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IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF SACRAMENTO

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NATIONAL AUDUBON SOCIETY and MONO LAKE COMMITTEE, Petitioners, vs. STATE WATER RESOURCES CONTROL BOARD, Respondent.	No. 336712
DEPARTMENT OF WATER & POWER OF THE CITY OF LOS ANGELES Real Party in Interest.	
And Consolidated Action No. 336715	

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DEPOSITION OF ELDEN H. VESTAL

VOLUME II

(Pages 136 through 290)

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Napa, California
Thursday, March 1, 1990
10:30 A.M.

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Reported by:
REBECCA K. FELKER, CSR No. 8043

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BE IT REMEMBERED that, pursuant to Subpoena and continued by Stipulation, and on Thursday, the 1st day of March, 1990, commencing at the hour of 10:30 o'clock a.m. thereof, at Napa County Library, 1150 Division Street, Napa, California, before me, REBECCA K. FELKER, CSR No. 8043, a duly licensed Certified Shorthand Reporter in the State of California, there personally appeared

ELDEN H. VESTAL,

a witness called under the appropriate and applicable

provisions of the Codes of the State of California, who, being first duly sworn, was thereupon examined and testified as hereinafter set forth.

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A P P E A R A N C E S

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MORRISON & FOERSTER, 630 Hansen Way, Palo Alto, California 94304-1014, represented by BRYAN J. WILSON, Attorney at Law, appeared as counsel on behalf of the Audubon Society, Mono Lake Committee, and Elden Vestal.

LAW OFFICES OF KRONICK, MOSKOVITZ, TIEDEMANN & GIRARD, A Professional Corporation, 770 L Street, Suite 1200, Sacramento, California 95814-3363, represented by JANET K. GOLDSMITH, Attorney at Law, appeared as counsel on behalf of the Department of Water and Power of the City of Los Angeles.

ALSO PRESENT were Peter Vorster and Ethel Vestal.

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ELDEN H. VESTAL,

called as a witness, having been first duly sworn to tell the truth, the whole truth, and nothing but the truth, was examined and testified as follows:

EXAMINATION

BY MS. GOLDSMITH:

Q Mr. Vestal, this is a continuation of the deposition that was started on the 11th of January, and do you

remember all of the general admonitions that were given you about the fact that this is under penalty of perjury, and that material that you testify to here can be used in court?

A Yes.

Q Thank you.

I'd like to go back to Exhibit 23 and ask you some questions about it.

MR. WILSON: I'm sorry, what was the number?

MS. GOLDSMITH: 23.

THE WITNESS: Let's see.

BY MS. GOLDSMITH:

Q It's this one (indicating).

A That was a map, was it not?

Q Yes, and it has a legend across the top, Mono County greets fisherman, fishermen's paradise, reached via Bishop Lee Vining or Bridgeport, and has small advertising of various establishments in Mono County at the lower right-hand corner of the map is --

A Yes.

Q An establishment identified as Rush Creek Ranch?

A Yes, Rush Creek Ranch.

Q Did you ever visit Rush Creek Ranch?

A Yes.

Q Did you visit it during 1939 to 1940 when you were there?

A Yes.

Q And --

A I did, however, I did not, however, know what the boundaries of that were, but I had visited the Rush Creek Ranch and the principal home which was occupied by Mr. Clover and later by Mr. Dombrowski. I knew where it was, right there near the mouth of the creek.

Q How often did you visit there?

A Well, rather regularly when the Rush Creek test stream project got underway.

Q When was that?

A Well, that was in the -- starting in the season of 1947. I had visited before during the reconnaissance with Mr. Curtis in the fall of 1946, and I had seen it previously, we passed through it, and seen the location of it with Mr. Taft, the chief of the bureau, and Mr. Curtis also in 1942, Mr. Taft in the spring of '42 and Mr. Curtis in the fall of 1942, so I was, you might say, I knew that there was such a thing as Rush Creek Ranch, knew its location, and the fact that this was astride a section of the lower -- well, I'm not sure at this point whether it was astride, but it certainly was riparian to lower Rush Creek.

Q Was it located below what's been referred to as the Gorge?

A Yes.

Q How far below that?

A Let's see, subtracting the -- I'd say 3.2 miles.

Q So from the lake to about 3.2 miles below the Gorge, roughly?

A From the lake, if the ranch extended below the county road, this is what I'm puzzled about. And I earlier mentioned the fact that I wasn't familiar with the boundaries of the property, but the ranch certainly would be located, at least the frontage on the county road would be located about half a mile from the edge of the lake.

Q As it stood then?

A This was my recollection of it.

Q Did it include the meadow area below the Gorge?

A The ranch, insofar as I know, did not include the meadow area. This -- the upper section of the ranch, the upper boundary of the ranch didn't include much above what we later call the upper bridge, which was, oh, about another half a mile above the county road and the -- I'm trying to get the compass -- the north boundary of Rush Creek Ranch.

Q Okay. In the period 1939 to '40 you visited the ranch?

A Yes.

Q Do you remember what it looked like at that point, what features it included?

A There was a -- there was a fence, and I think one

reason for that was to keep stock out, I say stock, we're talking about sheep.

But there was a fence, and I seem to recall that there were at least -- there are at least two or three Jeffrey pines on the property, they may have been planted there, but the bulk of the surface coverage on the ranch was bitterbrush and sagebrush, and the common great basin plants of the more arid portions of the Pumice Valley.

Q The legend on the map advertising Rush Creek Ranch says, Rush Creek Ranch, Walter Dombrowski, D-o-m-b-r-o-w-s-k-i, proprietor, for many years lower Rush Creek has produced the finest of stream fishing, duck shooting is unsurpassed, rates for season, P.O. Box 31, Mono Lake.

Do you have any recollection of cabins or guest accommodations or any of that sort of amenity?

A Nothing permanent. People would come in there with, especially in the fall, partly during -- partly for fishing, and partly for duck hunting with trailers, but I don't -- I don't recall any permanent like cabins or that sort of thing.

Q Do you have any specific recollection of duck hunting?

A Yes, I took part with Mr. Dombrowski on one occasion.

Q When was this?

A This was in the fall of 19 -- 1940. And he invited me another time after World War II, but -- I don't -- let's

see, either '40 or '41. Just one occasion. And he wanted to show me the duck ponds that they had developed. A lot of it, a lot of the work was done by Walter himself on both sides of the lower stream at the delta, and those ponds show in a report, or series of reports rather, in a map that was attached to these reports in the fall of 1948, beginning in September.

But the one occasion was an introduction, since I was interested in waterfowl and had done some hunting, ducks and geese with my wife's father, I was interested in breaking in, so to speak, but also the fact that Mr. Dombrowski was noted as a waterfowl -- I want to say, quote, specialist, quote, he was very observant and had had considerable experience with waterfowl, was an excellent shot and he was a superb duck caller.

And he demonstrated his ability at that time that I was there with him to call out, of out of the clear blue sky, ducks that were flying by. Would call them in with what he called an attraction call, then as they circled in he would, with vocalizations, with his hands and his mouth, he would mimic the feeding call, and the ducks would come right into the ponds. And this was how clever he was at this, and also qualified him as a guide.

Q Did you have any luck with him hunting?

A No, I got off a couple of shots, but being at that point a novice waterfowl man I missed.

Q How did he do?

A He didn't do very well because the birds were still too far out.

Q Is there anything else that you recall about the Rush Creek Ranch that I haven't covered?

A Well, the fact that part of the attraction there was the -- was the fine fishing in lower Rush Creek for large trout. People, anglers would come there and Walt talked up in and about Lee Vining, the quality of the fishing and the fact that these fish were available there. And I had heard tell of some beautiful brown trout taken on it.

I never myself, in my fly fishing there, did not take anything over about 13, 14 inches, but I had heard tell of browns larger than that taken by guests there at Rush Creek Ranch.

Q How often, not just the period '39 to '40, but during the years that you were stationed in the Mono Basin how often did you fish down there?

A Oh, I didn't fish very often. It was occasionally, occasional thing. And usually in the fall, generally, the times that I did fish I fished in the fall because this was the time when other fisherman, and that was the reputation, it was good fall fishing.

Q You have good fall fishing there?

A It was good fishing, it was good fishing, I took fish, I didn't -- I didn't keep any, but I caught them to see, to

look at them.

Q Generally what size were they?

A Well, they were -- I saw fish larger than 14 inches, but I caught, hooked fish up to 14 inches. Never saw fish in lower Rush Creek that was in poor condition. They certainly didn't have a reputation for -- they had a reputation to be -- for being in good condition.

Q And this was throughout the period that you were stationed?

A The -- as the -- as the test stream went on, continued on and the stream flows declined, then there was -- there was a commensurate decline in the size, not the condition, but the size of the fish.

I don't recall any fish, either seen or reported by men coming through the test stream, that is where resident fish in the stream, that were very large, and in contrast to the fish that had come out of there in the early years.

Q Did you ever take any trout other than brown trout?

A Brown trout was the species that I caught.

Q Do you know of anybody taking any other species?

A There were a few rainbow caught, and a few Eastern Brook caught. The Eastern Brook were not that common, and the Eastern Brook were taken in the upper portion of that lower section, we're talking now about the Gorge, down to the mouth. Probably due to the influence of the springs in

the meadow, I think that this is -- this was the principal hang out, nursery grounds and feeding areas for the Brooks.

Also because although we did not measure the temperatures there, we had suspected that the temperatures had we made a circuit against the terrace as it dropped off into the floodplain, almost surely the temperatures would have been less near the site of issue than they were after they got down, well down toward the main stem. And that's what the Brooks were looking for.

Q Did you see the Brooks or the rainbows or just hear of people catching them?

A No, I saw, I saw all three species, I saw all three.

Q Okay. I'd like to move now to Exhibit 19.

A I would like to add one comment about the occurrence of large fish.

Q Sure.

A At the time that I visited the delta with Mr. Dombrowski we saw swirls and rises in the lower most portion, this was outright extending, some of this aquatic influence was extending out into Mono Lake.

Q What is a swirl and a rise?

A A swirl is when a large fish, especially from a large fish, comes up and he grabs something off the surface and as he turns the surface of the water will swirl or sort of spin. And they'll dimple. Dimpling is when a fish rises to the surface and they suck in a bit of food, an insect or

something on the surface.

And the swirls and the dimpling and the wake that we saw, Mr. Dombrowski and I at the time that we were there, had to be from large fish. And we did not see these fish, but Mr. Dombrowski interpreted them, inferred that they were browns because of the size of the fish.

And they -- we also inferred that they were, in addition to other foods, they were making passes into the saline, immediate surrounding, or partly saline water to get brine shrimp, and feeding rather actively.

Q Turning now to Exhibit 19, it's a memorandum to Phil Pister?

A Yes. This was addressed to -- I have it taken.

Q How did you come to have this memorandum?

A It lacks my initials, I -- I'm not sure. It could have come -- it could have been -- I'm just not sure how I came by this paper. I just can't be sure.

Q On the second or third page, it's the second page of print, there's some handwritten notation on the side that culminates at the bottom with NX7MI equals 51,968; do you know what that means?

A NX -- (witness reviewing document.) Oh, let's see.

MR. WILSON: It's a little more easy to read on this copy.

THE WITNESS: Oh, these were notes, yes. What I attempted to do there was to determine the total, the

summary -- that particular -- those particular figures represent the total, 7,424 per mile, plus or minus a hundred and forty-two, using this method that they used to sample the stream, and at the same time that I made those no -- that notation, and that was later multiplied by 7.9.

So round figures seven miles for the total length of Rush Creek from the lower most station up to the station below Grant Lake Dam to give me a total. And I later added another set of figures to get the overall total. This total was for the section, section two, which was the 335 feet nearest Grant Lake Dam in the upper section as shown on the map.

MS. GOLDSMITH: M-hm.

THE WITNESS: And when I got that overall total I compared the results, percentage results, species-wise, with what I had derived for section two, and I got the -- a very similar figure.

In other words, there was -- there were 96 -- 96 percent were brown trout, 3.8 percent were rainbow trout, and the rest were almost just practically a trace was Eastern Brook, and the same obtained for the overall summary for the seven miles.

I got total of 8,036 fish per mile when I brought them together, my arithmetic, and then the same percentage figures for the species and the totals worked out to 16 Eastern Brook, 312 rainbow trout, and 7,208 total

for the brown trout.

BY MS. GOLDSMITH:

Q And so what was your total?

A The total overall was 8,036.

Q Per mile?

A Per mile.

Q Did you come up with a total that you felt --

A 63,484. If we interpret that, use these data then multiply by 7.9 would give you 63,484 for the seven point mile reach, 7.9 mile reach of Rush Creek.

Q In reviewing this memorandum and making these calculations did you form an opinion as to whether this was a good way to estimate the population?

A It -- while I have never -- men that I have supervised have used it. Early on I did not use it myself. I realize that it was -- it was an improved method.

In the early years we probably would have done it, you might say the hard way. We would have gone in and made more, set up more stations, set up more block scenes and collect the fish more sections, and bring them all together to get an aggregate by section and also for the total reach.

And this method certainly saves a lot of effort, and one of our members of the biological staff used it over on coastal streams and found that it was very effective on steelhead and salmon streams over there.

A I cannot say that it was adopted as a standard method, but it certainly was recommended by him, and hence the application here under the circumstances in this study, November 9th, 1984.

Q So, if you were going to study the stream you would put more stations in to sample?

A If I were going to study the stream, I think that one of the problems that I had with sampling was to try to obtain a more specific view of food grade. Well, let's start with bottom, the gravels, the size of the gravels, the characteristics of the bottom, in relation to the northerly wetted perimeter of the stream. And then from that to try to come up with an understanding of the food grade and get a better idea of the habitat before applying the method, any method of sampling.

And there's nothing in this report that, or very little in this report that indicates that just what this was. Part of that, of course, is due to the, in a typical transect through the stream, the total 7.9 miles of stream, as an aquatic biologist and fisheries biologist, I would visualize after some experience typical transect, a series of stations up through that reach of stream, and then the -- within the normal flow, wetted perimeter the velocity pattern that was preferred for food production and for spawning by rainbow and especially brown trout, since brown trout were dominant there.

And that typical velocity pattern for food production varied from a half a foot per second to a little over three feet per second, and the average size of the gravels varied from about an eighth of an inch up to two and a half to three inches in diameter. Those are study after study of our -- members of our biological staff have shown that to be true.

And on spawning the gravels range upward a little larger, depending upon the size of the fish involved, to be able to move the gravels, and they varied from about a half an inch in diameter, well, for spawning, even downward, if you consider Eastern Brook, clear down to an eighth of an inch up to, again, over three inches in diameter.

And so given that understanding of the habitat, and then it seems to me that a sampling of the production, the normal production, productivity of the stream, makes more -- makes a lot more sense. It's likened in a sense to an alfalfa field.

Q A what?

A An alfalfa field, considering the soils and the production of the plants. The farmer evaluates his acre and he knows in advance that it's going to produce so many bales because of the soil's quality, and the only way he's going to enhance that is by fertilization.

And, of course, it's well-known, but in a

stream the -- you begin with the habitat, as I have described it, and certainly the velocity pattern in those serial transects over the 7.9 miles.

Q How much credibility do you give your calculation of 60 plus thousand for that stream?

A 63,484.

MR. WILSON: Credibility for what purposes?

MS. GOLDSMITH: How much faith does he have in that as an accurate estimate.

THE WITNESS: It's an estimate, and to the extent the accuracy of the method that they used, it's -- I believe, the fishing, the specific fishes given, the method has been used sufficient to say that it's useful.

I'm sure that Mr. James Burns when he used the method over on the coast again and again and again, based many of his reports on it, and is a far better statistician than I am. And Mr. Burns was a good biologist.

So on the strength of the effort by Mr. Burns and other biologists on the staff, I came to feel that as a fisheries biologist that it was certainly an acceptable method for estimating steams and the population in streams, and perhaps subject to the comments that I made about productivity, I think acceptable.

BY MS. GOLDSMITH:

Q I can follow the calculations that led you to the

63,000, and we discussed the general considerations that would lead to the number of transects which would give you the numbers to put into the calculation, and I guess what I'm trying to get at is whether or not in your experience as a fisheries biologist there were adequate transects to allow you to really have confidence in the number of 63,000 as the number of trout along Rush Creek, in lower Rush Creek?

A I would have much more confidence in it at normal flows because some -- using another method in estimating the population of it, of streams similar to Rush Creek, I derived a figure quite a bit over that. It was a few thousand over that.

What they came up with was certainly a usable population figure for the productivity of the stream, but in my estimation the, and subject to a more comprehensive description of the habitat, along the line of remarks that I made earlier, I feel that the potential of the stream was much greater than that. That normal -- under normal flows, and I'm visualizing at the wetted perimeter an average of 20 feet wide, an average depth throughout the 7.9 mile reach, of seven inches. I'm just visualizing that right on through. And --

Q At what season of the year?

A Well, this would be -- this has -- the productivity has to take in all the seasons in order to be more

comprehensive of the total productivity of the stream.

I don't think at any particular -- you could base a conclusion because certainly in the spring when the alevins of the brown trout are coming out and the Brooks are coming out the population would be much greater, and this was in the fall when a lot of the mortality had occurred. And so it would be, naturally, it would be less.

So, I think, and for this reason I made that comment about the total seasons, so what you probably -- the lowest point in the population would be just prior to the -- to the onset of spring. Just before the alevins begin coming out of the gravel. Then you'd have a surge in population.

Q Is the basis for your comments about a 20 feet width and a six to seven inch depth based on your experience at Rush Creek or idealized?

A No, it was on the experience at Rush Creek, on the Rush Creek test stream.

Q Were those actual characteristics of the stream, or were they sort of a blend over what occurred over the course of a year, how do you come to that?

A This average was a summation of measurements of the stream from which we derived flow average, we took the, I call it the Davis, H. S. Davis formulas. When you get the average width and average depth at several stations, and then using day, time, and seconds compute the velocity, or

using the float method determine velocity in feet per second and use that arithmetic to compute your flows of the stream and factoring that to get your actual flow.

Q So this would be an average over the course of a year?

A This would be the -- this would be an average during the period that we were taking the flow measurements. So there were times there when the, in the spring when the flow was greater, the streams, wetted perimeter would be much greater, right up to the banks, when the average width, I know, would be much greater, but the average of 20 feet in width, and average of seven inches in depth was derived mainly during the, perhaps, midsummer flow.

And in discussing this with Claude James, the hydrographer of the City at Cain Ranch, he felt that this was, because of long experience in hydro measurement, he felt that this was acceptable.

Q Thank you. I'd like to turn now to Exhibit 18.

A Number 18.

MR. WILSON: Those are your notes from the '86 visit.

MS. GOLDSMITH: And I'd like to get out my glasses.

THE WITNESS: I'll -- I have, I think I made both a copy and I have the original, so, yes. Okay. I have them.

// //

BY MS. GOLDSMITH:

Q Okay. This is very dense, tiny handwriting, and I've had a lot of trouble trying to read it. So I'd like to ask you some introductory questions about what prompted these notes being made, and then try to go through them.

You testified at the last portion of this deposition that you made a trip to the Mono Basin in 1986. And that it was a detour on a vacation, I believe, to Boise Idaho?

A Visit our family in Boise.

Q Right. Was this the first time since you'd been in service in the Mono Basin that you were back?

A I recall -- I recall one other trip, but not for -- it was just -- it was just in and out of the -- it was just in and out of the Basin, we didn't stay anywhere. I think we just -- it wasn't for any length of time at all, but I don't recall the date of that, but this is certainly, this was the first trip where I was really focusing on the appearance of the area after all those years.

Q On the trip that you mentioned that preceded this 1986 trip, do you have any recollection of where you went before or after or how it was that you happened to be -- find yourself at the Mono Basin?

A I'm just not at all sure. On one of the trips we wanted to see Mr. McPherson, Wallace McPherson and his wife in Bridgeport. And I think basically the purpose of the

trip was to see them, and I -- the purpose of the trip is focused around the visit to the McPherson's in Bridgeport, and hence the reason why I'm not able to recall. I didn't do any side tripping at all.

Mrs. McPherson had been ill, and very good friend of my wife's, and we wanted to see her. So I didn't do any side tripping incident to that.

Q Okay. In 1986 why -- what prompted your making this detour?

A Like I say, I wanted to -- this time, I wanted to -- one of the things was see our old home at Gull Lake, and since I had received some communications from the Mono Lake Committee, publications and so on, and seen press and so on, I wanted to see Mono Lake again and see Rush Creek and the site where we conducted the creel census.

And it was a nostalgic thing, and also went to Lee Vining Creek and see as much as I could in the very limited time, including Grant Lake and up through Silver Lake and Gull Lake and Silver Lake and then on home.

And incident to that I took a series of pictures, of slides, a few slides, and I made the notes based on the observations of the evening before on Lee Vining Creek and the next morning, 9:30, the 30th of September, on Rush Creek and the rest of it.

Q Is it your normal practice to make extensive notes on vacation trips like this.

A Well, since I had been a biologist over there for a long time, and because of the -- my interest in the streams in the area, and knew people over there, and I wanted to try to recall as much as I could on the basis of the trip.

I also was interested in recording, putting down sight observations, just what I had seen. I didn't know, I had no idea at that time what I might do with them or anything like that. I just made a record of what I saw to the best of my ability.

Q Had it crossed your mind at that point that at some point in the future you might eventually be called on to testify?

A No, it really didn't. I wanted to, and had I had a notebook along, I would have probably used more or less the standard form that we have in several of our exhibits. I just had -- I just had some paper, this lined sheet, and I scribbled on it, wrote on it.

Q Did you have any thoughts about the use that you might put those notes to later?

A I really, at the time I really thought that they might be of value. They might be useful.

Q Was that part of your purpose in revisiting these sites?

A The basic purpose was to see what was there, what -- tried to appreciate what had happened in the intervening years.

Q So, can you sort of walk me through this visit from when you arrived and where you went specifically. I'm not sure if reference to some of the exhibits that are maps might be useful, if they are please let me know and we'll get them out and take a look at where it was that you went when you made these notes, and read them out loud.

A All right.

Q How about starting at the top?

A We arrived on the 29th of September and settled in for the night at -- in Lee Vining, then after doing that I went to Lee Vining Creek.

Q Where did you stay in Lee Vining?

A It was a Best Western Motel. I'm not --

Q Good enough.

A Okay. And I proceeded to Lee Vining Creek to look over the section there below the diversion and above the diversion dam to see -- I had heard and read in the press of a release that was going to be made or to be made in the stream that had been depleted of water by diversion at the diversion dam.

And I had an idea that this would -- it would be well to see what was happening there and compare this with the natural, normal stream in-flow into the four bay pool, so I went to this section and looked over that section of the stream the evening before.

Q That's on September 25th?

A On the 29th.

Q On the 29th, sorry.

A Yes, on the 29th.

And then I went down as far as -- walked down the stream on that section into -- down through the cover, yes, lodgepole grove, and adjacent willow cover, adjacent to the stream, and then I made an estimate, an eye estimate of the flow, just wanted to know what was flowing there, and I came up with this.

Q At what place in the stream?

A Well, at the place just above, it was below the diversion dam but above the -- just above the culvert. It looked like a very good section of stream, very excellent, excellent piece of stream, and I just made an eye estimate of what the flow was there. And I noted the stream as about ten feet wide, an average depth appeared to be about seven inches there at that point, and I estimated five second feet, and there were excellent spawning gravels.

Q You're now reading from Exhibit 18?

A I'm reading from Exhibit 18 and I'm running through those notes.

Q Thank you.

A And the willows and grass-lined banks, the arboreal makeup consisted of lodgepole pine, aspen, willows, there were good pools and riffles, and the lodgepole grove about the ranger station area, that is one reason I guess that

the station was established there. And to the foot bridge and above I noticed the bottom consisted of boulders and gravel, rubble, mixed course of riffles and runs, and the section appeared to be an excellent small trout stream.

And I noted there that the flow estimate was made by the eye method, and just -- then below the culvert, the stream was more rapid with boulders and large rubble, shorter and somewhat deeper pools, there was lodgepole pine, Jeffrey pine, aspen willows with gasses and mosses at the stream banks in places.

Q Did you see any fish?

A Yes, I saw one which I thought was an Eastern Brook, fish about, I would say, perhaps eight inches, about eight inches long.

Q In which section?

A In the section below the culvert. There was a pool just below the culvert, and the fish ran up into that pool below the culvert.

Then I walked up to the diversion to see the stream above the four bay pool, and I noticed there was a magnificent stream, times ten, the mind's eye of what was there below the -- in the section below the dam, times ten of flow below the culvert, below the ranger station.

And the flow there was possibly 50 second feet, entering the four bay pool, fine rubble, coarse gravel, the width, 20 to 50 feet wide, it's spread out

quite a little ways before it entered the four bay pool, was crystal clean, riparian cover included more large aspen. And I made a note there to check the USGS water supply papers as to what that was, but I never had access to water supply papers, so I just didn't.

Q Why were you going to check with the water supply paper?

A I was curious to see how close my estimate would compare with what was actually recorded into the four bay pool.

And I noted that the Los Angeles-Venturi Weir was located about a thousand feet above the diversion, and that weir would probably have a -- well, yes, it would have a welling gauge or well gauge there for records, and I never saw any of the records.

Then on the 30th of -- next morning, I then proceeded to take a look at the stream below -- above and below the power house 395, boulders, heavy rubble, there is -- and the stream makes the bend and starts down under the highway and then it plunges off, cascading so to speak with huge boulders and heavy rubble, and then it drops down through the riparian cover and becomes more moderate, four ways. And then, well, it's rapid, then to moderation, more moderate, and then rapid and then as it goes off toward Mono Lake.

Q Your description has carried us how far down the

stream?

A We have gone down now to just about opposite town.

Q Is that above or below 395?

A That's below 395.

Q Is it above or below the powerhouse?

A From above the powerhouse.

Q Okay.

A Down to below the powerhouse.

And so I noticed the boulders and heavy rubble, many small pools, some one and a half feet, two feet deep. There was abundant white water as the water was cascading down this area, and I noticed it makes good but very small trout stream at plus or minus five second feet. Again this is an eyeball figure, but considering the time of year and the seasonal temperatures.

Riparian cover was dominated by black cottonwoods, Jeffrey pine, wild rose thickets, sage and bitterbrush, and it was quite a tangle down through the section, about opposite camp. There was a little, maybe an anglers' camp where somebody had set up a sleeping bag or something for fishing, and I walked down below that, worked my way through, it's quite a tangle, as I got farther down it was more passable.

Q Where the camp was?

A The camp was about opposite town.

Q Okay.

A The -- I noted that the stream gradient tended to lessen and become somewhat more open opposite Lee Vining, and there were larger pools. And one thing that I did notice was the pocketed gravels that -- there wasn't much of this up in the cascading portion, but right where it reached just about the bottom, started to moderate, the gradient started to moderate then, and where you had this gravel pockets, and I visualized these gravel pockets in the fall being used by whatever fish, browns or Brooks, mostly browns in the stream.

There were many good pools, some small patches of spawning gravels make a workable fishing stream at this flow, and again time of year and season. From here to about 500 yards below there was a fire or wickiup camp, think I refer to, the stream was more gradual in descent to Mono Lake from the old lake edge on. All is open to present lake level.

Q Where do you identify the old lake edge in your mind?

A This was difficult to identify, but it would be in the vicinity, in mind's eye and recollection where the cover broke off, there were willows that went on down following the stream, but where the main cover broke off. As I recall in the early years the similar situation obtained, but a large cover went on down to a lower elevation. So about where -- about where the large cover broke off to the willows and the low stream riparian cover was what you

would interpret to the lower lake level. This was all open to the present lake level.

Then I notice this there the Gunite slick off the powerhouse, those should be eliminated, temporary filters, fish movement, started home. I made a note there regarding the Gunite slick opposite the powerhouse thinking it should be eliminated to facilitate fish movement, local migrations up and down stream.

In my opinion the stream flow should never be reduced below the volume so long as man controlled at any season of year, and it was just a bare minimum so -- and you could see that there was habitat there that would support trout, and if it went much lower it wouldn't support trout, many anyway, and that hence the reason for that note.

Q How far down did you walk, all the way down?

A I worked my way along the edge of the stream, back and forth, crossed over on one side, then I crossed back on the town side, worked my way down. I did not at that time go down to -- all the way down to the lake.

Q How far did you go?

A I went down to below town where there's a -- there's a -- there was a building on that side. I can't remember -- I guess it was a -- seems to me it was a service station or business on that side, and I went down below far enough where I could look far enough and you could see that

building, but I did not go all the way to the lake at that point.

But I did see from the roadside, I did see the remainder of the stream from the road. And I had binoculars and I was able to scan the stream from that point on down to the lake edge, and I noticed the stream was somewhat braided, and there were willows of various growth along the stream to the lake edge.

Q On Exhibit 18 it looks to me as though that concludes your notes on Lee Vining Creek, although there are a number of notes written vertically on the margin. Do any of those pertain to Lee Vining Creek?

A (Witness reviewing documents.) On -- at one point just above where the exhibit mark is I made the note the actual release turned out to be at very least ten second feet, I was able to ascertain that at a later time and that was from a press release.

Q Can you read the notes that the little finger is pointing to?

A Yes. Releases into the stream channel immediately below the diversion dam should be sufficient to maintain a flow of twenty second feet at one-tenth mile above the entry point contour to Mono Lake.

And this was from nobody's recommendation except that it was my experience estimate at the time of what the bare minimum should be. After having seen all

this, and made an estimate of five second feet plus or minus above 395, and five second feet plus or minus below 395, I thought that at least as a minimum, considering the qualities of the habitat and the character of the stream, that comparing it with other streams that I'd seen, east-slope streams, that a minimum would be perhaps twenty second feet. And I attempted to visualize the stream at that flow and hence the note there.

Q Did you visualize four times the flow that was there, or did you visualize other streams that you were familiar with?

A I compared it with other streams in my experience, and I felt that considering the qualities of the habitat, the quality of the stream, it would certainly merit at least that flow.

Q Again, I want to be clear, did you visualize it at four times the flow you thought was there at the time?

A No, I actually visualized -- since I've had experience with many streams in the very extensive biological of a fishery, we survey them, so before I went there was a sign to the east slope and then up and down the east slope. I attempted to compare it with streams that were perhaps comparable to that situation, and coming more to focus on east-slope streams it seemed to me to make more sense to note that.

Q How long did it take you to make this reconnaissance

of lower Lee Vining Creek?

A Well, it was done in the evening from about -- in the evening portion was done in the evening from before dinnertime to about almost dark. And then in the morning I was up at daylight, and like to see birds and everything that I can in the early hours and it's quiet then, listening to bird sounds and other wildlife voices, and I proceeded down to the section to reconnoiter the section below 395, took another look at it above the highway, and then spent the most of the time below the highway, in time for oh, perhaps, a late breakfast and check out and then on because we had in mind returning to Napa that day. And so we got away reasonably late in the morning.

I had in mind also if I was going to get any pictures I should wait until the time the sun was up at a higher point.

Q Did you see any fish?

A I saw fish -- I saw the one fish in the upper stream the evening before, right -- went into the pool below the culvert, and then I don't recall -- I don't recall seeing -- I don't think -- I don't recall seeing any fish below highway 395. I was looking for them, but I was also looking for other things including the fish, but I didn't see any.

One of the things that made it difficult down below highway 395 was the canopy, there was a lot of

cover, it was well canopied over and a lot of shade, and browns are very, very sensitive to foot pads along the stream. They just -- just the vibration like that (indicating), slight vibration and they'll head for cover, and there was a lot of cover down there.

Q Then you went on to Rush Creek?

A Yes, then I went on to Rush Creek, and the -- examined, upon arrival at Rush Creek, I examined the -- I say examined at the washed out bridge in the lower section. Just what would be in early times, early years, an extension of the road across a culvert or a bridge, but as far as I could go, parked the car and walked over to the edge.

Q Was this toward the lake or toward --

A Toward the -- this was -- where I stopped was actually toward the stream, but the lake would be to my left, be to the north of where I stopped, beyond where the old Clover home was.

Q So it was down toward the lake?

A Yes.

Q The county road?

A That's right, right close, within the map it would be -- it was right here (indicating) where the road -- let's see, no, that's -- it would be right in this vicinity, right here (indicating), where the road did cross at that time, at the time across the creek.

And if I may, I was -- I wasn't prepared for what I found, it was -- in all my years as a fisheries biologist I've never seen a scene that was so devastating, so to speak, in terms of stream biology, aquatic biology and fisheries. I have seen a lot of flood flows, and the workings of highway flows over on the coast in the Eel River and the coastal streams, but I was downright shocked at what I saw, and I confess, I was somewhat, I was a little choked.

Q What was it you saw that shocked you?

A What I saw that shocked me was the terrible incision, the frightful effects of flooding, erosion, through the glacial till and the pumiceous dust and so on which had occurred from -- at some time. I did not know at that time what those flows were or when they occurred, but all I could see was the effects, and subsequently that's when I took the pictures that I brought with me, the color slides.

The incision was at least 30 feet deep, wide channel, and the stream was a mixture of heavy gravel and rubble and boulders. The cover was gone, there was no -- there was just nothing there that compared with what I knew during the days of the Rush Creek test stream before, when I first saw the stream in earlier years, in late '39 and 1940. I -- and I guess thinking at that time just it was just habitat that was wiped out, it was just washed out, so to speak.

And so I took a series of pictures. And I thought at that time that it took 4,000 years to build this habitat, as I knew it, and at least 4,000 years, and I went back to the field trips that I made with Dr. Putnam and his interpretation of the age of the Pliocene, glacier, volcanic history of the Mono Basin, and I knew it took a long time to build this up, but just a short time in the life of man to -- for this -- through some circumstances to destroy all this and what we had there, the fishing, the fisheries, the fishery, the habitat and the fishery, the riparian cover, the meadow, and so on.

I did not actually at that time go very far up the stream, I actually didn't. I just took the photographs of the crossing downstream and I walked up to where the old Clover home was.

Q How far is that from the road?

A That would be above the site of the road at that time, it would be, oh, 200 yards at least, and where I could see the stream going up as far as I could. My time was limited and I didn't, wasn't able to, had there been more time, and had I been alone, perhaps I would have walked out on it.

Q Who was with you?

A I had my wife with me.

Q M-hm.

A And we did have a long way to go.

Q From there where did you go?

A From there, following the taking of the pictures, and at least making mental notes of what I saw on the scene, and I made a mental note that I would later examine more carefully the slides when I got them back to see the fine details.

I went from there to the old highway crossing of the Cain Ranch. I wanted to see this because I had taken that picture, a shot of that, on the 19th of July in 1939.

Q That's an exhibit to this deposition?

A That's an exhibit in the deposition of which you have a copy, and incidentally, the field note sheet which I uncovered on that at that time revealed that the flow was not five second feet but one second foot, and I gave the dimensions of that and details of that observation at that time on that note page, wrote that down.

Q This was in 1986?

A No, no, the note page was for July 19th, 1939, and -- but on the 30th of September 1986, I proceeded to that point, took another -- took a picture up there, again I was pretty jolted to see what -- look upstream and look downstream and consider the channel as a -- I used to see it with a cover, the lodgepole, the Jeffrey pines were gone, the pines that I knew, the cottonwoods, a lot of dead cottonwoods, willows were gone.

There was still back away from the channel

at that time there was -- far back was the edge coverage of sagebrush and some bitterbrush and rabbitbrush, and there were some willows, but the cover had -- it was pretty largely devoid of the cover that I knew back in 1939, in those years.

So I took a picture, I took at least one shot, I took two shots looking upstream, one of which was my wife, I asked her to step into the side, for size, and then one looking from the bridge downstream. And after thinking about this for a bit, then I proceeded to Grant Lake, went up the old -- went up to Grant Lake Road to Grant Lake.

Then I took a shot up Grant Lake, which I believe is still in this series, and then proceeded up the stream. I wanted to see the inlet of Grant Lake, the inlet area, that I once knew had magnificent groves of aspen that were removed in 1940, and up to the site of the egg taking station. And there were no buildings there, I mean there was no installation there, no facilities there, but I was able to recognize the site. And then up to the Los Angeles-Venturi Weir site, however, I did not stop at the weir at that time.

I went on directly to the site of Rush Creek, excuse me, the road parallels Rush Creek and it gives one a good opportunity to see the stream at intervals as it borders the stream from there on up to the outlet of

Silver Lake, see the beautiful stretch of Rush Creek there below, in the campgrounds section below Silver Lake.

Then I stopped the car and walked over to the outlet of Silver Lake and took a shot of the outlet, tried to get as much of the outlet, Carson Peak, the scene there of the outlet, and how the stream sort of spreads out before it comes together just below the lake, and then proceeds on down the canyon.

Q Was that scene comparable with what you remembered?

A Yes, there were no changes, I noted no changes there, there had been no -- it was just pretty much like I remembered it years ago.

And then proceeding upstream I saw the Rush Creek where it crosses the -- or the highway crosses Rush Creek below the powerhouse, and then proceeded on up to Reverse Creek and where it starts up to -- I wanted to go in to Fern Creek, where I stayed in the hatchery for years, but again time was limited.

So I went on up to Gull Lake and on around the lake to where our home was on the other side of the lake. And we looked, full of nostalgia, where we used to live. Then for just a short time, and -- I mean, we just stopped for just a short time.

Then I wanted to get up to the head of June Lake and look back and see June Lake again from the -- from what they used to call Old Ridge, I guess they still call

it Old Ridge, and I was surprised to see the overlook development that the forest service had put in in the interim, rather extensive development and very surprised to see the beautiful panorama of Carson Peak in the background --

MR. WILSON: We may have gotten far enough in the answer to the question.

THE WITNESS: -- to home.

BY MS. GOLDSMITH:

Q To home, how long did that take, when did you finally get home?

A Finally headed home -- it was -- by that time it was after noon, it was getting late and we wanted to get over Sonora Pass and get over that into the valley before -- kept thinking about traffic, so we wanted to get over the pass.

Q Okay. I'd like to ask you to read your notes on Rush Creek that are on Exhibit 18.

A Examined at washout bridge lower section. Terrible erosion and bank destruction from flood flows several years ago. And there's a somewhat marginal note there with fingers, Vestal color photos, willows and grassy path riparian to stream all or nearly all wiped out. Flow seconds taken to 15 CFS, followed by a question mark there, I wasn't quite sure because I didn't make any measurement at that point. Fifteen second feet, see pictures taken up

and downstream at this point and reexamine in detail, which I did at a later time. Tributaries Walker and Parker were dry at U.S. 395 meanders, meadows still green and probably creeks diverted for some irrigation or more likely total flow is being taken by City of L.A.

Q I have a question for you at this point. Did the meadow look -- how did the meadows compare and the flow for Walker and Parker compare with your recollections prior to this?

A There was a general dryness. By this time I think that irrigation had -- this late in the season they probably had moved the stock out and there was a general dryness, this was my recollection of it.

Q This is your recollection from when you were a ranger there?

A It was my recollections from when I was there as district biologist in consultation with the district ranger, Bill Fisher, who first informed me about the numbers and the range of sheep in Pumice Valley, in the Mono Basin. And he gave me -- at that time he informed me about the numbers of sheep and about the time, the schedule every year that they came in and they were moved out. Some years they were moved out a little earlier than others. Might have been moved on other range, I don't know but that was --

Q Was the extent of the meadows changed, larger or

smaller?

A I didn't see -- it didn't look to me as though there had been a great deal of change in the meadows. I didn't really examine them to any great extent, I was more interested in getting to Rush Creek and old 395, compare that with what I'd seen below, so I didn't spend time.

Q It didn't strike you as significantly changed?

A Not to any great extent.

Q Okay.

MR. WILSON: Are you referring to just the meadows not having changed or the creek itself?

THE WITNESS: Well, I was referring, of course, my recollection is the creeks were dry, and what I could see of the meadows above they were -- it was -- they were dry.

MR. WILSON: Again you're talking about 1986?

THE WITNESS: 1986, yeah.

Then I made a note following that on Rush Creek, pictures were taken at the old bridge above U.S. 395, up and down at ten hundred hours, that's 10:00 o'clock, estimated flow ten to 15 second feet, and I made a note to check it because I wasn't -- I wasn't sure, have not made a measurement, I wasn't sure just what it was, but it looked to me like it was between ten and 15 second foot, comparison with other flows.

Note the absence of riparian cover and few

Jeffrey pines. Up view with Ethel, my wife, in the picture toward Parker Lake, Parker Lake and the range behind, wild riffles, coarse gravels and medium rubble, good pools and runs, and some white water.

Very comparatively little white water, as a matter of fact, it shows up in the slides. Check pics carefully for details.

And then the last note there in that section was one pic at Silver Lake outlet to Carson Peak, however, I did take a picture, stop and take one picture of Grant Lake looking up towards Carson Peak on the way.

BY MS. GOLDSMITH:

Q On the margin of this first page of Exhibit 18 there is a note that refers to logging by the forest service. Can you tell me what that refers to?

A Let's see, on -- (Witness reviewing document.)

Q It's this (indicating).

A Oh. Oh, yes. (Witness reviewing document.)

Yes, it says search old pictures and notes for stream and riparian ecological condition after the stream center diverted, desiccation began, it did not take many years before Jeffrey pines and other arboreal cover to whither and die.

One of my last recollections on leaving the Basin was the rusty red of Jeffrey pines below Highway 395 looking down Rush Creek where drying had caused plants --

and some cottonwoods had withered and died also.

Some of the larger, best trees were logged off and sold by the forest service. This was my understanding, that the forest service had -- that somebody had arranged with the forest service so that the trees could be cut. I'm not absolutely sure of just who made the arrangements.

Q In what location were the trees cut?

A It seems to me that the large, old trees were cut above and below the highway, Highway 395. That is all I do recall about it. Early aerial pics of the area to Grant Lake would show prediversion conditions.

And in looking over the aerial photos I noticed a much -- that my recollection of the distribution of Jeffrey pines from Grant Lake down to below the Gorge was pretty much correct, that they were clustered on down, clear on down, beautiful big trees. Some of these were big trees, large trees, they were closer to Grant Lake. Some were lodgepole pines, and a rather dense riparian cover complex consisting of, in addition, black cottonwoods, willows, and the understore of sagebrush and bitterbrush along the banks, rabbitbrush filled in places.

MS. GOLDSMITH: Can we go off the record here.

(Discussion had off the record; thereafter, a recess was taken.)

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BY MS. GOLDSMITH:

Q On Exhibit 18 I would appreciate it if you could just read into the record the -- what's written there; could you do that? It's the third page marked 032 at the bottom, why don't you read the body and then start on the left hand and read down the margin?

A This is the one that has the phone numbers on it.

Q I don't know that we need the phone numbers.

A I'll start, this is series of notes --

(Proceedings interrupted by person entering room.)

THE WITNESS: This is a series of notes that was the outcome of a telephone conversation with Eileen Mandibaum, the Eastern Sierra representative of the Mono Lake Committee, regarding Lee Vining Creek on the 27th of August, 1987.

She called me, a series of questions at hand, and elicited a response on these questions. And there was a discussion of the prediversion conditions along Lee Vining Creek from the diversion point to the mouth, stream type, the cover, fish life, and so on.

I said I felt ten second feet or minimum would be the absolute minimum, as far as flow is concerned. Perhaps an additional 15 second feet would be required in such worse conditions to get clear through to the mouth at Mono Lake.

As regards fish, I said there were a few Eastern Brook in those early times, small percentage, but there were mostly rainbow and browns. The brown trout were most able to survive naturally over the years, and a few reached good size, for Lee Vining that is 13 to 15 inches.

As regards fishing, it was difficult in the early spring due to high flows, turbulent, great deal of white water, plunging and rapid flow, then it got better as the streams settle down off the main snow melt period. A good deal of fishing was done by locals, but was also used by visitors from the diversion down back of town toward the mouth.

I did not recall an established trail, but certainly it was not impossible to work one's way down, for them to work their way down along the stream. Angling was done by the short-rod method due to an abundant stream-side riparian covering, actually very dense, and they just used a very short rod, some of them.

And then I made a note to review the diversion site with Bill Banta and the Hess brothers, old-timers in Lee Vining.

BY MS. GOLDSMITH:

Q Are they still living?

A Mr. Banta I'm informed is still living, and I think the Hess brothers are. I know of no member of the Hesses that have been deceased.

Q What are the names of the Hess brothers?

A Well, there was -- Augie was the one I remember. Hess brothers were part Indian, and Augie was the one that I remember most. They had a garage there in Lee Vining and I used to at times talk with Augie.

Q What information would you expect they could provide?

A Well, specifically as regards fishing, the camp results from lower Lee Vining and Bill Banta had a store there and I'm sure that he was well-versed on the species and the numbers and the size of fish. Augie did, too, both are fisherman themselves.

The -- and then I made a reference, I said local reference in talking, continuing to talk with Eileen Mandibaum, local fishing, referring to fishing frequency and quality to Bill Banta and the Hess brothers, and also included Wally McPherson, who was the son of Venita R. McPherson who was the former supervisor and owner and proprietor of Mono Inn on Mono Lake.

On the right-hand side of the -- of this page of Exhibit 18, I note in the upper right corner in the early 1940's they were considering grant for planting of more, BN, brown trout, from Mt. Whitney, Rush Creek stock, the lower reaches of all the Mono Basin streams were full with fingerlings, at that time there was no catchability, browns might be raised.

Then dropping to the next marginal note with

regard to Lee Vining Creek, angling was at least average intensity at Rush Creek at about ten anglers per mile or about 35 anglers --

(Pause in proceedings for Mrs. Vestal to change tape in recorder.)

THE WITNESS: Angling in Lee Vining Creek, at least the average intensity at Rush Creek at ten anglers per mile per day, or 35 angler hours per day, compared pretty well with Lee Vining Creek -- with Rush Creek, roughly in proportion to the size and quality of the stream.

There was less fishing during the peak runoff period, but gradually the stream became more fishable as the turbulence lessened and the stream got down, it got clearer, there was less white water, it was just more workable as a fish stream.

BY MS. GOLDSMITH:

Q Mr. Vestal, on what did you base your estimate of the number of anglers and angling hours per day?

A Actually, the -- in the absence of any creel census, mostly got from the wardens and the people on the intensity in that lower section of the canyon. He had remarked that that section of Lee Vining Creek from the ranger station down almost to the mouth was one of the best fishing sections in the canyon.

And putting this together, reports of the

wardens, comments by Mr. Banta and Augie, Augie Hess, and the reports from the anglers, that I inferred that it was pretty close in that section, in that reach, and during those times of the year, pretty comparable to lower Rush Creek.

Q Did you yourself verify this at all?

A I conducted no creel census, we just did not have the personnel, the money, and the time to do it. We had to depend pretty much on the warden reports.

Q Were the warden reports written?

A The wardens at that time were submitting regular weekly reports to their captain.

Q Do you know the names of the wardens at that time?

A Well, the wardens in that area at that time were Webb Talbott, Al Crocker, Jim Londergan came from Bishop, Carl Waters occasionally from Independence, and later there was a warden named Steadman who lives in Lee Vining, Robert Steadman, who -- I'm not sure Bob is still living or not, but last I knew he was living over at the Coast somewhere.

Q Do you know what the captain did with these warden reports?

A Frankly, I do not. They would have gone to -- judging from the administrative procedures of the department they would have gone to the inspector's office in Los Angeles.

Q Do you have any idea whether these are maintained or exist anywhere today?

A I would doubt that the same records system is maintained today.

Q What typically would a warden report cover?

A Warden report would cover the -- a specific daily report would consist of the day, conditions, weather and road conditions, the route patrolled, the -- in many instances the person who is contacted, people and places visited, and then he would summarize based on those contacts and his own direct observations by eye and by binoculars and so on and walking out sections of the streams, his own personal observations of what he saw.

He'd bring this together in that closing report for that day, and this series of days, weekly report and so on, and then I am not sure as these are brought together as we did in a monthly report.

Q Thank you.

A Then on the left-hand side the note there is, the uppermost note is prepare by no later than September 28th for upcoming proceeding, it looks like CT, which would be abbreviation for court, and I'm not sure what court this is. This was something that Eileen told me, Eileen Mandibaum told me over the phone, and what I think this was, but it is scribbled very quickly because I had the page down and receiver in one hand.

Releases, as regards releases, with a star on this. Release of fish to -- under Section 5937 to keep

fish downstream in good condition and then there was an -- omission, this does not mean a fish, I made this point to Ms. Mandibaum over the phone.

The intent for many years was for releases for water sufficient to maintain a prediversion normal population, the average population during those -- the normal habitat condition all seasons and all months of the year considering the habitat, the food production, spawning and so forth, for a series of years in good condition, that is able to move up and down freely to spawn, to complete all normal and usual life history stages.

And then appended to that note there was a whole question of minimum flow, see notes of last fall, September 1987. I don't know what -- and then I made a note there to check photographs, available notes, on pre and postdiversion situation. And there I was reminded -- reminding myself to try to find survey notes and logs.

Lee Vining Creek may have been planted originally with Cutthroat, later it was stocked with brown trout from Mt. Whitney and rainbow trout from Hot Creek. Eastern Brook may have drifted into the lower reach from natural propagated fish upstream, perhaps from the Tioga and Ellery Lakes. However, I must say that Eastern Brook actually were at one -- at one interval, at one time there was some planting in Lee Vining Creek above -- up to the junction of the Warren Fork with Lee Vining Creek which is

some four and a half, five miles upstream.

Earlier plants of brown trout were called Loch Leven, later brown trout, later called brown trout, which fishery biologists realized all variations come from typical production most years. Every variation occurred in the production from the typical classical Loch Leven with halos, spots and halos on the sides, up to well dense brown spots and well up onto the gill covers, and a golden bronze back color.

Q Thank you. On the 6th page of Exhibit 18 which is marked 0036 at the bottom on the right-hand margin are stream flow notations for four creeks, Rush Creek, 70 CFS; Parker Creek, 25 CFS; Walker Creek, 25 CFS; Lee Vining Creek, 50 CFS; and underneath that is a fishing plus 50 CFS. What is the meaning of those notations?

A I guess they were -- the significance was a mind's eye view of what the minimum flow in these streams might be. Considering most years, I had -- I did not have at hand a complete hydrologic record of all of the streams, and I guess I visualized what a minimum flow might be considering the habitat in toto.

And so I listed Rush Creek, 70 second feet; Parker Creek, 25 second feet; Walker Creek, 25 second feet; and Lee Vining Creek, 50 second feet. And as far as the plus fifty second feet, I don't know what that refers to.

Q Is it -- is it your opinion given your experience on

eastern streams of the Eastern Sierra that these flows likely would produce a good fishery?

A Flows of this kind would probably produce a good fishery, but they would not realize, without applying the type of assessment of the habitat that I referred to earlier in my testimony to the stream, they would not realize the full potential of production in terms of fishery, fishery biological potential of the stream and its habitat.

So I would have to -- I would certainly want to evaluate from that standpoint very carefully.

Q Thank you. In addition to the weekly warden reports that you mentioned a few moments ago, are you aware of any records that the Fish and Game Department collected concerning fish populations in the Eastern Sierra streams, particularly in the Mono Basin streams?

MR. WILSON: You mean in addition to the field reports that he's already produced?

MS. GOLDSMITH: Right.

THE WITNESS: No. You refer to the Department --

BY MS. GOLDSMITH:

Q Of Fish and Game.

A No.

Q Are you aware of any creel studies on any of these streams?

A No.

Q Or any special censusing of fishing people say on opening day?

A No.

Q Or estimates of angling days?

A No.

Q In 1940 I believe, I don't know if you've seen this document, but there was a protest the Department of Fish and Game submitted to a diversion, and it had an estimate of angling days on these streams. Are you familiar with that protest on Rock Creek?

A On which creek?

Q A protest of an appropriation on Rock Creek, and it estimated angling days in Lee Vining and Rush, I don't believe it estimated on Walker and Parker, it had an estimate there. If you're not familiar with it, that's fine.

A No, I'm really not, I don't call it up readily.

Q Okay.

A We -- the Department carried out a study on Rock Creek, but I'm not -- I don't recall it.

Q This protest, it had estimates of angling days on Lee Vining and Rush Creek.

A I don't recall that, no.

Q I don't know how they came up with it, and I was wondering if you were familiar with it.

A No.

Q All right. Let's take a look at the slides that you've brought. We'll need to mark the box I guess as the exhibit and perhaps refer to the slides as A, B, C, D, and I'd like to arrange to have copies of the slides made --

A All right. We will see that you --

Q -- with the notation so I can cross-reference.

MR. WILSON: So that this Exhibit is going to have to be separated from the transcription for a few days.

(Whereupon, a Metal Box Containing Slides was then marked as Exhibit No. 24, with prints of slides contained therein to be marked individually as Exhibits 24-A through 24-N by the Witness for identification.)

MS. GOLDSMITH: On the record.

BY MS. GOLDSMITH:

Q You have some slides, and we've identified them as Exhibit 24, and I'm not sure how many there are, but we'll identify each of the slides by letters, so the first one will be 24-A, the second one 24-B.

If you could just describe for us briefly what they show and when they were taken I'd appreciate it.

A All right. Slide number 24-A was a -- shows the inlet of Parker Creek taken on the 2nd of July 1950, the flow, with a flow of approximately 12 second feet. District Ranger W. L. Keen to the left for size, and shows comparable size of the stream, shows the typical gravel in the inlets and the riparian cover, here predominantly

willows.

Q Mr. Vestal, when you say the inlet, what is it the inlet to?

A The inlet to Parker Lake.

Q Above the City's diversion?

A That's right.

24-B is the alevin below Parker Lake taken the same day at a flow estimated to be 30 second feet, again this is above the L.A. diversion weir. It shows the riparian cover, grasses, grassy bank, the willows adjacent and predominantly lodgepole pine on either side, comparatively little canopy of the stream at this point. Excellent gravels, pools and runs in this section of stream.

This is a section of Gibbs Creek.

Q 24-C?

A This is 24-C, taken -- a section of Gibbs Creek taken in June of that year showing a section of Gibbs Creek, typical section of Gibbs Creek above a logjam which we planned to remove, excellent gravels, very fine flow in this section.

District Ranger Keen in the top center, riparian cover here also willows and adjacent banks with lodgepole pines.

This is a section -- this is 24-D, showing the outlet of Gibbs Creek and the logjam which we had

planned to remove in cooperation with the Forest Service. Again Mr. District Ranger W. L. Keen standing on the tremendous logjam in the stream blocking spawning migration of the trout.

24-E shows Rush Creek, lower Rush Creek opposite where the road crossed the stream, looking downstream toward Mono Lake, and shows the extensive destruction by catastrophic flows, very high flows, incision, cutting down to the stream, estimated perhaps 30 feet at this point from the thread of the channel up to the top banks.

Q Mr. Vestal, when was this taken?

A This was taken on the 30th of September 1986.

Q And on what basis did you conclude that it had recently -- previously been not incised?

MR. WILSON: You mean what was he comparing it to?

MS. GOLDSMITH: No, what was the basis for his conclusion that this incision was of recent origin?

THE WITNESS: It hadn't -- the incision hadn't been too recent, but it had been recent enough to drive down or drop down the channel, cut down the channel to that extent.

At that point I wasn't at all sure just when it had occurred. Recent in terms of the time between I last saw the stream and the time that I saw it on the 30th

of September.

BY MS. GOLDSMITH:

Q When did you last --

A In terms of geologic time, of course, it would be very, very recent.

Q When did you last see the stream before the picture was taken?

A The last time was in the fall of 1950.

Shows here also the banks, the slope of the banks and the stream incised to the point where the willows and cottonwoods bank cover down to this point is gone, just destroyed.

This is a -- 24-F is Rush Creek looking downstream, shows the bottom heavy rubble and boulders, and rather low flow. I did not know exactly what the flow was, but at a normal flow there would be much more white water and the spread of the stream would be much greater on the channel width at this point.

Q Mr. Vestal this was taken looking downstream of approximately the county road in 1986?

A Yes, yes.

This, 24-G is, while not too distinct is looking upstream toward in the direction of the upper bridge and toward the meadows, the back, generally toward Mt. Wood and Carson Peak and San Joaquin Mountain in the background there.

But again shows the incision of the stream as it progressed upstream toward the meadows section of the stream. Shows debris, the stream itself is not too distinct, but is in the lower -- more apparent in the lower left side of the photograph. The next photograph will probably show it better. Yes.

Shows the stream.

MR. WILSON: On 24-H.

THE WITNESS: 24-H shows the debris, again the spread of the erosion and incision of the stream, and cut back to some of the adjacent cover there.

It appears like there are willows on the extreme right center of the photograph, in general looking toward -- this particular picture is looking toward the Parker Basin and Mt. Wood.

And as I recall I estimated the flow perhaps at plus or minus 15 second feet at this point. Again there's no apparent white water, not too much white water. It was comparatively low stream. Just not much of a stream at all, quite a bit of debris is shown in the picture.

This is --

BY MS. GOLDSMITH:

Q 24-I.

A 24-I taken at the -- near the road crossing, attempting to take the picture across the channel, downstream, shows the downtrend of the debris along the

stream, shows the bottom fairly well.

There's no, virtually no white water showing in this flow, and the bottom consisting of some rather good gravels low down in the stream, then rubble, of course rubble, and cobbles and boulders, looks like some fractured volcanic material on either side of it, one large boulder in the lower right-hand corner which I inferred to be perhaps a glacier boulder.

This would be 24-J, Rush Creek looking upstream from old 395 Highway bridge. My wife is standing on the right bank for size there. Here the channel is spread out at this particular crossing. I thought at first it might be a jeep crossing, but it was just a spread of the stream.

Some white water is showing at this flow, the bank is devoid of willows, very little debris but there is a rather -- shows a rather good distribution of gravels in the bed, main bed of the channel itself. Had opportunity permitted I'm sure that the good gravels in this particular reach of the stream would have been born out.

Looking up into the distance we began to see, looking toward the Parker Creek here, Parker Basin, mouth of the Parker Basin, and to the left we see some Jeffrey pines, scattered pines along the thread of channel of Rush Creek as it goes on up, and then to the left toward

Grant Lake.

This is another photograph of the same reach.

MS. GOLDSMITH: We're on K.

THE WITNESS: This is 24-K looking more toward, let's see, Carson Peak, and in the upper, extreme upper-left corner of the photograph, and we have this, more of the large, the Jeffrey pines and the forest cover following the stream on down.

But here again this particular angle a little more white water showing, a little bit more in the foreground of the stream at 15 second feet estimate, and the channel eroded by high flows at sometime in the past, recent past.

This particular section shows a really, basically a good channel structure, and at normal flows a potential for a good trout stream.

BY MS. GOLDSMITH:

Q Mr. Vestal, are all of the slides from here on taken in 1986 or so?

A Yes. These -- all of these slides are taken, yes, the Rush Creek slides were taken in 1986, that's correct.

And this a photograph from the bridge looking downstream showing white water there at the -- just below the bridge, and pretty much the same basic structure of the channel as we're looking toward the White Island at

Mono Lake.

Here as I say cobbles and heavy rubble, some boulders, probably glacier boulders that were moved down the channel at high flows, but the structure of the channel itself on close examination would show some good gravels, good food producing areas in this section. And normal flows this would be a fine section of stream, and there's a little bit more white water shows in this picture, a little bit more than in the previous one.

This is 24-L.

BY MS. GOLDSMITH:

Q That's the picture you just are describing?

A Yes, 24-L.

And 24-M is a picture looking up Grant Lake from roadside at whatever elevation, I am not sure of that, looking towards Carson Peak, the snow covered peak in the center, Reverse Peak at the left, and Mt. Wood is off the scene to the right, typical shot looking at Grant Lake.

And 24-N is taken of the outlet of Rush Creek, taken at Rush Creek at the outlet of Silver Lake and looking toward Carson Peak on the right, Mt. San Joaquin is the snow covered peak just to the left, off the left shoulder of Carson Peak, and showing the typical bank side, lake side, bank side cover here of some aspen, but lodgepole pine predominantly on the left.

Rush Creek in this section from the outlet

of Silver Lake down to at least the main bend of the highway, approaching the Los Angeles-Venturi Weir is a beautiful, very productive stream.

That's it.

MS. GOLDSMITH: I'd like to have a stipulation on the record that Mr. Vestal can retain custody of the slides and prepare prints for the deposition reporter to include with the transcript, that will be lettered as we've described.

THE WITNESS: Yes, we will see that this is done.

MR. WILSON: So stipulated.

MS. GOLDSMITH: This is all of the questions that I have at this time.

MR. WILSON: Why don't we take a lunch break.

(Lunch recess taken at 1:00 p.m.; thereafter, at 2:30 p.m. the deposition resumed.)

MR. WILSON: Back on the record.

These are just a few more corrections to the transcript that we hadn't picked up on the first time around, and we want to make sure they're on the record.

THE WITNESS: We're eliminating exhibit -- the duplicate of Exhibit 8, I guess that was understood that we had a duplicate, was that right?

MS. GOLDSMITH: Yes, but I think we weren't going to change the numbering.

MR. WILSON: This was -- has a misspelling.

THE WITNESS: On page 74, line 5, there should be inserted the words "50 second feet," not five second feet because this pertained to the flow at the Los Angeles-Venturi Weir below Silver Lake.

MS. GOLDSMITH: Okay.

THE WITNESS: On page 99, line 9, was inadvertently omitted lodgepole pine and willows out of the sentence.

MR. WILSON: That might have been all.

THE WITNESS: We had some spelling here.

MR. WILSON: These are all.

THE WITNESS: Oh, these were all sent in, okay. Did we get --

MR. WILSON: There was another word, you had found the word entirely.

THE WITNESS: Yes, I'm trying to find the exact page and line. Oh, yes, page 32, line 19, the word t-a-r-r-y, should be "entirely," and line 24, line 5 --

MR. WILSON: Page 24, line 5.

THE WITNESS: Page 24, line 5, should be "immaturity," not maturity of these fish, and so forth.

MR. WILSON: Minor points, but in the interest of precision the five was more important.

Are you going to tell us again how you found these, you listened to the tape.

THE WITNESS: Oh, yes, I listened carefully to

the tapes that were taken before, and played the tape at these locations a couple of times in order to make sure of what was said and what was transcribed.

MS. GOLDSMITH: Can we go off the record for a second.

(Discussion had off the record.)

BY MS. GOLDSMITH:

Q Mr. Vestal, if you recall last January when we took the first part of this deposition you produced a series of folders with documents that you had preserved from the time when you were a biologist in the Mono Basin.

A Yes. And those papers were reproduced by the court reporter and sent to us, and they were numbered sequentially. I'd like to refer now to page numbers 89 through 307 and have those marked as Exhibit 25.

Can you tell me what they consist of, what these documents are?

MR. WILSON: That's this file.

THE WITNESS: These documents are weekly and monthly reports to the Bureau of Fish Conservation from approximately April -- no, approximately March 26th, 19 --

(Ms. Goldsmith hands documents to Mr. Vestal.)

THE WITNESS: The first one is a monthly report, I was referring to the earliest document which was a weekly report. They consist of weekly and monthly reports for the period cited.

BY MS. GOLDSMITH:

Q Who wrote these?

A I prepared them.

Q And was this part of your duties as a fisheries biologist?

A Yes, a weekly -- the documents prepared first as a weekly report from field notes, field records, summarize on a day-by-day basis, brought together at the end of the month for a monthly report submitted to the Bureau of Fish Conversation office in San Francisco.

Q Did they generally describe your activities on days and for the weeks and months, they did?

A Yes, they did.

Q How did you happen to have the set?

A I kept carbon copies of all of the reports that were submitted to the Bureau of Fish Conservation.

Q Are the pages that I indicated copies of the carbon copies that you kept?

A Yes.

Q Is it fair to say that significant observations would be reflected in these papers?

A Yes.

MR. WILSON: Did you understand what significant means? I guess I'm objecting, it's a little vague.

BY MS. GOLDSMITH:

Q Unusual?

A Yes, I think in many instances, in many instances significant observations were recorded in these reports. No -- in not every instance was a special report indicated to the Bureau, to my supervisor or to the chief of the Bureau. If a special report was required they would call upon me. Yes.

MS. GOLDSMITH: Thank you, I don't have any other questions about these.

(Pause in proceedings.)

(Whereupon, a File Folder and Its Contents was then marked as Exhibit No. 25 for identification.)

MR. WILSON: Back on the record.

EXAMINATION

BY MR. WILSON:

Q What I want to do now is just go through and we have a few questions we want to ask. We also have, and this is what I wanted to do at the outset, a few more documents that you produced this morning, and I just want to go through those briefly and identify them and add them as exhibits to the deposition.

A Yes.

MR. WILSON: Let's mark as the next exhibit a copy of a photo.

(Whereupon, a Copy of a Photograph was then marked as Exhibit No. 26 for identification.)

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BY MR. WILSON:

Q Can you identify Exhibit 26 for us?

A Yes, Exhibit Number 26 is a photograph by Joseph Dixon, then of the Museum of Vertebrate Zoology at Berkeley, California, form number 2176, taken by Mr. Dixon during a field trip in connection with survey work planned by Doctors Joseph Granell and Tracy Store in connection with the animal life, their eventual publication "Animal Life in Yosemite." It was a trans-Sierra transect from the valley over to the Mono Basin through that area.

And Mr. Dixon was part of the field crew, and he took this photograph, number 2176 at the mouth of Lee Vining Creek in Mono County. Apparently Mr. Dixon stood at a point right at the actual mouth where he could look up the corridor of the stream at midday.

And as near as I could interpret the field notes, it shows a fine, rapid trout stream flanked by dense riparian cover, creek alder, willows predominate with partial stream canopy. Stream shows abundant white water, short pools, extensive gravel, rubble, and some boulders.

I noted the time about midday, judging from light and shadows on the stream surface.

Q What you just read was the caption on the exhibit?

A Was the caption on the exhibit, that's correct.

Q You made a reference to interpreting the field notes. You said as near as you can tell in interpreting the field

notes, I just wanted to clarify what notes?

A From just what information was available in the Museum of Vertebrate Zoology file, and it wasn't -- it wasn't very extensive.

Q Is that description consistent with your evaluation of the photo from examining it?

A Yes.

Q How are the conditions that are depicted in the photo compared to the conditions as you recall them in 1939 and 1940?

A The riparian corridor was pretty much the same except that there was a greater gap between the last of the corridor and the level of the lake.

The stream was willow bordered from that point down to the lake, and there was some braiding of the stream, but generally compared well.

Q When you -- just one thing to clarify -- I think probably because I'm not sufficiently familiar with the terminology.

When you say the mouth of the creek you're talking about near the lake; is that right?

A That's right, the actual mouth of the stream would be at lake edge.

Q And this is somewhere that you were familiar with from visits in 1939?

A That's right.

Q And 1940?

A That's right.

Q Is there anything else of significance or importance in this photo that you want to identify?

A Well, the flow is certainly quite -- a lot of white water, and it's pretty obvious looking at this photograph and the original as I saw it in the files that the stream is fairly deep, but I didn't venture to guesstimate the flow, it's --

(Pause in proceedings for Mrs. Vestal to change tape in recorder.)

THE WITNESS: I didn't venture to guesstimate the flow because of the appearance of the photograph.

MR. WILSON: Let's mark the next exhibit, which will be 27.

(Whereupon, a Copy of Notes Dated 23 June 1948 was then marked as Exhibit No. 27 for identification.)

MR. WILSON: It's the 23 June 1948 field note, I believe.

THE WITNESS: Number 27.

MR. WILSON: Number 27.

BY MR. WILSON:

Q Can you identify this for us?

A Yes, this is a field note sheet made on the 23rd of June 1948 at Rush Creek test stream, Mono County. At 1:00 p.m. saw a Snowy Egret fly up from its fishing grounds 20

yards above the upstream barrier in the Gorge. At this time there was only about 50 gallons per minute passing over the barrier, possibly due to lack of irrigation in the table and above this year.

And city, L.A., taking it, taking it all, and "water" is in parentheses.

Q You mean the City of L.A. was taking all the water?

A Yes, by that time, January -- I mean the 23rd of June 1948, the inference was that the City was taking all the water because there was only just a very small flow, and 50 gallons per minute could very well have been made up from seepages and spring issues just above the Gorge.

Q Is this your writing?

A This is my writing. It's a note I have made.

Q Did you make it at the time?

A I made it at the time, yes, in the field.

Q When you make the reference to table land above, what was that referring to?

A The table land actually above would be Pumice Valley. This would be the flat land and the expanse of sagebrush, rabbitbrush covered more level land.

It was actually part of the -- of that continuation of terrace, Pleistocene terrace above Rush Creek.

Q Can you identify that on the photo, that's been --

A Yes.

Q I know that wouldn't come out in the record, but I want to see it for the record.

A Yes. This table land, I'm looking now at plate number 3 of Dr. Putnam's Quaternary of the June Lake District, California, August 1949, plate 3, page 1290, and this area that I'm talking about, this expanse of area would be -- it's cut down by the threads of Walker Creek and Parker Creek and Walker Creek, but it comprises this area here, this terrace (indicating).

Q So you are talking about the area irrigated by diversions at Walker and Parker Creek?

A Yes, it certainly takes that in.

Q So, was it your observation then that water in Walker -- water had been flowing in Walker and Parker Creeks then, prior to 1948?

A That's right.

MR. WILSON: Let's mark the next exhibit 28, which is another two field notes, I believe.

(Whereupon, a Copy of Field Notes Dated July 19, 1939, was then marked as Exhibit No. 28 for identification.)

BY MR. WILSON:

Q Can you identify this for us? Well, do you have a copy of it?

A Yes, I have the original sheet before me.

Exhibit Number 28 is another note sheet, field note sheet made at the time, dated July 19th, 1939,

locale at this was Rush Creek, and at 9:20 a.m.

I noticed that Rush Creek, the old road to Grant Lake, crossed the creek and this -- yes, the old road to Grant Lake crossed the creek.

There was an estimated flow of 1 CFS, the temperature was 62 degrees Fahrenheit, the air 73 and a half Fahrenheit, the average width of the stream was four feet, and the average depth four inches.

Q Were these estimates that you made or measurements that you took or some combination of the two?

A This was measured with, let's see, this -- it was rough -- no, it wasn't actually measured with a steel tape that one, this was an estimate of the width made by eye. And it's generally, by experience and practice, it's generally fairly easy to measure smaller flows by that method, it certainly saved a lot of time, but rapid field technique.

I note that most of the irrigation ditches were dry above Rush Creek on Highway 395 toward June Lake junction.

Sheep men were loading some sheep in trucks. A photo was made at this point. I note photo one twenty-fifth of a second at F16, 50 feet.

Q Is that photo the one that's been marked as an exhibit?

A That's correct.

Q Let me get that so we can relate to it.

A That's correct. That's number, let's see, that's on Exhibit Number 8, the bottom photograph. And the bottom -- that photograph -- in the caption of that photograph it says July 19th, 1939, flow estimated five second feet.

And I would like to -- this was -- that flow estimate should be corrected for the record to one second foot by actual sight.

Q Was finding this field note what made you realize that the caption on the photo was incorrect?

A Was incorrect, that's correct. And the reason -- and the way I found that note was as explained, was that it was made, I had made other notes on Basin wildlife in a series, and apparently just continued on in that notebook instead of shifting to a fisheries biology and survey notebook. I just took an extra page and continued that note.

At 9:30 a.m., Rush Creek, 200 yards below the outlet at Grant Lake the average width was 12 feet and the average depth 15 inches. The temperature was 69 degrees Fahrenheit, and estimated 26 second feet. I had a question mark after because it was an estimate and a larger flow.

According to the L.A. employee from West Portal, and concerned with Grant Lake Dam, work to start next spring. Lake will have a capacity of 67,000 acre feet or thereabouts.

On the reverse side, level on Grant Lake seems to be holding its own, although still way down. Stanley Carson tells me a person can pole across anywhere from willows and narrows in the upper one-third of the lake.

Mr. Carson was the concession operator there near the narrows in Grant Lake.

Conway, and that means Richie Conway, who was a rancher, sheep man in the Basin at this time ranging about 2500 sheep. And parenthetically see Fisher, be Bill Fisher, the district ranger at Lee Vining.

Ranging the sheep in the meadow at Grant Delta near the inlet. And the reason for the parenthetic note was I wanted to check with Mr. Fisher on that particular segment of the sheep allotment. Within the ranger district each sheepherder had allotments, and Mr. Conway and Mr. Mendaburi, Mr. Saldubehere, and one other rancher that I remember.

Q Maybe you can spell that last one for the reporter.

A S-a-l-d-u-b-e-h-e-r-e, I think that was Antoine Saldubehere, as I recall.

Q You make a reference to a photo?

A And the photo is looking toward the dam, shows the grazing sheep, the photo of Grant Lake looking toward the dam shows grazing sheep. And then I indicated the date, at one twenty-fifth of a second at F16, 100 feet.

Q Is that one that we've marked as an exhibit as well?
A I believe that we do have that photograph marked as an exhibit, Exhibit Number 7, the lower photograph, and the date on that should be corrected from July 10 to July 19. I am indicating July 19th, and I'm initialing that to show that correction because that -- these photographs, there was a series of these taken on July 19th as I progressed along Rush Creek.

And I was able to -- partly to pin that down by examining the right-hand side of that photograph with a hand lens, and I notice the sheep in the photograph. And so tying that in with the note, on July 19th I knew for sure that those dates were correct, or that particular date was correct.

Q Let's --
A Then on the left margin on the back side I note Write Taft, that would be Mr. A. C. Taft, chief of the Bureau of Fish Conservation on the fish way, on fish way at L.A. Weir.

Part of the concern, as I testified earlier, in the top photograph in Exhibit Number 7 showing the Los Angeles-Venturi Weir looking upstream through it was to try to work with the City of Los Angeles, Department of Water and Power to modify the downstream approach to enable fish passage.

Q Let's go back to Exhibit 8 for a minute and the lower

most photo, and which is the July 1939 photo.

A Get that. (Witness reviewing documents.) Yes.

Q You said flow was one CFS?

A Yes.

Q Do you know why it was so low?

A I believe that it was low because of -- there was irrigation going on still that early in the season, probably a diversion from irrigation, and there was -- could have been gate seepage or return flow that was contributing to that amount of water.

Q Did you at the time form an impression of the condition of the stream, of this particular portion of Rush Creek, at the time you took the photo?

A At this section, within the section there of 200 yards above and below the section, which incidentally is the same section which is pictured in the color -- one of the color slides.

Q The slides that we have marked as Exhibit 24?

A I was able to form an impression that this was one of -- a very productive section of the stream showing the exposure of the gravels, they're very fine gravels shown in this taking a visual transect across this stream at this point, and very fine gravels, and at normal flows this would be quite productive.

Here in this view there are remnant cottonwoods. I don't -- at this point I do not see many.

I see -- it appears to be some willows, but not many, and some debris, some debris, debris in the stream and along the borders of the stream, some heavy cobbles and boulders that have been cast at higher flows.

Q When you say it could be a productive stream in normal flows, you mean the conditions that are depicted in this photo are sufficiently good that higher flows could support a fishery?

A At higher flows.

Q That wasn't a very good question.

A Well, yes, at higher flows it could certainly support a full-blown fishery with a full-blown normal flow regime. The bottom streams, structure on the bottom type is such that it would be quite productive.

Q Could it remain at this flow level for a long period of time?

A And not be productive because the velocity patterns, the velocity -- the velocities and velocity pattern preferred and in normal habitats is simply not there.

Q Let me ask you one more question about this photo. Do you recall at this time -- let me start over.

Do you recall what flows were at this time in the lower reaches of Rush Creek? Was it one CFS all the way down, or were there additional flows all the way down?

A There was additional flows further down, partly due to perhaps return flow and to spring seepage and so on to the

point where you began to get real inflow from the springs and the meadows that entered the test stream section below the Gorge.

Q Do you have any more specific recollections of where the return flows and where the springs were and some idea of the magnitude?

A The return flows would come together. They -- it appeared to me that they came together in more volume in the -- certainly below the highway, the old 395, and within the last quarter mile or half a mile or so of stream before they came together in Rush Creek.

Q And can you describe more specifically what the return flows are just so we all know what we are talking about, what you're referring to?

A When I refer to return flows I'm referring to flows that may be in part seepage from gate controls, from -- flows that follow from the very downstream edge or so, of the irrigation fields, the irrigation area, and those waters then have to go somewhere and they spill off by gravity into the channels.

Q Which creeks do those waters come from?

A The creeks came there from Parker and Walker Creeks.

MR. WILSON: I think that's about all I have on that exhibit.

MS. GOLDSMITH: Would you want me to ask questions now or wait, which would you prefer?

MR. WILSON: Off the record a second.

(Discussion had off the record; thereafter, a recess was taken.)

MR. WILSON: Back on the record.

BY MR. WILSON:

Q I cut you off in the middle of an answer on one -- with respect to the table lands and the return flows that we were discussing in connection with the lower most photo in Exhibit 8. You were saying that, I think you -- well, you can go ahead and tell me what you told me I cut you off on.

A Yes. This -- as regards this specific photo at this particular time this was an unusually low flow I thought in my estimation, and I indicated that in part it may have been due to return water from irrigation above, and that this return flow came from the table land and the terrace land, Pumice Valley lands, which had been irrigated by Rush Creek and Parker Creek and Walker Creek.

And then as progressed downstream there was more pick-up, more return flow from seepage or otherwise, still over from that irrigation and from ground seepage which created an increasing increments in lower Parker Creek and Walker Creek.

Q Was some of the irrigation -- well, let me see if I have this correct. So you were saying there are three elements of the irrigation diversion, one at Walker Creek,

one at Parker Creek, and a third was Rush Creek?

A The elements as far as irrigation go, certainly one was from Rush Creek, one was from Parker Creek, and one from Walker Creek, the return flow.

Q Were the Rush Creek diversions the ones which were made that are known as the A and B ditches?

A I believe, as I recall. I'm not -- I wasn't too conversant with the ditch system, but it was my impression that the A and B ditches were fed by Rush Creek.

Q That's what I meant to say.

A Yes, over on this side (indicating).

Q Is it correct then that essentially what was happening, and what's shown in the two pictures that you've just been talking about, is that the water was, at least with respect to Rush Creek, the water was diverted out of Rush Creek somewhere below Grant Lake and eventually would have it return to Rush Lake up or around the Meadows and the Gorge?

A In one way or another much of it was returned by absorption and ground seepage and through the springs.

Q Is that everything you wanted to say about that? It's characterized adequately?

A I think that characterizes it. Certainly as far as lower Rush Creek and Parker Creek and Walker Creek, what remained there was nothing but the thread of the stream, there was very reduced habitat in those lower reaches of

the streams, and just a fishery holding on by its gill covers.

MR. WILSON: Okay. We'll come back to that in a minute. I think at this point Ms. Goldsmith has some questions.

I guess I should say for the record that since this is a new exhibit, instead of my going through all my questions and then Ms. Goldsmith starting over again, we thought it would make more sense for us to alternate questions with the exhibits, and Mr. Vestal thought that was acceptable.

FURTHER EXAMINATION

BY MS. GOLDSMITH:

Q I have some questions about Exhibit 28, and I guess I still don't quite understand how this hydrology works.

A Exhibit 28.

Q It's these fields notes --

A I see.

Q -- that we were just talking about.

A I see.

Q Now, am I correct in understanding that both of the observations that are recorded concern reaches of lower Rush Creek that are above Highway 395?

A Yes, on that particular -- on that particular exhibit that is the reach above Highway 395, yes.

Q And it's my understanding of the geography of the area

that both Parker and Walker join Rush Creek below 395; is that correct?

A At that particular time, yes, and clearly shown in the total mosaic of Dr. Putnam.

Q So, if there was an -- the field notes seem to indicate an increase in the flow of Rush Creek as you go down lower Rush Creek, still above the highway.

A No. No, it would be -- let's see. Oh, oh, I'm working up here, I'm working upstream.

Q Oh.

A From that station, my next station was 200 yards below the outlet of Grant Lake.

Q So the first entry is lower, on lower Rush Creek?

A That's right.

Q Then the upper?

A Yes.

Q That certainly clarifies.

So the diversion looks as though it probably was made someplace in between those two points of observation.

A That's correct, yes.

Q Okay.

A As far as Rush Creek was concerned.

Q I'm also curious about the temperature that's recorded in the second entry, it's a temperature of 69 degrees, and that's at a larger flow than the first entry which is 62

degrees at one CFS, is this unusual?

A Well, evidently the outlet -- the temperature there near Grant Lake is influenced by the temperature of the water from Grant Lake. We're getting a warm -- we're getting an increase of temperature out of water that's appearing out of Grant Lake, so it would be several degrees, there's seven degrees difference there between the upper temperature and the lower temperature.

And let's see, the air temperature, the general air temperature taken at 9:20 was 73 and a half, which may be really not high enough to cause -- to effect that much of a change, but I suspect that upper temperature was influenced by releases out of Grant Lake.

One would think at a higher reservoir, this 1939 Grant Lake hadn't been enlarged yet, so the water was coming off pretty close to the top at that time.

Let's see, July, yeah, it was coming closer to the top, and then as it went on downstream and went through the riparian protected and shaded portions of the channel, it was -- it went through a coolant, certain amount of cooling process, shade and shelter, and what fish were there were getting the advantage of this by inference.

But I strongly suspect that that was drying, that flow was -- was affected out of surface water.

Q The other question I have about this note, and the discussion that we've just had about the irrigation, is

that your note and your field notes indicates that most of the irrigation ditches were dry above Rush Creek on 395, and it's difficult for me to understand what the reduction would be unless you incorrectly noted that the irrigation ditches were dry. Or I don't know, there was a tremendous loss or something?

A Well, the road, the highway certainly crossed the ditches at several points, which these were observed dry and the -- at this time of the year evidently since they were -- since they are loading sheep out the irrigation season long passed through irrigating, and a lot of that had just gone into the, well, I want to call it again Pumice Valley, had just been sucked up by the pumiceous dust and particles and the surface pumice and so on, and then on down to seep into -- deeper and deeper into the ground structure.

Q So, the irrigation gates would have been open and then this would have been lost to percolation, is that --

A I don't know what condition the -- what -- just how they managed the irrigation gates. They would open the irrigation gates of course during the issue part of the irrigation season to get the water out there, but then whether they would close them or not, I don't know just how they -- just whether the gates were here. I would think that they would have, would have some of the gates perhaps were closed in order to create this condition, but I just

don't know how those gates were managed.

Q Is it likely that the stream would lose 25 CFS between these two observation points?

A Not without the gates, some irrigation water going out somewhere in order to divert that flow. That's quite a difference there, that's a big difference.

Q How close to the irrigation gates did you observe the irrigation being dry?

A Crossing -- where the irrigation district crossed the road, it would be some distance.

Q Okay.

A Be quite some distance, yes.

MS. GOLDSMITH: Those are all the questions I have on that, thanks.

FURTHER EXAMINATION

BY MR. WILSON:

Q You made a reference to the flows being abnormally low.

A Yes.

Q What did you mean by that? Compared to prior years?

A Certainly prior years, certainly a low in comparison with flows that Rush Creek, as I first saw it in 1938. And it was lower, it was lower when I saw it in the field with, let's see, twice in the field with Dr. Putnam. It was higher, it was -- the flow more than one second foot.

Q I think I have a few more questions about those

ditches, but we'll leave them for a different context.

Can I just verify, does the note say most of the irrigation ditches?

A Note, most of irrigation dry above Rush Creek on 395 toward June Lake junction.

Q When you say most of the irrigation ditches, were there other ditches, other irrigation ditches?

A There were other irrigation ditches and --

(Interruption in proceedings by unknown person entering room.)

THE WITNESS: I don't recall at that point whether active or not. I infer from that note that there were part of the -- it may have been a declining situation as far as the use of the irrigation ditches and some that were -- could have been an intermittent flow, some water standing or residual water would cause me to note that some were dry.

The inference there is that because they were loading the sheep there was no point in their continuing a diversion, and I guess for -- from their standpoint wasting water, wasting good irrigation water.

MR. WILSON: Moving on from there, we're moving on down Rush Creek, I'd like to have the next exhibit marked, which will be 29.

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(Whereupon, a Document Entitled Pacific Flyway Waterfowl Investigations Population Data was then marked as Exhibit No. 29 for identification.)

MR. WILSON: It's the Pacific Waterfowl --

THE WITNESS: Number 29.

MR. WILSON: Yes.

BY MR. WILSON:

Q This is a document that you found in your files between the last deposition and this session; is that correct?

A Yes.

Q Can you tell us -- first of all, identify it for us?

A This is -- these -- Exhibit Number 29 consists of a series of reports by Mr. Walter Dombrowski in connection with the Pacific Flyway Waterfowl Investigations, Population Data, which apparently he submitted on an annual basis. But because of my interest he just gave me copies of his 1948 reports: the first report of September 28th, 1948; the second report of September 27th, 1948; the third October 4th, 1948; the fourth October 11th, 1948; and the last November 1st, 1948.

And he indicated on these the number of species observed. There were lists of the -- on the facing page of each report he was to indicate the date, the time, the locality specified as the Rush Creek Delta, Mono Lake, Mono County California, which he typed in here, and then

there was the estimated total number of waterfowl by species that he observed.

Then at the bottom there would be his remarks summarizing the counts and any other remarks that he made in connection with observations.

And on September 20th --

Q Let's stop there for a minute. I don't want to get too far ahead.

How do you know that this was the way the reports were prepared? How do you come to obtain your knowledge of this?

A Partly because he told me, he showed me how. And as I mentioned because of my interest in birds and waterfowl he indicated how they were prepared and his connection and as a contribution to the waterfowl investigations.

Q So you were familiar with this work that he was doing and you discussed with him the way these were complied?

A Yeah, to indicate just how they were, what the records consisted of, what the significance of these records were.

I did not know at the time that he went into a pooling of records which were later worked up and then resubmitted in terms of annual report to several states by the Fish and Wildlife Service.

Q Did he prepare these on or about the dates --

A Yes.

Q -- that -- the dates indicated?

Okay. I wanted to get that in before I forgot, I'm sorry I interrupted you there.

Were you with him on any of the dates that these observations were made, that are indicated in these reports?

A No, I wasn't with him when he made these observations. He made lay counts, he had his system, and I did not -- I was not aware at that particular time of the map. However, he did show me in the field the ponds, the location of the duck ponds in the Delta and the approximate diversion points from Rush Creek into these ponds, and explained how the ponds were managed in the fall for the assemblage of ducks, waterfowl.

Q Now, the map you're making reference to --

A Yes, it would be page 6, and in reference to Mono Lake. And the relative importance of the Rush Creek Delta area to the rest of the waterfowl areas on Mono Lake would be shown on page 7.

Q I think that a page got skipped here in the numbering. Oh, never mind, I think what happened here -- let me ask you, there is a page between the page number five and the page that's number six, is that just the back?

A It's the duplicate of the back of the page, that's correct.

Q Okay. So this is a full set?

A It's a full set, and what I did was just simply

duplicate the back of that page, and there's one other page similarly done. Page 4, the back of that one is duplicated also.

Q Now looking at -- I'm sorry.

A What I was -- what I had begun to say, that on the September 20th report Mr. Dombrowski indicated eight species, and he made a general estimate of the numbers of waterfowl actually settling into the ponds in the Delta of a hundred and seventy-five thousand to 200,000 birds.

On September 27th, 1948, there were still eight species predominating in the observations, and approximately the same numbers.

On October 4th, 1948, there were still eight species, and his estimate was just simply a hundred and seventy-five thousand.

On October 11th, 1948, there were nine species, addition of one more, and his estimate ranged upwards, 300,000 to 400,000 birds and there's about 60,000 in one -- in one pond.

And then on November 1st, 1948, there were 12 species, and he remarked that there were over a million ducks on Mono Lake. Eighty percent of those were Ruddies, and Shoveller, S-h-o-v-e-l-l-e-r.

Q Did you ever have an opportunity to make personal observations that were -- that would verify or correct these counts?

A I was at lower Rush Creek when there were -- I never actually made counts, but I was in lower -- at lower Rush Creek in this vicinity when in flight the sky -- not darken, but there were just birds, seemed like ducks flying every which way upon being disturbed, and they would rise up, and leave large numbers of ducks still sitting on the ponds.

Q Was that an experience you had more than once?

A Yes, during the fall period, yes. And of course around other parts of Mono Lake over on the -- around the -- above Lee Vining and Danberg Ranch and other places during that period you'd see large numbers of waterfowl.

But the waterfowl characteristically gathered around the fresh water entries to Mono Lake. And of course one principal reason why they gathered here was because they had fresh water to rinse their feathers, and assemble in large flocks.

Q Based on your experience as a biologist out there do you have any estimates, or did you make an estimate of the numbers?

A No, I did not make estimates. No, I let Walt do that.

Q Okay. Let's take a look in a little more detail at the map that's on the page that's marked number six.

You said this depicts conditions that you saw personally; is that right?

A Yes. I recall the -- I recall the ponds, and I recall

the main system, the ditch systems, and Mr. Dombrowski explaining how it was maintained.

And the first map shown on page 6 of Exhibit 29 is approximately -- it's -- I would say it was pretty well drawn, and when I examined the aerial photos later, although the level of the lake had changed, these were positioned about right.

I think he evidently had submitted this as an appendage or attachment to his report series, and he made it quite accurate.

Q So you saw these four ponds that are depicted on this map?

A Yes.

Q The one that is two and a half acres and one about ten acres?

A Yes. I saw the -- I saw the large pond on the east of the -- east side of the Delta, and I saw the -- there are two ponds, one large and one smaller, that was connected to it before it reentered Mono Lake.

And then there were two smaller ponds over on the west side of the Delta. The large pond on the east side was by his estimate or measurement 22 acres, and the smallest pond in the series of four was two and a half acres over on the west side, and all of these were fresh water.

Q Do you know how the pounds were created?

A I'm not sure just how. I know the ponds were created in part by diking and ditching, and whether there were -- whether there were -- these were partly out of meanders within the -- within a braided delta in that marsh area seemed probable to me and he improved them by the diking and the ditching.

Q He being Dombrowski?

A Dombrowski, yes. Most of this was -- work was done by Walt.

Q Why did he do it?

A Well, it was actually in connection with the -- examined the recreational map and Rush Creek Ranch and the popularity of this area in the fall for duck hunting, and there were many waterfowl or bird shooters attracted because of the location of these ponds and the ducks that were attracted in there the --

(Pause in proceedings for Mrs. Vestal to change tape in recorder.)

THE WITNESS: There were literally dozens of gunners attracted by the advertisement, the map, or maps I should say, by the Haden Map Company and by Walt, in correspondence with Walt Dombrowski, and by word of mouth.

BY MR. WILSON:

Q Did you see these dozens of gunners you mean or --

A No, I never was there on a good gunning day in the fall when there were -- there were only a limited number of

blinds.

There was another feature of the duck area, duck hunting area, were the blinds that Mr. Dombrowski maintained, and just a limited number of blinds. And as I recall two or three gunners at a time could occupy one of these blinds. There were blinds of different sizes, there were two person blinds, several of these, rather skimpily made, but still satisfactory blinds, and then several larger blinds which would accommodate perhaps up to four gunners shooting on either side of the blind.

Q It appears from the map that the source of the fresh water in those ponds was Rush Creek; is that right?

A That's correct. And an active flow. You'll notice the center of the diversion was a dam. And this enabled -- I don't know what kind of a dam, whether this -- this was a sack, combination of sack, I don't quite recall what the nature of that beaver work was, so to speak, but sufficient to get a flow out through -- a gravity flow out through these blinds.

Q Let's take a look at the bottom part of the map, there is a road, it says "road," can you identify what that road is?

A That road is the county road from left to right, it's the county road coming in from Highway 395, a dirt road, gravel, or dirt, to the bridge and crossed Rush Creek there below. In the words it says "weather station." It was my

recollection that this was near proximity or close proximity to the Clover -- the J. B. Clover residence.

Then the road crossed via a bridge and went on, continued on down the edge of the lake for a ways. I'm not sure if that road went for very far beyond the edge of the Grant Lake or Mono Lake.

Q Where I think you said fish checking station --

A The fish checking station would have been approximately in the location where it says weather station.

Q Was the fish checking station the station that you used in the Rush Creek testing studies?

A Yes. At first it was just a small building and then the Division of Fish and Game moved a trailer in there, and actually a combination of that little building and the trailer at one point.

Q Can you identify approximately on this map where the hunters' and fishers' trailers that you were talking about earlier were located?

A Well, aside from the hunting out in the Delta area, the -- they would stay above the road and chiefly on the west side of the Rush Creek meander that you see above the road, upstream from the bridge, on the area of Rush Creek Ranch.

And like I mentioned earlier, I wasn't sure of the confines of Rush Creek Ranch, the entire confines.

Q Are there other features that are identified on this map that you want to point out before we move on?

A Except that the map is drawn in a scale of one inch equals 500 feet, and that the dotted line that he drew there is completely around the ponded area, and he mentions as per his label the area within the dotted line is covered by the general estimate for waterfowl.

Which I think is very -- that includes all of the ponds, and he especially wanted to get in that big pond because that -- and he notes the label map of Rush Creek Delta area, and the fact that the general direction here of the flow of Rush Creek into the lake is northerly.

Q Were the ponds still there when you left the area, when you left the Basin? Or did they still have water in there I guess is the more precise question?

A They were not maintained after -- not too well after Mr. Dombrowski became supervisor and he -- his time was taken elsewhere. And certainly not after, you know, he became ill and passed away. He died before the work at the Rush Creek test stream initial phases were completed.

Q Do you know when he became a supervisor? I ask not because that's particularly important, I'm trying to just identify the dates.

A It was right after Mrs. McPherson was supervisor, let's see if I have a possibility of a date on that.

Q Or if you can just tell me in relation --

A 19 -- let's see -- (Witness reviewing documents.)
Q What I'm really interested in is how long did the ponds survive after the onset of the diversions.
A That's really why I was trying to gather -- they gradually faded out. They gradually -- it became more and more difficult for Walt to get water out into the Delta, and the big delta that was there originally, and I think was shown in one of my exhibits, just wasn't there.

That, let's see, that photograph shows rather clearly a flow of a hundred and seventy-seven second feet.

Q But was there enough water to maintain the ponds?
A No, couldn't get the water area out there, marsh area gradually dried up, or was drying up anyway.
Q When you say the marsh area, could you explain that a little more?
A The marsh area comprised a fan, a fan right from just below -- just below the county road where the stream -- the main thread of the stream continued on to Mono Lake. But there was some braiding there.

And, incidentally, in the earlier years this braiding -- some braiding made it easier for Walt to maintain the duck area. But the marsh consisted of a fan right there about the outlet, about the mouth, I should say.

Q Is this the area that's depicted in Exhibit 9 in the

middle picture?

A Let's see. (Witness reviewing documents.) Yes. Yes, and also on the lower picture, part of that. Actually, in the lower picture you can see one of the duck blinds out toward the lake.

Q I can't quite make it out in the photocopy.

A Oh, it's --

Q In the lower picture?

A On the lower picture there is a -- and if I may, it's actually shown in this photograph (indicating), quite --

Q I see.

A -- quite clearly. It shows one of the blinds out in that area (indicating), and this was all marsh, developed as marsh area for purposes of waterfowl.

Q As long as we're discussing this area, can you give us a brief description of what Rush Creek was like before the diversions from the county road to the lake?

A Well, Rush Creek, there was coming down from the Gorge there were -- the stream at what I refer to as the normal --

Q I'm sorry to interrupt, why don't we just the county road to the lake.

A From the county road to the lake. Downstream below the county road for a ways there were extensive willows and cottonwoods along the, along the stream, willows on both sides, and what I call marsh grasses right along the

banks, stream, right up to the edge of the stream itself.

And then down just below, let's see, I can't -- I'm trying to mind's eye figure the actual distance or tenths of miles distance, but it certainly would go down perhaps a quarter of a mile below the county road. And heavy, rather heavy cover on the west side, much heavier, as I recall than on the east side.

But then it meandered down, and then looking up to the middle photograph which we have at higher flow, the stream then spread out through the Delta and you did get some of these, some of this braiding.

Q Are you talking about the area where the dam is on this exhibit we're looking at?

A I don't see the actual location.

Q I'm trying to tie in your description of where the braids began in the Delta to the map that we're looking at, Walt Dombrowski's duck ponds, and where the dam is located on there, I was wondering if that was the area you were talking about?

A Yes, I was talking about the low rim of the cover, the riparian cover on either bank of the stream, and I mentioned the fact that most of that cover was on the west side of the stream, and then it gradually lessened and virtually disappeared after about a quarter of a mile below the county road.

And then the stream still meandering through

this delta area entered this grassy marsh area. There was -- I don't recall, I don't think I ever knew the number of marsh plants or the type of marsh plants in there, but Mr. Dombrowski had said that there were several species that were quite typical of east side waterfowl marshes, which apparently had been started up there at some time in earlier years.

Then the stream went down, and perhaps it could have been half way down or where he had his dam, I don't recall the location, it does not show in the middle photograph because it's at a higher flow and that would be inundated.

Q The dam?

A The site of the dam for his diversions.

And then as you went down the stream got -- this was increased delta, fresh water, of course. And as it approached the lakes of course it was a fan. There was actually a fresh water fan went out into Mono Lake at the very end of it. And all of this was wetted, area was pretty well wetted area, and remained quite green through most of the season, didn't turn brown or turn color until later in the year.

Q How extensive was the fish activity on the area of the creek below the county road?

A In this area?

Q Yes.

A Well, I am not sure how extensive it was. There must have been considerable, however, because of the ranging of large trout down through that area.

I pointed out earlier about the site, we weren't sure of whether these were specifically brown trout, but they were certainly large trout and they could have been browns, ranging down in this area in their feeding habits.

A lot more water down in there in those earlier years, and could have been a very important sizing area, so to speak, for large trout.

Q Did the presence of the duck hunters make it a less desirable area to fish in?

A I don't think the presence of the duck hunters affected the fishing. I think that they -- the emphasis at that time was on duck hunting. However, there was some -- there was some fishing going on at that time, up to the time the season closed.

Q The next map in this report is on page 7, this is marked as page 7?

A Yes.

Q What was this map?

A This map is a map of Mono Lake showing the relative or approximate percentages of waterfowl distribution around the shore of the lake. "This distribution is naturally reflected by shooting during the open season," and I'm

quoting from Mr. Dombrowski's own label on this plate, page number 7 of this Exhibit Number 29.

Q Did he draw this map?

A Yes, he prepared the map, and he prepared the -- marked it various areas going counterclockwise around from the Delta. He indicated the location of the fresh water ponds, and with a dash line shows the Rush Creek Delta area, and indicated 45 percent of the concentration of waterfowl around the Rush Creek Delta. They certainly had to be a large percent from his observations.

Then the next eastward, again counterclockwise, would be indicated five percent, there was another area called the Tufa Rock area.

Then the next area was the Samann Springs area, S-a-m-a-n-n, 15 percent. And he's marked it out, there was rather wide area, quite a good-sized area, and it could have been equivalent or a little bit more than the Rush Creek area. Then the next area counterclockwise he's marked the Springs as -- in the Springs area, 15 percent.

And the Warm Springs area, he's got a similar dashed line at five percent.

And proceeding on around counterclockwise to the Dechambeau Ranch area, that's spelled, capital D-e-c-h-a-m-b-e-a-u, Dechambeau Ranch area, 15 percent, and that he's got a dotted line mark, that area which would be off around Negit Island, N-e-g-i-t, Island in Mono Lake,

Blake Island.

And then coming on around the Monte Vista Springs area, and he's got a similar dotted line there at five percent.

And then the last area, right around the mouth of Rush Creek, the fresh water fan around the mouth of Lee Vining Creek, Lee Vining Creek delta area, ten percent.

He's got an extension of the Lee Vining area along the shore of Mono Lake toward Rush Creek, and I interpret that as being that area where there were some fresh water springs or seepages out of the -- along the shoreline and into Mono Lake which attracted the waterfowl.

Q Was this report, this map, excuse me, prepared at the same time as the rest of the report?

A Apparently, yes, submitted along with these, with the -- at least submitted along with this collection of reports for the year 1938, or '48, rather, I'm sorry.

Q And how did you come into possession of those?

A Because of my interest in waterfowl and --

Q He just gave you a copy?

A Yes, and I was interested in what he was doing. He explained his association with the Pacific Waterfowl Investigations, and what he was doing about them.

MR. WILSON: That's all I have on this exhibit.

MS. GOLDSMITH: Okay. I have some questions.

FURTHER EXAMINATION

BY MS. GOLDSMITH:

Q Did you ever make any attempts to identify species at Dombrowski's place, species of ducks?

A Waterfowl?

Q M-hm.

A Yes, yes, I could readily identify on the leading page, page 1, for example, the Mallards, Gadwall, the Baldpate, the Pintails, the Green-winged Teal, the lesser numbers of Blue-winged Teal, and Shovellers were probably the most numerous. The Shovellers, other common name for them was Spoonbills or Spoonies. I think all of them knew them locally in the vernacular as Spoonies.

Q Do you have any idea how he arrived at his estimates of numbers?

A Well, I think at this point all waterfowl men -- I have flown with waterfowl men over along the coast and in the valley out of our -- my former region 3, out of Yountville, and what they did --

Q Mr. Vestal, the question is whether you know how he did it.

A Well, what I'm attempting to say is that I think he used a technique similar to theirs, which they call checkerboarding. They would see one area of a pond and they would quickly make an actual eye count or estimate on that, and then multiply by times eight or times five or so

on to make an estimate.

This is how a lot of the large counts of waterfowl up and down the Pacific Flyway were made, by checkerboarding, and that's undoubtedly the way Walt made his counts, some of his counts.

The lesser counts were just bird by bird, but I think most of the time he did it by checkerboarding.

Q And you think that -- why do you think that?

A Well, because it was easier, especially a large number, you're dealing with 200,000 waterfowl. It is just is physically impossible to make. They're maneuvering, moving around and so on.

If they're spread out on a pond, if they're spread out like on this large pond, if he can get into a situation where he can take his glasses and cut off a section that he knows the area of the pond quite well, cut off a section of that and make a quick approximation or actual count of a portion and multiply with the rest of the pond he's got it made.

Q Did he ever tell you that was how he did it?

A Yes, yes. I never did actually see him make the count, but that's --

Q But he told you he made them that way?

A That's right, yes.

Q On the map of the pond areas do you know when those ponds came into being? Were they there when you were there

before the war?

A They were there when I first came on the scene, and he pointed out that, well, I guess it was an adjunct of Rush Creek Ranch almost from the start because that's how the ranch became established in duck hunting and the fishing.

Q Okay.

A So, it was hand and glove.

Q Do you know how deep the ponds were?

A Quite shallow. The typical duck pond, let's see, I was able to wade out in a portion over on the west side in the pond marked ten acres I believe, able to wade out on a portion of that, and it was quite shallow. I had boots on, of course, but it was quite shallow. Not over, oh, at the greatest depth not over -- perhaps just above the knees' length. Just up to about gun boots, just above the knees, I didn't wade out into the center of it, because -- the ponds were typically relatively shallow.

Q I guess I'd like you to make another attempt at identifying when Mr. Dombrowski became a supervisor.

A Let's see, locate that, that date. (Witness reviewing documents.)

MR. WILSON: Is this something you expect to find?

THE WITNESS: I could pin it down more closely if I had an opportunity to look at the logs because there was an expression there, early on it was when the test stream

began.

Let's see, yes, now here. I have an entry October 6th, 1940, returned from supervisor Walter Dombrowski. I was mistaken about the order of political position here. It was supervisor Walter Dombrowski first before Mrs. McPherson, she followed Walter in succession.

I think Bill Banta at one point was a supervisor also, but I'm not sure of that date.

But this time October, in that period, Walter was supervisor.

BY MS. GOLDSMITH:

Q So the duck ponds would still be in operation at that point?

A They would still be in operation.

Q And they -- were they still operational when you began your creel study in 1947?

A In -- the duck ponds were still there in 1946 when we first reconnoitered, Mr. Taft, or Mr. Curtis and I we reconnoitered the testing area. And, of course, they were still going in this period here, 1948, period of these records.

Q After that your personal observation was that they fell into disuse?

A They fell into -- I don't -- what I was trying to recall was whether this was in connection with any illness that Walt had, but he was employed by -- right up to his

death. He was employed as a checker by the Department of Fish and Game, devoting most of his time to that work.

Q What is a checker?

A He was recording the anglers in and out, the cars and --

Q I see.

A -- and fishermen in and out of the test stream, and this took quite a bit of time. And we required reports from him, he was working up -- he was quite meticulous about working up the daily weather reports and air and temperature, and air condition, weather conditions.

Q Turning to the map of Mono Lake, the last page of the report, do you know how he derived these estimates?

A I'm not sure. I'm really not sure. He -- whether he enlisted the help of others in getting some count or whether he made a circuit of the lake in part, I'm just not sure.

Q So there really is no information as to the basis for these estimates?

A I would think that the basis of the estimation, would be possible to follow that in the annual reports, the area Flyway reports to the Fish and Wildlife Service and back from the Fish and Wildlife Service or state compendium, these have been kept for a long time.

Q Where would the state compendium be?

A Would be with the Department of Fish and Game, and a

man named Dan Conley in Sacramento. You could certainly track it through Dan Conley. And I cannot -- I'm sorry I cannot be of help in the Sacramento office of the Fish and Wildlife Service, but they're controlling as far as these enumerations go.

MS. GOLDSMITH: That's all the questions I have.

THE WITNESS: They were -- just to add an added comment, they were, I think, controlling as far as the methods and techniques so that they could coordinate the whole operation over the Pacific, all of the U.S., Northern American Flyways, all speaking the same language so to speak.

MS. GOLDSMITH: Okay.

MR. WILSON: One minor question regarding number 4.

(Pause in proceedings for reporter to change paper.)

FURTHER EXAMINATION

BY MR. WILSON:

Q When we ran out of tape, saying I had one more very minor point, which I do, I was just noticing on the -- or actually I had it pointed out to me on Exhibit 23 which is the Haden map.

A Yes, sir.

Q Where it refers to Dombrowski in one of the little ads in its bottom.

A Yes, Walter Dombrowski, proprietor.
Q And I notice that Dombrowski in that little box is spelled with a Y at the end.
A That is misspelled.
Q But it's the same person?
A Same person, that's right.
Q I thought Dombrowski wouldn't be all that common a name.
A I knew him too well.
Q Just to be sure.
A I knew Walter too well.
Q Let's move on up Rush Creek a little bit more, again I think you were starting to get into this and I rudely cut you off, but I'd like to discuss in a little more detail the portion of Rush Creek below the Gorge and the county road, if that's a --
A Yes, approximately 3.2 miles.
Q Is that a distinct section that's meaningful to discuss?
A Yes, I think so because of the geologic area that the -- the geologic boundary you might say, and the road.

From the -- in the direction of flow from the Gorge, just below the Gorge the stream was bordered by -- right within the Gorge it was bordered by tall cottonwoods, and both above and below Jeffrey pines and willows, rather old and tall willows.

And the channel contained at that point, because of the slightly greater gradient just below the Gorge, was some glacial boulders in there. I don't know how they got in there, but they certainly were indicated as glacial boulders, and then large fragments of the rocky defile itself, large cracked off rhyolitic material was what that is.

Then the stream meandered down, it went on down through the floodplain. And actually it was -- wasn't on a meandering course, it was a sinewous stream for the most part on down for the length of the 3.2 miles.

The stream was bordered more than half of its length by dense willows, this was actually described as a jungle. Anglers reported as a jungle and so did our men report it as a jungle trying to get through the dense willows. Most of these had been high lined by sheep for a long time, but even then it was difficult to get through them.

Then they broke out, there were places there where anglers could have access to the meanders of the stream. And most of these areas where there were open places between the riparian cover were grassy meadow areas. This was in this upper portion of about a mile, is where the springs area issued. Springs area and issues came in from the west and southwest side and went -- came through a grassy meadow.

It was a very grazeable meadow, but at the same time in the early years it was swampy and there were watercress beds in there. The issues came out and meandered down through this, and it was marshy and wet and swampy and considerable watercress. I likened it in many ways to the watercress beds in Hot Creek when it was renowned from days of Paul Needham, before that you had a high food production. These areas were just fabulous as far as food producers.

Q Was food production the main significance of the watercress bends?

A What's that?

Q Was food production the main significance of the watercress bed?

A I think the watercress beds contributed, they contributed to maintenance of temperatures as far as the Brooks are concerned.

I mentioned earlier the fact that I think that this was a stronghold for the Brooks, could move up in some of the little streams, meander out of that spring area through the meadow. And while they may have spawned in the main stream and in partial tributaries to those areas, they would seek the colder inflows which almost certain were coming out of those spring issues.

Then the stream meandered on, continued on down, and the situation as far as willows and cottonwoods

continued on down. There were cottonwoods at various ages and sizes with open areas intermittently and right on down to the vicinity of the upper bridge. There was an open area there.

One reason why we selected that for a crossover is because there was an open area and comparatively easy area to get across with logs and structure for bridging, and continued on down, meandered on down and made a rather marked bend to the east and northeast before it approached the county road bridge.

Now, as it got down toward the Clover place, the -- it seemed to me that the terrace on the west and the northwest side was more abrupt. I'm not saying that it came in that close to the stream, but it was much more significant as it approached the -- I think this was one reason why -- that helped form the partial boundary anyway of the Rush Creek Ranch.

Q Can you identify for me which area was this area that's been referred to as the meadows area? I think the Rush Creek testing reports referred to it.

A I could indicate the meadows area on the -- maybe we have --

MS. GOLDSMITH: One of the exhibits?

MR. WILSON: That is what I was --

THE WITNESS: The meadows area came in from -- yes.

(Ms. Goldsmith hands document to witness.)

MR. WILSON: Which one are you looking at there?

THE WITNESS: There is --

MR. WILSON: Exhibit 3.

THE WITNESS: We located the Gorge, the meadows area came in in this upper area.

MR. WILSON: Tell you what, why don't we go off the record for a second here. Off the record for a minute.

(Discussion had off the record.)

(Whereupon, a Copy of Geomorphic Map of June Lake District was then marked as Exhibit No. 30 for identification.)

BY MR. WILSON:

Q Why don't you first identify the photo for us as what it is and where you found it.

A Exhibit 30 is plate number 3, page 1290, from the bulletin of the Geological Society of America, Volume 60, August 1949, and part of a leading article in that issue by Dr. William C. Putnam entitled, "The Quaternary Geology of the June Lake District, California."

Q You made a photocopy of this plate from the book?

A Yes, that is correct.

Q Now, where we left off we are going to ask you to mark on here --

A This is a geomorphic map of the June Lake District, California, that's the title of the map.

Q And I was going to mark on this exhibit.

There were three things we wanted you to mark. First why don't we have you mark it in red pen so it sticks out if that is fine enough for you. The three things we wanted to show first of all the meadows area and why -- can you mark that with an A?

A I'll mark the meadows area which comes in just above the Gorge, and mainly on the -- let's see, the --

Q Just above the Gorge?

A The northwest side. Below the Gorge, below the Gorge, yes, I'm sorry, toward the lake, and comes in around this portion back toward -- there is, there's, let's see. I'll get -- that's part of the meadow area too, but the main seepage was all the way around here (indicating), takes this meander, and spring issues all along there, through this section on the northwest side of Rush Creek. (Witness marking document.) Grassy meadow areas bordering the main stem of Rush Creek.

Q So is it correct that -- were all of the springs in the meadows area, or just most of the springs?

A No, all of the springs were not just in the meadows areas. There were some springs that came in, there were two springs that came, entered the creek in the lower end of Walker Creek, the very low end, just above the Gorge, just a few hundred yards above the Gorge.

And there were some spring issues evidently coming in from the southeast side, the extent of these I'm

not sure, but the bulk of them came in, and this is where -- on our reconnaissance of the area this is where we were seeking because that would have been a possibility for a hatchery site.

Q So the mark in red is what you refer to as the meadows?

A That's right, that's correct.

Q Can you maybe identify in blue where the watercress beds were that you've discussed?

A Yeah, well, the watercress, let's see. The watercress beds were located in the darker areas, let's see, I'll try to --

Q Does that show up?

A It doesn't show up very well, they might show up in --

Q Want to try it with a highlighter?

A Let's see, I don't know whether I can do that or not.

Q Were --

A They're too small really to indicate with any certainty.

Q But they're roughly in upstream edge?

A That's right, they're roughly in this area, in this -- I was going to call it kind of a pocket there in the geomorphology of the area.

Q Finally can you identify on that photo where the Gorge was, the area that you refer to as the Gorge?

A The Gorge.

Q Maybe we could pick up another circle.

A How do you wish me to --

Q Why don't you identify the first one that we've identified as the meadows as A.

A Meadow as A.

Q And then put in a second circle that we can identify as --

A And this other circle I'll actually put this over a little because it straddles the channel, as B (Witness marking document), the Gorge.

And on this particular exhibit the Gorge is rather distinctly marked by two tongues, two rather tongue-like structures of topography converging on the channel in the proximate center of that circle marked B.

Q And now you're just writing on the map that A is the meadows and B --

A Meadows and B the Gorge.

Q Was the meadows one of the most productive areas in the creek in your experience there?

A In my estimation it was one of the most productive sections of the whole test stream area because of the combination of stream bottoms.

I meant to add that the stream bottom throughout this reach of 3.2 miles had some fabulous gravels, beautiful spawning gravels and food producing gravels, and they were graded, well out in the typical

section of the stream, and it was very productive.

But this vicinity within the meadows, the combination of stream and those string issues in the meadows was one of the more productive areas of the test stream area, yes.

Q What happened to that, excuse me, that area of the creek as the test stream?

Well, let me back up a minute. Let me first introduce this next exhibit.

MR. WILSON: Let's mark this as the next exhibit.

(Whereupon, a Document Entitled Creel Census at Rush Creek Test Stream was then marked as Exhibit No. 31 for identification.)

MR. WILSON: What we've marked as Exhibit 31 is a creel census at Rush Creek, entitled The Creel Census At Rush Creek Test Stream, Mono County, California, 1950, and it was in the documents we produced last -- at the last session of the deposition, and it's numbered from 67 through 87.

THE WITNESS: What year was that?

MR. WILSON: 1950.

MS. GOLDSMITH: Do we all have that?

MR. WILSON: That's right, that's the abstract, there's a first page which is the abstract which I didn't include.

Off the record for a second.

(Discussion had off the record.)

BY MR. WILSON:

Q Can you identify Exhibit 31?

A Exhibit 31?

Q Oh, you don't have a copy?

A Just a moment, 1950.

Q '50, I'm sorry, you're right.

A This was Exhibit Number 31. This is creel census at Rush Creek Test Stream, Mono County California, 1950, submitted October 27th, 1953, and was a report to the bureau of -- to the Inland Fisheries Branch of the California Department of Fish and Game by me for that season's operation at the Rush Creek test stream.

Q Was this one of the bases upon which you wrote the test stream study that was introduced last time as an exhibit?

A The final report, yes, for the period -- for the period of time 1947 to 1951, which is Exhibit Number 15.

Q Was there one of these done for each year?

A One of these reports was submitted for each of the seasons, 1947, 1948, 1949, 1950, and the one finally by Mr. Beck in my absence to bridge that final season in 1951.

Q And this was based on your personal observations in your work on the Rush Creek test stream?

A That's correct, or under my supervision.

Q I want to ask you a few questions that really involve the conditions at Rush Creek towards the end of the Rush

Creek test project, and I want to introduce this as an exhibit based on notes at this time and also so you can refer to it if you need to as a reference.

What was happening to Rush Creek or Rush Creek fishery as the project progressed, the test stream project?

A Well, the --

Q The flows were declining?

A The flows were declining and the fishery itself was going down to what I have referred to in the past as -- I use the expression it was developed in connection with the Friant project, the vital thread. It was going down, shrinking down, down. As the thread of the stream got less and less the habitat shrunk, and we were just hanging on, we were really hanging on to try to maintain any semblance of the original objectives of the program.

Had we -- had we been better advised and changed canoes in the stream, as a figure of speech, we would have shifted to a different program of management, but we were bound to follow-up on year classes and markings, and so as to exhaust those marks and get the total returns out of those years classes.

We were being strangled by diminished flows. The work by Mr. Beck brought this really to a focal point, and is illustrated in his report for the year 1951. He actually showed in the one photograph, I would have wished

that Mr. Beck had published the whole series but he didn't, but he did selected a -- select a key photograph for that report, what was a real low point of 1.8 second feet for the stream at that time. This was in July of 1951.

We were creating -- we were creating a kind of -- by continuing management we were creating a kind of fish market whereby we were planning a stream, and the very small percentage of the fishermen were getting the lion's share of the catch. Those that had repeated fishing in the stream knew where to go, knew how to catch the fish, and they were catching them out right away. And of course the regulation included limit catches, and they make their catches and submit the report and be on.

Q Was this the intent of the test study?

A This was not the intent, this was what you might say an inadvertent result of the type of management.

The yield of the fishery continued to be basically the planted rainbow, I think the average for the year was 83 percent through the season of stocked rainbow, and then the lesser percentages were made up of browns and Eastern Brook, just a trace of Eastern Brook.

Q Did the people who fish complain about it, about conditions?

A At the last they complained rather openly and rather frequently. Mr. Beck reported that some of the anglers were so frustrated and discouraged at the situation that

they never witnessed a light -- as a matter of fact, they said many fisherman enter the stream and left without ever fishing, they were not happy with what was happening or what they saw.

Q What was it that they saw?

A What they saw was a thread of a stream. They saw what I saw, the vital thread of the fishery that was there, the very small stream, the shallow pools. There were some pools, but they were shallow, very small connecting streams down to a half a second foot or a second foot, connecting those pools. And a stream that in its shrinkage was beginning to be bordered by increasing plant encroachment. Plants were coming into the thread of the stream itself and encroaching more and more on the channel, and --

Q Why was that something that hasn't happened before?

A Because there was no flows, there was no flushing flows, there was no what you might call spring cleansing flows to keep those plants back to normal limits, within the -- within what I'd call the normal channel that we knew at the start.

Q Now, fish were surviving in the creek at this time?

A Yes, the browns were surviving there, the hardiness of the Brooks and especially the browns insure their survival. They -- it's almost dead sure that the browns were able to survive in those stream areas where there were perhaps remnant debris. There was probably a few rocks in the

channel or places where the stream was well inside any overhang or in the banks at all by that time. And there were just pockets there where I'm sure because of the density of coverage, density of riparian cover, the fishermen just didn't -- didn't get at them, the browns were harder to catch to begin with. They're more elusive, very sensitive to angler approach and headed for cover, and that helped to enable their survival.

Q Was this a stable condition for the creek?

MS. GOLDSMITH: I'd like to object as vague.

BY MR. WILSON:

Q Is it something that -- could the creek have remained in this condition for a prolonged period of time?

A I doubt very much because I think that we were headed toward -- we would have headed -- the vital thread would have gotten down to the point where the same thing has happened on other streams in California where you're actually bordering on extinction, and the extinction is caused by the sum total of habitat causes, habitat factors, I should say. The diminished volume of the stream, the lack of food producing areas, actual shrinkage all the way around, plus the increased vulnerability of the species to predation, herons, mammals, man, and so forth.

Q Do you recall the condition of the meadows in the 1950 season?

A The -- by the 1950 season the flows had diminished

where the meadows were beginning to -- I wanted to say they were beginning to show a commensurate shrinkage and commensurate declining.

Q Commensurate with the creek?

A With the general condition of the area. The lack of water was causing a reduction in spring flows and issues which were really by that time the main source of supply to the test stream. They were -- by all intents and purposes they were the thing that would -- was keeping the stream alive.

Q The spring you mean?

A The springs.

Q I lost you there for just a second.

You mentioned a couple times the vital thread, what do you mean by the vital thread, the --

A Well, the vital thread was a concept that I think I referred to just a little earlier, a concept that was developed during the Friant Dam case on the San Joaquin River where the large diversions in the San Joaquin River cause -- were causing -- caused the decline and causing the extinction of the San Joaquin River salmon. And applying this same concept, the same concept to -- to Rush Creek I could see throughout the reach a similar diminution which was going to lead to extinction of the -- eventually if it just kept going that way.

Q What I guess -- I think maybe I unfocused there for a

minute. What was the concept itself of the vital thread? You mentioned you develop -- well, did you mention it was you that had developed it?

A Yes, I developed that concept as a -- it was a condition of bear existence of the species within the thread of the channel as we knew -- once knew it on the San Joaquin, and condition of bear existence as we once knew it originally, originally knew it on Rush Creek.

Q What's the significance of having the vital thread?

A Well, the vital thread, if there is any possibility at all for survival, the resilience, the hardiness of the species and the resilience of the species, and when conditions are restored it maintains that way.

And I have seen in situations over on the Coast in steelhead streams where the vital thread is reduced to intermitency, and all you have are pools of more or less depth with fingerling steelheads. These pools perhaps would be two and a half to three feet deep, and at the very bottom of the pool is a layer of cool, flowing water, flowing through the under gravels. This is where your survivors are located. Time and again we saw this during the summer in the streams over in the Eel River system, Russian River system, and similarly, that same -- that was a vital thread only under conditions of stream intermitency.

Here I feel quite sure that the conditions

would have come on down and there may have been pockets of survival within the, as it were, the stream basin below the Gorge, from there to the mouth where there would be survival simply because the browns, and perhaps the Eastern Brook too, but the browns would pocket themselves in those areas and just -- they would feed, they would -- they would maintain themselves as long as they could.

Q Let's finish up one final section here on Rush Creek that I want to clarify.

We had talked a little bit about the areas where Walker and Parker Creeks empty into or feed into -- I'm not sure what the fish term would be, fish language term -- but they empty into Rush Creek.

A Yes, Walker and Parker Creek early on were emptying into Rush Creek.

Q Did I understand correctly that your testimony last time was that the fish from Rush Creek were entering into Walker and Parker?

A Yes, in the lower reaches, when conditions for movement presented themselves the fish were there, and they did that partly in their search for food. As the food -- as the stream regained itself food began to be produced again and the fish would follow that food, not for any great distance, but for -- within the boundaries of their individual safety you might say.

Q Skipping up, well, let's start with --

(Mr. Wilson and Mr. Vorster conferring off the record.)

BY MR. WILSON:

Q Skipping up a little bit to above -- well, let's go back to Parker Creek, I've totally confused myself.

Was there a continuous flow of water before the DWP diversions from where the diversion point currently is into Rush Creek?

A Yes. There were early in the year, there was -- I remember one field trip with Dr. Putnam where we both were able to see the continuous -- the continuous stream down, right on down. There were probably, during the time of year of good flows, probably sufficient flow to enable perhaps local seepage or return water, enough to keep a thread of the stream. And then as it got down lower there was more of the stream clear down to its junction with Rush Creek, but there were continuous streams flowing in both Walker and Parker Creek.

Q Did you -- I think you may have said last time that you had seen fish in those creeks or had fish --

A Which?

Q Let's start with Parker Creek, did you --

A I had fished the lower reach of Parker Creek.

Q And -- I'm sorry?

A And I fished up into the lower reach of Walker Creek too.

Q Had the wardens reported to you or had you heard from anybody else about the fishing in other stretches of Parker and Walker Creeks, if you remember, up either above the meadow or above the irrigation areas?

A The wardens did check these streams when they were actively flowing, they checked them from time to time for fishing, and fishing did occur as I got feedback from them.

I don't know what the frequency of their visitations was because I didn't keep that close track of their patrol activities, but I did get feedback from them that where the streams were active, any stream at all, why there was fishing.

And it seemed to me that they were -- I attempted to correlate this with the times when the wind blew anglers off of Grant and June Lake and more or less compelled the anglers to seek other water. They were -- but I think there was some correlation there too.

Q How do you mean?

A Well, because of the high winds, the Chinook winds, they were driven our of the higher areas because higher danger, they sought stream fishing.

And at that time because of that they were exploring these areas fishing, and that's when the wardens caught up with them, at least saw them. I don't mean to cite them or --

Q People fishing without licenses or something?

A Yes, that was part of their duties. There were no sections of those streams that were in illegal boundaries. Checking for license activity.

Q I see.

A To see what fishing activity was going on.

Q Where Walker and Parker Creeks entered into Rush Creek does that have particular significance biologically, those areas? I mean not just the fact they entered in.

A Well, for one thing, as far as Parker, yes. As far as Parker and Walker were concerned, I think I pointed out earlier that both of these areas were contributing, feeding a nursery section to Rush Creek, those lower reaches, to the extent that nursery and propagating areas, spawning areas.

Q Can you describe what a nursery area is?

A Well, the nursery area would be an area that would be an area that was suitable for spawning where the young would appear from the gravel in due course and the young would remain there until large enough to go back down in the main stream, back down in its main stem and contribute to the fishery lower down in that stream.

And they also contributed drift on the part of the Eastern Brook species for both Walker Creek and Parker Creeks.

Q How do you mean drifts?

A As the fish got larger they worked downstream, the

flows would actually cause them to -- the recurrence of higher water in the spring would cause them to back down.

Then in the irrigation diversions -- in fact, that the stream at the time was being all or partly dewatered, the stream, that would force them lower down into Rush Creek. And this in my opinion accounted for some of the appearance of Eastern Brook in the upper end of the Rush Creek test stream.

Q Did the flows -- the inflows from -- excuse me, from Parker Creek and Walker Creek have any moderating effect on the temperatures in Rush Creek that you know of?

A Only to the effect -- well, when -- only to the extent that those sections and streams, and they were pretty well covered, it was not -- I don't think a complete canopy, but there's a partial canopy of willows and other riparian coverage both of those sections, and that would contribute to the cooling effect, cooled inflows into Rush Creek in that portion.

Coming through that, I think that there may have been also some chemistry inasmuch as the flows -- there was actual addition to that extent out of -- into, back into Rush Creek from the areas that were irrigated out of Rush Creek.

But there could have been leachings from workings of stock in the -- those portions of Pumice Valley which contributed to this nursery value and in turn

contributed to the richness of the test stream, the lower portions of both Walker Creek and Parker Creek, and the richness of the test stream.

MR. WILSON: I could use a break. I'd like to ask a few questions about these Rush things and we're almost done.

(Discussion had off the record; brief recess taken.)

BY MR. WILSON:

Q I wanted to move back up Rush Creek a little bit continuing our march to Grant Lake.

We've now I think covered Rush Creek as it stood prediversion from approximately the Gorge, or actually I think from the highway, from 395 essentially to the lake, and I want to move up from there.

A By the lake you mean Mono Lake?

Q Mono lake.

A Yes.

Q What I wanted to -- I've seen some maps of an area referred to as the narrows on Rush Creek, down in the Gorge area also.

A The narrows is referred to as the Gorge, they're one and the same.

Q Okay. I just wanted to clarify that.

A Yes.

Q And that is distinct from another area which is the

constriction in Grant Lake and also called the narrows sometimes?

A Yes, the narrows, the constriction in Grant Lake, and what they call the narrows right through here (indicating).

Q And what you're pointing to on Exhibit 3 is the constriction in Grant Lake where the two moraine intrude in the lake?

A Right. This is the proximate point of the Tioga moraine, within the Tahoe moraines here and --

Q I just wanted to clarify the Gorge and the narrows are one and the same as far as Rush Creek goes.

A That's correct.

Q Can you describe Rush Creek between Grant Lake and Highway 395 before the onset of the diversions, and again just a brief summary of what you recall?

A Yes, the stream, thread of the stream, let's see, coming down below Grant Lake the stream was for a ways relatively more respected. There were large boulders or granite boulders in there as you might expect from the glacial till, and coarse rubble.

There were more pools, and there were more -- because of that stream structure, there was relatively more drop-off, even some cascades in there at that time. And rather coarse stream structure, but a lot of pool structure for a trout stream.

Then it went on down what we call the bend,

the big bend there and tended to -- as it got down toward the plain of Pumice Valley it had a tendency to spread out, it was less confined within a canyon type of terrain, and got more so as it approached Highway 395, and so did the openness in the stream and the gravel, and the productivity it seemed to me increased from, oh, a few hundred yards below Grant Lake right on down to the highway, old Highway 395.

Q Are you familiar -- excuse me, are you familiar with where Mono gate number one now enters Rush Creek?

A Mono gate number one enters Rush Creek about -- let's see.

Q I don't need you to identify, what I want to ask you about is what was that section of Rush Creek like that was now dewatered. I want to get an idea of what that stream was like in terms of vegetation.

A It was about as I described for that first section of mile or mile and a half below the stream, was a good trout stream. Rather increased gradient with heavy boulders and rubble down through there and some cascading of the stream, and was rather substantially productive but not -- I thought not as productive as the stream lower down toward Highway 395.

Q Was it fished?

A Yes, it was.

Q And was it again one of those areas that was more

heavily fished when it was too windy for both, for Grant Lake?

A The anglers would go into the stream and fish any of the reaches of Rush Creek that they could get to, and they could get to most of it under those conditions.

Q What kind of vegetation was there in that area of the creek?

A Well, below -- from right below Grant Lake there were Jeffrey pines, clustered and scattered all the way down to old Highway 395 there was a rather -- some of these were large trees, and on the -- I think I have a photograph taken from the bend of the road below Grant Lake looking down across the plain.

This was taken in 1935, showing the location of these trees on the landscape from -- generally from meandering as the stream went, meandered to the left and then back to the right and then on down to Pumice Valley.

Q Is that one of the ones we marked as an exhibit?

A It's an exhibit, yes.

Q Can you identify that so we're clear what we're talking about?

A Yes, it's on Exhibit Number -- it's on Exhibit Number 8, and the middle photograph. Showing the general direction of trees from right to left, you can see the taller trees there are Jeffrey pines, the lesser trees are some lodgepoles in there, but also many cottonwoods, black

cottonwoods, a lot of willows on both sides of the stream. I do not remember the -- or any extensive distribution of aspen below Grant Lake.

My recollection the predominance of the aspen occurred above Grant Lake in the upper delta area right up on, up below Silver Lake.

Q Did that vegetation -- how long did that vegetation survive after the diversion?

MS. GOLDSMITH: Objection, vague, which vegetation are you talking about?

MR. WILSON: That he just described.

MS. GOLDSMITH: Above?

MR. WILSON: Good point. Between Grant Lake and Highway 395.

THE WITNESS: Well, as soon as the dewatering occurred distribution began and there were -- it took some time before the deeper rooted trees and so on showed actual, you know, death. But I think I pointed out earlier that one of the last things I remember before I left the area was above and below 395 and down that far the rusty colored Jeffries that were just dead. And there were many, there were many black cottonwoods dead.

There were many willows dead also, but I think the willows were able to hang on for a little longer time for some reason or other, I think it's because their roots maybe have greater penetrating power or something

into the watered areas or the moist areas.

BY MR. WILSON:

Q Let's talk very briefly about Grant Lake itself. Were you familiar with Grant Lake before the -- well, before it was --

A Before the construction of the dam?

Q Before the construction, I was trying to think, because it was increased in size?

A I like to phrase that as a reconstruction because there was a dam there prior to the work by the City of Los Angeles, their contractors, which was actually enlargement.

I was generally familiar with the lake in its form, and it certainly had the appearance that is shown on Exhibit Number 3, 30, as far as this outline and so on. And I was more specifically familiar with the east side, the extensive plant beds.

There were very extensive plant beds from about this cove right on down through this cove near the dam on the east side extending down along the east side toward the southern end to this point, and then the plant beds in this area too, and these plant beds were a variety of water plants (indicating).

Q Again the area just north?

A Generally the east side of Grant Lake in the shallows. Here's where the shoal areas were, the -- what we call the littoral, l-i-t-t-o-r-a-l, zone of the lake, and here is

where more often than not was a great concentration of chubs of various sizes and several fish, the dominant population of browns, large browns.

Here is where most of the fly fishing for those big browns occurred as the season wore on. Come late summer and the fall it -- the lake became hot, so to speak, in fishermen's parlance because of the appearance of those browns. Fishing was excellent, they'd wade out and fish out there where they could on the edge of the plant beds after these big browns.

Q Did you ever take surveys or counts of how many people were fishing?

A No, we didn't conduct a census the times that you fish, it was just to verify the fact of what -- my wife's uncle was an expert fly fisherman, and he took anglers down there that were guests of their lodge and received reports from them and others as well as to their success and occurrence of the fish. And these fish, of course, were the self same species and size and condition that appeared in the fall at the Rush Creek testing station.

Grant Lake under those conditions was relatively a warmer lake, shallower and relatively a warmer lake.

Q When you say relatively warmer, can you give us an idea of the range?

A Well, the warmest temperature that I recall was in the

'70's, and this was a surface temperature. And there was a time when on a series of hot days, comparative still nights that we -- I myself and at least one of the other fisherymen, hatcherymen, and at least one of the wardens were concerned about a possible die-off if that temperature rose up higher toward in the '80's and it remained that way there was a possibility of a die-off of the trout or other fish, just tens of thousands of chubs, which formed that valuable foundation, and there could have been a die-off starting with them.

I saw no, as a result, during that period, one period I think of in particular --

Q Which period is that?

A This is during a summer period, during let's see, it was 19 -- 1940, the dam was -- began to fill the reservoir after the work was done, completed in the in late 1940's, but during that fall period of 1939 or during the summer or later summer of 1939 there was a period when I thought that there might be some disease breakout in the chubs because of the density of them.

Q Do you know if those plant beds are still there?

A I -- because of the change, the lake then was what we call eutrophic, e-u-t-r-o-p-h-i-c, eutrophic water, and it was very productive, partly due to the plant bed and partly due to certainly temperatures and so on. But the lake changed as it deepened, it enlarged and deepened and

cooler, and the habitat of the lake became generally more favorable because of that and the increased plankton production for rainbow.

Almost sure that this was a contributing factor to the lingering, call it residual population of black spotted. These are large fish, it was quite a healing sight to see them working their way up to the L.A.-Venturi Weir and above in the spring, we knew that conditions were at least favorable partly due to that.

Q Was there also an area at the inlet to Grant Lake that was of particular interest to you before the construction of the dam, of the new dam? I mumbled again, at the inlet to Grant Lake before the construction of the new dam?

A Yes, there was an extensive area at the inlet where the stream first entered. It seemed to me that the stream first entered farther over toward the old roadside before there was braiding definitely in the Grant Lake Delta in the early years and persisted right on down through the time when the -- these great aspen groves and some lodgepoles were removed by the contractors.

Q And --

A Clearance. That was 1940.

Q And which contractors?

A These are Los Angeles City contractors.

Q So in connection with enlargement of the dam?

A The project, yes.

And great piles of these were dozed up and burned, and the ash and so on, I think I mentioned that earlier contributing to the pollution of the lake. Enormous amounts of turbidity went on clear on down Rush Creek to Mono Lake. Because of that turbidity, it took some time to clear up.

But to continue, as the lake got larger and deeper and cooler, it became -- and was more heavily stocked -- there was a situation there where once the rainbow began to take hold and it began to get larger rainbow it was more of a clamor for increased stocking from Hot Creek, and this certainly contributed to the increased dominance of the rainbow in the fishery. In no way was it the results of spawning, natural spawning, because the rainbow -- over the years the only trout that were successful for spawning were the Cutthroats, it ran all the way up to June Lake. And in good water years.

And while I don't quite -- I don't thoroughly understand why the rainbow didn't avail themselves of suitable -- one such area was this area below Silver Lake. It could have been too cold, the air up above -- no, here's Silver Lake, right in here (indicating). Up into the lower ends of Fern Creek and Reverse Creek, and even some of those fish, as migratory as they are, could have gone in good water years to June Lake, but they did not.

I would have thought that because of the planting in the early years, starting in around 1921, of steelhead in June Lake that produced -- these were real -- these were from coastal steelhead stock originally, that some of these fish would have drifted down in their tendency to migrate out of the water down into Grant Lake and then come back, migrate up through there.

But there just wasn't the transportation because of the size of the outlet of Gull Lake and the relatively small stream in Reverse Creek at a time I guess that they -- perhaps they just weren't -- the fish, the steelhead, they were caught out of June Lake, in other words.

Q I think that pretty well answers my question about preconstruction conditions. I want to look, I think I skipped an exhibit in here.

A I think one thing, if I might add, about Grant Lake is that it is deserving of a thorough geomorphological survey which has really never been done. We were not -- we were tied down with the project at June Lake by requests from our department, and I felt that there was a crying need for a thorough going geolimnological survey early on, and then after the dominance or tendency to dominate the fishery by the rainbow, the larger, deeper, colder, it should have been explored, it should have been surveyed.

Q I think that's pretty much all. One more thing I just

wanted to clarify, to go back to the collection of Rush Creek, below Grant Lake and above Highway 395. When you were -- when we were describing the portion of the creek that no longer has any water in it at all, that's just the section between Grant lake and --

A Mono gate.

Q Mono gate number one?

A Diversion, yes.

Q Was that what you were describing when I was asking you about that section?

A Yes, the original condition of that.

Q Okay.

A Yeah.

Q And that's --

A I don't -- let's see, I really don't recall at anytime when that section of the stream was water pocketed. In other words, whether intermittent, just pools, whether from construction seepage or what. But I don't recall anytime when it was just --

(Pause in proceedings for Mrs. Vestal to change tape in recorder.)

THE WITNESS: I think the statement had been completed anyway.

BY MR. WILSON:

Q In your answer to the last question --

MRS. VESTAL: In backwards, I guess so.

(Pause in proceedings to change tape in recorder.)

BY MR. WILSON:

Q In your answer to the last question are you talking about after the diversions began, I'm not quite sure I understood.

A Well, I was really talking about the more historical condition of the stream. After the diversions began there was -- there was -- for a while there was a pocketing of the stream, eventually as time went on it dried up.

Q By pocketing you mean pools of water remained in there?

A Yeah, chiefly standing water pools.

Q I just didn't understand the term, that was all.

MR. WILSON: It's all yours.

FURTHER EXAMINATION

BY MS. GOLDSMITH:

Q Okay. I wanted to clear up an ambiguity with respect to Walker and Parker Creek. You were asked whether or not they were continuous streams, and I believe I recall your answer was that they were continuous streams early in the year, and there's two different meanings of the term "continuous." One is persist throughout the year, the other is they go from point A to point B continuously but may be intermittent.

Was your experience prediversion that Walker

Creek was continuous from above the current diversion point of the City of Los Angeles to its juncture with Rush Creek throughout the year?

A Originally in times of heavy -- in high water years this was certainly the case. There was enough water coming out of Walker Creek to go all the way and provide the irrigation diversions. There was, in other words, there was sufficient water to maintain a stream in the channel all the way down to Rush Creek.

Then as it got farther down, of course, because those years where you have more.

Q In normal or drier years would it be continuous from above the -- continuous and persistent?

A It would be -- it would be discontinuous for a ways below the -- below the point of diversion, and then again would pick up again as you got lower and lower down. The drier years it would be lower down the creek before you'd begin inflow, return flow.

Q Is this characterization also true for Parker Creek?

A For Parker Creek?

Q As well?

A Essentially, yes.

MR. WILSON: Can we back up on the last one, did you say Walker in the last one?

MS. GOLDSMITH: I don't remember which one I asked --

THE WITNESS: Parker Creek was the last one.

MR. WILSON: Was the first one Parker or Walker?

MS. GOLDSMITH: Can you read it back?

(Record read.)

BY MS. GOLDSMITH:

Q You also testified just now that you fished the lower reach -- lower reach of Parker Creek. Breaking lower Parker Creek into the part above the highway and the part below the highway, did you fish lower Parker Creek above the highway?

A No. No, below the highway in that last section just before it went into Rush Creek.

Q Did you fish the lower reach of Walker Creek above the highway?

A No, not above the highway.

Q Then --

A Actually, in the fishing there I was after exploration of the extent to which that lower section, just before it went down into Rush Creek, was utilized by the trout. I wanted to try to --

Q How far above the mouth of Walker Creek have you ever fished personally?

A Oh, not -- probably not more than 200 yards, 250 yards at the outside.

Q What about above the mouth of Parker?

A Parker Creek less than that, probably a hundred to a

hundred and fifty yards.

Q You also testified about temperatures and the effect of inflow from Walker and Parker Creek on temperature in lower Rush Creek, and I believe it was your conclusion that these creeks had a moderating influence on the temperature of lower Rush Creek; was that a correct characterization of your testimony?

A To some extent because of the canopy of cover, the cascading effects and the canopy of cover, and as far as Walker Creek was concerned inflow from at least two spring areas and some seepage there in the lower Walker Creek, so this would drop the temperatures down, decreasing temperatures or help to decrease the temperature in that section of Rush Creek.

Q Did you ever take any measurements of the temperature of those creeks?

A No, I never did, I never did record the temperatures. The uppermost temperatures I recorded was right there at the Gorge.

Q Uppermost being the most upstream location?

A The most upstream location being -- pertaining more closely to the test stream area itself.

MS. GOLDSMITH: That's all the questions I have.

MR. WILSON: I think we're getting close to the end here.

THE WITNESS: This is Exhibit Number 30, this is

marked for entry was it?

MR. WILSON: That's right, that is the original.

Why don't we -- first I want to ask you a little bit about another section of the river.

First let's mark as the next exhibit in order this summary chart.

(Whereupon, a Copy of a Chart Dated 2-5-90 was then marked as Exhibit No. 32 for identification.)

FURTHER EXAMINATION

BY MR. WILSON:

Q Let me show you what's been marked as Exhibit 32, and can you tell us what this is? I know that you can, I'm asking will you?

A Yes. This is a chart that was -- that I felt would be a more convenient method of bringing together considerable note data on the early conditions of Mono Lake tributary streams. At the top --

Q Well, before we get into the substance I just want to ask you a couple or preliminary questions. When did you prepare this?

A This was finally brought together on the 5th of February this year.

Q And what were the sources of the information -- of information that you used to prepare --

A My early field notes and the weekly logs and monthly logs, accumulation of records and photographs and so on

which have been entered into this matter.

Q Is there anything that you -- any source of information that you used or relied on in your preparation of this chart that has not already been produced in -- either produced as a document or introduced as an exhibit, or most likely both in this case?

A I know of none.

Q Did you also -- is this something that you prepared potentially to submit to the Water Board in conjunction with our proceeding?

A If need be, yes.

Q Why don't you describe then what you set out here. I just wanted to get the preliminary matters into the --

A Well, the chart then entitled Mono Lake Tributary Streams, shows at the top, just indicate some preliminary captions here, the symbols used in the chart for the species, BN for brown trout, RT for rainbow trout, EB for Eastern Brook trout, CT for Lahontan Cutthroat trout and parenthetically black-spotted.

And then over to the right I used the lettering on fishing intensity derived from a report I'm going to refer to in a moment, grading the fish intensity in terms of heavy, medium, or light, A for heavy, B for medium, and C for light, and this is taken from the a paper developed by Dr. H. S. Davis, of United States Bureau of Fisheries, fishery circular number 26, 1938, which was used

as a guide entitled "Instructions for Conducting Stream and Lake Surveys." It was a handy reference to itemize the left-hand column, numbers one through 26, the different categories of information in order to prepare the chart.

And across the top are the columns Rush Creek, Parker Creek, Walker Creek, Lee Vining Creek, and then on the last column on the right various remarks.

What I did here was bring together the information under these -- in these categories as suggested in Dr. Davis's fishery circular as a means of locating the information that had been brought together.

For example, for Rush Creek in the section this was the lower 7.93 miles, from Grant Lake to the mouth at Mono Lake, and its source was to be found in snow, glaciers, springs, and surface runoff, which I had observed in my surveys in the upper Rush Creek Basin in 1939 and 1940.

And then under barriers, Grant Lake Dam, of course, the early dam prior to the diversions, elevations 7,060 feet. And I made the comment in that historically there were no barriers between the mouth and June Lake.

Q You mentioned also that the dam pre-enlargement. These conditions are all as you've recalled them prior to the onset of the diversions, right?

A Yes.

Q I want to do one other thing, I'm sorry to be jumping

around, but I think we're running up on our time. There's one other document I just want to at least identify.

MR. WILSON: It's the one we just -- this is one we just -- no this is taken out of the documents. Have this marked as the next exhibit.

MS. GOLDSMITH: What is the date?

MR. WILSON: It's a memo, in a memo format, it's field correspondence, it's number 287 through 294. I don't believe it's been identified as an exhibit though --

(Interruption in proceedings.)

(Discussion had off the record.)

MR. WILSON: I have two more very quick questions. Back on the record.

BY MR. WILSON:

Q One I just notice the chart, Exhibit 32, under number 7 in Rush Creek you have some pretty high historic flows your research indicated in Rush Creek. Did you -- in 1940 did you see any evidence that the creek had been harmed by these high flows in the past?

A No, there were two points behind those entries, one was that I scanned the records to indicate the range of flows to see what high flows were, what they amounted to, but there was no evidence that I can recall that the stream had been harmed by, for example, the upward range of 1200 second feet.

Q Nothing of the sort that you saw?

A Nothing of a catastrophic nature. Certainly at 1200 second feet in Rush Creek there were velocities that would move bottom materials, but the stream from Grant Lake down to the lower limit of the riparian cover was protected and contained, its integrity was preserved because of the intense growths of willows and cottonwoods and riparian growth.

Q The final subject, moving along, is to switch entirely to the Owens River and particularly the portion of the Owens River below the east portal.

A Yes.

Q Were you familiar with the area of the Owens River in 1940 and before?

A Yes, I had run a rapid survey of that section of the river in connection with the distribution of trout, and also an exploration of the big springs as a possible hatchery site, and then down below into the Owens River from that site.

Q Did you have a chance to observe that portion of the river after the flow began entering through the east portal?

A Yes. One of the first things -- one of the first occurrences -- one of the very first occurrences was apparently flushing flow out of the tunnel of 200 second feet. It was called to my attention and it had -- it had spilled a lot of tunnel debris into the outlet and down

into the river and had caused some -- had caused some stranding, when the spring went down it caused some stranding of fish locally, bends and pockets of the river, and some of that silting had gone clear on down to the bend across there.

I also explored the section of the river in connection with spawning of suckers from Crowley Lake, this was a regular spring occurrence, but there was a complaint about the upward movement, upstream migration of suckers from Crowley Lake, and the disturbance that was being created by the actual spawning of those, of suckers, and the young of the suckers and trout, other fish moving in to capitalize on the disturbed bottom foods and also feed on the eggs of the -- millions of eggs that were being spewed out by the spawning suckers.

On that particular occasion I surveyed a 15-mile reach of it.

Q Was the concern about --

A One of the significant things about the silt out from the tunnel, the flushing, apparently flushing flows of the tunnel 200 second feet was that some brown trout at that time of the year entered the tunnel and went through the entire tunnel into Grant Lake and appeared on the -- at the spawning station on Rush Creek. This was the inference, inference of our hatcherymen because there were so many fish that they had to close down, they had to open it up

and let them go. They just couldn't contain them, and the only possible source of those fish coming in a surge like that was through the tunnel, and I joined in that inference.

MR. WILSON: Thank you. I think that will about do it since we're about to be evicted.

(The deposition was concluded at 6:05 p.m.)

--oOo--

--oOo--

I have read the foregoing deposition. The answers to the questions are true of my own knowledge. I declare under the penalty of perjury that the foregoing deposition is a true and correct transcription of my said testimony, except as I have corrected any answer in ink and initialed such correction.

_____
Signature of Witness

_____
Date of Signature

--oOo--

( ) The deponent failed to appear in order to approve or sign his/her deposition.

( ) The deponent refused to approve or sign his/her deposition for the following reason:_____
_____.

( ) The deponent approved his/her deposition by the letter attached hereto and made a part of the deposition herein.

--oOo--

STATE OF CALIFORNIA)
) ss:
COUNTY OF NAPA)

I hereby certify that the witness in the foregoing deposition, named

ELDEN H. VESTAL,

was by me duly sworn to testify the truth, the whole truth, and nothing but the truth in the within-entitled cause, pursuant to Section 2093(b) CCP; that said deposition was taken at the time and place therein named; that the testimony of the said witness was reported by me, a duly licensed Certified Shorthand Reporter under the laws of the State of California, and a disinterested person, and was thereafter transcribed into typewriting under my direction.

And I further certify that I am not of counsel or attorney for either or any of the parties to said deposition, nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 15th day of March, 1990.

REBECCA K. FELKER, CSR NO. 8043
County of Napa
State of California
--oOo--

SIMS & SIMS
Certified Shorthand Reporters
1700 Second Street - Suite 308
Napa, California 94559-0117

Napa: 707-226-3022
Vallejo: 707-642-3224
Fairfield: 707-428-3666

Date: March 15, 1990

TO: Mr. Elden H. Vestal
3042 Donna Dr.
Napa, CA 94558

RE: National Audobon Socient vs. State Water Resourses Board, et al.

The deposition you have rendered in the above-entitled matter has been transcribed into typewriting and is ready for your review.

If you wish to read, correct, and sign your deposition, the deposition transcript will be available in our Napa offices during business hours for a period of 30 calendar days following your receipt of this letter.

Please phone our offices for an appointment, if you wish to review your deposition.

If you have any questions regarding this letter, please contact your attorney.

Yours very truly,

SIMS & SIMS

BY: Rebecca K. Felker
CSR No. 8043

CES:rf

cc: All counsel
Original
Date taken: March 1, 1990