occurs for more than, I believe it is, four years under the State Farmland Mapping Act that would change the designation in that area. So we put that impact

in the agricultural resources section rather than the land use section.

DR. ECKHART: If I can add to that. Under the context of that statement in this paragraph, this is under approach two, which is mitigation to the Sea, the anticipation here for mitigation-type fallowing. So water replacement fallowing is that we can actually use what I refer to as the current practices of seasonal fallowing. So you have different crop seasons within the District, and you could just continue that type of fallowing use, usage, or make up water to the Sea. So that is the context, I think, with which that statement was made there.

MR. DU BOIS: Thank you.

I am concerned partly because I don't know what the county assessor, the tax assessor, will consider, whether he would consider the fallowed ground as being productive agricultural land.

Have you given any consideration to that aspect of fallowing?

DR. ECKHART: I have not.

MR. DU BOIS: Have you?

MS. HARNISH: No, we haven't.

MR. DU BOIS: I think that may be -- there is one question that I have.

Dr. Eckhart, you are acquainted with Decision 1600 of

the State Water Resources Control Board?

DR. ECKHART: Somewhat.

MR. DU BOIS: You would agree that the State Board's problem was that we at Imperial had too much water flowing into the Sea; therefore, it wasn't a beneficial use of water?

DR. ECKHART: That's -- yeah, an overview of my understanding, yes.

MR. DU BOIS: I am wondering how in light of a decision like that by the Board that Imperial can propose that we purposely let water go to the Sea?

MR. OSIAS: Is that rhetorical?

CHAIRMAN BAGGETT: Is that a question?

MR. DU BOIS: I wonder what the justification or logic is in proposing that when it is almost against the law.

MR. SLATER: Objection. Calls for expertise outside of this witness' testified experience.

CHAIRMAN BAGGETT: Sustained.

If you have a question, ask him a question. If you could phrase it to the EIR/EIS.

MR. DU BOIS: It was the logic behind that or reasoning that it was felt that that would be an acceptable procedure.

MR. SLATER: Objection. Calls for speculation.

CHAIRMAN BAGGETT: Can you rephrase?

MR. DU BOIS: I didn't want to know any speculative reason. I wanted to know the real reason why this --

MR. SLATER: Objection. No foundation.

CHAIRMAN BAGGETT: Okay. I understand, Mr. Slater. I am just trying to help.

MR. DU BOIS: I appreciate that. I think I am not going to get an answer. So I will rest my cross-examination.

CHAIRMAN BAGGETT: Thank you, Mr. Du Bois.

Mr. Rodegerdts, do you have any questions?

MR. RODEGERDTS: No.

CHAIRMAN BAGGETT: Mr. Rossmann, County of Imperial might have one or two.

MR. ROSSMANN: A couple. Sir.

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CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

BY COUNTY OF IMPERIAL

BY MR. ROSSMANN

MR. ROSSMANN: Good morning. I am Tony Rossmann. I represent the County of Imperial as distinct from the Imperial Irrigation District.

This document was also prepared for the Bureau of Reclamation as well as the Imperial Irrigation District. I'm referring to Exhibit 55, the draft EIR/EIS.

Is that correct?

MS. HARNISH: That's correct.

DR. ECKHART: They are colead agency.

MR. ROSSMANN: What is your relationship to the Bureau? Did you also enter into a contractual relationship with them for the preparation of this document?

MR. OSIAS: Do you know?

DR. ECKHART: I don't recall. There is a contract between Imperial Irrigation District and the Bureau of Reclamation for services that we use from the Bureau to prepare this document. I am aware of that contract.

MR. ROSSMANN: Did you participate at all, and I don't mean as preparers, but participate or assist in the preparation of the implementation agreement and/or QSA environmental documents?

MS. HARNISH: Could you repeat that question?

MR. ROSSMANN: Let me break it down.

Did you participate at all in the preparation of the Bureau's Implementation Agreement, Draft EIS?

MS. HARNISH: No. In terms of actually writing material for it, is that what you mean?

MR. ROSSMANN: Providing material for it.

MS. HARNISH: We provided some material for it, yes.

MR. ROSSMANN: But you did not assist in the writing of it?

MS. HARNISH: No.

MR. ROSSMANN: That is true for you also?

DR. ECKHART: Yes.

MR. ROSSMANN: I will assume on these ones, since you are the manager, Ms. Harnish, that when you answer you are answering for the both of you. If I am wrong, you can let me know.

Is your answer the same with respect to the QSA Draft EIR?

MS. HARNISH: Yes.

MR. ROSSMANN: As I read this draft, you have cited both the Reclamation Draft EIS and the QSA Draft EIR as a source for this document; is that correct?

MS. HARNISH: That's correct.

MR. ROSSMANN: So you actually had the final draft versions of those documents in hand before your draft was completed?

MS. HARNISH: What do you mean by final draft?

MR. ROSSMANN: You had the Draft EIS that went out for public review from those respective agencies before you prepared and released your draft?

MS. HARNISH: Yes, we did.

MR. ROSSMANN: As I understand your testimony, the baseline condition includes the projected decline of the Salton Sea if no action is taken; is that correct?

MS. HARNISH: Yes.

MR. ROSSMANN: In your analysis of the project did you also compare environmental effects to existing physical conditions as well as the baseline?

MS. HARNISH: It varied by resource area.

MR. ROSSMANN: Did you make that clear in the document which comparison you were making?

MS. HARNISH: We believe it was clear.

MR. ROSSMANN: With respect to the resource of declining Metropolitan Water District supplies in California if there is no action, did your no-project description include the baseline of that declining resource?

DR. ECKHART: Could you rephrase the question?

MR. ROSSMANN: With respect to the Salton Sea, you have used a baseline that includes the decline of the Salton Sea?

DR. ECKHART: That's correct.

MR. ROSSMANN: With respect to available water sources in San Diego, did you use a baseline that assumed a declining supply to San Diego if the Secretary of the Interior enforces 4.4 with no new projects approved?

DR. ECKHART: From the hydrology aspects, yes.

MR. ROSSMANN: You did assume that baseline. Okay.

Let me just ask you, sir, since you worked for Imperial before as well. Do you agree with the statement that at present Metropolitan draws approximately 1.2 million acre-feet from the Colorado, but the no-action scenario will

leave Metropolitan with only a 600,000 plus, maybe 660,000 acre-feet, reliable source from the Colorado?

DR. ECKHART: I would clarify that statement, in normal years.

MR. ROSSMANN: Thank you, sir.

Let me ask you to turn to Page 5-39 of your document that you all prepared. And I'm reading from the sentence the proposed project, two sentences, would not increase the amount of water delivered to Southern California, rather it would reallocate the existing water supply to ensure drought reliability of that supply. Improvements in drought reliability would not increase the average annual quantity of water imported by SDCWA.

MR. OSIAS: Is there a question?

MR. ROSSMANN: I'm just laying a foundation. I am asking the witnesses to focus on those two sentences.

Now, in light of the fact that Metropolitan will lose 600,000 acre-feet approximately in normal years, how can you square that fact with the assertions here that the average annual quantity of water imported by San Diego, comparing the no-project scenario with the proposed project, will, in fact, be the same?

MR. SLATER: Objection. It is not clear that this witness has -- there's been a proper foundation for this witness to respond to these questions regarding this

component of the EIR?

MR. ROSSMANN: Your Honor, these witnesses are presented as the preparers of the EIR. This witness worked from 1998 to 2001 as the project manager for IID.

CHAIRMAN BAGGETT: Answer the question.

DR. ECKHART: Restate the question.

(Record read as requested.)

DR. ECKHART: As I understand, and I did not do the analysis, as I understand that, Metropolitan in normal years will have additional water supplies that they can rely on. In those normal years when they are short that amount, their intention, as I understand, is to fill that gap that they are not getting from Colorado River. As a result of that, the water that would be imported to San Diego on an average basis, average critical over time, would be the same.

MR. ROSSMANN: But that would imply that Metropolitan would have to take new actions that would not be part of the no-project scenario?

DR. ECKHART: As I understand, in the QSA process Metropolitan is proposing new projects.

MR. ROSSMANN: That is not part of the no-project scenario?

Sir, I don't know if you were here when we discussed this last week, but let me just represent that the second amended petition before this Board filed by IID and San

Diego, which is Board Exhibit 1D, states that the purpose of the project or that the San Diego Authority needs an independent reliable and alternative of long-term supply, I am skipping some words, to accommodate anticipated growth in domestic, municipal and agricultural uses in San Diego.

And I am prepared to place this in front of you if you would like to see it. Let me ask you in light of that representation how can you square that with the assertion that this project will not induce growth in San Diego?

DR. ECKHART: As I stated before, it is my understanding that there will be other water supplies available, in those drought only years.

MR. ROSSMANN: Yes, sir.

Can I ask -- by the way, who would within your organization, and here I am addressing both of you, did prepare this analysis respecting growth, inducing impacts?

DR. ECKHART: That is information that we received from San Diego County Water Authority and, of course, our experts that put the verbiage into this document.

MR. ROSSMANN: That is a very helpful answer, sir.

MS. HARNISH: I would clarify, we relied on the analysis conducted for the QSA PEIR on growth inducements since that is a program level document.

MR. ROSSMANN: To come back, I placed that draft in front of you.

When you prepared this draft, am I correct in assuming your final can't be prepared and certified until the QSA final is prepared and certified?

MS. HARNISH: That's correct.

MR. ROSSMANN: Let's talk about time to complete the Final EIR. The alligator in the bathtub.

Have you seen the comments of the EPA on any of these environmental documents? And by that I'm referring to the Implementation Agreement, the QSA or the EIR.

MS. HARNISH: I have seen them on EIR/EIS, and I believe -- I don't recall if I have seen them on the QSA. I know th IA.

MR. ROSSMANN: You have seen them?

MS. HARNISH: I skimmed them.

MR. ROSSMANN: I am going to show you something for identification as Imperial 4 and ask if this copy dated April 26th is a copy of the EPA comments on this EIR/EIS?

MS. HARNISH: This looks like the letter I received.

DR. ECKHART: It is an unsigned copy.

MR. ROSSMANN: Yes. I will represent that it is an electronic copy, but it does indicate that it was signed by someone in the -- you may all my keep that up there. I am not going to ask you substantive questions about that.

But I guess in light of those comments and the fact that this Board is going to also have to rely on your EIR

and have to know how to schedule its work, I guess I am going to put in the vernacular, do you really think you can publish a Final EIR by the end of May?

MS. HARNISH: That is our goal.

MR. ROSSMANN: I guess I should have my planning director here who reminds me how goals and planning documents are called goals and nothing more enforceable.

MS. HARNISH: We are working feverishly.

MR. ROSSMANN: I appreciate that.

Have you ever completed a EIR on a project of this scope in 38 days or 40 days after the draft period closed?

MS. HARNISH: Me personally?

MR. ROSSMANN: Either your firm or you personally.

MS. HARNISH: I don't know the answer to that.

MR. ROSSMANN: Do you know of any environmental impact report of this scope where the final has been produced in little more than one month time at the close of the draft comment period?

MS. HARNISH: I don't know of any, but that doesn't mean they don't exist.

DR. ECKHART: Of this scope is important. There haven't been many of this scope.

MR. ROSSMANN: There have been a few. But you're ambitious.

I have heard a rumor, and I want to dispel that rumor

or confirm it, that, in fact, the Environmental Impact Report side of this document may be completed before the Environmental Impact Statement side of this document.

Is that a possibility?

MS. HARNISH: I am not sure how that would occur.

MR. ROSSMANN: I am not either. So when you prepare a final document, it is going to be a Final EIR and Final EIS?

MS. HARNISH: That's correct.

MR. ROSSMANN: Acceptable to the both lead agencies, the Bureau of Reclamation and the Imperial Irrigation District?

MS. HARNISH: That is correct.

MR. ROSSMANN: Good answer. I'm glad to hear that. Because I was going to say, "Don't dare do that." So I am glad I don't have to say that.

CHAIRMAN BAGGETT: Any other questions.

MR. ROSSMANN: Yes, sir, I do have some more here. I learned too much from Mr. Du Bois. Let me turn to air quality.

Have either of you reviewed Imperial County Exhibit 2, the written testimony of Shari Libicki?

DR. ECKHART: I have not.

MS. HARNISH: I am not certain if I have.

MR. ROSSMANN: Let me ask a few specific questions, then, on that.

In your air quality analysis, you claim that the recession rate for the Salton Sea is not comparable to Owens dry lake. What term of years do you assume for the completion of the recession at the Salton Sea?

MR. OSIAS: Objection. You mean under the baseline?

MR. ROSSMANN: Both under existing conditions and the baseline.

MR. ROSSMANN: Thank you, sir. That is a good clarification.

DR. ECKHART: Can you clarify what you mean by recession?

MR. ROSSMANN: Let's look at Page 3.7-35. I am going to ask the Board's Chair for the patience to let me just work through this line of questions. I know it was of concern to this Board when Mono Lake was before it, and it is of concern to us here.

Recession rate is described in the boldface bullet point at the bottom of the page.

MS. HARNISH: I assume that the recession rate for our project that we looked at is based on the modeling data that we have that shows what the decline in elevation would be over the 75-year course of the project.

MR. ROSSMANN: By your answer am I correct in assuming that you personally did not participate in the formulation of this analysis?

MS. HARNISH: That is correct.

MR. ROSSMANN: Is that also true for you, Dr. Eckhart?

DR. ECKHART: That's correct.

MR. ROSSMANN: Do you know whether your firm also compared the Salton Sea to the Mono Lake recession rate that was in effect from 1940 until this Board's decision in 1994?

MS. HARNISH: I don't think we compared to Mono.

MR. ROSSMANN: If I asked you questions about why the Salton Sea east monitoring station for air speed, No. 128, was not used in your analysis, neither one of you would be able to explain that to me?

MS. HARNISH: No.

DR. ECKHART: No.

MR. ROSSMANN: In your hydrology in your water supply and hydrology analysis, did you consider the future domestic needs of Imperial County in assessing the impacts of this proposed transfer?

DR. ECKHART: As I testified earlier, we assumed all municipal and domestic and industrial uses would be projected in the future using the most recent past, which was the past three to five years of use.

MR. ROSSMANN: So if I represented that the SCAG figure shows that Imperial County's population will double in the next 18 years, you did not assume that Imperial County would need approximately double the amount of its existing use as

a future domestic water supply?

DR. ECKHART: That is correct. And we made that assumption both in the baseline and the alternatives. So the delta effect between the two would be the same.

MR. ROSSMANN: The socioeconomic analysis that is included in your document was not prepared by IID's expert, Dr. Smith; is that correct?

MS. HARNISH: That's correct.

MR. ROSSMANN: It looks to me like economists on the CH2MHill staff?

MS. HARNISH: That's correct.

MR. ROSSMANN: Why did you include a socioeconomic analysis in this document?

MS. HARNISH: It is required by NEPA.

MR. ROSSMANN: Very commendable decision, by the way. These questions are not hostile.

MR. OSIAS: Thank you.

MR. ROSSMANN: Fallowing, could you focus at Page 2-30 of your document.

And, sir, these are my concluding questions.

CHAIRMAN BAGGETT: Thank you.

MR. ROSSMANN: You talk about the contractual restrictions on the use of fallowing in the transfer between San Diego and Imperial. I do not see a discussion here about any state law restrictions on the use of nontemporary

fallowing. And my question is:

In including fallowing as one of the features of either on the project or alternatives, did you consider whether or not state law might be a constraint on the use of nontemporary fallowing?

DR. ECKHART: To my knowledge, we did not.

MR. ROSSMANN: Could you look at Page 3.7-30 of your document in the air quality section. I am looking at the bottom of the page under Impact AQ3 and the following sentence: baseline conditions include approximately 20,000 acres of fallowed lands per year. And my question would be for you to elaborate on that sentence.

Does that mean 20,000 acres that are fallowed between growing seasons or 20,000 acres that at the moment just happen not to have a crop on them?

DR. ECKHART: I did not prepare that exact number, but as referencing to my knowledge as the former water manager, the way fallowing numbers are calculated, if you will, that means land that is noncropped is actually figured on a monthly basis. And then what happens is that is weighted over the year. So on a year's basis you would determine how much land was fallowed over that year, based on a monthly basis.

So, as you have crops going in and out, you have idle times. And Imperial Irrigation District keeps track of that

on a monthly basis, and I am assuming, and this is an assumption, that this 20,000 would be an average of some period of time of that data.

MR. ROSSMANN: I see. So if we had, for example, 12,000 acres of land in the Imperial Valley that was in the course of transition from one crop to another, and of those 12,000 acres one-sixth of them were out of production in any two-month period, you would come up with this number of 20,000 even though none of that land was out of production for an entire growing season?

DR. ECKHART: I don't think that is correct. I think the way the figures are done is as they sum those numbers up on a monthly basis and then they average them for a year, what they are looking for is the crop season. So the amount of land that would be out of production in a crop season. And those numbers vary greatly, as I recall. I mean, depending on economies and other things within the valley I can remember numbers as high as 70,000 plus acres can be in fallow. This would be for the term of a crop season.

Even though we keep monthly track of those numbers, a crop season might be three months. So you would consider that a farmer, for instance, could have grown wheat, but he did not, in a three-month period. So in that case you would call that fallowed, that land in that three-month period is

fallowed.

MR. ROSSMANN: Would any of the 20,000 in the baseline be land that is out of production for three years or more?

DR. ECKHART: I can't recall. I don't know.

MR. ROSSMANN: One last question based on personal observation.

MR. OSIAS: Yours or his?

MR. ROSSMANN: Mine and his. You lived in the Imperial Valley for at least three years; is that correct?

DR. ECKHART: Correct.

MR. ROSSMANN: When I was in the fields west of Holtville and saw ten owls in one place at one time, I was not hallucinating, was I?

DR. ECKHART: That is correct.

MR. ROSSMANN: Are those borrowing owls?

DR. ECKHART: Borrowing owls.

MR. ROSSMANN: Those are endangered species?

DR. ECKHART: Endangered species.

MR. ROSSMANN: They seemed to sustain themselves off that field. And my question is: Did your analysis include the impact of fallowing on the loss of that sustenance for burrowing owls?

DR. ECKHART: In our consultation with the Fish and Wildlife Service and California Department of Fish and Game, that was a critical issue, and that is covered within

mitigation. We have specific measures for burrowing owls, and it does take land idling into account.

MR. ROSSMANN: How are those critters going to be accommodated? What are the mitigation measures?

DR. ECKHART: There are several mitigation measures, ranging how we actually do maintenance there so we can protect those holes, their homes. And as lands go in and out of fallow, what we need to do is we are going to monitor to see if there is loss off burrowing owls. And, in fact, what will happen is we are going to be creating artificial burrows in other areas next to agricultural production fields. So that is part of the mitigation.

MR. ROSSMANN: Thank you very much.

Thank you, Mr. Chairman.

CHAIRMAN BAGGETT: Thank you.

MR. ROSSMANN: I am sorry, may I move into evidence Imperial Exhibit 4, which is the EPA comment letter which I will get copied at lunch and distribute to all concerned?

MR. OSIAS: Probably not Imperial, is it?

CHAIRMAN BAGGETT: County of Imperial Exhibit 4.

MR. ROSSMANN: Yes, sir.

CHAIRMAN BAGGETT: There is no objection?

MR. SLATER: We'd like to see a copy.

MR. ROSSMANN: I think that is fair. Let me make that a conditional motion and we'll renew it right after lunch.

CHAIRMAN BAGGETT: Let's come back at one. I have a procedural question before we depart. We've got five, four environmental organizations, are doing a combined case in chief.

Do you all intend to have five separate cross-examinations? Or are you combining those into one big one?

Should I ask each party.

Brendan, you were here for the first one. I am trying to understand timing here.

MR. FLETCHER: I think we should probably go separately. You can call it coordinated in a way that we did the first time, but I think we should go separate.

CHAIRMAN BAGGETT: I would appreciate that. So each of you don't ask the same series of questions. If you could coordinate, that would be more efficient.

We will call it separately. We will come back after lunch, 1:00 sharp and we will begin with Salton Sea Authority.

(Luncheon break taken.)

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AFTERNOON SESSION

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CHAIRMAN BAGGETT: Back on the record.

Mr. Rossmann, that is where we left off.

MR. ROSSMANN: Everyone has had a chance to see the marked for identification Imperial County Exhibit 4, the letter from EPA dated April 6th.

I would move its admission into evidence.

CHAIRMAN BAGGETT: Objection?

MR. SLATER: No objection.

MR. OSIAS: No objection.

CHAIRMAN BAGGETT: Entered.

We also have a couple housekeeping.

You want to make a comment? We have to respond to the Draft Environmental Impact Report. The State Board, we have set comments on procedural issues raised by --

MR. PELTIER: Apparently the original did go out with the correct date, April 26, but some cc's were apparently sent out with an incorrect date on them. So if you received a copy with a date of the 29th on it, just discard that and there are extra copies in the back of the room.

MR. OSIAS: We should just discard it as untimely?

CHAIRMAN BAGGETT: The signed original letter is dated the 26th.

MEMBER KATZ: Slap him.

CHAIRMAN BAGGETT: Do whatever you want with him.

MR. OSIAS: I got three head shakes over there.

CHAIRMAN BAGGETT: It was faxed on the 26th.

MR. OSIAS: No problem.

CHAIRMAN BAGGETT: We just want to make sure people have access to it.

With that, if there is no other housekeeping, Salton Sea Authority, do you have questions, cross-examination?

MR. KIRK: I do but I thought you were going --

CHAIRMAN BAGGETT: Defenders of Wildlife, Mr. Fletcher.

MR. KIRK: I do appreciate the eagerness.

CHAIRMAN BAGGETT: Do you have any cross-examination?

MR. FLETCHER: Yes, I do.

CHAIRMAN BAGGETT: Maybe I should announce the order. Followed by National Wildlife, PCL, Audubon and Sierra Club's still not here I assume.

MR. FLETCHER: No.

CHAIRMAN BAGGETT: Do they plan to be here?

MR. FLETCHER: I'm going to try to contact them.

CHAIRMAN BAGGETT: They didn't show up for the first half.

Is that an indication of the length of the cross-examination? If not, I am going to start the timer if that is the case.

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CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

BY DEFENDERS OF WILDLIFE

BY MR. FLETCHER AND MS. DELFINO

MR. FLETCHER: Good afternoon, Dr. Eckhart and Ms. Harnish. I'm going to start off with some questions about inflows to the Sea and the baseline that you used or developed for the DEIR/EIS.

What makes up the inflows to the Sea? I am sorry, I will just address my questions to the two of you collectively and the appropriate person can respond.

DR. ECKHART: The question was what --

MR. FLETCHER: What makes up the inflows to the Sea?

DR. ECKHART: Inflows to the Sea are agricultural drainage from Imperial Irrigation District and Coachella and other natural inflows from dry washes and other types of rivers and also rainfall and seepage, subsurface flow.

MR. FLETCHER: Approximately what percentage of inflows to the Sea have historically come from drain waters from IID, not direct drain waters, any water running off from IID that is not inflow from Mexico?

DR. ECKHART: I don't know the exact percentage, but the greatest percentage.

MR. FLETCHER: I don't actually know it either, I think there is a chart at approximately Page 3.1-46 of the EIR. Can I just call it EIR so we don't go through a lengthy

thing. And it is Figure 3.1-15.

That indicates that about somewhere over 80 percent of the water coming from the IID service area, even 85 percent of the water, comes from returned flows from IID; is that right?

DR. ECKHART: That's correct.

MR. FLETCHER: And this chart, however, only shows flows coming off the IID service area. That is not a chart of all inflows to the Sea; is that right?

DR. ECKHART: That's right.

MR. FLETCHER: The actual percentage would be somewhat lower, but still fairly high, maybe 75 percent?

DR. ECKHART: Yes.

MR. FLETCHER: What has the historical average inflow to the Sea been from the years 1950 to 1999?

DR. ECKHART: Again, you have to reference me to a page.

MR. FLETCHER: I did not write down the page number, but I believe it is 1.3 million acre-feet, approximately. Does that number ring a bell?

DR. ECKHART: It depends on the period.

MR. FLETCHER: I will just leave that because I didn't write down the page number.

The transfer has impacts on the water balance of Salton Sea because it would reduce inflows to the Sea; is that

right?

DR. ECKHART: That's correct.

MR. FLETCHER: Generally speaking, as IID increase its use, inflows to the Sea increase, all other things being equal?

DR. ECKHART: All other things being equal, I think, yes.

MR. FLETCHER: And the converse of that is true?

DR. ECKHART: Yes, that is true, all things being equal.

MR. FLETCHER: Generally, again generally speaking, the impacts from the transfer by reducing inflows to the Sea would be increased salinity, decreased surface area and exposing seabed because of that and decreased sea elevation; is that right?

DR. ECKHART: That's correct.

MR. FLETCHER: Now, to determine the impacts of the transfer on inflows to the Salton Sea, you developed a baseline for comparison with different transfer scenarios; is that right?

DR. ECKHART: Yes.

MR. FLETCHER: That baseline is the point of comparison throughout the EIR for impacts to salinity, elevation, exposure of sediments and surface area?

DR. ECKHART: That's correct.

MR. FLETCHER: And that baseline is equivalent to the no-project alternative that is defined in the EIR?

DR. ECKHART: For the Salton Sea, that is correct.

MR. FLETCHER: Thank you for that clarification.

In the EIR at Page 3.1-92, it states that the baseline was developed using data for diversions from the years 1987 to 1998; is that correct?

DR. ECKHART: That's correct.

MR. FLETCHER: And what was IID's average diversion for the years 1987 to 1998? You can find it at 3.2-25.

MS. HARNISH: You mean 3.1-25?

MR. FLETCHER: Did I misspeak?

DR. ECKHART: You said 3.2. I am sorry, there are a lot of numbers in the document.

MR. FLETCHER: Let me find it. I have written down 3.2-25. Sorry to bounce you around like this, but that's the only way to do it.

DR. ECKHART: What was the question, again?

MR. FLETCHER: The question is: What was IID's average diversion for the years 1987 to 1998?

DR. ECKHART: The average diversions based on Table 3.1-3 measured at AAC below Pilot Knob is 3,292,366.

MR. FLETCHER: I had actually thought it was a different number.

MR. FLETCHER: Just below that table it states: water

delivered for use in the Imperial and Coachella Valleys accounts for approximately 64 percent of the Colorado River water diverted in the AAC. From years '86 through '98, which actually includes one other year, an average of 2.87 million acre-feet of Colorado River water was delivered to the Imperial Valley through the AAC; is that right?

DR. ECKHART: That's correct. Measurement points are very important here.

MR. FLETCHER: I didn't specify.

Was that the figure you began with, approximately, leaving out 1986 to determine the baseline?

DR. ECKHART: For the baseline?

MR. FLETCHER: Yes.

DR. ECKHART: The baseline was based on the '87 through '98 data, and it was based on flows that were developed at the East Highline, basically.

MR. FLETCHER: Is there a number on this table that would indicate what the average diversion was for the purposes of that? I am just looking for the number you used to start the baseline calculation.

DR. ECKHART: Not on this table.

MR. FLETCHER: According to the DEIR/EIS, once you came up with that base number, assuming you did work from the base number, you then made some adjustments based on future anticipated changes; is that right?

DR. ECKHART: That's correct.

MR. FLETCHER: And those include an increase in Colorado River water salinity, the effects of the IID/MWD 1988 water conservation agreement and an adjustment to limit the diversions of priorities one, two and three for normal year hydrology on Colorado River to 3.85 million acre-feet per year; is that correct?

DR. ECKHART: That was three of the adjustments.

MR. FLETCHER: Three of the adjustments. That included those.

Now let me move on to just speaking of one of those adjustments, the IID/MWD 1988 Water Conservation Agreement. In developing the baseline did you assume that that agreement would decrease future inflows to the Sea by roughly 110,000 acre-feet per year?

DR. ECKHART: I think -- in your question did you say "increase"?

MR. FLETCHER: If I did, I meant to say decrease.

DR. ECKHART: Ultimately the flows will decrease to what the most recent amount conserved was, which 109,000, something just under 110,000.

MR. FLETCHER: The QSA would cap IID consumptive use at 3.1 million acre-feet; is that right?

DR. ECKHART: As I understand it, yes.

MR. FLETCHER: Can we turn for a minute to Table 2.1,

which is at page -- let me find it here for you.

Page 2-6.

DR. ECKHART: Okay.

MR. FLETCHER: Right there up at the top it gives the 3.1 cap far IID; is that right?

DR. ECKHART: That's correct.

MR. FLETCHER: And then the next item is a subtraction for a hundred to 110,000 acre-feet for the MWD/IID 1988 Agreement?

DR. ECKHART: That's correct.

MR. FLETCHER: If you make that subtraction you come up with basically 2.99 million acre-feet left?

DR. ECKHART: That's correct.

MR. FLETCHER: I will skip over the next one because it is part of the transfer here. There are then three of the next four items are additional reductions that are not part of this transfer; is that right?

DR. ECKHART: Which ones are you referring to?

MR. FLETCHER: The 56,000 acre-feet to MWD as part of the All American Canal lining project, the 11.5 thousand for the San Luis Rey water rights settlement, 11.5 for miscellaneous federal present perfected rights.

DR. ECKHART: I think that is correct except for the 11.5 miscellaneous perfected rights.

MR. FLETCHER: Could you explain that, please?

DR. ECKHART: I just don't recall.

MR. FLETCHER: If you subtract those three cumulatively, you end up with another basically 80,000 acre-feet approximately, leaving you with a water budget of about 2.91 acre-feet or million acre-feet per year?

DR. ECKHART: Yes, if your subtraction is correct, yes.

MR. FLETCHER: Do you know if that would constitute an increase or decrease in use over the amount that you used to calculate the baseline, or is it approximately the same?

DR. ECKHART: We are talking about two totally different calculations here. So what I have to do is look up the tables that shows the numbers where we computed the baseline. So off the top of my head unfortunately I can't remember would be increase or decrease. Essentially the baseline was based on the 3.1 cap.

MR. FLETCHER: So, to best of your knowledge, it would not be a significant increase or decrease from the initial number, the average annual use used to calculate the baseline?

DR. ECKHART: I'm sorry, I don't understand the question. It?

MR. FLETCHER: The 2.19 figure we arrived.

DR. ECKHART: Correct.

MR. FLETCHER: That is roughly within the range, about

the same range as average diversions under the 12 years that you used to calculate the baseline?

DR. ECKHART: Based on the table you've shown me today, yes.

MR. FLETCHER: So, would it be accurate to state that underneath the cap IID could continue using approximately the same amount of water that it used during a period in which you calculated the baseline?

DR. ECKHART: That is not a correct assumption.

MR. FLETCHER: Can you explain to me why it is not?

DR. ECKHART: Because of the anticipated changes that are going to happen that will affect IID.

MR. FLETCHER: What are those?

DR. ECKHART: The ones that you mentioned earlier, increased salinity, the effects of the transfer, of the '88 transfer, all of the effect we included in the baseline. So, in fact, as our baseline showed, river administration had an impact on IID diversions.

MR. FLETCHER: But we already subtracted, we already took out of that amount the 100,000 to 110,000 acre-feet.

DR. ECKHART: You are assuming future use of IID to be at what it was historically, and that is not our assumption in this case.

MR. FLETCHER: It could be under the 3.1 million acre-foot cap?

DR. ECKHART: From my professional opinion I disagree with that. I do not believe it will be the same as it was historically.

MR. FLETCHER: Do you believe it will be higher or lower?

DR. ECKHART: I believe it will be higher.

MR. FLETCHER: IID may increase its water use over what it did, apart from the transfer amounts, in the 12 years?

DR. ECKHART: Apart from the transfer amounts, that's correct.

MR. FLETCHER: If IID increased its water use, would that lead to an increase or decrease in inflows to the Salton Sea?

DR. ECKHART: That question totally depends if it is capped or not.

MR. FLETCHER: Right now I'm assuming a cap.

DR. ECKHART: Since IID would be limited to the cap, then there would be essentially no impact to the Sea.

MR. FLETCHER: This is the question I've really been getting to: The baseline does show that the IID and MWD agreement will reduce inflows to the Sea by a hundred thousand acre-feet; is that right?

DR. ECKHART: That the transfer reduces the baseline?

MR. FLETCHER: I'm sorry, let me strike that. I'll restate the question.

The baseline shows that the IID/MWD agreement from 1988 will reduce inflows to the Sea by a hundred thousand acre-feet?

DR. ECKHART: The document shows that the baseline from where it is currently, because of the '88 agreement, will be reduced by another 50,000. It's already been impacted by the first 50,000, 50-some thousand. So the remaining results of the 110- transfer have not been effectuated. That is what we anticipate will happen into the future.

MR. FLETCHER: If IID -- and I understand that will if you measure that against whatever IID's use happens to be, that will reduce inflows to the Sea as measured against that use.

If that use increases, the net effect will not necessarily be a reduction in inflows to the Sea; is that right?

DR. ECKHART: Again, you have to rephrase the question.

MR. FLETCHER: I will move on to another topic. Now in the EIR it is stated at Page 2-55 that under the no action alternative IID would not be obligated to limit its annual diversions to 3.1 million acre-feet; is that correct?

DR. ECKHART: That's correct.

MR. FLETCHER: Does the no-action baseline alternative assume that IID will keep its use within 3.1 million

acre-feet?

DR. ECKHART: The no-action alternative assumes that ag users will be held to 3.85. As a result of that, the 3.85 will be held in this process.

MR. FLETCHER: IID could conceivably exceed that 3.1 million acre-foot now?

DR. ECKHART: It could.

MR. FLETCHER: And increase its water use?

DR. ECKHART: It could, but the total ag uses would not exceed 3.85.

MR. FLETCHER: Right.

If it did increase its water use, inflows to the Sea would increase under the no-project, all other things being equal, under the no-project baseline alternate?

DR. ECKHART: Under the no-project, all things being equal, that is correct.

MR. FLETCHER: I have a procedural question. Do I have two hours total; is that correct? I don't anticipate using it all.

CHAIRMAN BAGGETT: One hour per panel.

MR. FLETCHER: One hour per panel.

CHAIRMAN BAGGETT: You have one panel.

MR. FLETCHER: So it is not --

CHAIRMAN BAGGETT: One hour each. No.

MR. FLETCHER: That is what I needed to know. Let me

move on.

I think you referred to it earlier, the adjustment to limit the diversion to 3.85 million acre-feet per year. Is that the 59,000 acre-foot adjustment referred to on Page 3.7-23 of the DEIR/DEIS where it states an additional 59,000 acre-feet would be conserved in compliance with the Inadvertent Overrun Payback policy?

DR. ECKHART: What page?

MR. FLETCHER: 3.7-23.

DR. ECKHART: I am sorry, don't see that on Page 3.7-23.

MR. FLETCHER: Up towards the top of the page.

DR. ECKHART: No. The 59,000 referred to here is overrun due to inadvertent over runs. That is different than river administration.

MR. FLETCHER: So that 59,000 acre-feet, is that 59,000 acre-feet that would be conserved as part of the baseline. Part of your baseline calculation?

DR. ECKHART: That 59- is not in the baseline. That 59- is part of the project.

MR. FLETCHER: It is part of the project.

DR. ECKHART: It is part of the project.

MR. FLETCHER: Is that additional to the 300,000 acre-feet -- let me back up one question.

Would that 59,000 that is conserved result in a 59,000

acre-foot reduction in inflows to the Sea?

DR. ECKHART: No.

MR. FLETCHER: Would it be neutral as to the Sea?

DR. ECKHART: No.

MR. FLETCHER: What would its effect be as to the Sea?

DR. ECKHART: The impacts to the Sea would be 59- minus losses. The 59- is measured at the Colorado River. So by the time you work its way through to the Salton Sea, you would have something less, some less effect than the 59- to the Sea.

MR. FLETCHER: So that portion that makes it into the drainage of the Salton Sea would be lost to the Sea, but that portion that leaks out or seeps out prior to that time would not; is that correct?

DR. ECKHART: Rephrase that.

MR. FLETCHER: We can -- Strike that.

I'm going to move on to impacts on fish. At pages 3.2-150 it stated that because all fish species are introduced as nonnative species, impact to the project, proposed project, are less than significant.

Was that statement made?

DR. ECKHART: You don't have a line number, do you?

MS. HARNISH: The statement was made.

DR. ECKHART: Yes, it was.

MR. FLETCHER: Do you know approximately how many fish

there are in the Salton Sea?

DR. ECKHART: I do not.

MR. FLETCHER: Have you heard the number stated in millions?

DR. ECKHART: I have never heard a number for the entire Salton Sea.

MR. FLETCHER: So you don't know?

DR. ECKHART: I don't know.

MR. FLETCHER: In general, are all of those fish stressed by increased salinity?

DR. ECKHART: It is my understanding from the biologists I work with, yes.

MR. FLETCHER: All of those fish will experience reproductive failures sooner than they otherwise would if the rate of salinity increases?

DR. ECKHART: As I understand it, yes.

MR. FLETCHER: All of those fish or their successors will ultimately die sooner than they otherwise would if the rate of salinity increases?

MR. OSIAS: Objection. Are you talking lifespan or population?

MR. FLETCHER: I am talking basically we will lose all fisheries that currently exist sooner than we otherwise would if the rate of salinity increases.

MR. OSIAS: Thank you.

DR. ECKHART: And I agree with that.

MR. FLETCHER: The DEIS states, and I think on Page 3.2-150, based on significant criteria only affects the candidate sensitive for special status species or certain species effects to native fish constitutes significant biological impact; is that right?

MS. HARNISH: Yes, that is right.

DR. ECKHART: That's correct.

MR. FLETCHER: Where are the significant criteria drawn from?

MS. HARNISH: I wasn't involved in the development of those.

DR. ECKHART: I don't know the answer to that.

MR. FLETCHER: Are you familiar with Appendix G of the CEQA guidelines?

MS. HARNISH: Yes.

MR. FLETCHER: Is the appendix a checklist of potential impacts to the Sea or potential impacts to be considered while doing an EIR?

MS. HARNISH: Yes.

MR. FLETCHER: If I told you that there were items in that checklist relating to effects on candidates sensitive for special status species, and in a separate item effects to native fish, to the effect that those kinds of impacts would constitute significant biological impacts.

Does that sound right from your recollection of Appendix G?

MS. HARNISH: That sounds right. I need to look at it to confirm that.

MR. FLETCHER: To the best of your recollection, do the criterion in Appendix G affirmatively state that impacts to nonnative do not constitute significant impacts?

MR. SLATER: Objection. That is a double negative.

CHAIRMAN BAGGETT: Restate.

MR. FLETCHER: I will try to restate it.

Is there a statement in Appendix G to the effect that impacts on nonnative fish do not constitute a significant impact?

MS. HARNISH: I don't believe so.

MR. FLETCHER: Is there a statement in Appendix G to the effect that the impacts listed in checklist format in appendix constitute the entire universe of potential significant impacts?

MS. HARNISH: It is a recommendation. So, no.

MR. FLETCHER: Thank you.

I am going to move on to air quality.

Could we turn back to the charts that you showed at the very beginning of your presentation comparing the baseline to the 300,000 acre-foot transfer.

MR. OSIAS: That is the feather chart?

MR. FLETCHER: That is the feather chart.

One of those, one of the three comparisons made is for surface area. Can you tell me in the year 2012, under these baseline, the surface area looks to have dropped to about from a current level of 235,000 acres to about 227,000 acres under the baseline scenario; is that right?

DR. ECKHART: This was year 2012?

MR. FLETCHER: Yes, 2012.

MS. HARNISH: What was the number you said for 2012?

MR. FLETCHER: It looks like it is about 227,000 acres.

MS. HARNISH: That looks about right.

DR. ECKHART: That's a median value.

MR. FLETCHER: That is a median value, and we will stick with those for now.

Under the 300,000 acre-foot transfer that would have dropped to approximately 218,000 acres; is that correct?

DR. ECKHART: Looks correct. Again, median value.

MR. FLETCHER: For the year 2022 the baseline is about -- and that is about 9,000 acres smaller, so about 9,000 acres of shoreline would be exposed or seabed would be exposed; is that right?

DR. ECKHART: Correct. If your calculations are correct.

MR. FLETCHER: By 2052 the median numbers are a level

of 218,000 acres of surface area under the baseline, approximately, and 165,000 acres under the 300,000 acre-foot transfer?

MS. HARNISH: That looks about right.

MR. FLETCHER: That is a reduction of 50,000 acre-feet or 50,000 acres of surface area, which would correspondingly lead to about 50,000 acres of seabed exposure?

DR. ECKHART: Correct.

MR. FLETCHER: Could you tell me what the attainment status of the IID water service area -- Strike that.

Can you tell me what the attainment status of the Salton Sea Air Basin is for PM-10?

MS. HARNISH: Could you repeat the question?

MR. FLETCHER: Can you tell me what the attainment status of the western Riverside County portion of the Salton Sea Air Basin is for or PM-10?

MS. HARNISH: I believe it is serious nonattainment

MR. FLETCHER: Is it serious nonattainment or just moderate nonattainment?

MS. HARNISH: I am not certain. I would have to look that up.

MR. FLETCHER: In several places in the air quality discussion, the EIR compares the potential for air quality impacts from exposure of seabed with the experience at Owens Dry Lake.

Are you aware that the proposed project will expose more acres of seabed than at Owens Lake?

MS. HARNISH: Yes.

MR. FLETCHER: What kind of modeling did you do to estimate the quantity of PM-10 emissions that may result from the exposure of seabeds in the transfer?

MS. HARNISH: We did not conduct modeling.

MR. FLETCHER: Did you make quantitative estimates of the quantity of PM-10 emissions that may result from construction of on-farm conservation measures and system improvements?

MS. HARNISH: We did.

MR. FLETCHER: But you did not make quantitative estimates of PM-10 emissions that would occur from exposure of seabeds?

MS. HARNISH: That's right.

MR. FLETCHER: Why did you make a quantitative estimate for one category or PM-10 emissions and not for another?

MS. HARNISH: I did not write this section. However, I can tell you that there are emission rates available for the construction of conservation measures or things that could be easily related to construction of conservation measures. However, for the Salton Sea exposed seabed there is not an emission rate available to apply to that area.

MR. FLETCHER: Would it be possible to do modeling that

would yield quantitative estimates of potential PM-10 emissions from exposure to seabed?

MS. HARNISH: Experts disagree on that.

MR. FLETCHER: The DEIR/DEIS states that the low frequency of high wind events at the Salton Sea would inhibit suspension of dust from the exposure to sediments; is that right?

MR. OSIAS: Objection. Are you asking whether that is what the document says, or whether the statement is true?

MR. FLETCHER: I am saying if that is what the document says, 3.7-34.

CHAIRMAN BAGGETT: Please answer.

MS. HARNISH: Could you repeat the question?

MR. FLETCHER: Does the document state that the low frequency of high wind events at Salton Sea would inhibit suspension of dust from the exposure of sediments?

MS. HARNISH: Yes.

MR. FLETCHER: What is the component in the current PM-10 emission inventory for the Salton Sea Air Basin?

MS. HARNISH: I don't know.

MR. FLETCHER: Would it be accurate to state that wind is an important cause of fugitive windblown dust emissions in the Salton Sea Air Basin?

MS. HARNISH: Yes.

MR. FLETCHER: Allow me to find the reference really

quickly.

At Page 3.7-13 there is a Table 3.7-4. That lists the components of average PM-10 emissions in the Salton Sea Air Basin.

What is the largest single component in that table?

MS. HARNISH: Fugitive windblown dust.

MR. FLETCHER: Is that over half of the total for PM-10 emissions for the Salton Sea Air Basin?

MS. HARNISH: Yes, it is.

MR. FLETCHER: If the wind in the Salton Sea Air Basin is strong enough to be a cause of over half of all the PM-10 emissions in the Salton Sea Air Basin, how would it inhibit suspension of dust from exposure of sediment at the Sea?

MS. HARNISH: I don't believe it would. I don't believe we said it would.

MR. FLETCHER: But at Page 3.7-34 the document actually states that the low frequency of high wind events will inhibit suspension of dust from the exposure of sediments; is that right?

MS. HARNISH: I understand that to be in comparison to Owens.

MR. FLETCHER: In comparison to Owens.

What kind of studies did you do to conduct or did you conduct to determine that low frequency of high wind events would inhibit suspension of dust from exposure as compared

to Owens?

MS. HARNISH: You know, I am not the air quality person on this, so I don't think I can answer that question.

MR. FLETCHER: Did you know if you used information developed by the Great Basin Air Pollution Control District for determining when wind speed is efficient to cause the surface of Owens Lake to begin emitting dust?

MS. HARNISH: I believe that was considered.

MR. FLETCHER: The EIR states that salt crust on the exposed desert of the Salton Sea should be more stable and less emissive than Owens Lake; is that right?

MS. HARNISH: Is it right that it states that?

MR. FLETCHER: Does it state that?

MS. HARNISH: Could you direct me to the location?

MR. FLETCHER: 3.7-35.

MS. HARNISH: Yes.

MR. FLETCHER: What kind of studies did you conduct to determine the salt crust would be -- on the exposed desert of the Salton Sea should be more stable and less emissive than at Owens Lake?

MS. HARNISH: We relied on available information. We did not conduct new studies on the soil crust.

MR. FLETCHER: Lower on that same page, 3.7-35 the EIR states that the rate of Salton Sea recession and thus seabed exposure may allow natural processes to control dust

emission. Correct?

MS. HARNISH: Yes.

MR. FLETCHER: What kind of studies did you conduct to determine that natural processes may control dust emissions?

MS. HARNISH: We did not conduct any studies.

MR. FLETCHER: Did you utilize information developed by the Great Basin Air Pollution Control District predicting the rate at which the natural process would act to stabilize the surface of Owens Lake?

MS. HARNISH: I believe we relied on existing studies, but I do not know exactly which ones.

MR. FLETCHER: There is no discussion in the EIR of the possibility that there may be toxic materials such as pesticides that could become airborne and the sediments exposed to the Salton Sea.

Did you give any consideration to that possibility?

MS. HARNISH: We did give consideration to that possibility, and we have received a number of comments on that issue, and we will be responding to that in the final.

MR. FLETCHER: Thank you.

Now on the very next page, 3.7-36, the EIR states that selection of HCP Alternative 2, which is fallowing to provide replacement water for the Salton Sea, would be the only effective measure to mitigate the air quality impacts of seabed exposure.

Correct?

MS. HARNISH: It does state that.

MR. FLETCHER: Did you consider mitigation similar to those developed by the Great Basin Air Pollution Control District to control emission at Owens Lake?

MS. HARNISH: We did consider those, and, again, in response to a number of comments we are taking another look at that, and we will be reevaluating how feasible they may be to the situation.

MR. FLETCHER: Those are my questions, but my colleague, Kim Delfino, will have a series of questions on the HCP.

CHAIRMAN BAGGETT: Thank you.

MS. DELFINO: Good afternoon.

I am going to refer to the HCP if you want to pull out Volume 2 and get that ready, probably make things go faster.

When you are putting together, and again I am just going to refer the question to both of you and either, whoever feels can respond, and please do so.

When you're developing the Habitat Conservation Plan for -- this is targeted at the Salton Sea strategy part of the HCP -- you were looking at impacts. At which impact to the Sea were you looking at from the on-farm conservation impacts to Salton Sea? What were the -- were you looking at

increased salinity? Would you just go through the range of impacts that you evaluated?

DR. ECKHART: The HCP, what we were looking for, was the affected species. So as we have a change in either elevation or salinity, elevation converts to exposed seabed, and the shoreline habitat around that Sea, those habitats were looked at. And then mitigation was directed towards those habitats and the species in those habitats.

MS. DELFINO: So when you were taking into consideration impacts and you were looking at the fact that the Sea is going to drop in elevation, therefore decreasing in size, and I refer to -- actually this is Appendix F, Table 5.1. It says that according to the elevation area capacity data, the elevation of the Sea would have a volume of 3.8 million acre-feet.

About half the size of its current size?

DR. ECKHART: As far as surface area?

MS. DELFINO: Yes. Or volume?

DR. ECKHART: Again, refer me --

MS. DELFINO: It is Appendix F, Table 5.1.

DR. ECKHART: I got the table.

MS. DELFINO: And you're looking at the elevation of the Sea. When the Sea drops to mean of negative 245 by 2030 the volume is what? I believe 3.8 million acre-feet.

DR. ECKHART: Correct.

MS. DELFINO: That is about half the current volume of the Sea, right?

DR. ECKHART: As I understand this, yes.

MS. DELFINO: When you were looking at impacts and you took into consideration that the Sea was going to eventually be half the size of what it is presently, did you take into consideration the impacts on temperature, that temperatures will fluctuate probably in a greater degree than with its current size, smaller Sea greater range and frequency of temperature fluctuations? Did you look at that when you were analyzing impacts?

DR. ECKHART: No.

MS. DELFINO: Is there a reason why?

DR. ECKHART: The reason was we were looking towards effects to the longevity of the fish in the Sea. And the dominant factor, as stated by the wildlife agencies, was salinity.

MS. DELFINO: But isn't it true that earlier today you stated, I believe one of you stated, that tilapia are affected by temperature fluctuations?

DR. ECKHART: I believe that question was asked of me, yes.

MS. DELFINO: And your answer was yes, right?

DR. ECKHART: Uh-huh.

MS. DELFINO: So it is true that tilapia are sensitive

to temperature fluctuation why then would you not take that into consideration? Wouldn't temperatures be an equal -- something that was equal or similar concern for survival rates for tilapia?

DR. ECKHART: As I understand what you are talking about is a winter-summer temperature variation, and you're talking about the Sea being at a worst condition, so you are half its size. I don't recall what year that we reached minus 245.

MS. DELFINO: 2030.

DR. ECKHART: Between now and 2030 the salinity of the Sea is going to exceed 60 parts per thousand. So at that point it was thought by the wildlife agencies that salinity was going to be the dominant factor, not temperature. The Sea will still be of a size that, as I understand it from other biologists, the temperature was not the controlling factor even as the Sea decreased in this case.

MS. DELFINO: When would you start -- when would you stop stocking the Sea with fish? Was that at 60? When would you start building the ponds?

DR. ECKHART: The anticipation is that this is adaptive management. So what would happen is the Sea would be monitored, and when the threshold is reached that there are no longer fish in the Sea, and I don't know when that threshold is, that doesn't mean there is one last fish in

the Sea, then the stocking would move to the ponds at that point.

MS. DELFINO: But isn't it fair to say that even if you get to the point where you are stocking fish at 60 parts per billion that you are going to have a smaller Sea, and, therefore, temperature fluctuations are a concern? You will be stocking the Sea -- you don't know when you are going to stop stocking the Sea, right? It would be 2030 for all you know?

DR. ECKHART: That's correct.

MS. DELFINO: At 2030 you are going to have a Sea half the size in which temperature variations will certainly be a factor?

DR. ECKHART: I don't know that. I don't know -- when the Sea is half its size, I have no data that tells me that that temperature is the controlling factor.

MS. DELFINO: Because there was no analysis of temperature in the HCP?

DR. ECKHART: Based on the opinion of the agencies, the temperature was not the controlling factor, even as the Sea decreased in size.

MS. DELFINO: When you were looking at other impacts, you took into consideration selenium increases in drains, correct?

DR. ECKHART: Correct.

MS. DELFINO: Did you also look at impacts of selenium in the delta areas of Sea where the Alamo and the New Rivers will be flowing into the Sea?

DR. ECKHART: We looked at the outlets of the New River and the Alamo River, yes.

MS. DELFINO: Your impacts -- you looked at the impacts of selenium increasing in those areas.

DR. ECKHART: At the outlets, yes.

MS. DELFINO: When you say "outlets," what do you mean? How far out into the Sea?

DR. ECKHART: Where the measurement point is on those two rivers into the Sea because that is where the data is available.

MS. DELFINO: That isn't really the Delta part, and that isn't going out into the Sea where you have shallower parts of the Sea where primary feeding habitat for the birds, right?

DR. ECKHART: That's correct.

MS. DELFINO: Did you also then or is there any analysis in the EIR or in the HCP looking at -- as you have on-farm conservation, you are going to have reduced inflows to the Sea, increased selenium. Did you also look at increases in phosphorous, pesticides, other pollutants that would be flowing to the Sea?

DR. ECKHART: Yes.

MS. DELFINO: You looked at the impacts of that on the fish?

DR. ECKHART: The impacts of those within the drainage and river systems, yes.

MS. DELFINO: Not in the shallower parts of the Sea where the drain or the New River and Alamo --

DR. ECKHART: We relied on previous studies that discussed water quality within the Sea. Yes, we did do that.

MS. DELFINO: Really? Where is that in the EIR?

DR. ECKHART: It was referenced -- it should be referenced in the HCP.

MS. DELFINO: In the HCP? It is in there?

DR. ECKHART: I don't recall the exact reference because I didn't write the HCP.

MS. DELFINO: When you were looking at increases in salinity -- well, rephrase that.

What analysis in the HCP did you do of impacts to invertebrates in the Sea?

DR. ECKHART: I can't answer that. I don't recall.

MS. DELFINO: You said that you sat in discussions with agencies on the development of HCP. Were there any discussions at all regarding concerns on the impacts of selenium on invertebrates?

DR. ECKHART: Our discussions focused on the mitigation

and the impact to the mitigation proposals in our consultation sessions.

MS. DELFINO: So your mitigation isn't targeted at looking at invertebrate populations, I am assuming that. Therefore, you're not mitigating for those, right? You just didn't consider them?

DR. ECKHART: We are mitigating. As you mentioned, there are two approaches to the mitigation. And so we are not using the Sea as the mitigation. We are using the ponds-hatchery approach and using water replacement approach.

MS. DELFINO: The mitigations for impacts to fish eating birds; isn't that correct?

DR. ECKHART: That's correct.

MS. DELFINO: So you're assuming that the Sea will continue to provide invertebrate feeding opportunities or opportunities for birds that feed on invertebrates, correct?

DR. ECKHART: For a period of time, yes.

MS. DELFINO: What period of time?

DR. ECKHART: Until it no longer exists.

MS. DELFINO: Till the Sea no longer exists?

DR. ECKHART: Till the invertebrates are no longer available. And I don't know when that is.

MS. DELFINO: So is it safe to say that the HCP contains no analysis of impacts to invertebrates from the

changes in the Sea?

DR. ECKHART: I can't answer that because I don't recall the details of HCP.

MS. DELFINO: I didn't see it in there.

Turning to -- let me double-check the page number before I refer you to it.

Just really quickly looking at the Draft EIR, Page 2-49. I think it was -- it is the HCP. Sorry to make you bounce around in the documents.

DR. ECKHART: 2-49 in the HCP?

MS. DELFINO: Yeah, I believe so.

When you were analyzing impacts, this is a discussion of food chain relationships in the Salton Sea habitat area, did you examine -- there is a discussion that talks about -- Strike that.

In looking at this -- in this analysis did you examine the effects of the smaller Sea, therefore, crowding of fish in a smaller area and how that impacts on fish mortality?

DR. ECKHART: I am not familiar if we examined that in the Sea. I know that is an issue we have examined for other issues.

MS. DELFINO: In the ponds, maybe?

DR. ECKHART: Correct.

MS. DELFINO: With the crowding of fish in the ponds -- you looked at it in the ponds. One of the reasons why you

look at it is because that is a possible source of avian mortality. If you have fish dying or birds eating dying fish, you have a problem with the birds, right?

DR. ECKHART: As I understand.

MS. DELFINO: You didn't look at that with respect to the Sea?

DR. ECKHART: That's correct. To my knowledge, we did not look at it.

DR. ECKHART: You testified earlier that unless -- turn back to the pond-hatchery mitigation scheme.

You testified that there are -- well, I think you said there were four fish eating bird species at the Sea. I would like to point to Page 2-50 in the HCP. At the very end, at the very bottom of that page there is a discussion of the birds that forage on the Sea or fish in the Sea.

It is larger list. I believe it is 16 species. Does that sound correct?

DR. ECKHART: That sounds correct. I was referring to the coverage. We were asking for coverage for those four species.

MS. DELFINO: You are not asking coverage for those 16 species?

DR. ECKHART: I don't recall. I would have to look at the species list.

MS. DELFINO: Let's look at the species list. Let's go

2-64, Table 2.3-15. I believe -- we can go through and say which ones are fish eating and which ones are not. I think there is -- if you compare the two lists together, they look about the same.

DR. ECKHART: You are referring to this table versus --

MS. DELFINO: Yeah, the list in 2-50.

DR. ECKHART: That could be. I just have to read it. I think, yes.

MS. DELFINO: When the HCP was put together, did you evaluate the needs of all 16 of these species, fish eating species?

DR. ECKHART: Again, I didn't prepare the HCP, so I don't know. I can't answer that.

MS. DELFINO: It is not in there.

With respect to the ponds or hatchery scheme, do you know what percentage of -- have you worked out the percentage of each individual fish eating species that is going to be fed via the pond or hatchery strategy?

DR. ECKHART: We have focused on the four species that I mentioned this morning, and of those four species we have a monthly distribution of their food needs that has been worked out by the wildlife agencies.

MS. DELFINO: Where in the HCP is that?

DR. ECKHART: That is under current consultation.

MS. DELFINO: It wasn't available for --

DR. ECKHART: Correct.

MS. DELFINO: Again, I want to go to some of the specific questions regarding the hatchery.

Have you taken into consideration -- are the hatchery fish going to be raised in diluted Salton Sea seawater or Colorado River water? Do you know?

DR. ECKHART: It totally depends whether a hatchery is constructed or we buy them commercially.

MS. DELFINO: If a hatchery is constructed, what kind of water would they be raised in?

DR. ECKHART: It would be -- as far as I know at this point, it would be water quality equal to the Colorado River or better.

MS. DELFINO: Has there been any study done on what the impacts to the fish will be when you introduce them into a more saline environment like the Sea? You raise them in less saline water like Colorado River water, and then you introduce them into a more saline sea. Have you done any studies to indicate how the fish will adjust to that?

DR. ECKHART: The proposal includes the results of those types of studies that are in the literature and, in fact, there are acclamation ponds included in the hatchery, to move from what they are reared in to the Salton Sea salinity.

MS. DELFINO: What's the volume of fish that you are

proposed to produce to go into the Sea?

DR. ECKHART: I can't answer volume.

MS. DELFINO: How many fish do you think you are going to be dumping into the Sea?

DR. ECKHART: The maximum fish in pounds, in pounds, that has been determined by the wildlife agencies per year would be 6.3 million pounds.

MS. DELFINO: 6.3 million pounds?

DR. ECKHART: I'm sorry, I doubled that. It's actually 3.2.

MS. DELFINO: Is that a one-to-one mitigation ratio, say, all the fish dying in the Sea, is that to compensate for the volume of fish that will not be in the Sea anymore?

DR. ECKHART: It is to feed the birds. So it is based on the fishing needs of the birds that were asked to be covered.

MS. DELFINO: The four birds or the 16?

DR. ECKHART: It's based on the four birds.

MS. DELFINO: What happens to the other 12 fish eating birds?

DR. ECKHART: As far as I know, that we're supplying these pounds of fish, and the four covered species that we we're asking for will be covered. I don't recall the remaining birds that you are referring to.

MS. DELFINO: Let me get this straight. You testified

earlier, I believe, that you believe -- I am going to have to sum up. I'm going to hurry through this.

You think that the pond strategy is going to adequately account for temperature variations, 5,000 acres of ponds?

DR. ECKHART: The current strategy we are using has high volume flow through the ponds, and, yes, I do think it will take care --

MS. DELFINO: Where are you getting the water for the ponds?

DR. ECKHART: The proposal right now is the New River.

MS. DELFINO: Will you be treating that water?

DR. ECKHART: Treating it for what?

MS. DELFINO: Making it cleaner. The New River empties out into the Sea and that dilutes. So you are using New River water for your ponds. Have you done an analysis of how tilapia are going to fare in New River water in these concentrated ponds?

DR. ECKHART: You are making two assumptions there. First of all, the fish are now in the delta, so the New River. So the analysis and mitigation is based on the water qualities that we see within the New River delta. And, in fact, we will make that better because of the pond configuration that we hope to construct.

Number two, it is not a given conclusion that tilapia will be the fish that will be raised in the hatcheries once

they are moved into the pounds. There may be more efficient fish for the birds to be raised than tilapia.

MS. DELFINO: But you have no idea at this point what type of fish those are? You haven't done any of the studies to know the feeding habits for those birds?

DR. ECKHART: Yes, they have. We are relying on the wildlife agencies for the information that they have to tell us which fish species would be preferable to the birds.

MS. DELFINO: Is any of that information in this Draft HCP?

DR. ECKHART: Again, we are in consultation on that.

MS. DELFINO: Turning to the island and nesting habitat replacement, habitat that you are planning. Have you -- I believe you're saying you didn't do a one to one. As you lose nesting and roosting habitat, will you replace it? Is that your strategy?

DR. ECKHART: As I recall, yes.

MS. DELFINO: Have you identified the areas where these nesting and roosting locations will be created?

DR. ECKHART: We have preliminarily identified those. But, again, the way the HCP is set up is that those are adaptive management things and a lot of those activities are going to happen as we move forward with this process.

MS. DELFINO: Have you done any analysis on how the birds will adapt? What I mean, is it similar habitat? Have

you done analysis -- I am asking a compound question, aren't I?

Have you done any analysis on whether the birds are really going to use these areas?

DR. ECKHART: That is part -- as I understand, that is part of the effectiveness monitoring.

MS. DELFINO: Turning quickly to the drains, because I am running out of time.

Have you taken -- I guess the assumption is that as selenium increases in the drains, you're going to construct alternative habitat areas?

DR. ECKHART: That's correct.

MS. DELFINO: What are you going to do about drains that are heavily contaminated with selenium? How are you going to keep birds out of there?

DR. ECKHART: At this point we're not. The approach here is to totally replace all of the habitat within the drains.

MS. DELFINO: So you're assuming that birds are just going to start using the better habitat?

DR. ECKHART: That's correct, at this point.

MS. DELFINO: Do you have any basis in the HCP for that assumption? Do you have studies that show that?

DR. ECKHART: Again, this is based on opinions of the wildlife agencies.

MS. DELFINO: Have you looked at all at mitigating for selenium impact other than creating replacement habitat?

DR. ECKHART: Yes. We took a preliminary look at that, and we are continuing to look at that, actually as we speak.

MS. DELFINO: One last question since I'm running out of time here.

The funding is set at 22.5 million currently in your HCP, when you turn to the funding section.

DR. ECKHART: I don't recall.

MS. DELFINO: Page 5-2.

DR. ECKHART: I see it.

MS. DELFINO: Have all the things that I have gone through today on your mitigation strategies and everything you've laid out in the HCP, is that going to cost 22.5 million?

DR. ECKHART: Are including all of the Salton Sea mitigation?

MS. DELFINO: Everything that you are committing to do in your HCP.

DR. ECKHART: Obviously the preliminary estimates are higher than the 22.

MS. DELFINO: Where are you getting that money?

DR. ECKHART: What is going to happen in this process is if IID has the limits that we talked about this morning,

and, of course, those are limits that need to be brought up to today's dollars. You heard someone talk about $15,000,000. We need to move all those dollars up into today's dollars.

As I understand what we will do, the process will be is we'll finalize these costs once we are done with the consultation with the wildlife agencies, determine what the final mitigation is. Those costs will be estimated and then compared to what is available. And if those costs exceed the dollars available as committed to by IID, then other sources of funding will have to be resolved or the deal, I assume, can be stopped at that point.

MS. DELFINO: Outside of the money --

Can I ask just one quick follow-up?

CHAIRMAN BAGGETT: Okay.

MS. DELFINO: The 15,000,000 or however of your adjusted dollars are for current rates. Have you identified any funding outside of that? Do you have any funding sources secured at this point?

DR. ECKHART: We have not because we have not finalized the mitigation costs at this point.

MS. DELFINO: Thank you.

CHAIRMAN BAGGETT: Thank you.

Let's take a five-minute break, and we'll come back with National Wildlife Federation.

(Break taken.)

CHAIRMAN BAGGETT: Mr. Doyle.

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CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

BY NATIONAL WILDLIFE FEDERATION

BY MR. DOYLE

MR. DOYLE: Yes.

Good afternoon, Dr. Eckhart and Ms. Harnish.

My name is Kevin Doyle with the National Wildlife Federation.

As acknowledged in the Draft EIR/EIS on Page 5-36, indirect and growth inducing impacts associated with this proposed project must be considered under both NEPA and CEQA.

Is that correct?

MS. HARNISH: Yes.

MR. DOYLE: On Page 5-39 the Draft EIR/EIS states that the proposed project, quote, would not increase the amount of water delivered to Southern California, rather it would reallocate the existing water supply to ensure drought reliability of that supply.

Is that correct?

MS. HARNISH: Yes, it is correct that it says that.

MR. DOYLE: Thank you.

The Draft EIR/EIS then concludes that, and this is also

found on Page 5.39. It conclude that the transfer, quote, would not have the potential to induce or deter greater economic development or population growth because it would not modify any future increases of water supply that have already been planned and approved.

Is that correct?

MS. HARNISH: Yes.

MR. DOYLE: This is a question for either of you or both.

Is there a difference in your mind between water that accommodates growth and water that induces growth?

DR. ECKHART: I can't answer that.

MR. DOYLE: Ms. Harnish?

MS. HARNISH: Is there a difference between water that accommodates planned growth?

MR. DOYLE: No. Water that is provided to accommodate growth and water that is provided -- that would induce growth. The reason why I ask the question is because the Draft EIR/EIS concludes that this is water that is growth accommodating, not inducing. Therefore, there is no growth inducing impacts. So I am trying to understand in your mind as the authors of the EIR/EIS what the difference is in your mind between water that accommodates growth and water that induces growth.

MS. HARNISH: I guess I need to clarify that we are the

authors of the entire EIR/EIS. There were several authors. Neither of us authored this section. So, we could opine, but we would not -- we didn't write this section.

MR. DOYLE: Given your professional experience, both of you, would either of you care to opine on the difference between water that accommodates growth on the water that induces growth?

DR. ECKHART: I can only offer that my understanding is that the aqueduct to Met, which San Diego uses a portion of that water, is full now and it will be full after the transfer.

MR. DOYLE: What is, in general terms, what is San Diego to do with the water they would receive from this proposed transfer? What is the water -- why is San Diego getting this water, in layman's terms?

DR. ECKHART: In layman's terms this water is to meet their current uses.

MR. DOYLE: Dr. Eckhart, you represent CH2MHill throughout the Southwest; is that correct?

DR. ECKHART: That's correct.

MR. DOYLE: Would it be accurate to say that metropolitan San Diego lies in what can be referred to as a semi-arid region of the United States?

DR. ECKHART: That's correct.

MR. DOYLE: Would it be accurate to say that San Diego

has a relatively poor supply of naturally occurring freshwater resources, naturally occurring?

DR. ECKHART: Poor supply in comparison to their current or projected or population growth?

MR. DOYLE: Their current population.

DR. ECKHART: I would not term it poor. I would term it adequate.

MR. DOYLE: In terms of their groundwater and other surface water, naturally occurring freshwater resources, not imported water, but naturally occurring water through lakes and streams and groundwater resources?

DR. ECKHART: I am not familiar with the details of water supply. But it is my understanding that their natural local water supply does not meet all of their demands.

MR. DOYLE: Would it be accurate to say that one of the major factors that has helped metropolitan San Diego grow into the city and region that it is today is the importation of water?

DR. ECKHART: Correct.

MR. DOYLE: Do you agree, Ms. Harnish?

MS. HARNISH: Yes.

MR. DOYLE: So, in other words, water Importation has helped San Diego grow into the sixth largest city in the country, tied with Phoenix, Arizona; is that correct?

MR. OSIAS: It is tied to Phoenix?

MR. DOYLE: According to the Census Bureau, yes. It might be give or take a few people, but in general terms, yes.

DR. ECKHART: As I understand the transfers to date, yes, that is true. Importations to date.

MR. DOYLE: Is your estimation that the population growth projected for San Diego has already been planned for, regardless of whether or not this transfer occurs?

MS. HARNISH: That is my understanding.

MR. DOYLE: That is your understanding. Okay.

Because that is what -- that is the understanding of the Draft EIR/EIS.

MS. HARNISH: That is good, then.

MR. DOYLE: That I was able to glean.

MR. OSIAS: We have a match.

MR. DOYLE: Can I ask you how the authors of this report, and I understand that neither of you were the authors of this particular section, apparently, but could you offer an opinion in terms of how your firm recommended this conclusion on behalf of your clients?

MS. HARNISH: As I stated earlier, we -- because the QSA is a program document of which this project is one component, we worked -- relied on their analysis. We reviewed it. We also, I believe, looked at San Diego County water supply master plan, and for consistency, and adopted

that. Basically that is their analysis on growth inducement.

MR. DOYLE: In your professional opinion what would happen to San Diego if the available water supply today, today, was arbitrarily cut in half, say? What would happen to San Diego? What would happen to their plans, the economy?

MR. SLATER: I am going to object unless there is foundation made for the question. Is this scenario earthquake? You know, what is the basis for the hypothetical?

MR. DOYLE: The basis for the hypothetical could be an earthquake. It could be -- thank you for giving me that example. It could also be as Mr. Bennett Raley, the Undersecretary of water resource for the Department of Interior, has threatened publicly, that if this transfer does not go through by December 31st, 2002, that they would, the federal government would be forced to implement the California 4.4 Plan immediately.

Have you heard those --

MR. SLATER: Objection. There is no foundation been laid. Counsel's testifying. If there is an offer of proof as to what the threat is when it was made, what the specifics are. That is the first objection.

Secondly, calls for speculation as to what the impacts of an action by the Secretary of Interior would be on

Metropolitan, San Diego's wholesale provider and how Metropolitan would in turn handle that as a matter of internal shortage. There is no testimony laid for a foundation like this. It is hypothetical.

CHAIRMAN BAGGETT: Sustain.

I think you need to come up with a better foundation or some hypothetical based on something, one, that is related to the EIR.

Also, I question whether these witnesses are witnesses to ask.

MR. DOYLE: I think that is actually Mr. Bennett Raley's public statements that were made at the Colorado River Water Users Association meeting on December 14th in Las Vegas, Nevada, and I can provide the Board with that.

CHAIRMAN BAGGETT: I understand that.

MR. DOYLE: Public comments --

CHAIRMAN BAGGETT: Clearly affects the Met.

MR. DOYLE: Clearly affects this entire project. Basically saying to Colorado River Water Association, let's gets this transfer done or we are going to cut your water off. So that is the foundation of my question.

MR. SLATER: I will -- Mr. Chair, I will accept the offer of the foundation. The question still calls for speculation as to how it would internally affect Met, what Met's existing program is for allocating shortages under its

present structure. We have no testimony. These witnesses are not qualified or competent to indicate how that shortage would be addressed by Met and administered internally.

CHAIRMAN BAGGETT: I understand.

I guess, why are you directing to these? Surprised Mr. Osias has objected also. But in terms of these witnesses how --

MR. DOYLE: I am trying to establish the importance of water importation to San Diego in terms of growth. And so the question basically is what would happen to San Diego's ability to accommodate growth or just to grow if their current water supply were cut?

CHAIRMAN BAGGETT: Is that an appropriate question for the preparers of the EIR?

MR. DOYLE: I think it is.

MR. OSIAS: If you know, you can answer. If you don't know --

CHAIRMAN BAGGETT: Can you answer the question? Please answer the question.

MS. HARNISH: I don't know.

MR. DOYLE: You don't know.

Are you familiar with San Diego County Water Authority's lawsuit versus Metropolitan Water District challenging Metropolitan's calculation of the Water Authority's preferential rights?

DR. ECKHART: I know of it, but am not familiar.

MR. DOYLE: May I read just a brief sentence about what that is? San Diego County Water Authority further stated that its failure to obtain increased amounts of reliable water by way of an increased calculation of preferential rights would place almost 50 percent of San Diego County Water Authority's water supply at risk and would cause San Diego County Water Authority every irreparable harm and that it would destroy business confidence, undermine investment, translate directly into loss production, reduce income, cause lost jobs and result in a weakening economy in San Diego County.

Are you familiar with --

MR. SLATER: I object. Testifying? Offer of proof? What is that?

MR. DOYLE: I asked whether or not they are familiar with this, so I was giving an overview of what that is.

MR. SLATER: According to what? Objection. No foundation.

CHAIRMAN BAGGETT: So what was the purpose?

MR. DOYLE: The purpose of that was my follow-up questions.

MR. SLATER: Mr. Chairman, shall we be entitled to know from where he was reading? Did he make it up? Is it -- does it come from something?

MR. DOYLE: Yes, it does come from something.

CHAIRMAN BAGGETT: Fair question.

MR. DOYLE: One of the exhibits that has been --

CHAIRMAN BAGGETT: Could you cite the exhibit?

MR. DOYLE: That has been submitted, one of National Wildlife Federation's exhibits, which obviously we have not testified at this point. But it is Exhibit No. 7 of National Wildlife Federation. It is the verified complaint in San Diego County Water Authority versus Metropolitan Water District of California, et al.

MR. SLATER: Page number, please?

MR. DOYLE: It is the entire Exhibit No. 7. It is in National Wildlife Federation's exhibit.

MR. SLATER: Were you summarizing?

MR. DOYLE: I was summarizing that.

MR. SLATER: That is your interpretation of what it says?

MR. DOYLE: No, that is a direct quote, direct quote from that.

CHAIRMAN BAGGETT: Do you have a cite is what he is -- if you are going to cite from an exhibit, it would be beneficial to all of us, not just the counsel for San Diego, but for myself, to rely.

MR. DOYLE: I do have that. I believe on Page 28 of that verified complaint.

MR. SLATER: Thank you, counsel.

MR. DOYLE: Lines 6 through 9.

MR. SLATER: Thank you, counsel.

MR. DOYLE: Thank you.

Dr. Eckhart and Ms. Harnish, are you familiar with San Diego's status as a global hot spot of biodiversity?

MR. OSIAS: Objection as to the meaning of "hot spot."

MR. DOYLE: As a global place of significant importance for biodiversity. Does that help?

MR. OSIAS: Yes, thank you.

CHAIRMAN BAGGETT: That is fine. Answer it.

DR. ECKHART: I am not aware of that.

MS. HARNISH: I believe I read it in your comment letter.

MR. DOYLE: In your estimation has San Diego been prudent about managing its growth while not having a more guaranteed reliable water supply?

MR. OSIAS: Objection. Lack of foundation for qualifications of these witnesses.

MR. DOYLE: Without a more --

CHAIRMAN BAGGETT: Sustained.

MR. DOYLE: Without a more guaranteed water supply than they have today, do you think San Diego has grown beyond its means in relation to a clean and available water

supply?

MR. OSIAS: Same objection.

CHAIRMAN BAGGETT: I would agree. Sustained.

I would ask where are you going with this line of questions for preparers of a Draft EIR on the specifics of San Diego's plan. It might be more appropriate when San Diego comes up.

MR. DOYLE: They'll have their turn. But these are the authors of the EIR/EIS. And the authors are responsible for the conclusion which states that there are no growth inducing impacts whatsoever to the receiving area of this water transfer, which is the San Diego County Water Authority District.

So that is why I feel it very pertinent to ask these people.

My final question is --

CHAIRMAN BAGGETT: No. As I recall they already testified they relied on information provided by San Diego. If you can go ahead and please answer the question with that caveat.

MR. OSIAS: I think the last question had to do with some sort of judgment call about prudent planning.

MR. DOYLE: I'll rephrase the question.

CHAIRMAN BAGGETT: Rephrase it.

MR. OSIAS: So will you repeat it?

MR. DOYLE: Sure.

Without any more guaranteed water supply than they have today, do you think San Diego has grown beyond its means to provide for the population that it has?

DR. ECKHART: I have no idea.

MR. DOYLE: Would the proposed transfer, do you think, in your professional opinion, remove a barrier to growth in San Diego? Can San Diego grow without this water transfer?

DR. ECKHART: Yes.

MR. DOYLE: It can?

CHAIRMAN BAGGETT: I think it's unfortunate, as an editorial comment, you weren't here for the first phase. A lot of this information we've already been through.

MR. DOYLE: I've been briefed on Phase I.

Thank you very much.

CHAIRMAN BAGGETT: Planning and Conservation League, Ms. Douglas.

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CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

BY PLANNING AND CONSERVATION LEAGUE

BY MS. DOUGLAS

MS. DOUGLAS: Afternoon, Mr. Eckhart, Ms. Harnish.

I would like to start with some really foundation questions.

When you were doing the work on the EIR/EIS, did you

consult with, for example, the Salton Sea Authority?

DR. ECKHART: Yes.

MS. DOUGLAS: Did you use, it's in the documents, Scientific Research on the Salton Sea produced by the Authority?

DR. ECKHART: As I understand, yes.

MS. DOUGLAS: And did you also consult with the Salton Sea Authority science office?

DR. ECKHART: As I understand, our biologists have.

MS. DOUGLAS: You used the documents that have come out of Salton Sea Authority science office?

DR. ECKHART: Again, my understanding.

MS. DOUGLAS: Is it the same with the Salton Sea database project?

DR. ECKHART: Correct.

MS. DOUGLAS: And I've got here the references from the EIR/EIS. I see quite a few documents that we also relied on and that are in our exhibits. So one is the Sutton article, Dessert Pupfish of the Salton Sea - A Synthesis, PCL Exhibit 13.

Are you familiar with that document or did you refer to it for the EIR/EIS?

DR. ECKHART: I am not familiar with it.

MS. HARNISH: If it is referenced, it was likely used.

MS. DOUGLAS: The documents that are referenced were

likely used. So that Shuford, Warnock Reconnaissance study of the avifauna of the Salton Sea, Audubon 13, final fish report, the Environmental Reconnaissance of the Salton Sea Sediment Contaminants in Riverside and Imperial Counties, PCL Exhibit 20, the draft fish report from 2001. These are all referenced, so you say that you have all these reports, information from these reports, was used for the EIR/EIS?

MS. HARNISH: In some way, shape or form they were consulted. Whether they were directly cited or referenced depends on how they are used.

MS. DOUGLAS: I've got just one more question about documents.

The Archeological Investigation at proto-historic fish camp on the receding shoreline of Ancient Lake Cahuilla, this document, which is PCL and Audubon Exhibit 2, was actually prepared for IID.

Are you familiar with this document?

MS. HARNISH: Not personally.

DR. ECKHART: I am not personally.

MS. DOUGLAS: In the Riedel, Helvensten, Costa-Pierce 2001 fish report that was in the draft final report, that was submitted to Salton Sea Authority, this is, if you want to see the cite, it is on Page 9-22 in the references.

MS. HARNISH: Uh-huh.

MS. DOUGLAS: Now this --

CHAIRMAN BAGGETT: Excuse me, is this the EIR?

MS. DOUGLAS: Of the Draft EIR.

This report makes some estimates of the number of fish in the Sea at about 200,000,000. Are you familiar, have you heard the number possibly 200,000,000 fish in the Sea?

DR. ECKHART: I have not.

MS. DOUGLAS: Now, let's just maybe assume for the moment that there are 200,000,000 or more fish in the Salton Sea. Is it really your contention that the EIR/EIS that the elimination of the fishery that has 200,000,000 or more fish is not a significant biological impact?

DR. ECKHART: What we based our HCP analysis on was on the bird species, not the fishing species.

MS. DOUGLAS: Was there a reason for that? It seems like you take a fishery that the EIR/EIS actually says is one of the most productive fisheries, very productive fishery, and causes premature crash and basically eliminating entirely a very large fishery.

That is a fairly large biological change, right?

DR. ECKHART: I assume so, but we are talking temporal change.

MS. DOUGLAS: When you said in your testimony that the reason you didn't include the fish as a significant impact is not because temporal versus any other kind of change but actually was because they are not into fish species; is that

right?

DR. ECKHART: As I recall, yes.

MS. DOUGLAS: It is in your testimony. Would you like to --

DR. ECKHART: No.

MR. OSIAS: He said yes.

MS. DOUGLAS: He said yes, he said he recalls. It is actually in the testimony. So I am kind of curious on why you decided or maybe there is some code section in CEQA that I'm not aware of that actually limits the analysis of environmental impacts to native fish or to native species.

Is that the case?

MR. OSIAS: Objection. Ambiguous.

MS. DOUGLAS: Is there any legal basis for limiting the evaluation of environmental impacts to impacts on native species?

MR. OSIAS: Objection to the extent it calls for a legal conclusion. A nonlegal conclusion I don't mind them answering.

MS. DOUGLAS: I am not asking for legal conclusions. They are the preparers of the EIR/EIS.

CHAIRMAN BAGGETT: You are asking for a nonlegal.

MR. OSIAS: But you predicated it with are you aware of any legal.

CHAIRMAN BAGGETT: Okay. Sustained. I think we

understand. So can you provide nonattorneys.

MS. HARNISH: I will do my best. I was not involved in the development of the significance criteria for biology. But as they are, there is not an impact to the non -- the elimination or the temporal impact to the nonnative species was not considered an impact. It is, however, an impact in recreation. That is where that impact is reflected.

MS. DOUGLAS: You are saying you were not personally involved in developing the significant criteria.

Do you know who was?

DR. ECKHART: Our staff. The CH2MHill biologist in conjunction with the Bureau of Reclamation and, of course, the lead agencies.

MS. DOUGLAS: Now in your direct testimony, Mr. Eckhart, I believe it was you, you mentioned that tilapia, according to your literature review, might survive up to 120 grams per liter of salinity; is that right?

DR. ECKHART: As I understand it, yes.

MS. DOUGLAS: But you weren't meaning to imply with that statement that tilapia can actually reproduce up to that salinity level, were you?

DR. ECKHART: I don't know that.

MS. DOUGLAS: Because it was just unclear from what you were saying whether you were asserting they could survive or reproduce at that high salinity level.

DR. ECKHART: That is a question that we have not resolved in our consultation with wildlife agencies. My assumption is yours.

MS. DOUGLAS: Is mine?

DR. ECKHART: That it is survival not reproduction, but we have no verification of that.

MS. DOUGLAS: But you would also, I imagine, agree that the survival of tilapia in the Sea, regardless of whether or not they can reproduce at these high salinity rates, would be affected by the availability of food supply for the tilapia in the Sea.

DR. ECKHART: Rephrase the question.

MS. DOUGLAS: Let me put it in very clear English.

If the creatures that the tilapia eats in the Sea were to die, how would that effect the tilapia?

DR. ECKHART: Just to make it clear, I guess, if your food's gone you won't survive.

MS. DOUGLAS: Now, I am glad we agree on that one.

Now the EIR/EIS says, and any time you want we can go to a page but I prefer not to, the pileworms are one of key species in the food chain in the Salton Sea.

Is that your understanding as well?

DR. ECKHART: Yes, that is my understanding from the biologist.

MS. DOUGLAS: From the fish reports we have it seems

that the health of the pileworm species and their reproduction is predicted to be severely reduced at 50 grams per liter, which is well below the 120 figure or even the 60 figure that we have been using.

MR. OSIAS: Objection as to what fish reports since they are not identified and who we are.

CHAIRMAN BAGGETT: Could you identify the reports?

MS. DOUGLAS: This is PCL Exhibit 14, Final Report Fish Biology and Fishery Ecology of Salton Sea and it is on Page 5. Go to Page 5.

It says here, talks here about the death of pileworms, the role of pileworms in the ecosystem and potential effect of the death of pileworms on fish in the Salton Sea.

On Chapter 3.2, Page 140 in the EIR/EIS, it says that, I am reading here, the pileworm is primary component of the Salton Sea food chain, provide food to several fish species. Reproduction of pileworms is substantially reduced when salinity reaches about 50 grams per liter.

So, my question is: If pileworms themselves, the species, potentially is severely curtailed or disappears at 50 or so grams per liter, doesn't that really harm the ability of tilapia and other fish species that survive in the Sea?

DR. ECKHART: The answer to that is yes regardless of the project.

MS. DOUGLAS: But it certainly happens much sooner if there is a project, right?

DR. ECKHART: I don't know about much, but it happens sooner.

MS. DOUGLAS: Now that we have gotten into the invertebrate in the Salton Sea, I would like to go to another part of the testimony. Let's stay with the microorganisms and invertebrates for a little while.

You mention in the EIR/EIS that your analysis of what happens to the invertebrates -- you are not caring so much what happens to the invertebrates itself, it's the effect on the fish and the effect of the disappearance of fish on birds, right?

DR. ECKHART: Yes, the bottom line is birds.

MS. DOUGLAS: Well, the bottom line in your approach has been birds?

DR. ECKHART: With wildlife agencies that has been their approach, also.

MR. OSIAS: Let me just ask. There is an ambiguity here. Are you talking about the EIR/EIS or the HCP?

MS. DOUGLAS: I am talking about the EIR/EIS.

MR. OSIAS: I think the witness was talking about the HCP.

CHAIRMAN BAGGETT: She is quoting from the EIR. Made it very clear.

MR. OSIAS: No, the first part was right. Then she said you're focused on the birds. He's been answering HCP questions all day.

CHAIRMAN BAGGETT: That would probably be useful to always preface it with which document so that we can follow along.

MS. DOUGLAS: I will ask the question in regards to the HCP. In terms of the mitigation in the HCP, your focus is on the birds; is that correct?

DR. ECKHART: That's correct.

MS. DOUGLAS: In your testimony you say that there will be a change in the makeup of invertebrates in the Salton Sea because pileworms will eventually not be able to survive and brine flies and brine shrimp will take over their niche or become the predominant invertebrates in the Salton Sea. Is that right?

If you like, why don't we go to your testimony and refresh you on that. That is on Page 21. It's Page 21, Line 20, increased salinity will have a less than significant impact on invertebrate resources because brine shrimp and brine flies would increasingly replace pileworm community. Is that your testimony?

DR. ECKHART: That's correct.

MS. DOUGLAS: Now, one of the concerns I had in going through the EIR/EIS is that it does very little analysis of

how brine flies and brine shrimp will replace pileworms. It seems to be an assumption that they actually will.

Would you say that is a fair characterization of the analysis?

DR. ECKHART: Since I didn't do the analysis, I don't recall.

MS. DOUGLAS: If you like for reference I'm talking about Chapter 3.2, Page 140 in the EIR/EIS. It seems to really depend on a comparison with Mono Lake. The EIR/EIS talks about how Mono Lake is a hot spot for birds, is a very attractive place for a great diversity of birds. But it -- unless you can point me to something else -- do you think it analyzed at all whether Mono Lake is an appropriate model for predicting what would happen with the invertebrate biology in the Salton Sea?

DR. ECKHART: Again, I can't answer that.

MS. DOUGLAS: Does the EIR/EIS evaluate, for example, whether the presence of predatious invertebrates that aren't in the Mono Lake, but do exist in Salton Sea and prey on brine flies and brine shrimp -- I'm going to start over.

Are you aware that there are predatious invertebrates in the Salton Sea that prey on brine flies and brine shrimp and that don't exist in Mono Lake?

DR. ECKHART: I am not aware. I don't know.

MS. DOUGLAS: Are you aware that there are differences

in oxygen level in mixing in Salton Sea and Mono Lake that would make the Salton Sea less hospitable to brine flies?

DR. ECKHART: Again, I am not aware of that. I don't know.

MS. DOUGLAS: So, given your answer to the last two questions, can you predict with confidence that there will be a smooth transition with invertebrates from a pileworm dominated system to brine flies and brine shrimp?

DR. ECKHART: Again, I can't answer that question.

MS. DOUGLAS: Because the EIR/EIS says that there would not be a significant impact on other kinds of waterfowl. For example, the ruddy duck and the birds, your grebes, because they could switch over and start eating brine flies and brine shrimp. This is, again, in the same section I referred you to.

Isn't it possible that if brine flies and brine shrimp don't emerge as quickly as you think that there could be years when they don't have any food supply, when the birds that might depend on them don't have any food supply in the Salton Sea?

DR. ECKHART: If your assumption is correct, yes.

MS. DOUGLAS: Let's move on down the food chain here. Algae, more or less at the bottom of the food chain. And as you may or may not know, the invertebrates eat the algae and some of the fish might eat the algae.

Do you think it is possible that the disappearance of fish and some species or all species of some or most species of invertebrates in the Salton Sea could lead to a proliferation of algae and algal blooms?

DR. ECKHART: I don't know that.

MS. DOUGLAS: But is it possible? I mean logically if there are fewer organisms eating the algae, doesn't it seem logical that there might be more algae?

MR. OSIAS: Objection. Asked and answered. If he doesn't know, I don't know how he is going to answer. If it's possible, anything is possible.

CHAIRMAN BAGGETT: Sustain. Can you rephrase that as a question.

MS. DOUGLAS: No, I will move on.

The EIR/EIS mentioned in a brief section. This is -- I am not asking you to flip there, but -- Chapter 3.7, Page 36, that both algal blooms and the death of 200,000,000 -- it doesn't give the number, but many, many fish could have odor impacts. It could make the Salton Sea area smell bad and smell much worse than for much longer, I imagine, than it currently does.

But the EIR/EIS says that it is not --

You want to find the section?

MS. HARNISH: I found it.

MR. OSIAS: We got it.

MS. DOUGLAS: But according to significance criteria, it says there it is not a significant effect even though it will smell more because it won't be smelled by a significant number of people.

How many people have to be affected by the odor in order for it to be significant? Fifty? Four hundred? Ten thousand?

MS. HARNISH: We've received a number of comments on this particular issue, not a number but a few, a small number. And we are taking another look at this.

MS. DOUGLAS: You may be reevaluating this?

MS. HARNISH: Reevaluating and may have more information in the final.

MS. DOUGLAS: Do you think that bad smells around the Salton Sea might reduce property values around Salton Sea?

MS. HARNISH: As I understand it, the Sea currently regularly smells. So I can't say that there would be a measurable increase in that smell from the project that you could directly correlate to a decrease in property value.

MS. DOUGLAS: You are saying in the EIR/EIS that there will be a measurable increase in bad smells from the project. So given that you're already saying that, couldn't you also say that --

MS. HARNISH: Where do we say there will be a measurable increase in the odor?

MS. DOUGLAS: In the same provision I referred you to. You say that both the death of fish and the algal blooms could affect -- could cause odors.

MS. HARNISH: It says it would contribute to odor emissions. It doesn't say it will be a measurable increase.

MS. DOUGLAS: That it would be sort of a new contribution to odors, that it would be additional -- contribute would mean that it would add something to the threshold that already exists of odors?

DR. ECKHART: Just temporarily.

MS. HARNISH: Odor is very difficult because there really isn't a measure for odor.

MS. DOUGLAS: I understand. But when maybe perhaps 200,000,000 fish die, for example, one would imagine that there would be odor.

DR. ECKHART: That is without the project. Yes, I agree with you.

MS. DOUGLAS: Or with. Sooner with.

MS. HARNISH: And in the existing condition.

MS. DOUGLAS: Right.

Would the death of all the fish affect and the odors affect recreation at the Sea?

MS. HARNISH: In the recreation section we do say that the temporal impact on the fish would have a recreational impact in terms of reduced opportunities for sportfishing.

MS. DOUGLAS: Reduced or eliminated, right?

MS. HARNISH: I think there will still be some fish in the delta areas, so it won't be completely eliminated.

MS. DOUGLAS: Or from the fish ponds?

MR. OSIAS: Let me just object that since the project is 75 years and your questions don't specify when, day one there are fish in the Sea. Day 75 there are not.

CHAIRMAN BAGGETT: Sustained.

When you ask those, if you state a time frame, I think it would be helpful.

MS. DOUGLAS: Okay.

Are you aware that in the 1980s or until the early 1980s visitation of the Salton Sea was higher than it was to Yosemite?

MS. HARNISH: Yes.

MS. DOUGLAS: We are going to move away from biology and algae, and I would like to refer you back to PCL Exhibit 20, which is the Environmental Reconnaissance of the Salton Sea Sediment Contaminant in Riverside and Imperial Counties, California. This document is cited in the EIR/EIS, so I imagine it was used. And you said it was used.

MR. OSIAS: You want them to get that?

MS. DOUGLAS: I am just referring to it. This is the basis for some of these questions. So if they need to get it, I have a copy here.

MR. OSIAS: That would be great.

MS. DOUGLAS: Let me give it to you.

Are you aware that there are toxic chemicals found in the sediment in the bottom of the Salton Sea?

MS. HARNISH: Define toxic.

MS. DOUGLAS: I am going to actually do one better than that. I'm going to actually list the chemicals that were found at levels in Salton Sea sediment. Those include arsenic, cadmium, copper, lead, molybdenum, nickel, selenium and zinc. On Page 19 those are all listed in Page VI, six, in the introduction. Some of them are listed.

Were you aware in preparing the EIR/EIS that these toxic chemicals are found in the sediment in the Salton Sea?

MS. HARNISH: Yes.

MS. DOUGLAS: In the EIR/EIS acknowledges that sediment may become airborne, right?

MS. HARNISH: Yes.

MS. DOUGLAS: The sediment recon study on Page 5 of the introduction on Page 19 says that the sediment in the Salton Sea consists of a high proportion of very fine grained, very small sediments.

Is that also your understanding of the sediments in the Salton Sea?

MS. HARNISH: I can't speak to that.

DR. ECKHART: Nor can I.

MS. DOUGLAS: If they are particularly small in the Salton Sea, that would facilitate sediment becoming airborne, right?

MS. HARNISH: I can't speak to that either.

MS. DOUGLAS: If the sediments, the very small sediments, did become airborne, there is nothing stopping them from blowing a fairly long distance, right? Once they are in the air they can blow a fairly long distance; is that correct?

MS. HARNISH: I'm not an air expert.

MS. DOUGLAS: Did the EIR/EIS do any analysis that you are aware of possible impacts to human health from breathing sediment that have some of these toxics in them, cadmium, copper, lead, arsenic, nickel, selenium and zinc, molybdenum?

MS. HARNISH: That is not currently included in the EIR/EIS.

MS. DOUGLAS: Is there a reason for that?

MS. HARNISH: We are addressing it in the final.

MS. DOUGLAS: In response to comments?

MS. HARNISH: In response to comments.

MS. DOUGLAS: Are you aware that concentration of these chemicals in the sediment are highest in the upper foot of sediment, the upper one foot of sediment in the Sea?

MS. HARNISH: I understand that from a brief review of

Levine Fricke report.

MS. DOUGLAS: The EIR/EIS currently, the draft, says there would be no impact from dust in the IID service area and doesn't even consider whether there would be in Coachella Valley. Is that correct?

MS. HARNISH: I think you are going to have to refer me to a specific page.

MS. DOUGLAS: In the air quality section of the EIR/EIS. When you go into significance, you look at it by subregions, so you look at Lower Colorado IID water service area. You find that there is potential for indirect air quality impacts in the Salton Sea region, potentially significant unavoidable impact. This is on Chapter 3.7, Page 3. Chapter 3.7, Page 7 --

MR. OSIAS: One moment so we can get it. You summarized first and then you gave us the page numbers, so we have to catch up.

MS. DOUGLAS: Understand.

MR. OSIAS: Thank you.

MS. DOUGLAS: In the IID water service air -- this is summary table. Under the proposed alternative, you mention the possibility of windblown dust from fallowed land. But there is no mention of dust from the shores of the Salton Sea, is there?

MS. HARNISH: You're talking about within the IID

service area?

MS. DOUGLAS: Right.

MS. HARNISH: The way the impacts were discussed within the service area was related to activities that occur in that service area. So because this impact especially isn't there doesn't mean that there couldn't be impacts within the IID service area from the activity in the Salton Sea subregion.

MS. DOUGLAS: I understand.

So do you consider that you made that clear in the EIR/EIS, that there is a potentially significant impact in the IID subregion?

MS. HARNISH: I have to take a look at that.

MS. DOUGLAS: Because it looks from the table that there is not. I understand your explanation. It hadn't even occurred to me that you were limiting the impacts to where the activity took place.

Let me ask another question. We can maybe get back to this.

Is there any reason why the possibility of dust impacts in the Coachella Valley, so to the north of the Sea, wasn't analyzed in this at all?

MS. HARNISH: I am sorry, repeat the question.

MS. DOUGLAS: Is there any reason why the EIR/EIS does not evaluate the potential for dust impacts in the Coachella

Valley, so north of the Sea?

MS. HARNISH: They are discussed in Table 3-2 in Chapter 3.0. Impacts in the Coachella Valley Water District area and in Met are summarized in that table.

MS. DOUGLAS: What page number? Now you get your revenge.

MS. HARNISH: It is my revenge?

MS. DOUGLAS: You revenge on summarizing before you give me the page number.

MS. HARNISH: That's right. I don't mean any revenge.

3.0-11.

These are not related to the Salton Sea. They are related to activities in Coachella Valley Water District.

MS. DOUGLAS: Did you evaluate whether activities around the Salton Sea would affect the environment in the Coachella Valley?

MS. HARNISH: There is a great difficulty in assessing impacts that might occur from the windblown -- the potential from windblown dust as the Sea recedes. And we obviously have received several comments on this. We are working on additional explanation and why it is difficult to assess it before it occurs and how we may propose to do so as it occurs.

MS. DOUGLAS: You are saying you did not assess this document?

MS. HARNISH: We were unable to assess it.

MS. DOUGLAS: Because it was difficult?

MS. HARNISH: Perhaps impossible.

MS. DOUGLAS: Perhaps impossible. All right.

Now in terms of -- let's go back away from the Coachella Valley back to the Salton Sea. If the Sea declines in elevation, is it true that potentially a large number of acres of sediment would be exposed to the elements?

MS. HARNISH: Yes.

MS. DOUGLAS: And we have covered that these sediments have toxic chemicals in some concentration attached to them?

MR. OSIAS: Objection. "We have covered it" I think is misleading. You cited to a study which the witness confirmed contains that statement.

CHAIRMAN BAGGETT: You restate the question.

MS. DOUGLAS: In the study that is in your references for the EIR/EIS found that the sediment contains measurable concentrations of a number of toxics?

MS. HARNISH: They are measurable, and my understanding is that they are below EPA's remediation standards.

MS. DOUGLAS: Might depend on the extent of exposure from windblown dust, which you said was difficult to evaluate, right?

MS. HARNISH: Right. And those mediations would be for

in place. I am not talking about airborne.

MS. DOUGLAS: If the sediment is exposed, it's possible that a large number of contaminants might become bioavailable that were locked in sediment in the bottom of the Sea; is that right?

MS. HARNISH: I really can't speak to that, I am sorry.

MS. DOUGLAS: By bioavailable I mean exposed to the elements and basically taken from a place where they are sort of harmlessly stored at the bottom of the Sea, for example, and put out where they can get into the ecosystem and the food chain.

MR. OSIAS: Is that a question?

MS. DOUGLAS: That was a clarification of the question. The question is whether the exposure of the sediment would make these contaminants more bioavailable, and then I was defining bioavailable.

MS. HARNISH: I suppose so, yes.

MS. DOUGLAS: Did you evaluate in the EIR/EIS the possibility that once these chemicals are exposed to the air that they may become oxidized and leach back into the Sea in a more soluble form?

MS. HARNISH: We did not evaluate that.

MS. DOUGLAS: Does it make sense that if they're leached back in to the Sea in a more soluble form, they may

be more toxic to life in the Sea than when they were tied to the sediments?

MS. HARNISH: I don't know.

MS. DOUGLAS: Could salt, selenium and other contaminants in the sediment possibly harm agricultural production if the sediments get blown over fields in Imperial Valley?

DR. ECKHART: I don't know the answer to that.

MS. DOUGLAS: When you did the EIR/EIS, did you do any specific outreach to, for example, community groups or for example the Cabezon Tribe? Did you do any specific outreach to the Cabezon Tribe in terms of getting information from them or ideas, comments?

DR. ECKHART: I am not sure. I know the Bureau of Reclamation dealt with the tribes, but I don't know which ones.

MS. DOUGLAS: So you don't know if they did any outreach to the Torres-Martinez Tribes?

MS. HARNISH: There have been current consultations with Torres-Martinez.

DR. ECKHART: Also past, I am aware of past consultations.

MS. DOUGLAS: What about with the American Lung Association in Imperial County, did you have any contact with them?

MS. HARNISH: Not that I am aware of. They've submitted comments.

MS. DOUGLAS: Did you have any contact or consultation with the Citizens Advisory Commission of IID?

DR. ECKHART: Yes, much.

MS. DOUGLAS: Are you aware that the Citizens Advisory Commission of IID commissioned CIC Research, Incorporated, a San Diego consulting firm, to do an evaluation of the economic impacts of the transfer?

DR. ECKHART: I am aware that they did the study, yes, or had it commissioned.

MS. DOUGLAS: Have you seen the study?

DR. ECKHART: I have not.

MS. DOUGLAS: Are you aware that the CAC [verbatim] submitted comments to the EIR/EIS?

MS. HARNISH: Yes.

MS. DOUGLAS: Have you seen the comments?

MS. HARNISH: I have seen an attachment to the comments, but not the comments.

MS. DOUGLAS: I've got both of those documents here. Can I refer to them just for reference as PCL Exhibits 29 and 30?

CHAIRMAN BAGGETT: Fine.

MS. DOUGLAS: The 29 being the Community -- being the independent analysis by the consultant and 30 being the CAC

comments to the EIR/EIS.

CHAIRMAN BAGGETT: Are you proposing to introduce --

MS. DOUGLAS: I am proposing to introduce them as exhibits.

CHAIRMAN BAGGETT: They would be numbered?

MS. DOUGLAS: They would be number 29 and 30.

The CIC report states that -- I am kind of -- this is kind of difficult. This is not CAC, CIC. The consultant's report states that the analysis of fallowing in the EIR/EIS was slanted in the direction of maintaining the same proportions of cropping patterns as in the past.

Do you think that fallowing is an economic alternative that the numbers could have come up differently if you had analyzed just fallowing crops that have high water requirements relative to value?

MR. OSIAS: Do you understand the question?

DR. ECKHART: I am not sure I do understand the question.

MS. DOUGLAS: Are you familiar at all with economic analysis that you did of the fallowing alternative?

DR. ECKHART: I did not prepare it.

MS. DOUGLAS: You are familiar with the basic parameters of it?

DR. ECKHART: Basic principles, yes.

MS. DOUGLAS: Is it correct to say that your analysis

has an assumption that cropping patterns would be and would remain really in the same proportions as they are today?

DR. ECKHART: The cropping patterns would move to the future as they are today, yes, that is the basis.

MS. DOUGLAS: Do you think that if you had not had that assumption you might have come up with different numbers in terms of the cost of fallowing?

DR. ECKHART: I can't answer that.

MS. DOUGLAS: Did you consider in the evaluation of the economic impacts of fallowing the process of land conversion from, for example, agricultural to urban use as the cities of Brawley and El Centro expand?

MS. HARNISH: Could you repeat that question?

MS. DOUGLAS: Did you consider the possibility that conversion of land from agricultural to urban uses would reduce in the longer run the amount of land that might need to be fallowed?

MS. HARNISH: No.

MS. DOUGLAS: Did you consider that one possible way --

MS. HARNISH: I am sorry, can you go back?

MS. DOUGLAS: Yes.

MS. HARNISH: Do you mean that the fallowed land would be converted to urban use?

MS. DOUGLAS: I mean as cities grow their agricultural -- there would be less agriculture going on because the

areas around the cities are agricultural lands now. So the cities grow, there might be less use or less agricultural production on that land. I think --

DR. ECKHART: I am not sure I understand the question. What I understand is that, yes, as a city grows if it grows on land that has been cropped, yes, there will be a crop reduction.

MS. HARNISH: Not a water reduction, not water use reduction.

DR. ECKHART: There may or may not be a water reduction.

MS. DOUGLAS: Thank you. That was the question.

On the CAC comments to the EIR/EIS they have some comments on the environmental justice analysis that you have done. One of their comments is basically did -- in your analysis you found that there was no significant environmental justice impacts of the proposed project; is that correct?

MS. HARNISH: That is what the EIR/EIS currently says, yes.

MS. DOUGLAS: Is that under revision, too?

MS. HARNISH: Yes, it is. I don't know what the conclusion will be, but that analysis is currently being expanded.

MS. DOUGLAS: Might you, as they suggest that you do,

expand the analysis to cover the effects on, say, lower income workers in the service sectors of reduced recreational opportunities at the Salton Sea?

MS. HARNISH: Yes.

MS. DOUGLAS: Very good. I don't have any more questions.

Can I move the document that I referred to here into evidence.

CHAIRMAN BAGGETT: Yes.

No objection.

MR. OSIAS: I have an objection. There hasn't been a foundation laid for the documents other than they are attached on some index when they put their case in chief on. I think that is the entirety of the foundation.

Are they on your index? Yes. How were they used? I don't know.

MS. DOUGLAS: All of these documents except for the last two that I have brought in as PCL 29 and 39 are already PCL exhibits.

MR. OSIAS: I understand. The fact that you identified them as exhibits doesn't lay the foundation.

MS. DIFFERDING: Perhaps we can wait until the end of PCL's case in chief.

CHAIRMAN BAGGETT: That was the point. That is fine. If you can just wait and we'll enter them all at once.

MR. OSIAS: Let me say, I don't have an objection assuming it is the valid copy of the CAC comments.

CHAIRMAN BAGGETT: We'll need copies of that. If you have them electronically, that is helpful. If not, if you can provide them by tomorrow.

MR. FECKO: By tomorrow is fine.

MS. DOUGLAS: I can provide them by tomorrow.

CHAIRMAN BAGGETT: Mr. Rossmann.

MR. ROSSMANN: Yes, sir. I think that Mr. Osias met my concern that 29 and 30 are going to be able to come in. There is no foundational problem.

MR. OSIAS: I don't have a problem with those.

CHAIRMAN BAGGETT: But -- not the other.

MR. ROSSMANN: I think the Chair has made the right ruling to wait until PCL presents its case in chief. Just in fairness we had suggested that Mr. Silva be here today in case those documents were available and if they can come in through PCL's presentation, then we don't have to put Mr. Silva on the stand unless Mr. Osias wants to have him explain the context in which those were prepared.

MS. DOUGLAS: Can I just move those two into evidence?

CHAIRMAN BAGGETT: There is no objection.

MR. OSIAS: No objection to 29 and 30.

CHAIRMAN BAGGETT: The two that were used during --

MS. DOUGLAS: Twenty-nine and 30.

CHAIRMAN BAGGETT: Very good. And the rest will wait until the case in chief.

Thank you.

Keep going.

Mr. Wagner, Audubon.

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CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

BY AUDUBON SOCIETY CALIFORNIA

BY MR. WAGNER AND MR. YATES

MR. WAGNER: Good afternoon. I am Keith Wagner with National Audubon Society, California. I will be asking a few questions about the EIR, and then I will hand over the podium to Bill Yates to ask further questions for National Audubon.

I had the opportunity to be here this morning to hear the direct, so I have a few questions based on the direct testimony for you.

First of all, I guess I want to get a sense of how this testimony fits together. As I understand it, we are here today to talk about the unreasonable impacts that this project may have on fish and wildlife resources in Phase II.

CHAIRMAN BAGGETT: Potential impacts.

MR. WAGNER: That it may have. Thank you.

So I guess as the first question what I would ask is that the -- as I read the testimony, anyway, and I want to

make sure that I am clear. The Environmental Impact Report that has actually been prepared according to statutory requirements and the Environmental Impact Statement produced for federal and state statutory requirements really is the basis for the IID case, that this project does not have significant environmental impacts; is that correct?

MR. OSIAS: I object to him asking the witness what the basis of the IID case is. If he wants to ask me, I suppose I will go out in the hall.

MR. SLATER: Calls for a legal conclusion. Join.

CHAIRMAN BAGGETT: The purpose right now is to ask questions of the preparers of the document before you, not the purpose of the document, or its focus. We have hopefully only today.

MR. WAGNER: Is it correct that Page 2 of the testimony it says that the DEIR/DEIS forms the basis for or basically that it is the environmental impacts resulting from the implementation of Imperial Irrigation District as detailed in the Draft EIR/EIS? That is what your testimony here today is regarding?

MS. HARNISH: Correct.

MR. WAGNER: Then at Page 9 under the heading D, that is says the Draft EIR/EIS assesses the environmental impacts that could result from IID's proposed project?

MS. HARNISH: That is right.

MR. WAGNER: In that regard the DEIR/DEIS is not just serving the statutory purposes of satisfying CEQA and NEPA, but is basically the fundamental document here that we are discussing as to what are the impacts and are the reasonable or unreasonable?

MR. OSIAS: Objection. The same as I made before. The summary of what he just read from the testimony is absolutely correct. The Draft EIR/EIS has been submitted into evidence. It is not the entirety of the case. We have another witness, and we touched on benefits in Phase I.

CHAIRMAN BAGGETT: Yes.

MR. OSIAS: Misstates. And these witnesses wouldn't know. They are only here to talk about what he's already cited them to.

CHAIRMAN BAGGETT: Sustained.

This is a portion of their case in chief. This isn't the entire thing they are relying upon, the entire evidence. This is only part of the evidence. We can go back and these are the preparers of this.

We hone in on the document itself. That is why, I think, the two witnesses are here. That is what we are trying to get at, is the information related to that, not whether how this fits into their case in chief and all the other pieces of evidence and expert we are going to have tomorrow morning and experts we went through for about a day

last week.

I think he is correct. I will sustain the objection.

MR. WAGNER: Very well.

So within the environmental review that you have prepared we have a project setting. And CEQA requires a project setting that describes existing environmental condition.

As consultants who prepare EIRs, do you agree with that statement?

MS. HARNISH: Yes, a description of the existing conditions is a requirement of CEQA.

MR. WAGNER: And for establishing the existing condition, when is that existing setting described? Or in particular, does CEQA require that the existing setting be described at the time of the notice or preparation?

MS. HARNISH: It does. It makes allowances for resource areas where a projection may be more appropriate or a timeline may be more appropriate.

MR. WAGNER: Where is that exception found?

MS. HARNISH: I am not a lawyer so I can't cite it. It is in the guideline section. I'm an not attorney. That is my understanding.

MR. OSIAS: I don't have to answer questions.

MS. HARNISH: Lucky you.

CHAIRMAN BAGGETT: You are not a witness. You get off

the hook, Mr. Osias.

MR. WAGNER: In describing the existing setting for this project, there are actually a number of sections of the EIR, and each section of the EIR talks about an existing setting. I am going to focus primarily on the hydrology and water quality sections and the biological resources settings for the next few comments or questions.

The existing setting is described in the EIR as the current setting based on various studies that have been conducted. And then the EIR goes on to talk about a baseline model that has been described for the environmental impact analysis.

Is that correct?

MS. HARNISH: Yes.

MR. WAGNER: That baseline for the Salton Sea is based on the Salton Sea accounting model, which I believe is found at Appendix F, I think, of the EIR, maybe E. The model is what is important.

DR. ECKHART: The Salton Sea model is in Appendix F.

MR. WAGNER: Now the Salton Sea model, and I would turn your attention to Exhibit C from the testimony that you have offered today, the Salton Sea model establishes a 75-year project projection and at Exhibit C you indicate that the year 2077 is the baseline.

Is that correct?

DR. ECKHART: Table 3.3 is the baseline, represents baseline values, yes.

MR. WAGNER: Next to the year 2077 it says baseline?

DR. ECKHART: Yes, referring to the values in the horizontal line next to 2077. That is correct.

MR. WAGNER: The footnote below it says, however, for salinity the baseline is the year which is the year when 60 grams per liter is reached.

Is that correct?

DR. ECKHART: That's correct.

MR. WAGNER: And that year is not 2077?

DR. ECKHART: That's correct.

MR. WAGNER: When developing this baseline and projection, the logic that has been used here so far has been that the reason for this projected baseline is because the proposed water transfer project cannot be held accountable for mitigating all of the impacts of the proposed project.

Is that correct?

DR. ECKHART: No.

MR. WAGNER: What is the purpose for using the projected baseline?

DR. ECKHART: Projected baseline is to determine the impacts of the proposed project and alternatives. It is a method to measure those proposed impacts.

MR. WAGNER: Well, let's follow that for a second, then. If it is to measure the alternatives, one of the alternatives that CEQA requires is a no-project alternative; is that correct?

DR. ECKHART: That's correct.

MR. WAGNER: And in this particular case for the baseline that you have considered I believe the testimony earlier today was that the baseline is what has historically happened and what will be happening in the future affecting the Sea. And those assumptions that are included in the baseline include the '88 IID and MWD agreement, a look at increases in municipal water use, adjustments to increase for water -- increased water use due to increased salinization and also affects attributable to river water administration.

Is that correct?

DR. ECKHART: That's correct.

MR. WAGNER: And so if we have to analyze a no-project alternative for the future for the next 75 years, you have already included all of these projects in your baseline for the project.

DR. ECKHART: Define project? These aren't projects. We have included no projects in the baseline. Those four items, in my opinion, are not projects.

MR. WAGNER: Was there an EIR done for the '88 IID/MWD

transfer?

DR. ECKHART: That's correct, and that environmental document has been completed, so that would be in the baseline.

MR. WAGNER: Would that be a project?

DR. ECKHART: Yes.

MR. WAGNER: Would the administration of river water be a project?

DR. ECKHART: No.

MR. WAGNER: No. So does there yet have to be a decision regarding enforcement mechanisms that are within the QSA at this time?

DR. ECKHART: I am not sure I understand the question.

MR. WAGNER: In other words, for administering the Colorado River water within the state the QSA sets up a number of requirements for doing that.

Are those requirements in place?

DR. ECKHART: I am confused. The river administration we are talking about is for the baseline which has nothing to do with the QSA.

MR. WAGNER: So what are the river administration -- the future river administration requirements that you're taking into consideration?

DR. ECKHART: Hold the ag users to 3.85 million acre-feet.

MR. WAGNER: The way that you hold that is by also imposing a penalty of about 59,000 acres per year of water use, is that correct, from the baseline of the Salton Sea model?

DR. ECKHART: I don't understand that. You're moving from administration enforcement to modeling and analysis. So could you please rephrase the question?

MR. WAGNER: In the table that shows water use in Appendix F for the Salton Sea Model --

DR. ECKHART: Can you give me the table, please?

MR. WAGNER: Appendix F, the table, I don't have it in front of me, actually. It would be the water use table showing the consistent drawndown every year of approximately 50-, I want to say, -9,000 acre-feet. Let me look real quick. 56,856, found at Table 4.1 on Page 14.

DR. ECKHART: I see the number you're referring to.

MR. WAGNER: What is the entitlement enforcement?

DR. ECKHART: What that is, that is a method by which we analyzed river administration. So what that is is in the valuation of IID's and Coachella's future needs on the river, we compared that to the 3.85 river entitlement. And on average the enforce requires and the effects when you find the effects to the Sea is 56,800.

MR. WAGNER: Those enforcements have yet to be approved; is that correct?

DR. ECKHART: Again, I don't understand your question. This is my understanding. The Bureau has this ability to enforce administration now.

MR. WAGNER: Has the ability to enforce it, but these are not numbers that have actually been removed from the river; is that correct, or from the Salton Sea inflows?

DR. ECKHART: That's correct.

MR. WAGNER: These are projected numbers, but they've actually been removed or no action has been taken by the Bureau of Reclamation to engage in these reductions?

DR. ECKHART: These are administrative numbers that we project as potentially to potential possible in the future.

MR. WAGNER: So we have included all of these things as the baseline of the project. If that is the baseline for the project to year 2077, what other impacts have been included in the no-project alternative?

DR. ECKHART: You listed four, actually, that I commented on this morning. Those are the four items that we believe when we look into the future that would be included in the no-project situation.

MR. WAGNER: Those are not a part of the baseline?

DR. ECKHART: Those four items are part of the baseline.

MR. WAGNER: So what other items would exist or what would be included in the no-project alternative that is not

already in your baseline?

DR. ECKHART: In this case the no-project and the baseline are the same thing.

MR. WAGNER: Are you familiar with CEQA guideline 15126.6?

MR. OSIAS: By number?

DR. ECKHART: I am not.

MR. WAGNER: 15126.6, this would be particularly subdivision E-1.

Are you familiar that this section reads that the specific alternative to no-project shall be evaluated along with its impact, and then will skip a sentence, then it says, the time no-project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant? Are you familiar with that section of CEQA?

DR. ECKHART: I am not necessarily familiar with that, no.

MR. WAGNER: I guess I would just ask for clarification from Ms. Harnish, then, as a final point for my questions.

You said that some resources we haven't used to project the baseline, such as archeological resources, but rather used an existing setting. For other projects you have used a projected baseline out to the year 2077, maybe somewhere

else. How many baselines can a CEQA project have, Ms. Harnish?

MS. HARNISH: I think we used the one most appropriate for the resource.

MR. WAGNER: So in this case you have 16 different resource areas?

MS. HARNISH: We don't have 16 different baselines. We have the projected baseline that we use fits all associated with the hydrology of the Salton Sea.

Is that correct?

DR. ECKHART: That's correct.

MS. HARNISH: The resource area is not connected to the Salton Sea. My recollection, and I would have to refresh that, but my recollection is that they are all based on existing condition at the time of NOP preparation.

MR. WAGNER: But not the impacts to hydrology or to biological resources?

MS. HARNISH: Associated with the Salton Sea hydrology. Their biological resources that are not related with the Salton Sea hydrology.

MR. WAGNER: Those resources would be analyzed by a baseline 77 years from now?

MS. HARNISH: No. For example, the biological resources in, like, the drains.

DR. ECKHART: In the drains we actually do use the

project resource.

MR. WAGNER: That concludes it for my questions. I will hand the podium over to Mr. Yates.

Thank you.

MR. YATES: Thank you very much.

My name is Bill Yates. I am here on behalf of National Audubon.

I have a few questions over the relationship of this Draft EIR/EIS to other matters addressing this project, this transfer of water from Imperial Irrigation District to San Diego. You have made mention of the fact there is a program EIR being done for the Quantification Settlement Agreement.

Is that right?

MS. HARNISH: That's right.

MR. YATES: CH2MHill is not preparers of that document?

MS. HARNISH: No, we are not.

MR. YATES: Is this Draft EIR/Draft EIS prepared by CH2M tiered in this program, EIR?

MS. HARNISH: I believe it is tiered, but I am not certain. That is the program document and this is the project level analysis. Maybe you need to define "tiered."

MR. YATES: Does your document suggest that it is a tiered document?

MS. HARNISH: I don't think we use that word in our document.

MR. YATES: It is project specific Draft EIR/EIS?

MS. HARNISH: Yes.

MR. YATES: The project is defined as the transfer of water from Imperial Irrigation District to the San Diego County Water Authority as well as an alternative which would provide water to MWD and Coachella Valley; is that correct?

DR. ECKHART: Yes, that is correct.

MR. YATES: The entirety of the project from, let's say, the California Environmental Quality Act standpoint, what that law is concerned about, is it not correct to say, is concerned with the change to the physical environment caused by that project, correct?

MS. HARNISH: Could you reask the question?

MR. YATES: What your document is concerned about is change to the physical environment that exists there now?

MS. HARNISH: We are looking at impacts as defined by the significant criteria. In some cases change is true.

MR. YATES: Excuse me while I get your testimony.

Both of you have a great deal of experience in California Environmental Quality Act; is that correct?

MS. HARNISH: I do.

DR. ECKHART: I do not actually.

MR. YATES: You do not.

So, Ms. Harnish, you were not the project manager for this EIR/EIS?

MS. HARNISH: For about the last six-month period I have been, but not previous to that.

MR. YATES: Is it not just fundamentally the purpose of California Environmental Quality Act to be concerned about significant change to the physical environment?

MS. HARNISH: Yes, it is.

MR. YATES: Is that significant change limited to native natural resources?

MS. HARNISH: No.

MR. YATES: So the loss of 200,000,000 tilapia would be something that would be a physical change to the environment?

MS. HARNISH: That's correct.

MR. YATES: The issue comes down as to whether it is significant?

MS. HARNISH: That's right.

MR. YATES: On what basis did you determine that it was not significant?

MS. HARNISH: I did not write the biological study.

MR. YATES: You are the project manager?

MR. OSIAS: Let her finish.

MS. HARNISH: I was not involved when the significant criteria were developed. I can't speak to it, but I can tell you it is shown as a significant impact in the recreation section.

DR. ECKHART: Realize that we are talking about a

temporal impact.

MR. YATES: I don't understand that. Could you explain that to me?

DR. ECKHART: Under current conditions, the Sea is a changing resource. And that changing resource as we see it looking back in history is going to continue to change. And our project is going to change that change. So the transfer will change that change. So it is temporal change. So, for instance, depending on what resource you are looking at, if the Sea is becoming hypersaline, the transfer, as the analysis shows, could potentially change when the Sea becomes hypersaline, as you might define hypersaline.

MR. YATES: Is it unusual from your experience, Ms. Harnish, in dealing with environmental impact reports that you're dealing with an environment that isn't static?

MS. HARNISH: Well, most environments aren't static. To compare to a system that is changing as much as this one is, I would say it is unusual.

MR. YATES: If someone was to build a large significant building in the heart of the financial area of San Francisco, which is going to employ several hundred thousand people, and they built the structure, wouldn't they assume that it may last for at least 75 years?

MS. HARNISH: Might we assume that a building that they built would last for 75 years; is that your question?

MR. YATES: Yes.

MR. SLATER: Object. It is incomplete hypothetical. Don't know anything about the building, where it is, what the conditions are.

MR. YATES: The basis for this analysis is that this project's lifetime is 75 years. So as pointed out on Exhibit C of our baseline really begins at the year 2077, despite the fact that the project is happening now.

If you were to build a structure that you would assume that the building was to last 75 years, wouldn't one of the impacts of that structure that you would consider as you evaluate the impacts of that would be traffic as a result of that generated by that building?

MR. SLATER: Repeat my objection.

CHAIRMAN BAGGETT: I guess I would question the relevance here.

MR. SLATER: I will make that my objection as well, relevance and scope of expertise and no foundation, and it is an incomplete hypothetical.

CHAIRMAN BAGGETT: Can you give us some idea?

MR. YATES: I appreciate maybe I am -- what we are doing here is that the arguments being posed by the testimony presented that because the Salton Sea is changing, that we can depart from the statutory requirements that we have evaluated the project based on the fact that the law

says that what you are concerned about is how your project physically changes that environment. And the guidelines say at the time that your notice of preparation is released or if you don't do a notice of preparation, when your environmental review commences.

CHAIRMAN BAGGETT: I follow that.

MR. YATES: All I am suggesting is that if we establish for you as a responsible agency that precedent here that we depart from that understanding of law.

CHAIRMAN BAGGETT: I understand that. I guess the second question, are these the appropriate witnesses to ask such -- it is a legal conclusion.

MR. OSIAS: There is a lot of argument going on here.

CHAIRMAN BAGGETT: I would --

MR. OSIAS: I also think he misstates it.

CHAIRMAN BAGGETT: I suppose if the witnesses are comfortable answering the question.

MR. OSIAS: He's misstated the prior testimony, that the baseline isn't the 75-year projection. It is, in fact, only year 2077.

CHAIRMAN BAGGETT: Okay. I understand. We are into --

MR. YATES: I won't continue this.

I am not exactly sure if I misstated it, but it is table 3-3, which is attached as Exhibit C to your testimony. It says 2077, in parens baseline.

DR. ECKHART: If you look at the right of the table, entire table, is the Salton Sea baseline. So, I mean, I don't recall why that baseline word is there. That entire table represents baseline.

MR. YATES: So we have a baseline at 2002, 2023 and 2077?

DR. ECKHART: Remember, we are looking at a projected baseline in this document, in this analysis. So the baseline has all the variability built into it, which means it is over a period of time.

MR. YATES: It is indeed, as you suggest, a projected baseline?

DR. ECKHART: Based on existing conditions and anticipated reasonable future changes.

MR. YATES: The lead agency for this document is the Bureau of Reclamation and the Imperial Irrigation District, correct?

DR. ECKHART: Correct.

MR. YATES: Who funded the EIR/EIS?

DR. ECKHART: I am not familiar with all the funding of this particular document. I know that the CH2MHill's contract is with Imperial Irrigation District.

MR. YATES: You should know. I mean, what is your title in this whole operation? You're program manager for the IID, SDCWA water conservation transfer, joint EIR/EIS.

DR. ECKHART: That was my former title.

CHAIRMAN BAGGETT: He answered your previous question. Do you have another question?

MR. YATES: I don't know the answer, sir.

Who paid for the EIR/EIS?

DR. ECKHART: I told you I do not know. I know that we are under contract with the Imperial Irrigation District and they're paying our contract.

MR. YATES: On your Curriculum Vitae it also points out that you also were employed by Imperial Irrigation District; is that not correct?

DR. ECKHART: That's correct.

MR. YATES: You also worked for Imperial Irrigation District on this project?

DR. ECKHART: That's correct.

MR. YATES: Thank you.

CHAIRMAN BAGGETT: Let's take a five-minute break. We will come back with Salton Sea Authority.

(Break taken.)

CHAIRMAN BAGGETT: We are back on record.

Up with the Salton Sea Authority.

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CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

BY SALTON SEA AUTHORITY

BY MR. KIRK

MR. KIRK: Good afternoon, Dr. Eckhart, Ms. Harnish. Dr. Eckhart, I assume I can call you John? You allow that?

DR. ECKHART: Yes, I will. That is my name.

MR. KIRK: Ms. Harnish, I don't know you well enough to call you by your first name, so I will stick with that.

We're going to focus a little bit more on the baseline. I suspect you are getting tired of hearing about the baseline, but would you agree that the baseline issue and what we use for hydrology, really, many of the impacts in the EIR/EIS spring from that foundation? The hydrology is important and probably a critical part of this document?

DR. ECKHART: Yes. I would agree that the reference to the baseline to determine the impacts, yes, it is important.

MR. KIRK: What has -- when we talk a lot about inflows, average inflows and I know, John, you focused, given your experience, on variability. But most of my discussion will be on the average. Just simpler for my small brain to understand.

The average, average inflows into the Salton Sea for the past 15 years, what are those? Do you know what that is in acre-feet per year?

DR. ECKHART: You will have to refer me to a table. There are too many numbers here for me to remember.

MR. KIRK: I will put it up on the screen. This is Appendix F, Page 6, Table 3.2. And this is the last part of that table. The previous part is on the page before, I guess Page 5 or 6.

What we have up on the screen, John, are the last 25 years, thereabouts, of the current or historic inflows at the Sea. Can you read, if you can't read up there in your own document, what the average is for this 50-year period in the bottom right-hand column?

DR. ECKHART: That bottom right-hand column represents the historic inflow for the period of 1950 through 1999, and that number is 1,343,395.

MR. KIRK: So when I use 1.34 million acre-feet or thereabouts, that is the number I will be referring to as the historic average for the 50-year period you identified in your document.

Is that fair?

DR. ECKHART: That's correct.

MR. KIRK: Would it surprise you, and I don't expect you to get out your calculator, if you would like to we may have a little bit of time later to do that, would it surprise you if we took that table and for every ten-year period, the first ten years, 1950 to 1960, 1960 to 1970, '70

to '80, '90 to 2000 or '90 to '99, the average in every one of those ten-year periods is about 1.34 million acre-feet? Does that surprise you?

DR. ECKHART: That actually does surprise me.

MR. KIRK: You might want to double-check, and perhaps when you're redirected you could address that issue.

MR. OSIAS: Surprise isn't relevant.

MR. KIRK: Not to me. Again, we want to establish that the average inflows are 1.34 million acre-feet. And, in fact, there has been very little variability over longer time periods, whether it is ten years or 15 years.

I think Table 3.2 and Appendix F does demonstrate that, does it not, John?

DR. ECKHART: Well, if your calculation is correct, yes.

MR. KIRK: Let's move on to the following table in the same document. Actually, it is not the following table. It is the Present Level Salt Budget, Table 4.1. Table 4.1, and we have it up on the screen here, this projects a historic baseline through the next 75 years, or thereabouts, 74 years.

What is the average baseline identified in this table?

DR. ECKHART: Again, in the last column, the number is 1,230,425.

MR. KIRK: So when I say 1.23 million acre-feet or

thereabouts, we are referring to that projected baseline. Is that fair?

DR. ECKHART: As an average, yes.

MR. KIRK: Next I would like you to refer to our feather exhibit. Is that what your counsel has referred to it as? This is in the EIS/EIR. It' been up before. The last two graphs there are salinity. One under the baseline, the baseline/no project which you have combined. And in the right-hand side for us looking at the page is the project conditions; is that correct?

DR. ECKHART: Except that the first column is project baseline. If you go to the next page, alternative one is the no-project.

MR. KIRK: The project and the no-project are essentially the same, are they not?

DR. ECKHART: Essentially.

MR. KIRK: No-project and the baseline are essentially the same, are they not?

DR. ECKHART: Yes.

MR. KIRK: So we are comparing salinity under the baseline to salinity under the proposed project, at least in this exhibit, correct?

DR. ECKHART: That's correct.

MR. KIRK: Ms. Harnish, when you -- I assume you have prepared many environmental documents in the past?

MS. HARNISH: That's right.

MR. KIRK: When you do that, do you get the sense that most stakeholders out there have a very good understanding of statistics, graphs and the like?

MS. HARNISH: There is variability in the audience of EIRs and EISs.

MR. KIRK: I suppose if I am talking about statistics, there is variability.

MS. HARNISH: No pun intended.

MR. KIRK: Do you try to target these documents to a particular grade level readingwise or lowest common denominator?

MS. HARNISH: We haven't identified a particular grade level, but we are aiming to make it understandable to the general public.

MR. KIRK: To the general public, if they were comparing the graph on the left to the graph on the right, what conclusion would they come to?

MS. HARNISH: I can't say what they would --

MR. KIRK: Is it possible that they would come to the conclusion that the salinity at the end of the time period is the same under both the no-project as the proposed project conditions?

MS. HARNISH: I don't think so.

MR. KIRK: If they didn't understand how to read and

axis -- is it unusual to prepare a document that compares the trend and, in fact, your counselor referred to being vertically challenged earlier when he looked at the axis.

Is it unusual to prepare an axis with different amounts on the scale? Can you point -- in fact, we can't see it from here. What is the ending salinity on the graph on the left and what is the ending salinity on the graph on the right?

MS. HARNISH: It is 90,000 on the one on the left and 180,000 on the one on the right.

MR. KIRK: Twice as high.

Thank you.

This, of course, goes to when we measure the impacts for many of the resource areas other than some resource areas like cultural, you are measuring the impacts of the graph on the right compared to the graph on the left?

DR. ECKHART: That's correct.

MR. KIRK: I was hoping to bring up IID Exhibit 63, Page 24, but this does quite the same thing. IID Exhibit 63 was not available in electronic form yet.

This is Salton Sea Authority Exhibit No. 11. Under Salton Sea Authority Exhibit No. 11 also shows trend lines. You can see there that salinity again is on the left or Y axis, year on the bottom or X axis. Reverse those X and Y's, you get the picture.

Under the current inflow can you describe to me approximately, either of you, what the salinity would be at year 2060.

MR. OSIAS: Objection. Just for clarity. You are not asking them to actually describe to you what the salinity would be. You are asking them to read the chart on the screen.

MR. KIRK: Fair enough.

MR. OSIAS: The record will show that they are going to answer by using your exhibit.

MR. KIRK: Thanks for the clarification.

CHAIRMAN BAGGETT: He's agreed.

With that clarification.

MR. KIRK: Please read for me what you see on the screen with respect to this exhibit under the current inflows at year 2060.

MS. HARNISH: Which line represents current inflows?

MR. KIRK: The one that says 1.34 million acre-feet per year.

DR. ECKHART: From my angle it looks like the salinity in the year 2060 is something on the order of 58,000 milligrams per liter.

MR. KIRK: By year 2060 if, in fact, we use the 1.34 million acre-feet per year and if, in fact, we assume that this model was a correct model, we would still not be at the

magic number, as you call it, of reaching a threshold for tilapia; is that correct?

DR. ECKHART: That's correct.

MR. KIRK: You see the difference there between using 1.34 and 1.24. Can you describe to me what occurs under 1.24 trend Line in the year 2060?

DR. ECKHART: First of all, I don't understand what is behind the trend line. In other words, therefore, for example, I don't know if you're saying those trend lines represent 1.24 for the entire time period or if there is a ramp up or ramp down. I need to know the assumptions behind those.

MR. KIRK: I am not asking you to query my assumptions. I'm only asking you to read the exhibit.

DR. ECKHART: So what was the question, again?

MR. KIRK: The question is: Where are we in terms of salinity at the Salton Sea according to this exhibit in year 2060 if inflows average 1.24 million acre-feet per year?

DR. ECKHART: Again, from my angle about, I'm guessing, 75,000 milligrams per liter.

MR. KIRK: And if inflows average 1.0 million acre-feet per year, can you determine what the salinity is with the axis on this graph?

DR. ECKHART: For the year 2060? No.

MR. KIRK: But we presume it would be well over 100,000

parts per million?

DR. ECKHART: I could presume that unless it takes a right angle at the top or your graph.

MR. KIRK: If it came back down, you'd probably see it. We'll assume that it is at least over 100,000 parts per million.

If, in fact, and you understand I am sure that one of the concerns expressed here is about the use of your baseline. We see that the 1.24 million -- and you appreciate -- the 1.24 million acre-feet baseline accelerates the demise or the decline of this resource when compared to using a 1.34 million acre-feet baseline regardless of the details of the assumptions.

Is that a fair statement?

DR. ECKHART: According to your graph, yes, there is a change that would make it happen earlier.

MR. KIRK: According to any graph that you have seen with respect to salt modeling at the Salton Sea, if you were to change the average inflow in 1.34 million acre-feet to 1.24 million acre-feet, wouldn't you, in fact, increase the rate of salinization at the Salton Sea?

DR. ECKHART: From the graphs that I have seen that is correct.

MR. KIRK: If, in fact, you had conducted your impact analysis using 1.34 million acre-feet, wouldn't you have had

-- would you have shown greater impacts to many resource areas in your EIR/EIS?

DR. ECKHART: Many of the resources? No. Because what we are talking about is all of the in-valley resources of the Lower Colorado River.

MR. KIRK: Clarification. If you had used 1.34 million acre-feet average inflow for resources connected to the Salton Sea and its hydrology, air quality, biological resources, the aesthetics, would the impacts have registered greater than they otherwise have when you use the 1.24 million acre-feet baseline?

DR. ECKHART: In reference to the proposed project?

MR. KIRK: Yes.

DR. ECKHART: It is my belief from the analysis that we have done that the impacts are measured against the baseline. Therefore, whichever baseline we use the impact as a result of the project will be approximately the same.

MR. KIRK: So there would be a sliding scale is what you are suggesting. If you would change the baseline to 1.34, the project would have had a hundred thousand or 110,000 acre-feet less of impact on the Salton Sea?

DR. ECKHART: Some type of sliding scale, yes.

MR. KIRK: I guess I am having a hard time understanding that, John. If you look at this graph and you look at particularly the temporal impact, as you call it,

with biological impact, when you leach 60 parts per thousand is a pretty significant indicator, is it not?

DR. ECKHART: I am not sure I understand the question.

MR. KIRK: The 60 parts per thousand you identified as a magic number in earlier testimony, did you not?

MR. OSIAS: Objection. Misstates his earlier testimony.

MR. KIRK: Did you not? Isn't that the question? I posed it as a question. I'm asking him if, in fact, he identified 60 parts per thousand as a magic number.

DR. ECKHART: The 60,000 parts per thousand or 60 parts per thousand is a threshold number that's been given to us by the wildlife agency as a measurement to which we can define whether the fish survive.

MR. KIRK: I understand that. I am not questioning that at this point. I think you did use the term magic or magic number. Fair enough.

At 60 parts per thousand the -- again, if we call it -- I will term it magic number for my own purposes. That magic number is not reached until well after 2060 under your model. Again, this is not your EIS/EIR we're referring to, correct?

DR. ECKHART: That's correct.

MR. KIRK: Under this exhibit, the 1.24 line would suggest we reached 60 parts per thousand in the year 2025 or

thereabouts, which is pretty close to what you are suggesting at 2023 under the EIR/EIS; is that not correct?

DR. ECKHART: That's correct.

MR. KIRK: In fact, earlier testimony suggested you may be bumping that number back a year; 2023 may become 2024; is that accurate?

DR. ECKHART: The mean number, yes.

MR. KIRK: In fact, in this 1.24 line, at least where it crosses the 60,000 part axis, is pretty close, a very close fit, to what you have in your EIS/EIR. If you were to measure the impacts of your project against that 1.24 line, in fact, your temporal impact is 11 years or thereabouts, on average; is that correct?

DR. ECKHART: That's correct.

MR. KIRK: When you measure your project against a line, the 1.34 line and the 60 parts is crossed at 2060 or after, isn't the impact more like 50 years?

DR. ECKHART: Using your analysis that could be correct.

MR. KIRK: Thank you.

Let's talk a bit about why you use 1.24. It's actually 1.23, is it not? 1.23, in fact, 1.24 up here overstates your analysis by a little bit, 10,000 acre-feet. A 1.23 million acre-feet, now we have gone over and over what accounts for the reduction in the baseline. Is that not the

case you identified four or five factors; is that correct?

DR. ECKHART: That's correct.

MR. KIRK: Can we discuss a few of those factors again. One is IID/MWD number one. And that was a 110-, 108,000, 110,000 acre-foot water transfer through mostly a system improvement but some on-farm conservation as well.

Is that correct?

DR. ECKHART: Correct.

MR. KIRK: In the past ten, 12 years what are the average inflows in to the Salton Sea?

DR. ECKHART: The historic, again?

MR. KIRK: The historic.

DR. ECKHART: Your table would show something like 1.34.

MR. KIRK: Yeah. I think it has been 1.34 million acre-feet in the past ten, 12 years. So we didn't see a reduction in inflow to the Salton Sea during the period of the IID/MWD transfer to date; is that correct?

DR. ECKHART: That's correct.

MR. KIRK: I will give you a chance to clarify. Perhaps I will do so for you. Your rationale is, in fact, some of those reductions have occurred but are masked by changes in the farm economy, surplus criteria, et cetera?

DR. ECKHART: That is correct.

MR. KIRK: We would see in the future some additional

reductions going into the Salton Sea?

DR. ECKHART: That's correct.

MR. KIRK: I understand it, which perhaps is a step in the right direction.

One thing I don't understand is your new exhibit. It wasn't clear to me if that was entered into evidence or not. Could you put that up, John?

Thank you, David.

MR. OSIAS: And it was entered into evidence.

MR. KIRK: I can't remember the exact number, David. Do you?

MR. OSIAS: Sixty-six.

MR. KIRK: Is this an exhibit that identifies the majority or, in fact, all of the improvements associated with IID/MWD number one?

DR. ECKHART: As I recall, it identifies the majority.

MR. KIRK: And the improvement in color, in yellow, tan and green or bright green, the large polygons, could you describe to us those again?

DR. ECKHART: Those represent lateral interceptor system projects.

MR. KIRK: There was some questioning earlier about how those might be related to seepage and whether your tile system picks up drainage on those; is that correct?

Mr. Du Bois asked some questions about --

DR. ECKHART: As I recall, that questioning was related actually to canal lining.

MR. KIRK: The canal lining is shown on this in what color?

DR. ECKHART: I believe it is red.

MR. KIRK: Throughout the District is there a preponderance of canal lining in any particular area of the District?

DR. ECKHART: There is actually two colors representing the canal lining.

I'm sorry, go ahead.

MR. KIRK: If you can clarify that, John.

DR. ECKHART: There is black and red, and those represent what MWD has lined, the MWD project lined, and what IID has lined themselves.

MR. KIRK: Would the majority -- in fact, when were the last improvements constructed and fully operational under IID and MWD number one?

DR. ECKHART: I don't recall the date of the last ones.

MR. KIRK: About '96, '97?

DR. ECKHART: Something like that.

MR. KIRK: In fact, for improvements that have occurred, I guess, north of the green line as it were, but actually north of the green polygon, we should have seen the

impacts on the Salton Sea for all of those improvements to date. They were conducted -- you used an estimate of one to five years for flows getting into the Salton Sea?

DR. ECKHART: That's correct. I mean, that is a variable number, but again.

MR. KIRK: Thank you.

The second area that accounts for the reduction in baseline, I believe is the or at least secondary on my notes, perhaps it is different on yours, John, are the changes that occur in the CVWD service area. Is that correct? Is that one of the areas that accounts for a change in the baseline over time?

DR. ECKHART: Actually, no. I don't think they're included in mine. There are things happening within the CVWD area which we follow through, but it is a continuation of what is hatching now within the baseline. In other words, they're pumping their wells, and they're going to continue to pump their wells in the baseline.

MR. KIRK: Is it fair to say that the average flow contributed by CVWD in the next 75-year period is significantly less than the flow contributed by CVWD in the 50-year historic period?

DR. ECKHART: I can't tell you if it is significant or less, but my assumption is it is less.

MR. KIRK: In fact, this is again Appendix F. I

apologize, Ms. Harnish, you can't see me now. It's probably better for your eyes, anyway.

John, Appendix F -- can you hear me now?

MR. OSIAS: Now I can see him.

MR. KIRK: Appendix F, we have at the top of column 6 CVWD baseline discharge to the Salton Sea and that averages 64,000, actually closer to 75,000 acre-feet per year?

DR. ECKHART: That's correct. That table is 4.1.

MR. KIRK: Yes.

If we look at the historic, total historic, from CVWD is where I've my magnifying glass up on the screen. Isn't total historic at the bottom of that column close to 116,000 acre-feet?

DR. ECKHART: Yes, actually slightly over 163-.

MR. KIRK: I haven't done the math very quickly here, but 50,000 acre-feet less from CVWD?

DR. ECKHART: That's correct.

MR. KIRK: Ms. Harnish, is one of the purposes of CEQA and NEPA to disclose information?

MS. HARNISH: Yes.

MR. KIRK: And presumably your firm takes it very seriously to provide citations and references. And I think some of the other questioners, petitioners, participants, questioned you about citations, et cetera?

MS. HARNISH: Yes.

MR. KIRK: Appendix F, the baseline which so much rests has several footnotes. Bear with me. This is Table 4.1 again. And at top of the column you will see IID baseline discharge to the Sea, flows from CVWD, entitlement enforcement, et cetera. And at the bottom each one of those columns have been footnoted. All information related to IID and related, in fact, to entitlement enforcement, there is a footnote there. It says provided by Imperial Irrigation District.

Where is the information that underlies this table?

MS. HARNISH: I was not involved in the preparation of this appendix, so I will have to defer.

MR. KIRK: John.

DR. ECKHART: It depends which column you are looking at. Each of those columns have information from --

MR. KIRK: What I will grant you is it appears that in Chapter 3, and confirm whether I'm right or wrong, Chapter 3, there is information on changes in the baseline associated with IID's deliveries because of changes in the farming practices, et cetera.

Is that where we would find information referenced under the baseline contributions directly from IID?

DR. ECKHART: I don't know which section you're referring to exactly, but there are several references within the body of the document plus in the appendices.

MR. KIRK: I will go up to actually, again, the CVWD contributions. The CVWD's contribution is changed by an average of about 50-, 40-, 50,000 acre-feet per year. And what we get here is provided by CVWD.

Where in any of the testimony, where in any of the exhibits you've provided, where in the EIS/EIR, your disclosure document is the information found that supports getting this information from CVWD?

DR. ECKHART: As I recall, in this same document because this information or this particular accounting model was developed and run by the Bureau of Reclamation. This information was furnished to the Bureau of Reclamation. And on Page 38 of this particular document is the graph which had table that as provided to the Bureau of Reclamation, and this document includes that graph that was provide by CVWD.

MR. KIRK: Do we have -- so the information has been provided to Bureau of Reclamation, but it is not incorporated. Is there a plan in the EIS, a modeling run that has been done by CVWD that would be available to the public as a part of this disclosure function of EIS/EIR?

DR. ECKHART: This is a continuation of their pumping as they have historically and resulting --

MR. KIRK: I am not asking for your interpretation of their analysis. I am asking if there is information

available to the public that would support the change in the baseline associated with CVWD contribution?

MR. OSIAS: Other than what he's already answered?

MR. KIRK: In fact, he has not identified information that supports the change in CVWD's contribution. We don't see a model. We don't see modeling --

MR. OSIAS: He testified it is supported. There is a graph included on Page 38.

DR. ECKHART: Which was provided to us.

MR. KIRK: So we have the graph. We have the output of something, but we don't have the underlying assumptions.

Do you know if the underlying assumptions are available to the public on the changes in the reduction of inflows?

DR. ECKHART: I am not aware of that.

MR. KIRK: Moving on to one of the other contributions, if we can call it that, to the change in baseline. That is entitlement enforcement. And Mr. Rossmann addressed this somewhat.

Correct me if I am wrong, John. If I understand it correctly, entitlement enforcement is assumed to be if the Secretary is forced to reduce California water user's use of Colorado River water to their entitlement in the future; is that correct?

DR. ECKHART: Yes. Under -- yes, that is correct.

MR. KIRK: If I understood your earlier responses to

Mr. Rossmann, you have accounted, in fact, in terms of the model you have accounted for the reduction associated with entitlement enforcement in these water systems. You have accounted for the reduction not only within the IID/CVWD service territory, but also the Metropolitan Water District Service territory?

DR. ECKHART: We did not analyze that. It is included.

MR. KIRK: I understand. But it is included.

So you assumed if the Secretary is going to enforce entitlement, he would do so here, here in your and my mind is the Salton Sea area, CVWD, IID, and he would also do it for Metropolitan Water District, correct?

DR. ECKHART: That would be my understanding, yes.

MR. KIRK: It is my understanding and, again, based on some of your responses to Mr. Rossmann, that at the Salton Sea and for CVWD and IID, you would assume that that reduction, 59,000 acre-feet per year on average; is that correct?

DR. ECKHART: I think it's something less than that.

MR. KIRK: I'm not talking about the reduction of inflow, I'm talking about reduction in diversion.

DR. ECKHART: That's correct.

MR. KIRK: 59,000 acre-foot reduction in diversion would result in a 56,000 acre-feet or thereabout reduction of inflow to the Salton Sea?

DR. ECKHART: Yes.

MR. KIRK: Close to a one-to-one other than perhaps some losses in the system?

DR. ECKHART: That's correct.

MR. KIRK: You assume there is nothing to make up that water; that is a loss of water in the future within CVWD and IID, and/or IID?

DR. ECKHART: That's correct.

MR. KIRK: If I understood you correctly when you were responding to Mr. Rossmann, you treated the entitlement in the model differently and, in fact, in the EIS, differently with respect to MWD, that, in fact, you assumed entitlement enforcement, but you assumed they would make up the water somehow and that there would be no impacts from the reduction of inflow; is that correct?

DR. ECKHART: I don't understand the question. Where are you talking about impacts? In general?

MR. KIRK: Is it, in fact, the case -- I will try to restate the question. Is it, in fact, the case you acknowledge that you assumed entitlement enforcement would occur to MWD. If, in fact, that entitlement enforcement were to occur and you were forced to analyze those impacts, they could be severe in some resource areas if there was no make up for that water.

Is that not the case if, in fact, MWD was reduced in

its divisions by 300,000 or 400,000 or 500,000 or 600,000 acre-feet?

DR. ECKHART: Assuming your assumptions, that would be correct.

MR. KIRK: It is included in your assumptions, but you assumed -- you didn't do any impact analysis, did you not, to either of you, didn't do any impact analysis because you assumed that that water would be made up somewhere? You didn't analyze the impacts of entitlement enforcement within the Metropolitan Water District region because that water would be made up?

DR. ECKHART: That's correct, that's our understanding.

MR. KIRK: That is what I was trying to get at. So I think I understood where you are coming from.

But we don't know exactly how MWD would make that water up?

DR. ECKHART: I personally do not. That's correct.

MR. KIRK: Nor are you, as we were informed, qualified to determine how MWD would make that water up or how San Diego would cope, et cetera; is that correct?

DR. ECKHART: Yes.

MR. KIRK: Let's focus on the entitlement enforcement within the Salton Sea watershed, CVWD and IID. Entitlement enforcement, do we have any plans from the Secretary that are available as disclosure documents on how entitlement

enforcement would, in fact, be enforced?

DR. ECKHART: It is my understanding that it is the Bureau, the Department of Interior's obligation from previous court rules.

MR. KIRK: If I could cut you off there. I am not looking for a legal opinion. I am looking for are there plans? Do you know of any plans that describe how many entitlement enforcement can --

MR. OSIAS: Let him finish his answer.

DR. ECKHART: I don't understand the word "plan," so I can't answer your question.

MR. KIRK: Is there a document that says how the Secretary of the Interior will enforce entitlement?

MR. OSIAS: If that document is in a legal judgment, is it okay for him to refer to it? Because you cut him off when he started to talk about a Supreme Court decision.

MR. KIRK: Sure, go ahead, John.

DR. ECKHART: It's my understanding --

MR. KIRK: I am sorry, Mr. Chairman, that's really your call.

CHAIRMAN BAGGETT: That is if the witness feels comfortable giving the answer, his opinion.

DR. ECKHART: It is my opinion, but it is my understanding that because of the Supreme Court decision that the Bureau of Reclamation must enforce entitlements on

the river.

MR. KIRK: I understand. In fact, I've got some understanding of that as well.

My question is: Do we know how they would do it? Do they knock on IID's door in the year 2003, 2004? Do they knock on CVWD's door? How do they enforce it? Do we have any sense of that?

DR. ECKHART: It would be my understanding that on an annual basis IID, as other water users do, submit a water order to the Department of Interior, Bureau of Reclamation. And at that point the Department would approve or not approve that water order. And, of course, that would be based on the Bureau's knowledge of enforcing the entitlements on the river.

However, when it comes to implementation of that, the Bureau will monitor that usage and make sure that each of the entitlement holders will stay within their entitlement.

MR. KIRK: Is it fair to say we are not really sure how the Bureau would enforce entitlement, the mechanism of enforcement?

DR. ECKHART: Well, of course, I'm not familiar with that.

MR. KIRK: That, in fact, is what I wanted to hear. Fair enough.

The entitlement enforcement, do you suspect that if the

ag agencies were over, let's say on average 59,000 acre-feet per year, do you suspect that the agricultural agencies, when I say the agricultural agencies, I am referring to the parties within the 3.85 ag entitlement, and I am sure you appreciate that. Would you assume that if the ag agencies were over 3.85, they would be proportionately reduced in their use of Colorado River water?

DR. ECKHART: That is not my assumption or my understanding.

MR. KIRK: In fact, wouldn't you assume that priority system might be employed to determine who might be reduced?

DR. ECKHART: That would be my understanding, yes.

MR. KIRK: Who is the junior right holder of ag entitlement?

DR. ECKHART: My understanding is CVWD is, Coachella Valley Water District.

MR. KIRK: So, I appreciate that. We don't know exactly how the Bureau would this. But one hypothetical, and we don't have any details in your EIS/EIR on how this would actually be accomplished.

Is that fair? We don't have any details on who -- is this water coming out of IID? Is it coming out of Coachella? It is not really defined in the EIS/EIR. Is that the case?

DR. ECKHART: As you can see in the tables you quoted

here, it is coming out of both agencies, basically. We don't specify which agency that it is coming from.

MR. KIRK: So it could be both. It could be one or the other?

DR. ECKHART: That's correct.

MR. KIRK: Under the junior -- the priority system, one could assume that CVWD may take a first hit. Is that a fair assumption?

DR. ECKHART: That could be an assumption, yes.

MR. KIRK: Did you assume that if CVWD took that first hit, that there would be the same almost one-to-one impact on the Salton Sea?

DR. ECKHART: Yes, we did.

MR. KIRK: Did you assume that if CVWD took that hit, that CVWD would find some other source of water to make up that water?

DR. ECKHART: We did not assume that.

MR. KIRK: I would like to refer you to Exhibit 16 of IID, IID Exhibit 16, Sections 3.1 and 3.2.

I have 3.1 up on the screen.

John, are you able to read that?

DR. ECKHART: Yes.

MR. KIRK: Could you read it to use, that first paragraph?

DR. ECKHART: Under 3.1, conditions for reduction in

MWD's use of conserved water.

MR. OSIAS: The whole paragraph is not there.

MR. KIRK: I will head down.

DR. ECKHART: In any calendar year following the effective date of the conservation agreement in which the agricultural agencies, PVID, Reservation of the Division of the Yuma Project, IID and CVWD, met Colorado River diversions under the first three priorities of the parties' water delivered contracts with the Secretary, together with the amount of conserved water used by MWD would exceed 3.85 million acre-feet, and thereby the Secretary requires a reduction that year in diversions by the agricultural agencies or in any calendar year that the Secretary requires the agricultural agencies to reduce their diversions because their prior calendar year's net diversions, together with the amount of conserved water used by MWD, exceed 3.85 million acre-feet, MWD shall reduce its use of conserved water in accordance with the provisions of Section 3.2 of this approval agreement subject to each and all of following conditions.

MR. KIRK: And we'll be down to Section 3.2 shortly.

As you read that, John, does that sound to you like entitlement enforcement?

DR. ECKHART: Yes, it could be a form of entitlement enforcement.

MR. KIRK: Thank you.

We'll head down to Section 3.2.

If you could read on, John, Section 3.2, reduction in MWD's use of conserved water. And this is for reference the 1989 implementation agreement following on IID/MWD's first conserved water use agreement.

Is that the case?

MR. OSIAS: It is called the Approval Agreement.

MR. KIRK: Thanks.

MR. OSIAS: And you keep referring to it as the first MWD/IID agreement. I am not aware of a second.

MR. KIRK: Nor am I.

Thank you.

Section 3.2, if you can read that for me, John.

DR. ECKHART: Reduction in MWD's use of conserved water. If MWD is required to reduce its use of conserved water because the conditions enumerated in Section 3.1 of this approval agreement have occurred, MWD will provide a portion of the first increment of an agricultural reduction required by the Secretary by reducing its use of conserved water in calendar year of reduction. CVWD and PVID shall provide the remaining --

MR. KIRK: Did I miss a portion or a line?

DR. ECKHART: -- portions of the first increment of such a reduction by reducing their respective net Colorado

River divisions in the calendar year of reduction.

Do you want me to go on?

MR. KIRK: In fact, if you could -- I will continue for you, John.

MR. OSIAS: Mr. Chairman, given the lateness of the hour and we have the whole document as an exhibit, the usefulness of reading it --

CHAIRMAN BAGGETT: I would --

MR. KIRK: I'll cut to the chase.

CHAIRMAN BAGGETT: Cut to the chase, would you please.

MR. KIRK: If you see this section, John, it does indicate that MWD would make up losses to CVWD. If, in fact, the Secretary enforced entitlement, MWD would make up losses to CVWD up to 50,000 acre-feet?

MR. OSIAS: You skipped the section that had the condition.

MR. KIRK: You asked me not to read it. You asked me not to spend the time.

MR. OSIAS: No. I am going to ask you, do you mean to assume something?

MR. KIRK: I am sorry?

MR. OSIAS: Do you --

CHAIRMAN BAGGETT: Are you assuming your summary is correct?

MR. OSIAS: We skipped through the conditions. Have they been satisfied? The question is incomplete.

MR. KIRK: The question is, John, are you familiar with this agreement?

DR. ECKHART: I am not familiar with the details of this agreement.

MR. KIRK: The agreement is before you.

DR. ECKHART: That's correct.

MR. OSIAS: One page of or part of a page is before him. Let's be honest.

MR. KIRK: Fair enough.

That is generally how we conduct this hearing. Let's go page by page, reference by reference.

Would you agree that this agreement seems to, at least with information I have provided to you, provide a source of makeup water if, in fact, CVWD's entitlement was enforced?

DR. ECKHART: I am very unfamiliar with the agreement and reading out of context I don't feel comfortable in agreeing with that.

MR. KIRK: Mr. Chairman, the reason I am focusing on this is, of course, the baseline issue. And if I could clarify.

John, you've indicated that you have treated entitlement enforcement slightly differently. For MWD you assume one thing and for the ag agencies another.

Is that correct, for MWD, as we discussed, you assumed entitlement enforcement would occur, but some makeup water would be provided, some replacement for that loss would be provided?

DR. ECKHART: Yes. The document does not do a detailed analysis of their hydrology.

MR. KIRK: For that reason, apparently?

DR. ECKHART: I don't know the reason.

MR. KIRK: Here in the Salton Sea Basin you have assumed entitlement enforcement affects the Salton Sea to the tune of 56,000 acre-feet per year, and you don't assume makeup water even though this agreement seems to suggest, in fact, there is a source, in fact, a source per an agreement between the agencies, the water agencies, to provide makeup water; is that correct?

MR. OSIAS: Objection. Incomplete hypothetical. Laid no foundation that the Bureau would use this agreement with respect to accounting for 3.85.

CHAIRMAN BAGGETT: Could you --

MR. KIRK: Do you assume, John, that the -- tell you what, we'll move on. We'll move on.

The entitlement, last question on the baseline, or I think it is. Again, Table 4.1 in Appendix F. This is the start of Table 4.1., John.

You see in the penultimate column there, the second to

last column, actually the third to last, 56,856 acre-feet reduction due too entitlement enforcement.

Is it true that in earlier testimony you indicated that some minor changes in the modeling may result in pushing back the project's impacts by a year or two with respect to the salinity?

DR. ECKHART: With respect to -- again, clarify the question.

MR. KIRK: John, in earlier testimony did you indicate that some changes in the start date of the project, 2002 versus 2003 push back some impacts? The magic number of 60 parts per thousand.

DR. ECKHART: Correct, based on when the transfer starts.

MR. KIRK: Does the Salton Sea accounting model, is it entirely a projection? Here on Table 4.1 are these all projected values?

DR. ECKHART: No, they are not.

MR. KIRK: Which values are not projected?

DR. ECKHART: If you look at Footnote 3, says the total unmeasured inflow is from historic.

MR. KIRK: That is the same in the future as it is in the past; is that correct?

DR. ECKHART: Correct.

MR. KIRK: At least in the recent past.

Do your projections for all of the other columns begin in the year 2000?

DR. ECKHART: That's correct, because the modeling was done in '99.

MR. KIRK: This Salton Sea accounting model was last revised in 1999?

DR. ECKHART: I did not say last revised. I said the modeling and the model was set up in the year 1999. So when we started doing our analysis, it started in year 2000.

MR. KIRK: Using the year 2000 as the start date of projection because of entitlement enforcement and perhaps reductions through the other projections -- actually, let's just take a look at entitlement enforcement.

Because of the start date in year 2000, haven't we already lost 150,000 in more acre-feet of water to the Salton Sea because of the use of an improper start date?

DR. ECKHART: The improper start date, I disagree. But I did agree with the fact that, yes, there is 56- twice times that had been removed from the Sea.

MR. KIRK: In fact, before the project starts in the year 2003, the 56,000 acre-feet would be reduced three times?

DR. ECKHART: Correct.

MR. KIRK: Wouldn't that over -- would that underestimate the impacts in some of the resource areas?

DR. ECKHART: No.

MR. KIRK: Why not?

DR. ECKHART: Because, as I testified before, it is the difference between the baseline and the project projections and alternative projections. So when you change baseline numbers, you may be changing -- in most cases you actually do change the same numbers that are used in the project projections. So the impact or the affect of the projects. In other words, the delta I referred to earlier is the difference between those two. So although they won't be exact, they will be very close.

MR. KIRK: You said that, and you've also indicated when I showed the different graphs in Salton Sea Authority Exhibit No. 11, that you concurred with me that, in fact, if you use the 1.34 trend and compared it to the project the impacts would be greater for many resource areas.

DR. ECKHART: I did not say that. Based on your graphs, the difference between the 1.34 and our project, yes. But our project has the baseline of 1.24 built into it before the project is applied to it. So it is an improper comparison.

MR. KIRK: Entitlement enforcement, again, that you've reduced inflows into the Sea by 56,000 acre-feet for the IOP. The IOP also reduces inflows to the Sea about 56,000 acre-feet; is that correct?

DR. ECKHART: That's correct.

MR. KIRK: Does that show up in the proposed project's impacts as an impact of 56,000 acre-feet or is it netted out because it's the same as this water?

DR. ECKHART: No. What happens is in the IOP, which is different from entitlement proportion or river administration, is that water is paid back to the river system. So you have effects both in the payback districts and also to the river. And in particular under IOP, IID is taking the overage related to the 3.1 cap as is signified in the QSA.

MR. KIRK: So you're telling me that when you compare the IOP -- in fact, if we were to compare the IOP alone, if there is no other part of the project, proposed project, and the only IOP, would that result in a 56,000 acre-foot reduction of inflow to the Salton Sea on top of the baseline you used?

DR. ECKHART: Yes.

MR. KIRK: So the IOP and the entitlement enforcement are cumulative?

DR. ECKHART: Yes. The difference is the payback.

MR. KIRK: Thank you.

On to impacts on the Salton Sea restoration.

John, you're relatively familiar with Salton Sea restoration, are you not?

DR. ECKHART: Somewhat.

MR. KIRK: In fact, you chaired the Salton Sea Authority Technical Advisory Committee?

DR. ECKHART: That's correct.

MR. KIRK: Which you treated as one of the most cherished positions you've ever held?

DR. ECKHART: Of course.

MR. KIRK: Thank you.

DR. ECKHART: The Executive Director in particular.

MR. KIRK: You are familiar with the 2000 Restoration EIS/EIR? Somewhat familiar with it?

DR. ECKHART: Somewhat familiar.

MR. KIRK: You recognize that IID did include a couple of exhibits related to Salton Sea restoration for consideration as a part of this hearing process?

DR. ECKHART: I'm aware, but I am not familiar with them.

MR. KIRK: You are aware that the restoration project is in part about addressing salinity in elevation objectives?

DR. ECKHART: Yes.

MR. KIRK: Generally, in -- you're a hydrologist, right? And we can reference various pages, and et cetera, but I am looking for your general expertise in terms of hydrology in giving your knowledge of both the transfer and the Salton Sea Restoration Project, I would like to ask you a couple of general questions.

One is, generally, what is the impact on the elevation -- what is the impact on salinity of the Sea on a significant reduction of inflows? Do they -- does salinity go up markedly?

DR. ECKHART: Of course, depending on the water quality of the inflows, but, yes. If you can use the current inflows; that is correct.

MR. KIRK: And under current inflows, can you recall approximately how much salt we, the restoration project, would need to take out of the Salton Sea to balance salt load every year?

DR. ECKHART: I don't recall.

MR. KIRK: Approximately, does it sound approximately like 4,000,000 tons, does that sound about right?

DR. ECKHART: That sounds --

MR. KIRK: Does a reduction of inflows make restoration more expensive?

DR. ECKHART: I don't know that.

MR. KIRK: If the Salton Sea -- if inflows are reduced by 300- or 400,000 acre-feet, the Salton Sea does, in fact, become much saltier much faster, does it not?

DR. ECKHART: Yes.

MR. KIRK: Would you agree that the top six feet of the Salton Sea or thereabouts contain a hundred million tons of salt?

DR. ECKHART: I don't know the number, so I have to take your word for that.

MR. KIRK: Thereabouts.

Would you agree that under a restoration project, we, then, the restoration project under a reduced inflow scenario would not only have to take out that 4,000,000 tons of salt or 5,000,000 tons of salt, but catch up on all the salt in the top layers of the Salton Sea that is condensed into a smaller Salton Sea? Is that a fair statement?

DR. ECKHART: I think that is a fair statement.

MR. KIRK: So just a six-foot reduction of the Salton Sea, assuming my math is close, would require the Salton Sea project to take out an additional 100,000,000 tons of salt?

DR. ECKHART: If your math is correct, yes.

MR. KIRK: Based on that math or, in fact, any math that I have seen and probably you as well if, in fact, inflows significantly reduce, would the restoration project need to be much larger?

MR. OSIAS: Objection. There is no foundation for what we even mean by restoration. No foundation as to --

MR. KIRK: Actually --

MR. OSIAS: Let me finish, please.

No foundation as to whether restoration means restoring the Salton Sea to current size or restores it to a smaller size. So in doing comparisons without defining what

restoration means --

MR. KIRK: Mr. Chairman, I have provided a foundation. I went through a step by step, explaining that restoration in part means controlling elevation and controlling salinity. And with respect to salinity I identified the maintenance target, the very least of 4- to 5,000,000 tons. Mr. Eckhart's expertise and his understanding of the issue. He seemed to acknowledge that, in fact, that is a part of our restoration project. I don't think there is much debate about that.

MR. OSIAS: My point is is this question about preserving elevation at a certain height --

MR. KIRK: I didn't question preserving elevation.

CHAIRMAN BAGGETT: That wasn't the question.

Could you answer the question, please?

Overruled.

DR. ECKHART: Please repeat the question.

MR. KIRK: Does a significant reduction of inflow and this concentration of salts in the Salton Sea make any, just about any -- in fact, any restoration project much larger? Evaporation ponds, pipelines, desalinization, whatever the case may be. If we have to pull out an additional hundred million tons or 200,000,000 tons, doesn't that make the project larger?

DR. ECKHART: Again, based on the specific project, and

you mentioned evaporation ponds, yes. There might be some new technology that I am not aware of out there.

MR. KIRK: Even a new technology I assume, John, you can't envision something that if it has to take more salt out, the project, in fact, wouldn't have to scale up to take more salt up?

DR. ECKHART: My current knowledge, yes, I will agree with that.

MR. KIRK: On Page 1-42 of the transfer EIR -- make sure high reference is correct as well.

On Page 1-42, John, you're probably ahead of me on this. The fifth paragraph down, first line. Does it state implementation of the proposed project is not inconsistent with subsequent implementation of a restoration project?

DR. ECKHART: Yes, the document does state that.

MR. KIRK: And I understand we don't like double negatives, so is it fair to say that not inconsistent means consistent?

DR. ECKHART: That would be my interpretation.

MR. KIRK: If I were to restate this, the document is indicating that implementation of the proposed project is consistent with subsequent implementation of a restoration project, and the proposed project for purposes your analysis, as both of you have testified, could involve the reduction of inflow by several hundred thousand acre-feet

into the Salton Sea; is that correct?

DR. ECKHART: That's correct.

MR. KIRK: How is the proposed project consistent with restoration of the Sea?

DR. ECKHART: It would be my understanding that if you move to the next paragraph or subparagraph there that would be the reasons that the author of this section believes that it was consistent with the restoration.

MR. KIRK: What is your belief? Do you believe the proposed project if, in fact, it reduces inflows by several hundred thousand feet, is consistent with restoration of the Salton Sea?

DR. ECKHART: It is my understanding from the Salton Sea restoration legislation that the restoration was supposed to allow for transfers out of the Sea, and as stated in that next subparagraph, reduce inflows to the Sea to 800,000 acre-feet per year.

MR. KIRK: Doesn't, in fact, the 1998 Reclamation Act state when evaluating options the Secretary shall consider reductions of inflow as you indicated? Does the Reclamation Act, in your understanding, take responsibility for fixing the Salton Sea under those reductions of inflow?

DR. ECKHART: Since I don't have that in front of me, I can't answer that question.

MR. KIRK: Hypothetical. If, in fact, your

interpretation of the Reclamation Act is off or perhaps the author of that section is off, would you consider the proposed project and reduction of 300,000 acre-feet of inflow to be consistent with the restoration of the Salton Sea?

MR. OSIAS: Objection. I don't understand what he means by "the author of the legislation is off."

MR. KIRK: If I said that, I apologize. I indicated the author of the section. I think that is my statement, counselor.

CHAIRMAN BAGGETT: Anyway, clarify. And then you have been lax on the time. You have gone a few minutes over already.

MR. KIRK: I will try to wrap things up.

CHAIRMAN BAGGETT: I will give you a couple more minutes to wrap it up since we had more than one interruption here.

Could you answer?

DR. ECKHART: I'm sorry, repeat the question again.

MR. KIRK: Ignore for a minute that section of the EIS/EIR and ignore your recollection of the Salton Sea Reclamation Act. Do you consider a proposed project that reduces inflows by several hundred thousand acre-feet to be consistent with restoration of the Salton Sea?

DR. ECKHART: If I ignore the Restoration Act, I ignore

the restoration of the Sea. I find that a difficult question to answer.

MR. KIRK: You don't think restoration of the Sea would have been possible without the Restoration Act?

DR. ECKHART: I did not say that. The Reclamation Act defined how restoration was to proceed forward.

MR. KIRK: I could see you may not want to answer that question.

Aesthetics. Does the EIR conclude that aesthetic impacts, Ms. Harnish, are going to be less than significant? This is Section 3.11 of the transfer EIR.

MS. HARNISH: With mitigation, yes.

MR. KIRK: Is the mitigation for the aesthetic impacts of the receding shoreline, which I think is identified as the less than significant impact, is the mitigation relocating recreational facilities?

MS. HARNISH: Can you refer me to a page?

MR. KIRK: I can't because I'm short of time. Assume that, in fact, your mitigation is relocating recreational facilities to the --

MS. HARNISH: I believe that is a component of it, yes.

MR. KIRK: Do people have homes on the shoreline of the Salton Sea?

MS. HARNISH: Yes.

MR. KIRK: What is the concept of sensitive receptors in an environmental document? What does that mean?

MS. HARNISH: The people who are most likely to be impacted.

MR. KIRK: Would you consider the people along the shoreline to be the most impacted in terms of aesthetics?

MS. HARNISH: I think the numbers of people who visit the sea are probably greater than the numbers of people who live around the Sea.

MR. KIRK: I thought the sensitive receptor wasn't in terms of numbers, it was those that might be most likely to be impacted. Wouldn't you agree that those on the shoreline would be more likely to be impacted disproportionally than those driving by?

MS. HARNISH: Potentially yes.

MR. KIRK: Potentially. If you lived on the Salton Sea and your shoreline receded one to five miles --

MS. HARNISH: Yes.

MR. KIRK: -- would you consider yourself a sensitive receptor?

MS. HARNISH: Yes.

MR. KIRK: You don't indicate that is a significant impact nor do you propose any mitigation for aesthetic impacts.

DR. ECKHART: If I can answer that. It depends when

you bought the house and what the level of the Sea was. If you bought the house ten years ago, there was a different level on the Sea or 20 or 30 years ago.

CHAIRMAN BAGGETT: You wrap up please. Give you one more question.

MR. KIRK: Environmental justice. You indicated you're making some changes or considering some changes to the document there. Did you consider the differential impacts of the project to people living around the Salton Sea and specifically the Torres-Martinez Indian Tribe compared to other populations?

MS. HARNISH: With respect to what impact?

MR. KIRK: In terms of the environmental justice section.

MS. HARNISH: Well, it depends on what specific environmental impact you look at for different populations.

THE COURT REPORTER: I can only take one at a time.

CHAIRMAN BAGGETT: One at a time.

MR. KIRK: In fact, you identified no significant impacts in terms of environmental justice.

MS. HARNISH: That is correct. And I indicated that the section is being reevaluated.

MR. KIRK: Thank you, Mr. Chairman.

CHAIRMAN BAGGETT: Thank you.

The Colorado Tribes, do you have any?

MR. SHEPARD: Yes.

CHAIRMAN BAGGETT: Is it going to be a lengthy cross-examination? Should we take a break?

MR. SHEPARD: A break would be nice.

CHAIRMAN BAGGETT: Okay. Let's take five minutes.

(Break taken.)

CHAIRMAN BAGGETT: Back on the record.

Colorado Indian River Tribes, Mr. Shepard.

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CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

BY COLORADO RIVER INDIAN TRIBES

BY MR. SHEPARD

MR. SHEPARD: My name is Eric Shepard. I represent the Colorado River Indian Tribes.

Good afternoon -- good evening, Doctor.

Just to focus a little bit to the to Lower Colorado River, which hasn't been discussed a whole lot up till now. In the course of preparing the Draft EIR/EIS document, did you consult the Colorado Indian River Tribes or any of its agencies?

I'm sorry, I'm not sure who to direct to, so I guess I am directing that to both of you.

DR. ECKHART: I'm not -- I don't know that. Unless the Bureau of Reclamation did. I am not aware of.

MS. HARNISH: My understanding is the Bureau of

Reclamation had consultations with the Colorado Indian River Tribes.

MR. SHEPARD: Do you have any actual knowledge of consultations with the Tribes?

MS. HARNISH: No.

MR. SHEPARD: Are the Colorado Indian River Tribes listed in Chapter 6.0 as one of the persons, agencies or organizations consulted?

MS. HARNISH: Doesn't look like it, no.

MR. SHEPARD: Chapter 3.9, Indian Trust Assets, of the Draft EIR/EIS, on Page 3.9-3 there is a kind of inventory of trust assets for the Colorado Indian River Tribes. That is not really presented as an inventory. It is narrative in form.

Have you examined the impacts of the proposed transfer on the powerplant at Headgate Rock Dam?

MS. HARNISH: I believe we summarized the evaluation that was conducted in IA for this document, incorporated by reference after we summarized it.

MR. SHEPARD: In Chapter 3, Cultural Resources, could you tell me, it's specifically Page 3.8-24, could you tell me what agency was contacted in order to determine what the impacts on cultural recourse for the Lower Colorado Indian River Tribes would be?

It's cited at the top of the page.

MS. HARNISH: I can read that sentence to you.

MR. SHEPARD: Sure. That would be great.

MS. HARNISH: Information on ethnic graphic resources in LCR geographic subregion is incorporated into this Draft EIR/EIS by reference of the Draft IAEIS Reclamation 2002 Draft QSA PEIR, CVWD, et al., 2002.

MR. SHEPARD: On the next paragraph -- actually, I am sorry, on the top there.

MS. HARNISH: I'm sorry, I was only going to read one paragraph.

MR. SHEPARD: I appreciate your willingness to cut things short.

MS. HARNISH: I will indulge you.

The native American Heritage Commission in Sacramento was contacted to secure information on any sacred lands that might be present in LCR geographic subregion and to secure a list of most likely defendants who should be contacted, forward information about ethnic graphic resources. The Native American Heritage Commission reported that no sacred lands are present in the LCR proposed project area.

MR. SHEPARD: To your knowledge, the Colorado River Indian Tribes or other Tribes in the Lower Colorado River were not contacted?

MS. HARNISH: This is one of the sections that I am least familiar with. So --

CHAIRMAN BAGGETT: He is asking for your knowledge.

MS. HARNISH: According to my knowledge, I couldn't say one way or the other, honestly, except for what it says here.

MR. SHEPARD: Dr. Eckhart.

DR. ECKHART: Not to my knowledge.

MR. SHEPARD: Is the Lower Colorado River incorporated into the Habitat Conservation Plan prepared as part of this EIR/EIS?

DR. ECKHART: As I recall, we are dealing with issues related to the Lower Colorado River.

MR. SHEPARD: What are those?

DR. ECKHART: I think I actually have to correct that statement. The HCP is not actually dealing with the Lower Colorado River.

MR. SHEPARD: Why not?

DR. ECKHART: That I can't answer.

MR. SHEPARD: Will the Lower Colorado River be affected by the proposed transfer?

MS. HARNISH: I believe those impacts are addressed in the biological opinion and the biological conservation measures that were developed as part of that biological opinion. Those are defined in Section 3.2.

MR. SHEPARD: If we just turn our attention to Chapter 3.2 for a moment. The first table that is in Chapter 3.2,

according to Table 3.2-1, what would be the impact on cotton willow communities in the Lower Colorado River, impact of the proposed transfer on cotton willow communities in the Lower Colorado River?

MS. HARNISH: It would be less than significant with the implementation of the biological conservation measures.

MR. SHEPARD: How about on the next page, same, table back water habitat?

MS. HARNISH: Same, less than significant with implementation of the biological conservation measures.

MR. SHEPARD: And below that, special status species that are part of cotton willow habitat?

MS. HARNISH: The same.

MR. SHEPARD: And special status species part of back water habitat?

MS. HARNISH: The same.

MR. SHEPARD: So, in your opinion, if the conservation measures are not implemented, will there be significant impacts to cotton willow communities, back water habitat and special status species that reside in those habitat forms?

MS. HARNISH: Without implementation of biological conservation measures?

MR. SHEPARD: Yes.

MS. HARNISH: I am not a biologist. I didn't write the section, but that it is my understanding, that they are

potentially significant, but with the mitigation they are reduced to less than significant.

MR. SHEPARD: Do you know what is the basis for the development of the conservation measures? How were they formed?

MS. HARNISH: I was not a part of that process.

MR. SHEPARD: Dr. Eckhart?

DR. ECKHART: Nor was I.

MR. SHEPARD: What provision, if any exist, if the actual effects of the proposed transfer are greater than the project effects, the effect of the proposed transfer on cotton willow and back water habitat?

MS. HARNISH: Could you repeat that?

MR. SHEPARD: What provision, if any, exists in the event the actual effects of the proposed transfer are greater than those anticipated?

MS. HARNISH: I don't know the details of the biological conservation measures, so I can't answer that. It may be adaptive management, but I don't know.

MR. SHEPARD: Do you know who will pay the costs of these biological conservation measures?

MS. HARNISH: Do I know what?

MR. SHEPARD: Who will pay the costs of the biological conservation measures?

MS. HARNISH: I don't know.

MR. SHEPARD: Do you know if there is a plan for any long-term monitoring to ensure unprotected impacts are mitigated?

MS. HARNISH: I don't know.

MR. SHEPARD: Do you know what criteria will be for selecting mitigation size?

MS. HARNISH: I don't know.

MR. SHEPARD: That is all I have.

Thank you.

CHAIRMAN BAGGETT: Mr. Slater, we are on a roll here.

MR. SLATER: Given the hour, I will try to be as quick as we can.

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CROSS-EXAMINATION OF IMPERIAL IRRIGATION DISTRICT

BY SAN DIEGO COUNTY WATER AUTHORITY

BY MR. SLATER

MR. SLATER: I would like to start with some testimony that you provided in cross to Mr. Gilbert, and that goes to -- start with under the IID/San Diego proposed transfer agreement, is the payment from the transferees, San Diego, going to IID or directly to the farmers?

DR. ECKHART: As I understand it goes directly to IID.

MR. SLATER: And presumably IID would make arrangements with its farmers on how to distribute the proceeds, correct?

DR. ECKHART: That is my understanding. Correct.

MR. SLATER: And IID has reserved discretion to determine how the proceeds were going to be divided and to what purposes the proceeds might be made available?

DR. ECKHART: That is my understanding.

MR. SLATER: If IID wants to direct a portion of the proceeds to the farmers as opposed to the landowners, it has the discretion to do that?

DR. ECKHART: That is my understanding.

MR. SLATER: Mr. Eckhart, are you familiar with the statement in Appendix D of Exhibit 65 in the statement with regard to alternative four which states as follows: Alternative four does not comply with the "directives" of the State Water Resources Control Board?

DR. ECKHART: I am not familiar with that statement.

MR. SLATER: Mr. Eckhart, you defined fallowing, finally --

MR. OSIAS: Dr. Eckhart.

MR. SLATER: Dr. Eckhart, sorry.

Dr. Eckhart, you defined fallowing in broad terms in the EIR/EIS, correct?

DR. ECKHART: Correct.

MR. SLATER: And you defined it as the non use of farmland for crop production; is that true?

DR. ECKHART: As I recall, yes.

MR. SLATER: Does the definition include permanent

fallowing?

DR. ECKHART: Under that context, yes.

MR. SLATER: And if fallowing were temporary or short term, it might be a desirable component of the IID conservation program, true?

DR. ECKHART: The short-term part of that I don't know, but it could be desirable, could be.

MR. SLATER: For example, temporary short-term fallows has soil preservation benefits, correct?

DR. ECKHART: Correct.

MR. SLATER: I believe, Dr. Eckhart, you testified on cross that you made certain assumptions regarding the proportion and type of crops on a go-forward basis that would be fallowed in accordance with the fallowing program, correct?

DR. ECKHART: That's correct.

MR. SLATER: Those assumptions are that it would be in proportion to the percentage of total croplands as they generally exist presently?

DR. ECKHART: That's correct.

MR. SLATER: And is that without regard to the specific productivity of land that might be fallowed?

DR. ECKHART: That's correct.

MR. SLATER: However, all land within Imperial is not the same, is it?

DR. ECKHART: As far as soil type?

MR. SLATER: Correct.

DR. ECKHART: That's correct.

MR. SLATER: Did you make any assumptions regarding the level of labor that would be required to produce crops on the land to be fallowed or was it presumed to be the same?

DR. ECKHART: I am not familiar with those assumptions in the socioeconomics.

MR. SLATER: Without regard to socioeconomic impacts, does the EIR/EIS include any assumptions regarding the cost to farmers of fallowing?

DR. ECKHART: Not that I am aware of.

MR. SLATER: Not on a per acre-foot basis?

DR. ECKHART: Not that I recall.

MR. SLATER: And am I correct that the Draft EIR/EIS includes a finding that alternative four would result in significant unavoidable impacts to agricultural resources?

MS. HARNISH: That's correct.

MR. SLATER: But it is also true that the assumption is true is that permanent fallowing would be employed to reach that conclusion, correct?

MS. HARNISH: That's correct.

MR. SLATER: I have no further questions.

Thank you.

CHAIRMAN BAGGETT: Given the lateness of the hour, we

will -- I have a few questions which might take a little while and I know our staff, especially our biologist, Andy, does. So we will resume at 9:00 sharp with those.

I just have a procedural question for Mr. Osias.

Would you prefer to put your last witness on at that point, do cross and then do redirect on all three of your witnesses at once, or do you just want to finish this panel? I am just wondering if that might save a little bit of time.

MR. OSIAS: Can I tell you in the morning?

CHAIRMAN BAGGETT: Yes. Because he has very short testimony and very narrow scope, and I thought we could just do, hopefully, a fairly -- the cross, I think, of Dr. Smith will be a little less contentious, then just do redirect of all three, then allow everybody a short recross on any of the three witnesses.

Talk to your witnesses.

MR. OSIAS: Thank you.

That sounds like something we'll consider. We'll let you know first thing in the morning.

MR. SLATER: Verify the other witness is Dr. Smith.

CHAIRMAN BAGGETT: Dr. Smith will be on tomorrow morning.

And the mystery witness. You haven't seen the subpoena list.

We are recessed until tomorrow.

Thank you for your patience.

(Hearing adjourned at 5:30 p.m.)

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REPORTER'S CERTIFICATE

STATE OF CALIFORNIA)
) ss.
COUNTY OF SACRAMENTO)

I, ESTHER F. SCHWARTZ, certify that I was the official Court Reporter for the proceedings named herein, and that as such reporter, I reported in verbatim shorthand writing those proceedings;

That I thereafter caused my shorthand writing to be reduced to typewriting, and the pages numbered 641 through 904 herein constitute a complete, true and correct record of the proceedings.

IN WITNESS WHEREOF, I have subscribed this certificate at Sacramento, California, on this 14th day of May 2002.

_____
ESTHER F. SCHWARTZ
CSR NO. 1564