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1	UNITED STATES DISTRICT COURT
2.2	WESTERN DISTRICT OF WASHINGTON
3	AT TACOMA
4	UNITED STATES OF AMERICA,) UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON
5	Plaintiff, FEB 12 1974
6	OUTNATITE TRADE OF THE TAME
7	et al, EDGAR SCOFIELD, CLERK By Deputy
8	Intervenor-Plaintiffs,
9.) CIVIL NO. 9213
10	STATE OF WASHINGTON,
11	Defendant,
12	THOR C. TOLLEFSON, et al,
13	Intervenor-Defendants.
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18	TRANSCRIPT OF PROCEEDINGS
19	
20	September 3, 1973
21	Tacoma, Washington
22	
23	$\langle -1 \rangle$
24	THE HONORADIE GROOMS
24 25	THE HONORABLE GEORGE H. BOLDT UNITED STATES DISTRICT JUDGE, Presiding

.1	PROCEEDINGS
2 3	September 3,1973 9:00 o'clock a.m
4	(Appearances as heretofore noted in Volume I.)
5 6	(All parties present.)
7	THE COURT: Good morning everyone.
8	MR. PIERSON: Good morning, Your Honor.
9	First a small housekeeping matter, on our
10	exhibit list for PL-36, we have a date that is
11	two years in error, and my anthropologist called
12	it to my attention over the weekend. I would like
13	to correct it. As I understand it, it is a fairly
14	important change. It says 1856 and it should read
15	1854.
16	THE COURT: Is it agreeable to everyone
17	that correction be made?
18	(No response.)
19	THE COURT: Very well, it will be made.
20	MR. PIERSON: Mr. Heckman, come forward
21	and be sworn, please.
22	
23	JAMES L. HECKMAN, called as a witness on
24	behalf of the plaintiffs, being first duly sworn,
A-	testified as follows:

THE CLERK: State your name, please, 2 and spell your last name. 3 THE WITNESS: James L. Heckman, H-e-c-km-a-n. 5 DIRECT EXAMINATION 7 BY MR. PIERSON: 8 Mr. Heckman, are you the same James Heckman who 9 has submitted part of his written testimony as 10 Exhibit USA-36? 11 À Yes. 12 Q. Before we proceed to look at that in any detail, 13 I wonder if we could turn first to an overlay map, 14 which is designated PL-70, and purports to be a 15 blowup of figure 25 of the Joint Biological State-16 ment, which is Exhibit JX-2A. It is behind you 17 on the board. 18 I would like you to step up to the map and 19 start up in the northern part of Puget Sound and 20 tell us what each of those symbols represents. 21 Starting with the Lummi Indians, the circles show A. 22 on-reservation fisheries, and so at the Nooksack --23 mouth of the Nooksack River is an on-reservation 24 fishery by the Lummi Indians. 25

Can you give us some idea what gear is used in

each of those fisheries?

A. Primarily this is a gillnet fishery.

Going down farther south to the Swinomish Reservation, another on-reservation fishery by the Swinomish mostly by means of a trap located on the west side of the island.

On the Tulalip there is both an on-reservation and off-reservation fishery by means of gill nets and occasionally, or in the past, seines.

At Lake Washington and on the Green River, the Muckleshoot Indians have exercised off-reservation fisheries all by means of gill nets. On their reservation located on the White River, the Muckleshoots fish the river by means of gill nets.

- Mr. Heckman, is there an off-reservation fishery by the Muckleshoot Indians that is not shown either on this overlay or figure 25?
- A Yes, the Muckleshoot Indians have claimed and exercised fishing in the Carbon and the White River and on the Puyallup River outside their reservation.
- Q. Continue, please.
- A. Then this square at Tacoma (indicating) shows the -or indicates the fishery by the Puyallup Indians
 and it is not for me to say whether that is on or
 off-reservation at this time since that is under

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dispute. But they do fish by means of both drift and set gill nets.

A. Farther on south to the Nisqually, the Nisqually Indians fish by means of gill nets in both an on and off-reservation fishery in the river.

The Squaxin Indians fish in an off-reservation fishery. Their reservation is all on an island and their fisheries as regulated by the State are mostly located in the inlets to the west of their reservation.

The Skokomish Indians fish by means of gill nets, set gill nets on the Skokomish River all on-reservation.

Starting on the Quinault then over on the coast, the Quinault Indians have on-reservation fisheries on the Quinault and on the Queets River all by means of set gill net.

The Hoh Indians fishing at and near the mouth of the Hoh River exercise both on and off-reservation fisheries by means of gill nets, mostly set nets.

The Quileutes also located near the mouth of the Quillayte River fish off and on-reservation by means of gill nets.

The Makah Indians fish at the Ozette River,

and this is considered an on-reservation fishery. 1 The Makahs also fish two major rivers, the Soces 2 and the Waatch River on the reservation with set 3 gill nets, and they have off-reservation fisheries 4 in the marine areas. 5 Q. What gear do they use? 6 In the marine areas? A. 7 Yes. 8 They troll and they have gill nets. 9 Is that triangle a limitation or does that show 10 the only place that they fish the marine area? 11 No, their fishing area includes a much larger area 12 than this map shows, and so I can_delineate the 13 outer boundaries of that. 14 The Makah Tribe also exercises off-reservation 15. fishing on the Sekiu and the Hoko Rivers as shown 16 by these triangles. 17. Mr. Heckman, there is a triangle shown on what 18 is designated on the base map on the Pysht River, 19 do you know of any Indian tribal fishery there? 20 No, I do not know of any Indian tribal fishery there, 21 and that is an error on the figure 25 of the Joint 22 Biological Statement, and our draftsman in preparing 23 this just transferred that error to this map and 24

that should not be there. I believe it is

shown as the Sekiu River.

MR. PIERSON: I might indicate to the Court on figure 25, the Pysht River is designated as the Sekiu. With the indulgence of the Court, the plaintiffs would like to eliminate that triangle on the overlay on the Pysht River and also indicate an off-reservation fishery on the Carbon and other rivers of the Muckleshoot Tribe.

THE COURT: If there is no objection, that may be done.

Q (By Mr. Pierson) Moving now, Mr. Heckman, to your written direct testimony -- I believe, Your Honor, before we get to the objections, there should be two corrections which Mr. Heckman has noted.

Directing your attention, Mr. Heckman, to page 9, line 22, the statement is made, "Advisory Council to the Commission was formed in 1969," do you have a more precise date for that?

A Yes. We have looked into that and find that '69 is wrong, and the date should be July 26, 1968.

THE COURT: I wonder if I could have lost a part of this. I read this fully Saturday, and my copy here starts with page 1 and 2 and then starts 156. Have I lost out on some of the Heckman direct? I was going to ask something about it,

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because I didn't get any data on Mr. Heckman's
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              qualifications either, and I thought it might appear
               somewhere else. I couldn't find it.
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                           (Continued on next page.)
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THE COURT: Yes, somehow or other in the copy 1 that I got this material was not included. 2 MR. PIERSON: We apologize, your Honor. 3 THE COURT: No harm done. I will catch up as 4 soon as I can. In addition to the correction on MR PIERSON: 6 page 9 there is a short correction on page 12 for the 7 figure on the winter steelhead run in the Columbia River. 8 Do you know the correction that should be made there, 9 please? 10 Yes, at a heading of the columns that now show 1970-'71 11 and 1971-'72, those should be changed respectively to 1969, 12 and '70 and 1970 and '71. 13 MR. PIERSON: All right, with those corrections 14 made now, your Honor, we would like to take up the 15 objections that defendants have made to Mr. Heckman's 16 deposition. 17 MR. CONIFF: I have no objections, but I think 18 Mr. McGimpsey for the Fisheries has a few. 19 MR. McGIMPSEY: I believe the Clerk has a copy 20 of the testimony with the objections noted on it for you. 21 In particular, my objections occur at page 17. That is 22 where Fisheries sections of Mr. Heckman's testimony begins, 23 and my first objection is at page 18, which I object to 24 his statement that the stream listed in Dr. Matthews' report 25

do not cover all of the fishing areas of all of the plaintiff tribes.

The basis of that objection was that he was incompetent to state all of the fishing areas of all of the plaintiff tribes, if what he is referring to is the Exhibit designated PL-73, which is the red overlay indicating the usual and accustomed fishing places of the plaintiff tribes.

I felt that that was not within his competency to determine.

THE COURT: From what source did you get the information supporting this last sentence, there, from line 11 to line 13, Mr. Heckman?

MR. HECKMAN: In discussion with Dr. Barbara Lane and review of her report, I understood that particularly the marine areas of the plaintiff tribes would not be included in those rivers, or be covered by the green overlay.

VOIR DIRE EXAMINATION

BY MR. McGIMPSEY:

- Q Did you have any specific knowledge of which marine areas

 Miss Lane indicated the plaintiff tribes usual and
 accustomed places?
- A Well, yes, and I had an idea of my own what tribes those

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1 were. What tribes, to your knowledge, haveusual and accustomed 2 fishing places in marine areas, and then could you just 3 4 show us on the map where those areas might be. Well, first of all, I probably should clarify or would 5 like clarification -- are we talking about usual and 6 accustomed or are we talking about current fishing areas 7 by the tribes in the case area? 8 As to the current fishing areas by the tribes, I would 9 Q take it you would agree with the statement in the Joint 10 Biological Statement, JX-2A as to the location? 11 Α Yes. 12 Are there any of the rivers in that statement, the Joint 13 Biological Statement which are not included in Dr. Matthews 14 study other than the Quinault and The Queets River, which 15 are rivers that are not entirely on reservation? 16 MR. PIERSON: I have two objections. The first 17 is, I think Mr. Heckman should be able to see the same 18 page Mr. McGimpsey is looking at. The other objection is 19 whether Mr. Heckman was competent to make that statement, 20 I think he has answered that on voir dire, and Mr. 21 McGimpsey's examination really is getting into cross 22 examination. 23

THE COURT: Well, I usually permit you to go ahead and complete the interrogation and have it all in one

place where it is easy to find. 2 0 It would page 129, Mr. Heckman. 3 I don't have a copy here. Now, I am not sure you recall 4 your question. The question was, in your statement you said that you 5 should point out that the streams listed in Dr. Matthews' 6 report do not cover all of the fishing areas of the 7 plaintiff tribes. I believe you stated that you would 8 agree that Section 3.7 of the Joint Biological Statement 9 covers the areas where the Indian fisheries are currently 10 being exercised, do you not? 11 I believe this only covers, 3.3.7 only covers the Indian 12 river fisheries, not all of the fishing areas of the tribes 13 in the case area. 14 Are there any -- then, as far as Dr. Matthews' study is 15 concerned, your only reference here that it did not cover 16 marine areas? 17 I believe so, as far as the tribes residing on the rivers 18 listed here in the --19 So with the exception of the Quinault and Queets River, 20 you would agree that Dr. Matthews' study does cover all 21 the currently existing Indian river fisheries? 22 Α Yes. 23 MR. McGIMPSEY: With that qualification, my 24 objection will be removed, your Honor. 25

THE COURT: Thank you. Go ahead, Mr. Pierson.

MR. PIERSON: I think he has further objection.

THE COURT: I beg your pardon. Yes, of course.

MR. McGIMPSEY: If I might, the second objection I have occurs at page 19, your Monor, at lines 3 to 6, and I will just read it for the record. In response to the question as to limitations being imposed on mixed stocks, you said,

"Second, if, as indicated in the reports of Dr. Barbara Lane, the tribes' usual and accustomed fishing locations include many more fresh water and marine areas than those they are now using, the tribal members could shift to many rivers and marine areas not now used to take from stocks which have been increased beyond escapement needs by limitation on mixed stocks."

I object to that on the basis that there is not a factual foundation for it, and that the witness is incompetent to testify as to those areas where the Indians would have usual and accustomed places that they could shift from their present fishing areas to those other areas

THE COURT: And again, what is the basis of this statement, Dr. Heckman?

THE WITNESS: Again, I refer to Barbara Lane's report, and the overlay, red overlay prepared for this map,

which indicates that the usual and accustomed fishing areas 1 of the case area tribes would include many more rivers 2 than are shown included in the Defendants' report, and 3 any number of marine areas not shown in the report. Was the basis of your statement that simply that you 5 accepted at face value the statements of Dr. Barbara Lane 6 that usual and accustomed fishing places would include 7 virtually all of the fresh water and marine water areas 8 within the case area? 9 MR. PIERSON: Objection, your Honor. I don't 10 think Dr. Lane said that. 11 THE COURT: Well, in any case, let me ask the 12 13 question. This comment you make here is based solely then 14 on Dr. Lane's report or view; is that correct? 15 THE WITNESS: Yes. 16 MR. McGIMPSEY: My next objection, your Honor, 17 appears on page 19 at line 28, where the witness states: 18 "The result of these restrictions..." and he 19 is referring to restrictions on the fishery in marine areas 20 "...will be an increase in most, if not all 21 of the areas southward through which the salmon 22 migrate. It appears that the Department feels it 23 can still properly manage and utilize, the resource 24 even though it is not able precisely to predict what 25

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rivers will receive the resulting increase or precisely what the nature of the increase will be." 2 My objection there is based on the witness' 3 not being competent to say what the Department of 4 Fisheries --5 THE COURT: Yes, it is a conclusion, I think. 6 What do you say? 7 Your Honor, the words "it appears 8 MR. PIERSON: that, " and I think Mr. Heckman is qualified at least as 9 a fisheries management biologist, and he has also said 10 that he is very well acquainted with the Department. 11 One of the items in this case to which Mr. 12 Heckman is and will testify is how it appears to a fisheries 13 management biologist outside of the Department, a view of 14 what they intend to do, what they appear to be doing, 15 what their problems are, and I think as a fisheries 16 management biologist, he can say. 17 18 (Continued on the next page.) 19 20 21 22 23 24 25

THE COURT: If it is a matter of specifically stating what they are doing, that, of course, any witness, any qualified witness can testify to.

But to state what the policy or what the Department feels or may do or like, those are matters, I think, that would be speculation.

MR. PIERSON: Very well, Your Honor.

MR. McGIMPSEY: My next objection is at the bottom of page 20, beginning at line 25, in which the witness was asked: "Have you attempted to determine the river systems identified by Dr. Matthews as being Indian fishery rivers?" He answers that he has and that he has compared Dr. Matthews' study to Dr. Lane's study.

Again, this objection, I think, the Court has already made a ruling on. For the record, I would state simply that I feel the witness is not competent to testify as to the usual and accustomed places of the Indian fisheries.

THE COURT: Well, all that this purports to do is to compare the two in that he has read them both and compared them. Overruled.

MR. McGIMPSEY: Finally, my last objection is found on page 21 of the testimony, and it goes to a plaintiffs' exhibit, which I am not sure that

the testimony or my copy of it accurately identified. It would be PL-74, which is a bar graph that compares 2 the number of fish caught by Indians with other 3 citizens. 4 My objection is based that on the records of 5 his testimony there is not a sufficient factual 6 foundation for the establishment of 7.7 million 7 salmon harvest that he indicates there. 8 MR. PIERSON: My response, Your Honor, is 9 I believe earlier I had similar objections to 10 testimony, and I believe the Court's ruling was 11 that it's a matter for testing on cross-examination. 12 I would assume the Court's ruling would be the same 13 in this regard. 14 THE COURT: Test it now if you want. 15 MR. McGIMPSEY: I will test it. Your Honor. 16 THE COURT: All right. Consistency is 17 not always a virtue, I guess, but in that instance 18 I guess I can risk it. 19 MR. PIERSON: As I understand it, Your 20 Honor, striking that last sentence on page 19, 21 lines 28 through 32, with that the testimony of 22 Mr. Heckman is admitted without objection? 23 THE COURT: It is. 24 By the way, I jotted in on that exhibit the 25

original of that citation to the graph. I noted 1 it there. I hope I did it correctly. You might 2 check to see. 3 MR. PIERSON: Very well, Your Honor. 4 5 DIRECT EXAMINATION (Continued) 6 7 BY MR. PIERSON: 8 While the bailiff is putting up P1-73, which is 9 the red overlay, I would like to ask you, Mr. 10 Heckman, if you could explain to the Court your 11 understanding of how P1-73, the red overlay, was 12 prepared. 13 The information related on P1-73 came from Yes. 14 the report of Dr. Barbara Lane. It was prepared 15 in the Fish & Wildlife Service engineering section 16 on information directed from the Interior Department. 17. MR. PIERSON: If the bailiff will keep 18 the map down, I think you are going to need to put 19 another overlay on it very quickly, the green over-20 lay, which is PL-71. 21 (By Mr. Pierson) As to this green overlay, Mr. 22 Heckman, PL-71, was this also prepared under the 23. direction of your office and staff? 24 Yes, it was. 25 And what does it purport to represent?

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1 A It represents all of the streams listed in Dr.
2 Matthews' report.

Q. Now, when the red overlay and the green overlay were prepared, Mr. Heckman, what did you use as the rivers that you should consider?

Let me ask you a more direct question: Directing your attention to the testimony earlier of Mr.

Lasater where he put on some small rivers, some large rivers even, in black, did you consider those when you directed the preparation of the red overlay and green overlay?

- 12 A. No, I did not.
 - Q And to your understanding, what was the base map that you worked from?
- 15 A The base map is the same as that shown in the Joint 16 Biological Statement, identical to it.
- 17 Q. Looking at the green and red overlays as represented 18 there on the map and comparing, if you will, for 19 the record, could you indicate the river systems 20 which are not covered in green.
- 21 A. Yes. The rivers not covered are the Deschutes,
 22 Dungeness, Elwha, Queets, Raft, Quinault, Moclips,
 23 and the Hood River area --
- 24 0 Hood Canal?
- 25 A. Pardon me.

Yes, I have.

-- Hood Canal area, the Hamma Hamma, Duckabush, 1 Dosewallips, Big and Little Quilcene Rivers. Now, I believe the green overlay also indicates Q. 3 that on some of the river systems represented the 5 green lines do not stretch as far as the red. you explain why that is. Well, I can if you would care to go into detail 7 on each. As a general matter, the standards in preparing this 9 overlay, which was your determination about when 10 you should stop the running of the green lines up 11 the river. 12 Well, we didn't go in and prepare this with any 13 14 great detail in mind. Only that we should cover the major part of the systems included in Matthews' 15 report. We did cover the river up to the point of 16 salmon and steelhead use currently. 17 What would indicate a termination in the river 18 19 system? Were there natural barriers? What was it? 20 There were both natural and manmade barriers. Α. 21 Have you had occasion to examine further some of 22 the information that you used to determine whether 23 the green lines should extend further under those 24 standards?

1	Q	Could you indicate where and why they should extend
2		further.
3	A.	Yes.
4		Would you like to have me go river by river?
5	Q.	Please.
6	A.	Starting at the top on the Nooksack River, these
7		tributaries going north towards the Canadian
8		border should both be green. The red areas shown
9		at the upper headwaters of the Nooksack River are
10		approximately correct, the end of the green indicatin
11		that that is the end of salmon and steelhead use.
12		On the Skagit system, the Baker River, which
13		goes north, should have been green because it
14		receives use by salmon.
15	Q.	Is there a dam there?
16	A.	There is a dam, but the fish are trapped and hauled
17		upstream from it.
18		On the upper main stem of the Skagit River,
19		this is the edge of the acetate but it happens to
20		be also the approximate location of Gorge Dam.
21		On the Sauk-Suiattle River, again we are at
22		the edge of the acetate, but it also is the approx-
23		imate location of the upper extent of salmon and
24		steelhead use.

The same occurs on all of these upper

drainages of the Sauk-Suiattle.

On the Snohomish River, the north fork red areas are not used by salmon and steelhead, and that is correct. The south fork, the green should have been extended out farther on the red, but was not, and I am afraid for the convenience of the edge of the acetate. Those could have been extended out a little farther.

On the Snoqualmie, the Tolt River could have been green an additional half inch. The Tokul Creek also could have been extended out to the end.

And there is an arrow just above Tokul Creek on the main stem of the Snoqualmie River, and that is Snoqualmie FAlls. The green should have stopped right there. In other words, the green going up into the watershed should have come off. This is the upper limit of salmon and steelhead use.

On the Cedar River, going into Lake Washington, the City of Seattle has a water supply system there that marks the upper end of salmon and steelhead use. So, that is correct.

On the Green River, the Howard Hanson Dam is located right here, and that is the end of salmon use.

Mr. Heckman, it might speed things up if you would

just indicate where there should be green or should not be green. 2 On the Newaukum, that should be all green. Big 3 Soces, I believe, should all be green, or Hill Creek 4 whichever that is in there. 5 On the White River, those red areas, at the upper limits, could be green. However, I think the . 7 end of spawning occurs here as the gradient gets 8 rather steep. 9 On SouthPrairie Creek, it's all right. It's 10 accurate. 11 Carbon River and the main Puyallup River, the 12 green should have extended a slight distance farther 13 up on the red. 14 King Creek should be green. 15 Kapowsin Creek should be green. 16 The main stem of the Puyallup River is all 17 right. It stops at the Electron Dam. 18 On the Nisqually system, all of the tributaries 19 should have been green, and at the upper limit 20 of the main stem green is Alder Dam, and that is 21 correct. 22 Skokomish River, this is correct, and all of 23 the coastal streams are essentially correct. 24 25 MR. PIERSON: With the indulgence of the

Court, we would like to place green tape on those 1 2 areas where Mr. Heckman would suggest correcting the overlay and also to move it where he would 3 4 suggest correcting. THE COURT: No objection? You may do 5 that. 6 (By Mr. Pierson) Now, Mr. Heckman, in testimony referred to large chart graphic representations of 8 the Columbia River and two maps of the Fraser River system. Were those prepared in your office? 10 11 Yes. A. And could you give just a brief description of the 12 13 information you used in compiling them, glease. 14 The information on the Columbia maps was compiled 15 from the reports of the Washington Department of 16 Fisheries and Game and the Columbia River Compact 17 Commission. Fraser River? 18 19 On the Fraser River, that information was derived from the Canadian Department of the Environment, 20 21 Fisheries Service; the International Pacific Salmon 22 Fisheries Commission, and the Provincial Department 23 of British Columbia. 24 Going on, if you will, to what has been marked

and identified as PL-77, there is some reference

to it in earlier testimony. It purports to be a 1 2 number of pages for various areas of Puget Sound and the coast entitled, "Escapement Levels Achieved 3 Relative To Goals Set By Washington Department of Fisheries." 5 Would you describe for the Court, please, how 6 this was prepared. 7 The figures from the Department of Fisheries' 8 Yes. 9 report were taken directly and applied as a percen-10 tage of the spawning escapement achieved compared to the desired escapement goals cited in the report. 11 12 That desired escapement goal is expressed in the 13 charts as 100 percent. 14 MR. PIERSON: I might say for the Court's information the report he is speaking about is in 15 evidence as Exhibit F-18. 16 17 Plaintiffs move the admission of PL-77. 18 THE COURT: Admitted. 19 (Plaintiffs Exhibit Number PL-77 for identification admitted in evidence.) 20 (By Mr. Pierson) Mr. Heckman, has your office also 21 22 undertaken to enlarge four of those charts? 23 Yes. 24 MR. PIERSON: I wonder if the bailiff 25 could hold up what has been marked as PL-81, which

purports to be a blowup of the escapement, actual 1 and desired on the Skokomish River. 2 (By Mr. Pierson) If you would, describe for the 3 Court what is shown in this blowup. Would you go 4 to the chart, please. 5 A. Yes. As I said, the desired escapement goal is 7 expressed in 100 percent, and the escapement to level 8 achieved for each of the years 1965 through 1970 9 for each of the species utilizing the Skokomish 10 River are shown on the bars here. 11 For instance, on the case of Chinook salmon, 12 in 1965, approximately 25 percent of the escapement 13 goal was achieved. In 1966 it was close to the 14 In 1967, about 30 percent of the goal. As 15 you can see, '68 through '69 ranged anywhere from 16 very close, about 93 percent, down to approximately 17 75 percent of the goal. 18 What do the two colors represent, Mr. Heckman? 19 The color red shows all of those levels that were 20 less than 100 percent, and the yellow shows the 21 levels achieved that were in excess of 100 percent 22

Q Could you tell us what it shows for coho, for the

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of the goal.

For coho in 1965, the achieved level was approximately 150 percent of the goal. For each of the years '66 and '67, it was 75 percent. Then for each of the remaining '68 through '70 it was considerably above the escapement goal. For instance, in '68 it was 264 percent; '69, 266; '70, 480 percent of the goal. ET3 (Continued on next page.) .22

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1	Q And the other run that is shown there for the Skokomish is
2	chum?
3	A Chum, yes.
4	Q And what does that show?
5	A It shows that in every year the escapement level achieved
6	was considerably below the goal, and it ranged from
7	approximately 25 percent to about 70 percent.
8	MR. McGIMPSEY: I will object to the use of
9	the term "goal" by the witness. Perhaps it could be
10	cleared up in just a voir dire question or two, your
11	Honor?
12	THECOURT: You may do that.
13	
14	VOIR DIRE EXAMINATION
15	BY MR. McGIMPSEY:
16	Q Referring you to Exhibit F-18, which is, I believe, the
17	basis upon which you drew up your exhibit PL-81, would you
18	take a look at that and indicate to me whether the 100
19	percent figure that you have indicated in your exhibit
20	indicates the minimum escapement goals of the Department
21	of Fisheries for those years?
22	A I don't
23	MR. PIERSON: The Clerk would hand the witness
24	Exhibit F-18?
25	(Document to the witness.)

1	THE WITNESS: Yes, I believe on page 1 of that
2	report it said the desired minimum escapement.
3	Q (By Mr. McGimpsey) By what, level?
4	A I believe it does say "level" on that page.
5	Q Do you know anywhere in this report where it would say
6	"escapement goal"?
7	A It was my recollection that it did differentiate between
8	minimum desired escapement goals and the levels achieved.
9	Q Well, it's my understanding of the language you have
10	just recited that the reference to the desired minimum is
11	the desired minimum escapement level, and I'm interested
12	in whether or not you know of anywhere in this report
13	there is a reference to a desired minimum escapement goal.
14	MR. PIERSON: Your Honor, I think the witness
15	can use the word "level."
16	THE WITNESS: I would behappy to switch to
17	"level."
18	THE COURT: Anyway, would it satisfy your
19	objection if we crossed out "goals" up there and say
20	MR. McGIMPSEY: It should be "level," then I
21	would just ask for a clarification of what the witness
22	understands "desired minimum escapement level means.
23	THECOURT: All right. At a later time, we
24	will substitute the word "levels" for "goals." Would
25	you like the word "Levels," plural?

"Levels, "yes. MR. McGIMPSEY: 1 THE WITNESS: Well, I believe with that 2 3 correction, I was through. I would ask what the witness believes 4 (By Mr. McGimpsey) 5 the term "desired minimum escapement level" to mean as used in this report, and illustrated on his chart. 6 I understand "desired minimum escapement level" to be 7 that escapement that the Department has determined to be 8 the best for each of the systems in its study, and that 9 this was the level they would attempt to achieve through 10 their management program. 11 Would your definition be optimum escapement level or the 12 Q would your definition be distinguished then from what is **13**. defined in the Exhibit JX-25 at page 72 as the optimum 14 spawning escapement? 15 I would imagine that they are synonymous, and I think 16 17 probably the Department studied the stream systems by visual observation measurements of the stream bed, the 18 quality of the gravel, the stream gradient, and then 19 applied their backgrounds of knowledge and experience to 20 their observations to determine what they would expect 21 the desired escapement level to be. 22 So my understanding is that in your mind, at least, the 23 desired minimum escapement level is the same thing as 24 optimum spawning escapement level? 25

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Yes.
 1
         In your mind?
 2
         Yes.
         That is the basis upon which the exhibits you have
         prepared are based, is that correct?
 5
         Yes.
 6
                    THE COURT: As I understand it, this exhibit
 7
         purports to do no more than graphically portray the report,
 8
         right?
 9
                    THE WITNESS: The report of the Department, yes.
10
                    THE COURT: Yes, that's right. Go ahead.
11
12
                        DIRECT EXAMINATION (Cont.d)
13
    BY MR. PIERSON:
14
        Mr. Heckman, while we are on it, I wonder if the Clerk
15
        could give Mr. Heckman JX-2A, and you have in front of you,
16
        I believe, also what has been marked as F-18. While the
.17
        pages are not numbered. I would like you to turn to the
18
        last page of the text -- pardon me, to the last page of
19
        the text in that F-18 under the heading where it says,
.20
        "Desired minimum escapement determinations; " do you have it,
21
        Mr. Heckman?
22
        The last page?
23
        Next to the last page of the text.
24
        Oh, all right.
25
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1	Q Do you have that?
2	A Yes.
3	Q I wonder if you could read for the record what it says
4	in the first paragraph.
5	A (Reading:)
6	"As previously mentioned, determination of
7	desired minimum escapement levels was based on the
8	quantity and quality of existing spawning and rearing
9	habitat within the drainage system. The desired
10	levels are generally well below the total spawning
11	and rearing potentials that have been calculated
12	for these streams. Instead, they represent a level
13	that will maintain a harvestable production capability
14	with assurance of continuing present production
15	levels.
16	"In addition, the desired level is considered
17	sufficient so as to offer the opportunity to increase
18	natural production in each of the systems in the
19	future."
20	Q And for comparison for the record, would you also refer
21	to the Joint Biological Statement, page 72, the Statement
22	referred to by Mr. McGimpsey under paragraph 2.6.2.0
23	and read for the record what it says optimum number of
24	viable spawning parents means.
25	A (Reading:) "There is an optimum number of viable

1 2 5 6 7 the Court 10 11 me to go through each species? 12 Ő. 13 14

spawning parents required to provide sufficient offspring to maintain the runs under current habitat conditions. Today's levels are generally below total spawning and rearing potentials."

Thank you. Could we go back to what would be the next exhibit, we will look at PL-82, Mr. Heckman.

Again, this is a blowup of the Nooksack River information, and could you explain it very briefly for

- It shows the same information for the Nooksack River that we just examined on the Skokomish. Would you like
- Just give a general rundown, if you would, for the record.
- In the case of Chinook salmon, it shows that in most years the Department hit very nearly to 75 percent or better OF THE escapement levels it wished to achieve. Only one year, in 1969, did it hit considerably below, and that was about 20 percent in 1969.

In the case of the coho salmon, in 1965 and 1966 they were fairly close to the desired level. Only two years, 1968 and '69 did it hit considerably below the desired escapement level, those are 1968 and 1969.

In the case of pink salmon, which only runs on odd years, on odd numbered years, the level is also considerably below the level desired.

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In the case of chum salmon, four of the six years come fairly close to the desired level, two of 2 the years are at 25 percent or less of the level desired. 3 Looking again now at PL-83, which is a blowup of the 4 same information taken from the same source, from the 5 Puyallup River --6 THE COURT: I think you might hold it right there and save a walk. 8 (By Mr. Pierson) Mr. Heckman, could you explain just . 9 briefly this exhibit. 10 Yes, on the Puyallup River, the escapement of Chinook 11 salmon, except for the year 1970, which comes within 12 about 75 percent below the desired level, all of the 13 years are considerably low. 14 In the case of coho salmon, two years are either 15 at 100 percent in 1967 or 75 percent in 1965. Other than 16 that, all of the years, four remaining years, hit at 17 approximately 50 percent or as low as about 25 percent. 18 On pink salmon on the Puyallup River, the levels 19 are all at about 65 percent or lower. 20 In the case of chum salmon on the Puyallup, all 21 of the levels achieved are below the desired level, ranging 22 from 75 percent to as low as approximately 10 percent in 23 1965. 24 All right. Now, looking at the last chart we have, which is 25

25

PL-84, a blowup depicting the same information for the 1 Nisqually River, could you briefly describe that also. 2 Yes, in the case of Chinook salmon on the Nisqually, the 3 Α year 1965 escapement was very near the desired level 4 falling short only by about 5 percent. 1966 was 233 5 percent of the desired level, '67 was about 175 percent, 6 and each of the remaining years was at about 60 percent or 7 8 less, ranging down to about 25 percent. Coho salmon for the first three years, '65 to 9 '67, come fairly close to the 100 percent or desired 10 level exceeding 1966 and '67. The remaining three years, 11 '68 through '70, are much below the desired level, ranging 12 13 from approximately 60 percent down to about 30. All of the pink salmon years show escapement 14 less than the desired level, and in the case of chum salmon 15 except for the year 1967 when there was an escapement very 16 nearly twice that desired for that system, most of the 17 escapements for the-remaining years come within 20 to 18 25 percent or less of the desired level. 19 What is the timing of that Nisqually River chum run, if Q 20 you know? 21 It enters the river beginning in early December and peaks Α 22 towards the end of December and through January. 23

throughout the Washington State jurisdiction?

If you know, what fisheries are conducted on that run

1	A	No non-Indian fisheries harvest that chum salmon run since
2		its migrates through the Straits and the Puget Sound area
3	-	after the commercial non-Indian fisheries are closed.
4		Only the Nisqually River Indian net fishery operates on
. 5	-	that run.
6	Q.	Do you know where the net fishery is located?
7 ·	A	It has been confined to the reservation and to the off-
8		reservation area downstream from the reservation boundary
9	٠.	to a railroad bridge about 100 pardon me 1 and 1/4
10		miles below.
11	- '	THE COURT: I take it from what you have said
12		that that is the primary reason for the rather favorable
13		levels with respect to chum in the Nisqually, as contrasted
14	*	to the other runs in the Nisqually?
15		THE WITNESS: I don't believe I said that, your
16		Honor.
17		THE COURT: You didn't say it, I'm asking you,
18		is that is intended to be implied?
19		THE WITNESS: Whether it is an implication or
20		not, your Honor, these are the facts.
21		THE COURT: It is a fact?
22		THE WITNESS: Yes.
23	-	THE COURT: I will draw the inference then.
24		THE WITNESS: Thank you.
25	Q	(By Mr. PIerson) Would you be willing to make a comparison

just in terms of fisheries, in terms of the non-Indian 1 fisheries that fish on other species in the Nisqually and the fact that only an Indian fishery fishes on the chum run 3 Well, I believe that the level of fishing effort on this 4 run, the chum salmon run is perhaps constant and more 5 predictable than the fisheries on the other species, such as Chinook, coho and pinks, since these fisheries, mostly 7 by non-Indians, can take the majority of those fish when they 8 Fish in the open ocean and in the Straits of Juan de Fuca, and Puget Sound marine areas, where there are fisheries 10 on mixed stocks, including the stocks headed for the 11 Nisqually River, and for other systems in Canada and the 12 United States waters. 13 All right. Resume your seat, please. 14 MR. PIERSON: I would like the Bailiff to, if 15 he would, take down the larger overlay base map and put 16 up what has been marked as PL-74. 17 While he is doing that, your Honor, I would like 18 to move for the admission of the four blowups we have just 19 been talking about. 20 If there is no objection, and I take 21 it there is none, they are admitted. 22 (Exhibit Numbers PL-81 through 84 for 23 identification admitted in evidence. 24 (By Mr. Pierson) The Bailiff is about to put up what has

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1	been designated in the record as a histogram, and I wonder
2	if you could describe for the Court generally upon what
3	information you compiled that.
4	A Yes, the histogram shows three bars, the smaller bars
5	that you will see were derived from information in the
6	reports of Dr. Matthews, which have been listed by the
. 7	Court as Exhibit F-26, and the larger bar I will show
8	you on the histogram, the information was derived from
9	the statistical report of the Washington Department of
10	Fisheries and other statistical information from the
11	Department.
12	Q And PL-74 has been put on the board, Mr. Heckman, and I
13	wonder if you could with a pointer indicate which each of
14	the bars is that you have explained.
15	A Yes, pardon me, this is the first bar on theleft, is the
16	THE COURT: That is the red bar at the bottom?
17	THE WITNESS: Oh, pardon me, the bar aoninst
18	the bottom goes up. It includes both the Indian catch
19	and the non-Indian catch, or percentage of each.
20	Q What is the title of that bar underneath?
21	A This is the total landing by Washington fishermen from stock
22	produced from the Washington Department of Fisheries fair
23	share based streams.
24	Q Those are Dr. Matthews' F-6 and F-26 statistics?
25	A Yes, it is, and this would show the landings from the total

production that we saw on the streams of the geen overlay. Ż Q All right. The next bar is based upon information taken from Dr. Matthews' report of F-26, and it shows the landing by Washington fishermen from stocks produced in the Washington Department of Fisheries fair share based streams, excluding the catches beyond the three mile zone. Was that a distinction between Mr. Matthews' first and second report that he made? Yes, it was. The first bar would include the catches 10 11 by Washington fishermen from fish produced in the green colored streams on the overlay, both inside and outside 12 13 the three mile zone. Now, the third bar. Could you explain what that is and 14 where you obtained the information for planning it? 15 The third bar is the total landing by Washington fishermen 16 from all stocks available to Indians in the case area, 17 and it is an eighteen year average of those figures, 18 taken directly from the statistical report of the Department 19 20 of Fisheries. According to your understanding, if those Indians fished 21 in all the marine areas shown on the red overlay with the 22 stocks represented in the third bar, all of those stocks 23 would be available in those areas? 24 Yes, they would. 25

- And could you read for the Court what the percentages are 2 on the first, second and third bars? 3 Yes, beginning with the bar on the left, taken from Dr. Matthews' report, F-26, the non-Indian fishery would take 81.6, the Indian 18.4, and the center bar, taken from Dr. 5 Matthews' report, F-6;, the non-Indian would take 77 6 percent and the Indian 23 percent, and on the large bar 8 to the far right, the non-Indian would take 95 percent 9 and the Indian 5 percent. Mr. Heckman, could you explain why the total level of the 10 three bars is so disparate as between the first and second 11 12 and the third? 13 That is, in the first and second, the level is below 2,000,000 and the third bar is up above 7,000,000. 14 Well, the difference, the reason for that difference 15 would be because the landing shown here would be taken from 16 all of the production areas in Washington, British Columbia 17 Oregon and California, and that at one time or another 18 these are available to Indians in the case area. 19 And those fish while produced, the sum of which had been 20 produced outside the State of Washington, were caught in 21
 - the state?
 - Yes, in the waters under the jurisdiction of the Department
- of Fisheries. 24

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And bars one and two, where do those fish come from?

1	A	The fish depicted in bars 1 and 2 come only from the
2		streams listed in Dr. Matthews' report, F-26.
3	Q	And those are all within the State of Washington?
4	A	Yes, all in the case area.
5	Q	Re-take your seat, if you would, please.
6	-	There has been some earlier testimony, Mr.
7		Heckman, about the hatchery on the Quinault reservation
8	-	and its contribution to steelhead runs in the Quinault Rive
9		Could you explain, according to your knowledge,
10		where the egg source for that hatchery is, and whether
11		if at all that hatchery has obtained eggs from the
12 .		Department of Game?
13	A	Yes, according to Mr. Crouse's earlier testimony, I believe
14	-	he stated that eggs had been produced from the Department
15	-	of Game Chambers Creek hatchery to assist in the
16	•	development of a brood run to the Quinault national fish
17		hatchery.
18		Actually, no eggs have been secured from the
19	-	Department of Game for the purpose of developing a brood
20	÷	run to that hatchery.
21	· .	It has been the intent from the inception of
22		the idea of that hatchery that the steelhead runs produced
23		from that hatchery would be from stock native to the
24		Quinault system.
_	Ω	And the eag source for the broad run on the Quinault Piver

is where? 1 Is from the Quinault system itself. 2 I direct your attention to your knowledge of the Lake 3 Washington Muckleshoot fishery on sockeye. Do you know 4 of any time when the Muckleshoot Tribe has cut off its 5 fishery earlier than the termination date provided by the 6 Department of Fisheries? 7 Yes, they did that in 1972. A 8 Can you tell us how far in advance of the termination date 9 it was cut off? 10 I believe the Department set regulations for that fishery A 11 that would include a season to August 30th, and the tribe 12 determined, because of the very low numbers of fish in 13 the lake for the spawning escapement, they would cease 14 their fishing, and they announced it accordingly through 15 the newspapers and ceased their fishing on August 15. 16 And do you know of any fishery by the Muckleshoots on 17 the Green River? 18 Yes, they have fished for Chinook and coho in the last few 19 years. 20 Has there been a test fishery there? 21 Yes, there has. 22 Could you tell us how that operated? 23 Yes, the Muckleshoot Tribe met with the Washington Department 24 of Fisheries each of the last three years, I believe, now, and 25

1	agreed to conduct a test fishery in the lower portion of
2	the Green River.
3	Q On what species?
4	A On Chinook salmon.
5	Q What race of Chinook?
6	A Pardon?
7	Q What race of Chinook?
8	A Fall Chinook salmon.
9	Q Was there a limitation on thelevel or the type of their
10	catch?
11	A Yes, the defendant had expressed serious concern for the
12	returning females to the Soos Creek hatchery, their Green
13	River hatchery, and it was agreed between the tribe and
14	the state that once the test fishery began to take 10
15	percent or more females in the landing the tribe would
16	cease its fishing, and did so.
17	MR. PIERSON: Finally, your Honor, I would like
18	to move the admission of the Puyallup River comparative
19	graph, where we extended the statistics back to 1960.
20	It has been marked as PL-76. There has been testimony
21	mostly from the defendants on that graph. It has not
22	been formally admitted.
23	THE COURT: There being no objection, it is
24	admitted.
25	(Exhibit PL-76 admitted in evidence.

	1	MR. PIERSON: That is all for the United
	2	States, your Honor.
	3	THE COURT: Would you rather have the recess
	4	now?
	5 '	MR. GETCHES: That would be fine.
	6	THE COURT: We will be at recess for fifteen
	7	minutes.
	8	
ET5-1	9	(Recess.)
	10	
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	13	(Continued on the next page.)
	14	(AATVARTINGE ON PITE HEVE FIRE !)
•	15	
· .	16	
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THE COURT: You may proceed when ready, Mr. Getches.

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DIRECT EXAMINATION

MR. GETCHES:

- Q. Thank you, Mr. Heckman. Have you been asked by any of the tribes in the case area for assistance in developing propagation facilities or projects?
- A. Yes, I have.
 - Q By what tribes in particular?
 - The first one was the Quinault Tribe. Approximately 1962 we conducted a feasibility study on that reservation, and as a result funds were appropriated and the Quinault National Fish Hatchery was constructed.

The second one was on the Makah Indian Reservation, and that feasibility study was conducted we and/are presently preparing, through contract with a private firm, the master plan.... Funds have been appropriated both for that master plan detail design and for some site preparation.

The last is a request by a number of tribes in southern Puget Sound originally requesting these studies individually and finally as a group, and our feasibility study is underway, studying several

streams in southern Puget Sound beginning with the 1 Skokomish on the Hood Canal side up to and includ-2 3 ing the Green River on the east side of Puget 4 Sound, and we are nearing the end of our study 5 period and should have a feasibility report out about December of this year. 6 7 Is this a feasibility study for a fish hatchery? Q. 8 A. Yes, for a national fish hatchery to benefit the fisheries of the Indians in southern Puget Sound 9 10 and non-Indians. 11 THE COURT: You drop your voice a little 12 occasionally, and I didn't quite catch the last 13 few words. THE WITNESS: I said that the feasibility 14 study in the southern Puget Sound area that is 15 currently underway for a national fish hatchery 16 located there to benefit the fisheries of the Indians 17 in the general southern Puget Sound area and the 18 19 fisheries of non-Indians as well. (By Mr. Getches) It would benefit the fisheries 20 21 of the State in general? 22 It definitely would. A. 23 Q. What tribes requested this feasibility study? 24 The Skokomish, Squaxin, Nisqually, and Muckleshoots,

and the Puyallups independently requested the

- study, but did not join with the others in the joint request for the study.
 - You mentioned the examples of the Quinault and Makah. Did they both initiate the request?
 - A. Yes, they did.
 - Q You mention in the written portion of your direct testimony that you have done work with the Muckle-shoots concerning various White River projects affecting their fishery resource. Will you explain what work you have done in that regard?
 - Yes, both the Muckleshoots and the Puyallup Indians are represented on the White River fishery improvement committee that I chair, and which also has representation of the State Fisheries, Game and Ecological Departments and the Corps of Engineers, Puget Sound Power & Light Company, some that I may have forgotten, and through that committee and as a representative of the Fish & Wildlife Service, we have worked with the tribe to study the problems on the White River such as the Mud Mountain Dam operated by the Corps of Engineers, the Puget Sound Power & Light diversion and power project, downstream from the Mud Mountain Dam, and cooperatively included the Washington Departments of Fisheries & Game in our studies, to attempt to remedy some of the

1	problems in connection with those projects that
2	adversely affect the salmon and steelhead production
3	in the White River.
4.	Q Did the Indian tribes you mentioned intiate this
5	concern over the habitat of the fisheries?
6	A. They made a direct request through our bureau to
7	attempt to study it and find solutions to the pro-
8	blems, yes.
9	Q Is your staff and yourself, are you available to
10	advise tribes concerning their own tribal regulations
11	and the effect of State regulations?
12	A Yes, we have had a number of such requests.
13	0. And you are equipped to fulfill those requests?
14	A We attempt to meet the requests of the tribes, yes.
15	Q. In your opinion, Mr. Heckman, is it necessary to
16	consider the conservation effect that any applicable
17	tribal regulation might have on a tribal fishery
18.	before the necessity for conservation of a State
19	regulation applied to those Indians can be assessed?
20	MR. CONIFF: I believe that calls for a
21	legal conclusion from the witness.
22	THE COURT: Don't answer from a legal
23	point of view.
24	A. If there is a view from the point of a biologist.
25	O (By Mr Cotches) T will man

in less objectionable form. Do you as a biologist 1 determine what proposed regulation is necessary for 2 If you have not considered tribal conservation? 3 regulations over the same fishery which are applicable to it. 5 I will attempt to answer that. First, in assisting 6 tribes in preparation of either their regulations 7 or in interpreting the regulations proposed or 8 promulgated by the State, I must first take into 9 consideration their regulations on themselves, 10 and together with the history of their fishing 11 activities, general size of their fishery, so that 12 I might have an overall impact that their fishery 13 might have on the resource. 14 MR. GETCHES: I have no further questions. 15 THE COURT: Anyone else for the plaintiffs? 16 MR. HOVIS: No questions at this time. 17 (Continued on next page.)

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1 THE COURT: Mr. Ziontz. 2 MR. ZIONTZ: Yes, your Honor. 3 4 DIRECT EXAMINATION 5 BY MR. ZIONTZ: 6. Mr. Heckman, would you describe what the staff of the Bureau of Sports Fisheries & Wildlife consists of, both locally, . 7 . 8 regionally and nationally? 9 Α Mr. Ziontz, are you asking me to describe the positions 10 or the general organization? 11 THE COURT: The general organization of the 12 service from top to bottom in general terms, and then any 13 details that Mr. Ziontz may wish he will ask for. 14 THE WITNESS: The Northwest Fisheries program 15 is comprised of ten biologists, seven located in Tumwater, three in Vancouver, Washington and the program is under 16 the direction of our Regional Director, our regional 17 office located in Portland, Oregon. That regional office 18 19 covers six western states. 20 Of course, it is directly responsible then to the Director, located in Washington, D.C. 21 22 Q Is it an official matter of policy for your Bureau to provide technical services to Indian tribes in connection 23 24 with management of their fisheries?

It is the responsibility both by the directive of

1		the secretary and by agreement with the Bureau of Indian
2		Affairs and the individual tribes.
3	Q	If your services had become more extensive and detailed,
4		is your Bureau prepared to expand its services?
5_	A	Well, at the moment there is no direct funding available
6	. *	to provide for this expansion.
7	Q	Has there been any planning for any contingency in the
8		event this case or some other case results in a need
9		for joint management responsibility between the tribes
10	-	and the state?
11	A	I don't, to my knowledge, know of any planning to enlarge
12	 .	the staff to do this, but I believe perhaps the record
13		of our expansion over the past ten years to attempt to
14		meet the needs of the Indian tribes in Western Washington
15		or in the Pacific Northwest might be an example of the
16		Fish & Wildlife Service's readiness to meet that need.
17	Q	Now, one last area: At the outset of your testimony you
18 -		referred to a map, which was Plaintiffs' Exhibit 36, that
19		indicated the on- and off-reservation fishery of the
20	-	various tribes in the case area.
21		Counsel indicates that was 70, Plaintiffs
22		Exhibit 70;
23		You indicated with respect to the Lummis that
24		they had a net fishery on the Nooksack. Are you implying
	1	that there is no marine fishers conducted by the Tormia

-1	A No. I believe in my description of that overlay, which
2	was Figure 25 in the Joint Biological Statement, I was
3	only noting that it was considered an on-reservation fisher
4	I did not mean to exclude the fact that the Lummi Indians
5	did conduct a marine fishery using gillnets.
6.	Q How about the Quileutes? Did they not also conduct a
7	marine fishery?
8	A Yes. Several of the Quileute Indians troll for salmon
9	in the ocean.
10	Q How about the Swinomish?
11	A The Swinomish Indians trap that I noted is located in the
12	salt water area.
13	MR. ZIONTZ: I have nothing further.
14	THE COURT: Next for plaintiff? Mr. Taylor?
15	MR. TAYLOR: No questions at this time, your
16	Honor.
17	THE COURT: Mr. Stritmatter?
18	MR. STRITMATTER: Nothing, your Honor.
19	THE COURT: Very well, Mr. Coniff.
20	
21	CROSS EXAMINATION
22	BY MR.CONIFF:
23	Q Mr. Heckman, I am going to try to cover a few points that
24	you developed orally this morning, and then we will later
25	turn to your prepared direct testimony.

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First of all, I believe that in the course of your examination or explanation, if you will, of Plaintiffs' Exhibit Number 70 -- if I could ask the Bailiff at this time to place that exhibit so that you may look at it and examine it -- I believe that you testified that you identified certain on and off-reservation fishing areas utilized by the Indians.

My question is in your identification of those off-reservation fishing areas, did you mean to imply and infer that those were off-reservation commercial fishing areas for steelhead on the part of any of those tribes that you depicted on Plaintiffs' Exhibit 70?

I believe that the off-reservation areas are shown by a triangle, are they not?

- A Yes, they are.
- 16 Q Would you examine the triangles that you have located and answer the question.
- 18 A Starting over on the Coast, both the Hoh and Quileute
 19 Indians --
- 20 Q I'm sorry. My question is related to off-reservation 21 areas, as depicted by the triangles.
- 22 A Yes. There is a triangle on both of those.
- 23 Q I'm sorry. I see. Go right ahead.
- 24 A Both of those tribes have off-reservation fisheries.
- 25 Q Are those fisheries within the national park boundaries?

1	A To some extent, upstream from the national park boundaries.
2.	Q I was wondering how you could explain that answer in
3	light of your testimony at page 6, which you might want
4	to examine. I will read you the question and answer,
5	line 20:
6	"Do you have any examples of non-angling harvest
7	of steelhead outside reservation or National Park
8	boundaries on any regular basis within the State of
9	Washington?
0	"A Not within the area covered by this case.
1	I am advised that such activity is unlawful under
2	State law and that the Game Department vigorously
3	enforces the prohibition."
4	Can you explain that answer contrasted with
.5	your testimony you have just presented?
6	A Perhaps I should read it, but I thought you said any
.7	activity by non-Indians.
8	Q I'm sorry. I was referring to off-reservation Indian
. 9.	commercial netting activities for steelhead within the
20	case area.
21	A The off-reservation on the Hoh and the Quillayute are in
22	areas regulated by the Washington Department of Fisheries.
23	Q Beyond the national park boundaries?
24	A Yes, I believe it goes beyond.
	O So that when you depicted the triangle on the Hoh or

Quillayute Rivers, you did not mean to infer that the 1 2 Department of Game had not enforced state law in those areas beyond the park boundaries? 3. That's correct. Α 4 Would you please move northward on the map. 5 I noted that you have, I believe, one of the 6 triangles you have indicated will be removed, and that 7 8 is on the Pysht River? Yes. 9 With regard to the other three triangles, which as I 10 understand it are off-reservation areas, do you mean to 11 imply by your testimony this morning that those triangles 12. 13 represent off-reservation Indian commercial net fishing for steelhead? 14 No, I do not. 15 Would the same be true for any other triangles shown on Q. 16 the map? 17 No, I don't believe so. Α 18 Would you please identify those triangles where you Q 19 believe that there are open off-reservation Indian net 20 fisheries for steelhead and explain the basis upon which 21 you reach that conclusion. 22 I know of no open off-reservation Indian net fisheries 23 A٠ for steelhead. 24 Does that mean, then, that the other triangles on the map 25

1	do not indicate off-reservation Indian commercial net
2	fishing for steelhead?
3	A All of those, I think, we can name here: The Tulalip,
4	both the Lake Washington and Green River off-reservation
5	fisheries for the Muckleshoots, the Nisqually off-
6	reservation fishery, and the southern Puget Sound off-
7	reservation fishery for Squaxin are all for salmon.
8	Q In fact, aren't those triangled areas really graphic
9	representations of the special Indian only off-
10	reservation salmon seasons that have been established by
11	the Department of Fisheries?
12	A Yes.
13	Q I notice, also, on Plaintiffs' Exhibit Number 70, that
14	you have represented the reservations by a square.
15	Is that correct?
16	Excuse me. How do you represent the reservation
17	on that map? By a circle?
18	A Well, the reservations are shown on the base map, and
19	this is just an overlay showing the location of on
20	and off-reservation fisheries.
21	Q Directing your attention to what appears to me to be a
22	square in the area of Tacoma, would you explain to me
23	what that represents.
24	A That represents the fisheries of the Puyallup Indians,
25	and it is qualified on the base map by the notation at the

1	base of the map. If you would care, I would read it to you.
2	Q I am sure the map will speak for itself. My question to
3	you is this: Are you aware that this Court, in the
4	United States v. State of Washington has adjudicated the
- 5	fact of the existence or lack of existence of the
6	Puyallup Indian Reservation?
7 8	A I only understand that it is in a state of limbo at this time.
9	Q You are not aware that when the federal district court
10	issues
11	THE COURT: I wish you wouldn't refer to distric
12	judges' decisions as limbo.
13 14	THE WITNESS: I understand that it is under appeal.
15	Q (By Mr. Coniff) Do you recognize the validity of the
16	adjudication of this district court in adjudicating the
17	lack of existence of the Puyallup Indian reservation?
18	I recognize that the federal government has the matter on
19	appeal.
20	A I understand that at the moment it's considered to be not
21	a reservation fishery.
22	Q Therefore, when you placed that symbol in the Tacoma
23	area, did you not mean to infer that there still is at
24	this time legally existing a Puyallup Indian reservation?
25	A No. It is fully qualified as that on the base map.

1	Q	I wanted to get your understanding of the overlay, which
2		I understood you to have had prepared in, or under your
3		supervision.
4	A	Well, as I said in the beginning, the overlay is the
5		exact duplication for Figure 25 in the Joint Biological
6		Statement, and the Puyallup reservation is the only one
7		with the square on it because, to my knowledge, it is
8	."	the only one under adjudication at this time, which
9		separates it from the others.
10	Q	Would you agree that it might be in error to represent
11		that overlay as a reservation on that map in light of
12		the decision by this Court?
13		MR. PIERSON: Objection. I think the Court
14	- 1	had instructed all of the parties that if they are going
15		to modify or qualify anything in the Joint Biological
16		Statement it should be presented as such.
17		Mr. Heckman has stated he did expect to use
18	<u>-</u>	the overlay to
19	! 	THE COURT: I can't see any harm that can come
20		from the depicting of the Puyallup situation as it is,
21		because I'm sure all of the lawyers in the case
22		thoroughly understand that the United States District Court
23		for this district has ruled that the reservation ceased
24		to exist.

On the other hand, we also all know that that's

on appeal to the United States Supreme Court and 2 undoubtedly eventually will be determined there. 3 In the meantime, it is not in limbo. It is in full force and effect, subject to the appeal. 5 MR. CONIFF: My question of the witness really would be this: 7 You have indicated that you would correct an error on this 8 map with regard to the triangle on the Pysht River. My 9 question to you would be, would you be willing to correct 10 the representation on the map as it purports to portray 11 the Puyallup Indian reservation? 12 MR. PIERSON: Whether or not the witness would be 13 ready to, I would object to it. The only difference 14 between that map and the representation of the Puyallup 15 River and Figure 25 is that Figure 25 shows the Puyallup reservation a hexagon instead of a square. 16 17 The symbol is said to mean Status Currently in Dispute. 18 Now, unless the Department of Game is ready to modify its figure, plaintiffs are not ready to modify it. 19 THE COURT: Go ahead. I don't think there is 20 21 any need of a change. 22 MR. CONIFF: I think the record is clear at 23 this point, your Honor. Thank you. 24 (By Mr. Coniff) I don't know if you will need to examine 25 this document or not, but you described PL-72 as a histogram,

and I believe you described that exhibit as a representation of Dr. Matthews' report for data contained 2 3 therein. Is that correct? The smaller bars on that chart depict information 5 from Dr. Matthews' reports, yes. 6 I don't know if you will need to examine that exhibit 7 or not in order to answer this question. If you do, we 8 9 will provide it. My question is simply this: Does that exhibit 10 that you caused to be prepared purport to represent 11 steelhead catches or landings? 12 13 That is only salmon landings. MR. PIERSON: For the record, your Honor, the 14 exhibit designation is PL-74. 15 MR. CONIFF: I stand corrected. 16 (By Mr. Coniff) 17 I believe you commented on some testimony a few moments ago that the Director of the Washington 18 Department of Game presented in court regarding the 19 cooperative effort on the part of the Department of Game 20 to provide eggs or fish for the Quinault artificial 21 propagation facilities. If I understood your testimony 22 correctly, you indicated that it was not the intention 23 of the Quinault Tribe to use the eggs provided by the 24

Department of Fisheries for brood stock or eggs suplied

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for other purposes.
                              Is that correct?
          2
                  I might correct your question, I believe you mean eggs
                  provided by the Department of Game?
                  Yes.
              Q
                  I believe you said Fisheries.
                              (Continued on the next page.)
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I'm sorry, I meant Game. 0. A. Yes, those eggs are provided to assit the tribe 3 in experimental rearing of salmon and steelhead in Lake Quinault pen rearing program they have there 5 I'm going to read to you, if I might, a document 6 which I believe is already admitted, this information 7 has been supplied to you prior -- at a previous 8 time in the course of these proceedings entitled, 9 Outside Agency Steelhead and Fry Shipments, 10 Washington Department of Game," and ask what 11 I'm going to read to you, if that generally coin-12 cides with your recollection of shipments by the 13 Department of Game to the Quinaults, "In 1971, 14 61,950 fry at 413 to the pound were transferred 15 to the Lake Quinault project from the Washington 16 Department of Game's south Tacoma hatchery." 17 Does that generally coincide with your 18 recollection of the shipments by the Department of 19 Game for the year 1971 to the Quinaults? 20 No, I don't recall. 21 0. Would you recall a shipment of 543,456 eggs, 22 steelhead eggs to the Quinault National Fish 23 Hatchery which occurred -- the source being the 24 south Tacoma hatchery of the Department of Game, 25 which occurred during 1972, approximately half a

million eggs, steelhead eggs being shipped by 1 the Department of Game to the Quinault National 2 Fish Hatchery? 3 I don't believe that was the exact number of eggs that were transferred, but it could have been that 5 number. 6 You do recall a shipment of this size of steelhead 7 eggs by the Department of Game to the Quinault 8 fish hatchery, do you not? 9 Yes, I'm aware we received those eggs. 10 Do you mean to infer that the Director, Director 11 Crouse was incorrect in any respect in his testi-12 mony that you referred to this morning? 13 Yes, to the extent that Director Crouse said that 14 the purpose of that transfer of eggs was to develop 15 a brood run of steelhead to the Quinault National 16 Fish Hatchery, that is incorrect. 17 Do you know if the purpose for which the eggs was 18 used was ever communicated to Mr. Crouse by the 19 Quinaults or persons operating there? 20 No, I'm not aware of Mr. Crouse's communcation. 21 With regard to this Quinault National Fish Hatchery, 22 I believe you testified in response to questions 23 by Mr. Getches there were feasibility reports or 24 studies conducted which led to its establishment, 25

is that correct? 1 A. Yes. Is it your testimony that you and the people under 0. 3 your direction conducted that study and made that report? 5 At the time of that study, there was nobody under 6 my direction, I was working alone. But others in the other divisions of our bureau, for instance, 9 our engineers and our hatchery people were working along with me on that study along with other people, 10 The United States Geological Survey and others. 11 Of course, you don't mean to imply to the Court 12 13 that you yourself were responsible for the conduct or development of that feasibility study, do you? 14 No. I had input into it. 15 Would the same thing betrue with regard to the 16 0. Makah feasibility study which you referred to? 17 That again would be similar to the Quinault study 18 19 preparation and conduct. And would the same thing be true with regard to 20 Q. what I think has been referred to as the Muckleshoot 21 or south Sound feasibility study? 22 That's correct. 23 A. Also there is mention in your direct testimony and 24 25 in response to questions from Mr. Getches that

you are Chairman of the White River Fishery

Committee, how long have you been Chairman of that

committee?

- A Approximately seven years.
- Now, with regard to the progress which this committee has made, can you describe any tangible results in terms of the fish production that have resulted from the operation or conduct or progress of the White River committee?
 - Progress as a result of that committee would perhaps be difficult to weigh. One familiar with the White River and various problems on it adversely affecting the resource could probably determine at one glance that it was practically Mission Impossible.

With much of the recent work by that committee or considerations by that committee have involved the Puget Sound Power & Light Company's request to license their power plant and the intervention — or I assume it is an intervention by the Department of Fisheries & Game, and the contentions by the Department as supported by the Fish & Wildlife Service that that project of Puget Sound Power & Light Company adversely affects the White River fish production by the fact that it would — little water is allowed to flow downstream from the

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project to sustain fish migration and rearing habitata, and that screens constructed in the flume transferring water from the river to Lake Tapps do not work adequately, and one of the problems concerning the flow of water in the White River needed study and for several years this was going to be conducted by the State in cooperation with the Puget Sound Power & Light. Finally, we undertook at the request of the Muckleshoot Tribe to conduct that study, and we have completed a study, and we have a report in draft form soon to be circulated to both the Departments of Fish & Game and the Department of Ecology for their review. We hope that this will be a major contribution to the correction of problems in the White River affecting salmon and steelhead.

- So would it be fair to say then this draft report is it really a net reporting of the results of the study -- is the net product of seven years of endeavor with regard to this committee?
- No, it would not be limited to that. I can't recall all of the things we have covered in those seven years -- but certainly I believe as a result of that committee, we have a much closer communication between the State agencies, the tribe, the power company

and the people operating the Corps of Engineers 1 And I believe that we can point to a record 2 of much better operation of Mud Mountain in the 3 last few years to avoid excessive siltation of the 4 river, which has an adverse effect on salmon, 5 steelhead migrating in that system. 6 that as a result of the committee, several problems 7 have been brought to light and are receiving con-8 sideration by all of those people represented on 9 the committee. 10 But we really can't translate thee things into any 11 increased fish production, can we? 12 I'm not sure that any of the records of fish 13 movement on White River, such as the count at 14 Buckley Dam, would be a direct reflection of any 15 improvement of the production in the river. 16 By the way, who conducts those counts at Buckley 17 Dam? 18 I'm quite sure the Washington Department of Fisheries 19 conducts the counts and operates the trap and haul 20 operations through funds provided by the Corps 21 of Engineers. 22 MR. CONIFF: Mr. Bailiff, I would like to 23

While we are waiting, Mr. Heckman, for the bailiff

have PL-73, it's the overlay.

24

to put PL-73 on the map, I was a little unclear this morning as to the basis upon which the red areas, which are depicted on that map, were prepared .3 Can you refresh my recollection of your testimony of that this morning? 5 Well, the preparation of the map was conducted in A. . 6 our engineering section located in Portland by 7 my instruction as I was instructed to do so by the 8 Department of the Interior. Am I to understand you were merely a conduit in the 10 transmittal of instructions from your superiors 11 regarding what is shown as the red area? 12 I believe that would be correct. 13 Who instructed you to in turn instruct your engineer-14 ing division in Portland to show all of the waters 15 within the case area to be depicted in red? 16 MR. PIERSON: I don't believe we have 17 established that was the instruction yet, Your 18 Honor. 19 MR. CONIFF: That was my understanding. 20 I'm sorry. I thought that was my question. 21 (By Mr. Coniff) Did you receive instructions regard-22 ing the preparation of P1-73? 23 Yes. A. 24 From whom? 25

From the Interior Solicitor's office. 2 Q. Who? Mr. Gene Briggs. Who is Mr. Gene Briggs? Q. He's an individual who works in the Solicitor's 5 6 office, regional Solicitor's office in Portland. And what are his duties? 7 I'm sorry, I don't believe I could fully describe 8 9 his duties. 10 Do you know upon what basis he issued you instructions regarding the preparation of the PL-73? 11 12 I believe he consulted with Barbara Lane as well 13 as read her reports. You believe that, do you know it to be a fact? 14 I'm quite sure of it. 15 Is Mr. Briggs an anthropologist? 16. No, I'm sure of that. 17 18 Do you know if he has any unique training or 19 background in the field of ethno history? 20 I don't believe he has. 21 Does he, in your judgment, qualify as a treaty Q. 22 expert? 23 No, I doubt that. A. 24 What were Mr. Briggs' instructions to you regarding

the preparation of PL-73?

A. To color it red. 1 All of the waters that are shown in red? 2 A. Yes. Did he communicate to you the reasons why he felt 4 those waters should be colored in red? I believe he discussed it with Dr. Lane? 6 What reasons did he communicate to you regarding Q. 7 his instructions to you to color all of those 8 9 waters in red? He didn't go through a great deal of detail in 10 describing how he had come about his decision, he 11 had conferred with Dr. Lane, it was our engineering 12 section who was preparing it -- which was preparing 13 this overlay and many of the other exhibits, and 14 I did not have intricate detail or knowledge regard-15 ing many of these, and I was strictly taking instruc-16 tions from the Solicitor or whoever wanted particular 17 information on overlays. 18 I note that PL-73 has a legend at the bottom which 19 states, "Usual and accustomed fishing areas," 20 that what is intended to be portrayed by the red 21 22 areas?

A. Yes. 23

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And again do you know upon what basis Mr. Briggs instructed you to depict all of the waters in the

case area as the usual and accustomed Indian fishing 1 areas? 2 I believe I stated that I do not know all of the 3 background that Mr. Briggs considered in relaying to me the information and the directions to go 5 ahead and color all of the rivers in the marine б areas that are shown in red on this overlay. 7 Do you know for a fact that Mr. Briggs had actually Q. 8 read the Barbara Lane materials which have been 9 submitted to the Court? 10 I'm not sure to what detail he read them, but he A. 11 did indicate he had. 12 Earlier this morning during the voir dire examination 13 of Mr. McGimpsey, you indicated PL-73 was based on 14 your reading of Dr. Barbara Lane's materials, do 15. you recall that statement? 16 No. Α. 17 Have you read from Dr. Barbara Lane's materials Q. 18 which have been presented in Court? 19 I have read portions of it. A. 20 Do I understand your testimony correctly that you Q. 21 had nothing to do other than the mechanical func-22 tion of transmitting instructions that were given 23 to you by Mr. Briggs through the engineers in the 24 depiction of the Indian usual and accustomed 25

fishing areas noted in red on PL-73? You are correct. A. ET7 (Continued on next page.) б . 25 -

And do you know if Mr. Briggs will be sponsoring this 1 2 exhibit? 3 MR. PIERSON: I think Counsel can ask me that. MR. CONIFF: Who will be? 5 MR. PIERSON: The exhibit is already in evidence It is admitted, and my understanding of the rules in this б case is that it doesn't require a sponsor, and to answer. 7 8 your question directly, nobody in addition will sponsor this exhibit. 9 MR. CONIFF: Okay. 10 Would it be a fair statement that you are unaware of the 11 12 data base that was used by the person who instructed 13 you to depict all the waters in the case area in red? 14 MR. PIERSON: I don't mind his asking Mr. Heckman all he knows about this map. That question has 15 been asked three times. 16 THE COURT: I think it is clear from what he 17 has already said that he doesn't know of his own knowledge 18 to what extent the individual who gave him instruction 19 familiarized himself with any data supporting the overlay. 20 Have I correctly summarized your testimony? 21 THE WITNESS: Yes. 22 THE COURT: I don't think it would save us any 23 time to reiterate that point. I have it very sharply in 24 mind. 25

MR. CONIFF: Very well, your Honor. I will 1 2 move on to another area. 3 THE COURT: Right. Again, I don't know whether you will need to examine these 4 5 I think you should be able to remember them. I have one question with regard to several of the exhibits 6 7 you identified this morning, Mr. Heckman. With regard to PL-76, 77, 81, 82, 83, 84, 8 9 which as I recall were paragraphs representing the desired escapement levels, did those paragraphs depict 10 or any of those exhibits depict in any way levels of 11 escapement for steelhead? 12 13 MR. PIERSON: I think PL-76 is not a paragraph. It is an attempt to extend back in time F-4, which purports 14 to be a graph comparing Puyallup Indian catch to escapement 15 to the Puyallup River hatchery, and I will state for the 16 record it is that. 17 My question yet remains then, on the balance of the exhibit. 18 19 I have indicated you discussed this morning the paragraphs. Do those purport to represent in any way 20 desired levels of escapement for steelhead? 21 No, all of the species that they were intended to demonstrate 22 information regarding was listed on the graphs themselves 23 and do not include steelhead. 24

Well, now, turn to your prepared testimony, Mr. Heckman.

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On page 1 at line 23, you indicated that you had spent considerable time in salmon and steelhead population studies, and you have worked closely with Indian salmon and steelhead fisheries throughout Washington for the past eleven years, and I believe you have already perhaps in part answered this question, but could you describe for the record in a very general way the chronological development of your involvement in the expansion of your program with regard to Indian salmon and steelhead fisheries throughout Washington for the past eleven years? Well, yes, I was originally assigned to the Tumwater station as the single person operating there to work with Indian tribes in Western Washington, assisting them, providing technical assistance, that is, in the management of their fisheries, and at that time, of course, I was, because of the fact that I was alone, was very limited in the area that I could cover, so I concentrated on the Quinault reservation.

I did some work in relation to the other coastal tribes concerning the feasibility study of the Quinault hatchery, provided assistance to the Makahs and to a limited extent to the Tulalips, Swinomish, Lummis, and additional funds were provided —— I believe this was covered by my testimony, but additional funds were provided about 1967 by appropriation from Congress.

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The staff was enlarged to three biologists at that time.

I transferred to Portland, to our regional office as the Associate Regional Supervisor of the Division of Fishery Services, retaining supervision over the Tumwater office, and with the expansion to three biologists, essentially they attempted to cover the same area, but with a higher level of work ability to cover more details.

Q May I interject a question at that point?

At the time of the initiation of your program eleven years ago, were your primary efforts directed toward improvement of on-reservation Indian fisheries?

- A This is true.
- 14 Q And at what point in time did you and your staff begin to
 15 work in the field of off-reservation Indian fisheries?
- 16 A To any noticeable degree it was approximately 1969 or '70.

 17 I might say, however, that our Bureau, through the work

 18 of Dr. Ted Perry, who is presently our Deputy Regional

 19 Director, we were providing assistance to Indian Tribes

 20 on the Columbia River.
- Q I would like to confine your remarks, if I may, to the case area in this regard.
- A All right, so I would say that we principally became involved with the Indians in their off-reservation fisheries about 1970.
 - Q Would that be roughly coincidental with the establishment

of the special Indian only off-reservation commercial salmon fishing season by the Washington Department of Fisheries within the case area?

- A It coincides.
- Now, did I interrupt you when you were explaining in a very general way the development of your program from its inception, and I believe we had gotten up to, I believe three fishery biologists working for you inconnection with this program.

Would you generally briefly describe for the Court and record the development, if any, of this program and its expansion.

Well, I believe I would say that the area covered by the three biologists was approximately the same as that covered by myself. They were able to provide much more detailed technical assistance, and a great deal of their time was absorbed in assisting tribes to protect their resources against adverse developments such as logging operations, water development programs, and about 1970, as our Bureau became more involved in off reservation activities, that staff began to work directly with me, assisting tribes in the matters concerning off-reservation fisheries, and then in fiscal year 1972 Congress appropriated additional funds for the expansion of our program to assist Indians in the off-reservation fisheries

1	area, and at that time we expanded our operation to include
2	Indian tribes and other federal programs in Oregon,
3	Washington and Idaho.
4	Q How much money did you receive in an appropriation for
5	fiscal 1972 for your program?
6	A The money appropriated in '72 was for fiscal '73, and it
7	amounted to \$250,000.
8	Q I see. Subsequent to the commencement of this case, what
9	percentage of you and your staff's time would you say has
10	been involved in matters relating to this case?
11	A It is a very difficult thing to answer, because first of
12	all, almost anything you do with Indians and their
13	fisheries somehow seems to be related to this case.
14	Certainly when it comesto their fishing and
15	the regulation thereof, all of our activities relating
16	to their off-reservation fisheries is included there, but
17	
18	THE COURT: Do you mean that a great deal of
19	what you would normally do absent this case you have
20	continued to do, and it has a bearing on this case, in
21	that way? Is that what you mean?
22	THE WITNESS: Yes.
23	Q Isn't it true that at your deposition you stated that on an
24	annual basis, it would be fair to say approximately 90
25	percent of your time related to matters connected with this

case, and --1 Yes, and I don't believe I would change from that, but 2 you asked me just now about my time, and that of my staff, 3 and I had not calculated what portion of the staff work on a percentage basis. 5 Let me narrow the question then to you. Since the 6 commencement of this case, what percentage of your time 7 have you spent on matters involved with this case? 8 I would say roughly 90 percent. 9 Are you in a position to give an estimate regarding the 10 amount of your staff's time which have been involved in 11 matters related to this case since its inception? 12 I believe that I would almost have to include all of their 13 activities relating to Indian fisheries or development 14 programs relating to salmon and steelhead, and that might 15 come pretty close to 80 percent, or somewhere in that 16 neighborhood. 17 Returning now to page 2 of your testimony, Mr. Heckman, 18 at lines 29 through 30, you state: 19 "The major part of our work is concerned with 20 andromous fish in both their fresh water and marine 21 environment." 22 Now, do I understand your statement to mean 23 that certainly presently you and your staff are performing 24 research in connection with anadromous fish in both their 25

fresh water and marine environments? 1 I don't know that it would be appropriate to say "research, 2 Α 3 but certainly we are considering the fisheries and the 4 marine environment. Have you performed any research in marine environment 5 with regard to any salmonid since your program was 6 established eleven years ago? 7 Well, to a degree yes, we have, because I can recall, 8 9 for instance in 1965 or thereabouts -- it had to begin 10 about 1963 -- I had a large number of coho salmon marked and released into the Moclips River, and the returns from 11 these marks were recovered not only in the river but in 12 the marine fisheries along the coast and in Puget Sound. 13 In this respect, yes, we were studying the marine 14 environment and the marine fisheries on that stock. 15 In addition to the Moclips marking experiment in the early 16 sixties, can you think of any other marking experiments 17 that you and your staff have undertaken? 18 Α No. 19 Q Did you or your staff actually perform the marking 20 experiments in the Moclips River? 21 It was performed and paid for by my Bureau cooperatively 22 Α with the Quinault Tribe, and I should say the recoveries 23 cooperatively with the Washington Department of Fisheries. 24 So that there was a degree of involvement by persons beyond 25

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your immediate staff and the performance or accomplishment
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         of this marking study?
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         The Indian Tribes, yes.
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                     (Continued on the next page.)
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Beyond the Moclips marking study during the past 1 11 years, can you state for the record any other 2 studies or research which you or your division have 3 performed which would study anadromous fish in their marine environment? 5 Well, yes. I believe it's been within the last two 6 years that the staff in Olympia has studied the 7 Tulalip Bay area in relation to returns of coho 8 salmon from hatchery stocks in the Tulalip Creek. Was this a marking experiment ? 10 I believe some of those fish might have been marked. 11 I don't recall. But certainly it related to the 12 hatchery plant that the tribe made in cooperation 13 with the Washington Department of Fisheries. 14 15 So, is it true, then, that that study was based on fish provided by the Washington Department of 16 Fisheries for planting on the Tulalip Reservation? 17 It was fish from the Washington Department of 18 19 Fisheries' hatchery, yes. Did the Washington Department of Fisheries assist 20 you in any way in conducting or evaluating the Tula-21 22 lip Bay study which you have just referred to? 23 I'm not familiar with the studies that were conducted 24 there in any detail, and I am sure there was close 25 liason between the tribe and the State fisheries

and our bureau. Have any of these studies, either fresh water or marine environment studies of salmonids that you 3 or your staff have undertaken during the past 10 years ever been published in any recognized scienti-5 fic journal? 6 I don't believe in the context that you refer have 7 8 we had any publications, no. We have prepared 9 reports that are available to the public. 10 Now, return to the top of page 3 of your testimony, Mr. Heckman. Your answer relates to the question 11 at the bottom of page 2, which is: 12 13 "Could you give some examples of the 14 activities engaged in by the Northwest fisheries' program." 15 16 My first question is wouldn't it be more 17 correct to say the Northwest Indian fisheries' 18 program? No. That would be incorrect. 19 In your answer you state: "Starting back at the 20 Q. 21 beginning of our program in 1963 and continuing 22 to the present time, a good deal of our work relates 23 to conducting surveys of streams where there are reservation Indian fisheries and to provide Indians 24

with some assessment of their resources."

What areas on Indian reservations have you 1 conducted stream surveys for either salmon or 2 -3 steelhead? We have conducted studies on the --4 Stream surveys. 5 Extensive stream surveys on the Stream surveys? 6 Quinault, Makah, Muckleshoot, Tulalip, Lummi, 7 and the smaller reservations, of course; where there 8 9 are very limited water resources. 10 What is your understanding of the term "stream survey"? 11 12 Stream surveys are conducted for a number of reasons 13 They might be conducted to determine species use 14 or to determine the status of the fresh water habitat, the problems relating to it. It might 15 include assessment of the productive capacity of 16 17 the system. 18 Is the stream survey or the data derived from the 19 stream survey ever used as the basis for run size 20 prediction? 21 À. Yes. 22 With regard to steelhead, have you ever performed 23 these surveys to determine steelhead spawning escapements and into / of the watersheds that you 24 25 have mentioned on these Indian reservations?

- A. I believe I missed your question.
- Q. I'm sorry. I'll rephrase it.

I believe you stated, if I understand your correctly, that you and your staff have undertaken since 1963 stream surveys to assess Indian or to assess fisheries on Indian reservations. I believe you stated that these surveys included the Quinault, for example, or the Lummi or the Tulalip or the Muckleshoot.

- Is that correct?

- A. Yes.
- Ouring the course of conducting any of these surveys, were they ever conducted with a view toward determining the numbers of steelhead which might arrive in the spawning areas on any of the streams that you surveyed on any of the Indian reservations that you named?
- A No. We did not have that particular objectives:

 in mind in our surveys, but we have included in our
 surveys, both on those streams on and off-reservation, records of observation of conditions, observations relative to steelhead production and steelhead as they have been observed in that environment.
- Q With regard to the Lummi Reservation, where on the Lummi Reservation, what stream, did you conduct

the survey on on the Lummi Indian Reservation? 1 I believe the name is Slater Creek. I believe 2 Α. that's right. 3 Did you collect data regarding spawning escapements 4 of any species of anadromous fish as a result of 5 your stream surveys? No, I did not. 7 Did your staff? I'm not sure whether they have or not on Slater . 9 Creek. 10 With regard to any of the areas which you have 11 conducted stream surveys on, have you collected 12 13 data or information? Concerning steelhead? 14 Concerning steelhead. Q. 15 A. Yes. 16. What is the nature of the information that you Q. 17 acquired? Is it reduced to writing? 18 Α. We have a number of reports which cover our surveys 19 on streams on-reservation which would certainly 20 give you information relative to the condition of 21 that habitat for steelhead. We have conducted 22 a number of spawning ground surveys in areas off-23 reservation which accomodate steelhead spawning. 24 You have also performed steelhead spawning ground 25 Q.

surveys in off-reservation areas? 1 2 Α. Yes. 3 Were you present during the testimony of Mr. 4 Clifford Millenbach in this matter? 5 Yes. Ά. Do you recall that he testified that the Department 6 of Game has in the past few years initiated index 7 areas for stream surveys of steelhead spawning 8 9 areas? 10 Yes. 11 Did you make any effort to inform Mr. Millenbach 12 of the index areas that you selected as survey areas or to coordinate your research activities with 13 14 his activities? No, I did not. We were in fairly close contact 15 with the Fisheries Department on this, but we were 16 17 not aware that the Game Department had conducted any such surveys or, at least, if they had, they 18 were confined to the last two or three years at the 19 time that we initiated our studies. 20 Have you personally conducted stream surveys for 21 22 steelhead? 23 A. Yes. 24 As a biologist, do you know of any differences 25 between conducting a stream survey for steelhead

as opposed to salmon? 1 For some species of salmon, yes. 2 Could you describe generally what those differences might be. Generally, the fall chinooks, pink salmon, chums 5 utilize more the main stem of the system for their 6 spawning; whereas, the coho and to some extent the spring chinook salmon utilize more tributary 8 areas, such as steelhead do. 9 Is it your testimony that you have never observed 10 Q. any steelhead spawning in any main stem areas on the 11 watershed in the case area? 12 13 No. But it is your testimony or your opinion that 14 steelhead primarily or in the majority spawn in these 15 tributaries to the main stem? 16 Yes: 17 Α. Have you ever personally during your 11 years of 18 Q. experience with the Indians and Indian fisheries 19 and watersheds in the case area ever observed mass 20 spawning by steelhead in any of the watersheds 21 22 within the case area? 23 No. A. 24 0. Have you ever observed steelhead spawning to such a number that you as a biologist performed a 25

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judgment that there were too many there; that there 1 2 would be over spawning? 3. Α. No. Yet this is a relatively common phenomena, is it 5 not, with regard to some races of salmon under certain conditions? 7 No. Is it your testimony that salmon have never 9 mass spawned within the case area? 10 No. You said common occurrence, and I said, no, 11 it is not common. 12 THE COURT: Incidentally, if I may, do 13 you use in the parlance of this area of biology 14 the word "race" as being synonymous with a run? 15 MR. CONIFF: I would so understand --16 MR. PIERSON: I think the Joint Biological 17 Statement spells it out in the glossary. 18 five species of salmon: chum, coho, chinook, sockeye 19 and pinks. Within the various species there are various races, such as fall, summer and spring. 20 21 As I undertand the usage in the Joint Biological 22 Statement, a race is a division of the various 23 species.

As to steelhead, I think the two races are summer and winter.

THE COURT: Well, you can see that I 1 didn't get that far in the Joint Biological State-2 ment from my inquiry, but it has been occurring 3 to me because of the frequency with which "race" has been used within the last two or three days. 5 Thank you. 6 (By Mr. Coniff) Would you say as a biologist, Mr. Heckman, that steelhead lend themselves as readily 8 9 to numeration via the mechanism of a stream survey 10 as opposed to salmon? They utilize more the headwater areas of the systems 11 and by so doing they find themselves in a greater 12 number of tributaries, small fingers of the system, 13 14 and would require a little more footwork to run them down than, say, it would in the case of chinook 15. salmon, fall chinook salmon, utilizing the main 16 stem of the river. 17 18 Coho approach the situation, utilizing the small 19 tributaries as well. You mentioned that you have begun to commence 20 stream surveys for steelhead in off-reservation waters. 21 22 About when did you or your staff commence that 23 activity or program? It was either the winter of '68 or '69. 24

As a part of the establishment of a stream survey

program, did you establish index areas so that 1 you could compare, presumably or hopefully valid, 2 the data from one year to the next? 3 We are in the process of doing this. 4 Do I understand it that you have not prepared 0. 5 or defined index areas with regard to any of your б stream surveys for steelhead at this time? 7 That's correct. 8 At the time that you do establish your index areas, 9 would you then consider that the data that you 10 might derive from them might be entitled to some 11 validity? 12 Yes. 13 What would be the purposes for which you as a Q. 14 biologist would use the data which you would derive 15 from steelhead spawning index areas? 16 I believe that once we have established a number 17 of years of record, we can relate this more pre-18 cisely to the relative numbers of steelhead return-19 ing to the river. 20 Do you believe, then, that it could be used as Q. 21 one basis for predicting the volume or numbers of 22 steelhead that might return as native stock, if 23 you will, from this data? 24

Yes.

A.

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And what would be some other methods that you as 1 a biologist would be able to use as a predictor, 2 3 if you will, of the volume or size of the steelhead 4 runs beyond the use of data derived from stream survey index areas? 5 We could use information from the counts at dams 6 Α. and other passage facilities. 7 8 Isn't that sort of data the most reliable source 9 of data of any that is available to you as a biolo-10 gist regarding run size? It is an area where you can count in some cases 11 12 every fish that passes over a facility. 13 0. Would Bonneville Dam be an example of such a facility? 14 A. Yes. And the fish passage facility installed therein? 15 16 A. Yes. And would the same thing be true for the other dams 17 18 on the main stem of the Columbia up to Grand Coulee? 19 Yes. 20 Would the same thing be true for the four dams on the 21 Snake River up to Hell's Canyon, --22 I'm not exactly sure. 23 -- the lowermost dam on the Snake River? 24 Yes.

Would the existence or lack of existence of a

marine or salt water fishery for the steelhead 1 affect your ability as a biologist to predict the 2 future run size of that species or in advance of its 3 arrival at a river mouth? Yes, it would affect it, but it would not necessarily 5 preclude some analysis. 6 Have you or your staff in your 11 years conducted 7 any marine or salt water test fisheries or experiments 8 designed to predict the size of the oncoming run of 9 steelhead in any river or stream within the case 10 area? 11 No. 12 Do you honestly believe that as a biologist that such 13 studies would be productive? 14 I think they would be very difficult. 15 And the data might be misleading, would it not? 16 I'm not sure. 17 Would not the level of smolt production and planting 18 be important as a prediction factor or as a factor 19 in attempting to make a prediction of a future run 20 size of steelhead? 21 It would be an important factor in considering the 22 runs produced artificially. 23 But you would want the artificial production, would 24 you not, in addition to the natural production 25

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in order to project a total run size?
       1
               That's right.
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                           (Continued on next page.)
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1	Q	What would be the source of that information or data?
2	A	It would be the at the present time it would be from
3		the records of the Department of Game.
4	Q	Now, beyond the spawning grounds surveys, possible marine
5		or salt water experiments that might be derived therefrom
6		and smolt production and planting records of artificially
7	٠	produced steelhead, and the possibility of dam counts,
8		are there any other methods that you know of as a
9		biologist which would be used to predict the future run
10		size of the steelhead run on any watershed within the
11		case area?
12	A	I assume from your question, Mr. Coniff, that you are
13	-	referring to early run predictions.
14	Q	In advance of their arrival at the river mouth.
15	A	You would weight your analysis perhaps to a considerable
16		degree on the condition of the fresh water environment
17		during the rearing stage of the steelhead which you are
18		attempting to predict.
19		MR. CONIFF: I wonder if I could have that read
20		back.
21		THE COURT: Yes.
22		(Answer read by the Reporter.)
23	Q	(By Mr. Coniff) What do you mean when you use the term
24		"weight your analysis"?
25	A	In attempting to predict a return of those species of

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anadromous fish that rear for more than one year or a year or more, I should say, in fresh water, you must consider the fresh water environment.

In other words, flows during the low flow period of the year in the rearing area of steelhead and coho salmon, spring Chinook salmon must be reviewed to give you some indication of the general trends of productive levels.

If you had a condition during a low flow period when the stream flow is below normal, you can make some assumption that your production may be low. I believe this has been referred to in previous testimony. Right, I think I understand you now. So that if I interpret you correctly, Mr. Heckman, and please correct me if I am wrong, you are saying that the general environmental conditions in the fresh water system during that portion of the fish' life cycle, its juvenile portion would operate as -- in a general way as a positive factor. or as a negative factor, depending upon these flow conditions on the environmental conditions, and that in addition to the points I have enumerated would also go into any judgment that you might make as a biologist to predict the future run size of the steelheadrun? You would also have to, of course, consider the condition of the stream at the time of spawning and

incubation, and you would have to consider the size of 1 the general -- the general size that is of the spawning 2 population that produced this run we are trying to 3 predict. And the size of that spawning population would be 5 determined by the spawning ground survey, would it not? 6 Not alone. 7 How else would it be determined? Well, by spawning ground survey, dam counts. 9 You are assuming a dam count? 10 Records of the catches ain the net and sport fisheries. 11 Now, do you believe that by the use of any of these --12 I have now listed five factors, if you like I can read 13 them to you, by the use of these five prediction factors 14 can you as a biologist reliably predict the size in 15 advance at the arrival at the river mouth of any steelhead 16 run on any watershed within the case area? 17 Would you like me to run through the five factors 18 that we have just been discussing? 19 No, I don't believe that is necessary. I don't believe 20 that I would on the basis of those alone want to make an 21 estimate of the returning run. But by review of those, 22 I believe I could make an estimate of the relative 23

If you can't reliably predict the size of the steelhead run

abundance to be expected.

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1		in advance, how can you reliably recommend an expension
2		of existing commercial net fishing areas by Indians in
3		off-reservation waters to the extent depicted on PL-73?
4	A	I believe your questions include the recommendations of
5	. :	an expansion of the fishery?
6		How can I do that? I don't believe I have done
7		that.
8	Ω	How can you recommend the expansion beyond the existence
9 -	-	within reservation boundaries, how can you as a biologist
10		recommend any expansion of commercial net fisheries on
11		steelhead runs on any river in the case area?
12	A	I believe I have not made that recommendation. I'm not
13	,	sure that your question is implying that I have or would
14		or could.
15	Q	Can you as a biologist recommend to this Court that the
16		existing on-reservation commercial fisheries for steelhead
17	-	on the part of Indians within the case area be expanded
18 [.]		in any way without having any ability to reliably predict
19		run size in advance of the arrival of these fish at the
20		river mouths?
21	A	I am not sure I understand your question.
22		THE COURT: Read it.
23		(Pending question read by Reporter.)
24	A	I believe the question assumes that I don't have any of that
25		information, and if I do not have it, I certainly could

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not recommend an expansion of an Indian on-reservation net
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         fishery.
 2
         Do you have reliable spawning ground surveys in connection
     Q
 3
         with counts on any waters within the case area outside
 4
         reservation boundaries?
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     Α
         No.
         On the Hoh River, are there any dams that have fish
 7.
         passage facilities on them?
 8
     Α
         No.
         On the Quillayute River system are there any dams or --
10
         when I use the word "dam" I mean any facility where you
11
         can count fish, are there any dams or any river or
12
         tributary of the Quillayute River system?
13
         I don't recall any.
14
         What about the Quinault River system?
15
         None.
16
       What about the Queets?
17
         None.
18
         What about the Elwah?
19
        No, there are none on the Elwah.
20
        What about the Pysht?
21
         I don't believe so.
22
        Dungeness?
23
    A
        No.
24
        The big or little Quilcene?
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- I don't believe there are any facilities there. 1 2 The Hamma-Hamma? No. 4 Dosewallips? 5 A No. I can't read the third one, what is that -- the Duckabush. I should remember that one, I had a case over there once. 7 8 No : How about on the Skokomish, are there any fish passages 9 or counting devices there in that river system? 10 Α No. 11 How about the Deschutes River? 12 Yes, the Department of Fisheries operates a passage 13 facility there. 14 Perhaps we could shorthand this, could you describe the 15 nature of any fish counting facility that exists on any 16 river or tributary within the case area. 17 The Buckley trap on White River, the Baker River fish 18 19 transportation facilities. I don't recall -- I am not intricately familiar with all the drainages. 20 Would it be a fair statement to say that the dam counts Q 21 22
 - would it be a fair statement to say that the dam counts would not be a source of data with the exception of the facilities you have noted with regard to run prediction capabilities for steelhead?
- 25 A That's correct.

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1 I believe you have indicated there are no spawning ground 2 survey index areas yet established by your division for 3 steelhead in any off-reservation waters.

> Now, I believe if I recall correctly, the next element that we have discussed is the marine or salt water fisheries, do you know of any marine or salt water fisheries or tests that are occurring and would give us information regarding the size of the future steelhead run?

- Α No.
- And I believe the next element that we have discussed was 11 smolt production, and I believe you have testified that 12 that information would be acquired from the Washington Department of Game?
- 14 The production of the artificial program, yes.
- 15 And the final element that you have discussed is the general environmental conditions which might affect the 16 rearing of wild or native steelhead in the stream? 17
- 18 Yes.
- Is this true, that wild or native steelhead spend two years 19 20 in fresh water before emigrating to the ocean for 21 ultimate maturation?
- 22 Yes, most of them.
- 23 So then would it be a fair statement that other than general environmental conditions over a two year period 24 25 pertaining to native or wild steelhead, there would be no

1		basis upon which you as a biologist could predict future
2		run size in any watershed of the case area that does not
3 -		have a dam or counting device located on it?
4	A	I believe I said before that I could not make a precise
5		estimate.
6	Q	Could you even make a general one?
7	A	I believe so.
8	Q	What would that be like?
9	A	Perhaps it would be in the nature of I don't want to
10	-	say predictions, but general assumptions made by the
11		Game Department presently.
12	Q	Would it be in the nature of the estimates the general
13		estimates which Mr. Millenbach has testified about in his
14	-	testimony?
15	A	Yes.
16	Q	Would you feel that you today could make any different
17		or better or improved estimates or predictions of run size
18		of steelhead not testified to by Mr. Millenbach?
19		THE COURT: I take it you mean based on the same
20		data available to him; no better or worse?
21		MR. CONIFF: Yes.
22 -	A	No, I believe my estimates would be the same, based upon
23		the same data.
24	Q	(By Mr. Coniff) If we are unable to if you will assume
25		we are unable to accurately forecast or predict future

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run size of steelhead runs in the watersheds in the case area, and if the Indian level of harvest of these steelhead runs is defined by Indians themselves on the basis of what they convey to be their needs, can you reliably as a biologist recommend to the court that off-reservation commercial net fishing by Indians for steelhead be authorized?

If you would like, we can have the Reporter read that question back.

A It's a little lengthy, I would appreciate that.

(Pending question read by Reporter.)

- A Yes, I believe so.
 - Q Let's go back just a moment before I ask the obvious question, you cannot accurately predict the run size; is it, therefore true that you would not be able as a biologist to predict the escapement, the numbers of fish which escape for spawning purposes.
 - A No. not precisely.
 - So it would be true then that if a biologist is looking at this and trying to develop a management scheme or propose some regulation, it would be pretty important to that biologist to be able, not only to predict the run size, but to have a desired level of escapement established for the species that he is proposing to manage?
- A This would be ideal.

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1	Q	In the absence of either a desired level of escapement
2		and the ability to reliably predict or forecast run size,
3		upon what basis could a biologist recommend the
4		institution of a commercial net fishery, and I am relating
5		my question to steelhead, and I suppose I am becoming
6		hypothetical at this point, but do you think you can
7		answer that question, or I shall I take another
8		run at framing it?
9	A	I am considering that your question included that the Indian
10		off-reservation net fishery for steelhead would be relative
11		to their needs, and am not sure that I could at this time
12		measure that relative to their current take of steelhead.
13		But if I assumed that that might be similar
14	-	in magnitude to their current take of steelhead, I believe
15		that I could recommend or perhaps not recommend against
16		their off-reservation fishing, since I would assume the
17		level of their take would remain about where it is.
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19		(Continued on the next page.)
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Are you assuming that the expansion of Indian 1 commercial net fishing for steelhead into off-2 reservation would not increase their take or 3 harvest? 4 It would not necessarily need to. Α. 5 Q. Is that an assumption you are making for purposes of that answer? Yes. 8 If you would assume the contrary to be true, and 9 that the take would double over present levels on-10 reservation, would you grant me that assumption, 11 and would your answer be the same? 12 I would have to make some assumptions, that, one, A. 13 the resource ica could withstand doubling of the 14 Indians' take, and that would require study, or 15 I would have to assume that other fisheries would 16 be decreased to accomodate the increase by the 17 Indian fishery. 18 Just in terms of your concern as a biologist to Q. 19 maintain the proper numbers of steelhead spawning 20 in the natural wild conditions, would you not be... 21 first concerned with any harvesting group, but 22 with the meeting of a desired level of escapement? 23 Α. That would be my first concern and responsibility. 24

Wouldn't you as a biologist tend to be conservative

1		in recommending any further expansion of harvest
2		by more efficient gear until such time that you had
3		definitively or satisfactorily for your purposes
4		reached the desired level of escapement?
5	A.	I don't believe that the efficiency of the gear
6		would necessarily limit my recommendations.
7	Q.	Is it your testimony that there is no difference
8		in efficiency between an Indian gill net on the Hoh
9		River on his reservation as opposed to a sport
10		fisherman with hook and line upstream?
11	Α.	I believe your question did not imply an additional
12	`.	harvest, but the use of more efficient gear, and
13	:	I am not certain that that relates.
14.	Q.	My question was, would you as a biologist recommend
15	· · · ·	that commercial netting activities be expanded on
16		a resource such as steelhead on rivers within the
17		case area where you don't know first what your
18		desired escapement level is?
۱9	A.	I'm not sure what you mean by "expanded." Do you
20		mean expanded in the area in which they operate
21		or expanded in numbers?
22	Q.	Geographically expanded beyond the areas depicted
23		on the JX based map as Indian reservations?
4	Α.	First of all, I would not be unilaterally recommend-
.5	-	ing that this be done, but if the question were

1	put to me by an Indian tribe that they might wish
ż	to expand the area in which they fish, I might
3	suggest to them that that could be done if other
4	means of regulating the take would be incorporated.
5	Q. What other means are you talking about?
6	A. I mean by "limiting the take," by controlling the
7	number of days that might be fished by the gears gaze.
8	Q. You're referring now to Indian fisheries?
9	A. Yes.
10	Q On-reservation.
11	A I believe your question related to the expansion
12	to areas off-reservation.
13	MR. CONIFF: Your Honor, this might be a
14	good point if I might suggest it for lunch.
15	THE COURT: Very well, we will recess until
16	12:30.
17	(Whereupon, a recess was held from 12:00 o'clock
18	until 12:30 o'clock p.m.)
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AFTERNOON SESSION 1 September 3,1973 12:30 o'clock p.m. 3 THE COURT: Carry on. 5 MR. CONIFF: Thank you, Your Honor. 6 CROSS-EXAMINATION (Continuing) 8 BY MR. CONIFF: 9 Would you turn, Mr. Heckman, to your prepared 10 testimony, page 21, line 7? I would like to read 11 that statement to you, "Finally, by the color red, 12 we have attempted to show both the fresh water 13 and marine areas which Dr. Lane has indicated were 14 usual and accustomed fishing places for one or more 15 treaty tribes whose fishing rights the plaintiff 16 tribes claim to hold," and the identification on 17 that is PL-73. 18. Is that the overlay map that we were discussing 19 this morning? 20 Yes. A. 21 22 Look at the exhibit list on that. It has been 23 admitted by stipulation as an illustrative overlay map of usual and accustomed fishing areas; is that 24 25 correct?

Yes. 1 And is it not true that you are the sponsoring 2 3 witness of PL-73? MR. PIERSON: That is a question the 4 witness can't answer. 5 6 MR. CONIFF: He testified to --MR. PIERSON: He asked whether he is the 7 sponsor --8 9 THE COURT: I think we have had such a long period of examination on that point. It 10 is perfectly clear the witness himself does not 11 sponsor it. He is merely following directions to 12 produce it, and that he has no personal knowledge 13 about it excepting only that it purports to reflect 14 the views of Dr. Lane. That is all we need to know 15 about that, I think, at this time. 16 MR. CONIFF: All right, I will proceed 17 with that matter no further. 18 (By Mr. Coniff) At the luncheon recess, Mr. Heckman, 19 we were discussing the relative abundance of steel-20 head or the ability to predict abundance of steel-21 head in river systems within the case area, and I 22 would like to ask you this: In your opinion as a 23 biologist isn't it true that given the present level 24

of Indian commercial fishing activities within

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reservations within the case area, and given the present level of sport take, sport catch within the case area, that the steelhead runs in general on the watersheds within the case area appear to have satisfactorily maintained themselves?

- A Yes, I would agree with that.
- And isn't it true that the Department of Game has of course supplemented the native wild runs by an artificial propagation and planting program of steelhead smolts?
- A. In some cases I think that you could say that in the purest sense, and in other cases I think we would have to consider the adverse effects of water developments and other developments that have deteriorated the productivity of certain of these streams, and I'm not certain that we can could consider it enhancement purely.
- Well, put it this way: I will freely stipulate with you the adverse effects of many of man's developments on many of the watersheds. My question to you, I suppose, is really this: Would it be your opinion as a biologist that to the extent that there were successful plants by the Department of Game in the watersheds within the case area which

ran through and bordered on the Indian reservations,
that the commercial Indian take of steelhead would
be enhanced or increased as a result of those
plantings?

- A Yes, over the present day productive capacity of the streams, in somecases.
- Q And that the amount or extent of planting, would you as a biologist reasonably expect to see a more or less proportionate increase in the on-reservation Indian commercial fishing catches of steelhead?
- A. Yes, I think so.
- Q. And would you likewise expect to see an increase to some proportionate amount, speaking in very general terms, in the sports catch of steelhead in the areas of the watershed, for example, the Hoh, where sport fishing activity occurs above or beyond the reservation boundaries of the mouth of the river?
 - A. Yes, I believe the plants could be reflected in an increased landing by sport fishermen.
 - Turning to page 3 of your testimony, you state, commencing at line 5, "A very large part of our work..." and here you are describing the work of the Northwest Fisheries. Program, of which you were involved in working with Indians in an attempt to protect and maintain the habitat for salmon and

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steelhead and such things, in evaluating the effects of logging activities and measures needed to protect the stream habitat. My question is: Has the work that you have described here ever resulted in any written standards to control logging activities? For purposes of my question I would direct your attention to the Quinault Indian Reservation.

- My answer is yes. 9
- And did you staff develop these written samples? 10
- To some degree, yes. 11
- 12 Who else participated in their development? Q.,
 - The standards that have been prepared to protect the watershed and the fishery resources therein has been a subject of general concern by both federal and State conservation agencies for a number of years, and the measures that have been developed, I would say, have been the result of the input of all those agencies.
 - Are you representing to me that you have developed yourself, in your efforts, written standards regarding logging activities within the boundaries of the Quinault Indian Reservation?
 - We have taken into account all of the past experience and the reports prepared in standards employed by

such agencies as the United States Forest Service and others, State Department of Natural Resources, and have applied those general standards to the Quinault, and I'm sure to some degree modified them to fit the specific problems on that reservation.

- O. When you say, "applied them" what do you mean?
- A. I mean that we made that informationavailable to both the Indian tribe and the Bureau of Indian ANDIALS Affairs forestry division so that they might establish a procedure of planning in advance of timber sales, or in the event that the work has already been done to go back into the areas and do the cleanup necessary to get the streams back into production.
- 15 Q To your knowledge, have the Quinault Tribe of
 16 Indians acted upon the information that you supplied
 17 them?
- 18 A. Yes, they have.
- 19 Q In what way?
 - A. They have established withthe Bureau of Indian
 Affairs a very close working relationship with our
 bureau and the tribe to closely review all timber
 sales. We have worked on practically a daily basis
 to examine sales, upcoming sales and to examine
 logging activities as they are currently underway,

and do whatever is necessary to protect the resource 1 by making these, the needs of salmon and the measures 2 necessary to protect them, available to the 3 Bureau of Indian Affairs, so that they might 4 enforce those measures in the contracts for the 5 logging of the timber. 6 Turning to page 4, I believe you have indicated 7 that you or your staff have never attempted to 8 9 assume the management responsibilities of any of the Indian tribes within the case area; is that 10 correct? 11 That is correct. 12 13 But that your role and that of your staff is of assisting the Indian tribes within the case area 14 with regard to the development of such things as 15 these logging standards that you refer to and the 16 development of fishing regulations? 17 18 Yes. ET11 19 (Continued on next page.) 20 21 22 23 24 25

1 Q Now, am I correct in assuming that the fishing regulations that you refer to in your answer are found in Appendix 3 5 to the Joint Biological STatement? 4 Yes. Some of them would be in there. 5 And I believe, as you have previously testified in your 6 direct testimony, of your very close and continuing 7 working relationship with the Muckleshoot Tribe of Indians, referring to your testimony, page 3, lines 12 and 8 9 13, is that correct? 10 Α Yes. 11 And would it be fair for me to assume that you worked very closely with and made recommendations to the Muckleshoot 12 13 Tribe of Indians with regard to the proposed or their 14 purported, shall I say, off-reservation fishing regulations, which are found in Appendix 5? Unfortunately they are 15 not paged. 16 It appears to be the third section, which is 17 broken by the yellow pages. 18 After you have had an opportunity to review the Muckleshoot regulations, my question to you will be 19 did you participate in these recommendations, regarding 20 21 their formulation? 22 Yes, I did. Now, I would direct your attention to page 2, where we 23 see Green River indicated as the area where a gillnet 24 fishery for commercial purposes will be allowed. 25

Does the Green River flow through or border on 2 the Muckleshoot Indian reservation? 3 Α No. So that the area in question is entirely beyond reservation 5 boundaries? 6 Α Yes. I note under 1-A that the open area is defined as the 8 entire length of the Green River. Did you make a 9 recommendation to the Muckleshoot Tribe of Indians as far 10 as the geographic extent of their off-reservation 11 commercial net fisheries? 12 No, I don't make those determinations. Α 13 Would not the area where such a commercial net fishery 14 would occur be important to you as a fisheries biologist 15 in evaluating the effect of the proposed harvest of fish 16 authorized under the regulations? 17 Yes. 18 Q Turning to Point B, Season and Mesh Restrictions, can you 19 review the dates that are open and state for the record 20 the period of time that the entire length of the 21 Green River is closed under this regulation? 22 I'm sorry. I was reading that. I guess I missed what you 23 asked me. 24 From your reading Section 1.B, which states, Season and 25 Mesh Restrictions, can you state the period of time that

the Green River in its entire length is closed to 1 commercial net fishing by the Muckleshoot Indians 2 3 pursuant to this regulation? If I state to you my understanding of the 4 reading of it, maybe you could concur or not concur. 5 It looks to me like a net fishery is closed after January 6 15 until March 1. So, during each of the entire calendar years then, that 8 would be the entire period of closure, from your 9 reading of this regulation? 10 Yes, that's correct. 11 Did you make any recommendations regarding the January 15 12 to March 1 closure period for the gillnet fishery on the 13 entire length of the Green River, as indicated in 14 Muckleshoot regulations? 15 I don't believe that I made a recommendation for an 16 opening or closing, either way. 17 Now, if you will turn to page 3, Item Number 2, Subsistence Q 18 Fisheries. I note that point A, the open area is the 19 entire length of the Green River; is that correct? 20 That's what it says. 21 Did you make any recommendation regarding the open area 22 which would be open to subsistence fishing by members of 23 the Muckleshoot Tribe? 24 No, I did not make that recommendation.

1	Q I note that there are restrictions to the use of spear
2	gaffs, and hooks in this area, and that the use of vessels
3	is to be limited to canoes without motors and that the
4	open season for subsistence purposes is to be from March
5	1, 1971 to January 30, 1972.
6	I believe that indicates that one-month closure
7	during February; is that correct?
8	A That would be correct.
. 9	Q Did you make any recommendations regarding the
10	establishment of Item 2.B?
11	A No. I believe the tribe was pretty well on its own.
12	THE COURT: Is the word "subsistence" as used
13	in the regulation defined?
14	THE WITNESS: I don't believe we have defined it
15	in our Joint Biological Statement, your Honor.
16	THE COURT: Is it defined in the regulation?
17	THE WITNESS: I don't believe it is.
18	THE COURT: What is your understanding of what
19	it means?
20	THE WITNESS: This would be a fishery to take
21	fish for direct consumption by the fishermen.
22	THE COURT: Day to day consumption and not
23	accumulation or anything of the kind?
24	THE WITNESS: They might take fish for smoking
25	or for curing, in which case they would

1	٠.	THE COURT: But, in any case, for individual
2		consumption of the fisherman and his family or the like?
3		THE WITNESS: Yes, that's correct.
4	Q	(By Mr. Coniff) Returning now in your Muckleshoot
5	,	regulations to the next area indicated, it's that of the
6	-	White River, under Item Number 1 it says: "Gillnet fishery.
7		By the way, when these terms such as gillnet
8		fishery are mentioned in this regulation, how do you
9		understand that term to be used? What is being authorized?
10	A	A fishery that will use gillnets to catch fish.
11	Q	Would you assume that they would be set gillnets in a river
12	ı.	such as the White River?
13	A	I make no pure assumption one way or theother, but I would
14		assume the White River would have to be mostly set net
15		fishing.
16	Q	And on the upper stretches or portions of the Green River,
17	:	it would similarly have to be a set gillnet?
18	A	I believe so.
19	Q	And it would only be in the lower Green River where the
20		flows and the depth of water would allow a drift net
21		fishery?
22	A .	That might be a reasonable assumption.
23	Q.	An open area the entire length of the White River, did you
24		make that recommendation in establishing the geographical
25		extent to the Muckleshoot Tribe?

No. 1 Α B, Season and mesh restrictions, gives different mesh 3 restrictions during that time period. Did you make these recommendations to the Muckleshoot Tribe, regarding either 5 the season or the mesh restrictions? I don't recall specifically, but we may have recommended 7 a mesh restriction. 8 Am I reading this regulation correctly, if I interpret it to mean that the White River is closed to commercial set 10 gillnet fishing during the month of January? Yes, I believe that would be correct. 11 12 Under the terms of either White River or the Green River 13 gillnet fisheries, which are authorized under the 14 Muckleshoot regulation, as you testified you made 15 recommendations on, would it be your interpretation that the Indians could use monofilament nylon gillnets to 16 17 engage in such a fishery? I am not certain that they have restricted the use of 18 19 monofilament. The regulations do not prohibit the use of monofilament 20 21 gear, do they? I don't have it here. 22 A In your opinion as a biologist, is there a difference in 23. effectiveness between the use of monofilament nylon nets 24 and multistrand nets for purposes of gillnet fisheries? 25

	If so, what are those differences?
A	I believe that the monofilament net is more effective in
	catching fish than multistrand nylon net.
Q	On page 4 of your testimony, Mr. Heckman, you state at
	line 21:
	"With specific reference to net fishing by
	Indian tribes involved in this case, I have observed
 	gillnet fisheries in rivers by members of the
	following tribes:"
	You list many, many tribes, many of whom are
ļ.	parties plaintiff. I believe all of them are, in fact,
	parties plaintiff.
-	My first question to you is were these
	observations for gillnet fisheries a systematic system of
-	observation, or were they random observations?
A	I believe the latter would apply.
Q	The random?
A	Yes.
Q	Would you say that random data derived from random
	observations would provide any real important or relevant
	information as to the scope or extent or impact of such
	randomly observed fishery upon fisheries?
A	It would certainly contribute to my knowledge of the
	method and magnitude of the fishery, and I would add that
	to my other background of information relating to that
	Q A Q

ET12	- 1		fishery or to those fisheries.
T13-1	2	Q	Let's use a specific example, Mr. Heckman, let's take
	3		again we talk about the Hoh Tribe, we have randomly
•	4		observed the commercial netting operations on the Hoh
	5		Indian reservation, is that correct?
	. 6	A	Yes.
	7	Q	From those observations, can you predict the Indian catch
•	8		rate for any species of fish which travels through that
	9		fishery?
	10	A	I can examine the past records of the Washington Department
	11	· .	of Fisheries, the landing of salmon, and I can examine
	12		the record of the sport catch on the Hoh River, and I can
;	13		consider the number of Hoh fishermen, the kind and size
· · · · · · · · · · · · · · · · · · ·	14		of gear that they use, the area they fish, and I can get
. *-	15		some idea of the magnitude of their fishery.
	16		MR. CONIFF: Could I ask the Court's permission
	17		to have the Court Reporter read back my question?
	18		(Question read by the Reporter.)
	19	Q	My question, Mr. Heckman, to clarify it was based on these
,	20		random observations that you have testified to, could
•	21		you predict this rate without resort to the other
	22		information that you related in your answer?
	23	A	No.
	24	Q	Was there any particular purpose in making these random
			Observations, that was had in mind?

б

In some cases there were specific visits to learn something about the fishing activities. In other cases it was just established through other routine activities with these various tribes.

Q Would it be fair to say there was no single purpose every

- Q Would it be fair to say there was no single purpose every time you made an observation?
- 7 A That would be fair, yes.
 - Q Would the same thing be true at the top of page 5 with regard to your observations of the operation of the fish trap operated by the Swinomish Tribe on their reservation?
- 11 A Yes, that would be true.
 - Q If we move on down in your testimony to page 5, Mr. Heckman, you have the following question addressed to you:

"Have you reached a judgment as to whether gillnet fishing by Indians of the type and operation which you have observed in Western Washington is an inherently destructive means of harvesting salmon or steelhead?"

I would first like to ask your definition, which you, by the way, give again in the answer appearing at lines 30 and 31, I would like your definition of the way you use the term "inherently destructive means of taking steelhead or salmon," and that is in your answer appearing on lines 30 and 31.

A I relate those terms to terms used frequently by

representatives of the Department of Game. I believe Mr. Millenbach has referred to gillnets as inherently destructive means, or at least a destructive means of capturing steelhead, and to my knowledge, as long as they harvest a number of fish and still allow an adequate spawning escapement, I could not consider them inherently destructive.

What you really are saying, aren't you, is that they are simply more efficient than hook and line type of fishery?

Perhaps I should explain myself, the reason for my concern is that when you hear "inherently destructive" it implies to me you are destroying the fish, and this certainly is not true, it's merely a method of harvesting fish, is it not, with the use of the gillnet?

- A Yes.
- Q And wouldn't it be fair to say your implication here is that the method, even though it be more efficient than a hook and line fishery, does not do any more damage to the total run as long as these escapement goals are -- satisfactory escapement goals are achieved?
 - A I would agree with that.
 - How would you as a biologist affirmatively establish this more efficient type of harvesting without knowledge of either in run size the expected run size or the necessary escapement goal necessary to maintain it for

spawning purposes? 1 Are you referring to a particular case? Well, we can use again the Hoh Tribe as an example, if 3 you like. Well, there again I believe I explained earlier today that by an examination of the records of harvest, both sport and commercial, and with the knowledge of the relative size and manner of the Indian fishery, I have no evidence 8 that the runs have been diminished or that they have not 9 been maintained, and I would therefore conclude that 10 the manner of fishing is not destructive. 11 And, of course, you are basing your comments on the 12 Hoh to the reservation commercial net fishery at the mouth 13 of the river, are you not, with regard to steelhead? 14 No, I certainly am considering the fact that there is an 15 off-reservation steel head fishery. 16 How do you square that with the statement I read to you 17 from your testimony earlier today that to your knowledge, 18 the Department of Game vigorously enforces the prohibitions 19 against the use of commercial netting of steelhead in 20 off-reservation waters? 21 Is it your testimony the Game Department does 22 not now propose to enforce its laws in areas beyond the 23. Hoh reservation on the Hoh River? 24 In the case of the Hoh fishery, they do fish upstream from 25

the reservation in the park area, that's off reservation. We have a problem, perhaps, of communicating there. Perhaps for the Court's information I should ask 3 you another question, this park boundary you refer to is located how far upstream from the reservation -- the inland boundary of the reservation? 6 I believe the upstream park boundary must be two to three miles upstream from the upstream boundary of the reservation. 8 And is it your understanding that the State of Washington 9 has ceded jurisdiction to the Federal Government over that 10 area, I believe, to the National Park Service? 11 Yes. 12 Is that correct? 13 Α Yes. 14 And is it your understanding that the National Park 15 Service does not prohibit commercial netting activities 16 within the park boundaries? 17 By Indians. 18 By Indians? 19 A Yes. 20 Turn to page 6 of your testimony, and you state four basic Q 21 reasons to support the opinion that we have just drawn 22 regarding what the meaning of your opinion, "inherently 23 destructive" means for taking steelhead, is. 24 Now, the first reason is commencing at line 2, 25

"First, such fishing may be regulated and 2 controlled sufficiently to prevent over-harvesting." 3 For the purposes of that answer, who are you assuming is going to be regulating or controlling the fishing activity? 5. 6 Whoever may have the jurisdiction to regulate. You made no assumption regarding the entity or the standard 7 which might be imposed by the governmental entity in making 8 9 that answer? I only assumed that whoever regulates has the jurisdiction 10 11 and the control. Is it further your assumption that whoever does the 12 regulating will in fact control sufficiently the off-13 reservation commercial netting activity to prevent over-14 15 harvesting of steelhead? Yes, I make that assumption. 16 With regard to the Hoh Tribe regulations, did you assist 17 in preparing them? 18 19 Α No. Do you understand that the Hoh Tribe does have fishing 20 regulations? 21 Α Yes. 22 Using again the Hoh Tribe as an example -- by the way, if 23 you don't feel they are typical, please say so, I happen 24 to have picked the Hoh Tribe because some of your earlier 25

		answers had to do with the Hoh Tribe, but with the Hoh
	2	Tribe as an example, who within that tribe actually
	3	determines the content of the regulations?
. •	4	A The tribal council.
	5	Q And how many people belong to the tribal council?
	6	A I don't really know.
• .	7	Q Do you know how many people are in the Hoh Tribe?
	8	A No, not specifically.
٠	9	Q Do you know if any of the members of the Hoh Tribal
•	10	Council possess any particular background, training,
	11	or expertise in the field of fishery management or
•	12	conservation?
	13	A Iknow that fishing has been a very large part of their
	14	lives all of their lives.
	15	
	16	(Continued on the next page.)
ET13	17	
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I will restrict my question to formal training.
        I don't know. I don't know how many of them have
 2
        had formal training in this subject, no.
.3
        Do you believe that any of them have?
        I can't answer that.
        You are generally familiar with the Hoh Tribe
        of Indians as a result of your 11 years of work in
 7
8
        the case area, aren't you?
9
        Yes.
       Now, do you know if the Hoh Tribe has a court?
10
       No, I don't.
       Do you know if they have any enforcement officers,
12
13
        fish cops, if you will?
14
       I am not sure.
       Do you know if any Hoh Indian has ever been arrested
15
       by any representative of the tribe for any violation
16
       of any tribal fishing regulation, either on or
17
18
       off-reservation?
19
   A.
       No.
20
       Do you know if ther have ever been any cases filed
       in any jurisdictional tribunal of any court with
21
22
       regard to the Hoh Tribe of Indians regarding any
23
       violation by any tribal member of any Hoh fishing
24
       regulation for the past ten years?
25
       No.
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Therefore, I take it that you would not know
        of any disposition, judiscial disposition of any
 2
        such cases if any had occurred?
        That would be correct.
 4
        Now, in your 11 years of experience have you had
        occasion -
                   MR. PIERSON: Pardon me, Your Honor, do
 7
        I understand that counsel's question to distinguish
8
        whether the Hoh is typical still stands?
9
                  MR. CONIFF: I am moving on, Counsel. We
10
        will establish whether they are typical or a typical.
11
        Directing your attention to the Suak-Suiattle Indians,
    Q.
12
        are you familiar with them in your 11 years of work
13
        with the Indian tribes?
14
        No, I'm not.
    A.
15
        You are not familiar with the Suak-Suiattles?
16
    Α.
        No.
17
        Do you know that they exist as a tribe?
18
        Do I know that the Suak-Suiattle have a fishery?
19
        I don't know.
20
        Have you ever personally observed randomly their
21
        fishery?
22
   A.
        No.
23
        How did you know that it occurs?
24
        I have been here for 11 years.
25
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You heard about it?
       I understand that the Suak-Suiattle have a fishery.
       Where?
3
       I would assume it would either be on the Suak or the
       Suiattle River, I am not certain where that is.
5
       You don't know. When did you hear that these
6
       fishing activities occurred?
7
       I don't know of any specific information on their
8
       fishery.
9
       Have you ever met with any representatives of the
10
       Suak-Suiattle regarding development of any fishing
11
       regulations of any sort?
12
       No.
13
       Have you ever met with any representative of the
14
       Suak-Suiattle Tribe?
15
       No, not to my knowledge.
16
       Have you met with the Stillaguamish Indians?
17
18
       No.
       Do you know if they exist as a tribe?
19
       I understand they do.
20
       When you say you never met with them, did that mean
21
       that you have never conferred with them or made
22
       any recommendations regarding the formulation of
23
       tribal fishing regulations?
24
       That's right.
25
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24

25

What about the Upper Skagit? Have you ever met 1 with them? 2 No. 3 Do you know if they exist as a tribe? I understand they do. Who told you that? 6 I believe I have seen a record of their existence, 7 in a directory prepared by the Bureau of Indian 8 Affairs, and just from my general dealing with 9 people in Indian affairs. 10 Would it be a fair statement then that you had not 11 participated or assisted or made any recommendations 12 with regard to the adoption or promulgation or for-13 mulation of Upper Skagit fishing regulations? 14 That would be fair. 15 Perhaps I can shorten this line of inquiry. Can 16 you explain to the Court, based on your review --17 I assume you have read appendix 5 which purports 18 to be Indian tribal fishing regulations? 19 I have seen portions of it. A. 20 You have testified of course that one of the major 21 parts of the program is to assist the tribes in 22 formulating these various regulations, and we have

more flagged to go over in detail.

gone over one at least in detail. I have a couple

Perhaps we could

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shorten this line of inquiry if I could simply ask 2 Could you go through appendix 5 and point you this: out to the Court the specific regulations which you in fact proposed in which were in fact adopted by any tribe in appendix 5?

> THE COURT: And I take it you mean proposed or recommended in whole or in part.

- In whole or in part. I would like to cover it in whole or in part. Thank you, Your Honor.
- I doubt if I could go through it and pick out in any detail those portions of the regulations that I may have recommended on any particular tribe, and I am not aware of the fact that I said that assisting in the preparation of tribal regulations was a major part of our activities.
- I didn't -sorry, I am

THE COURT: Let's put it this way. IF there are any of those regulations that you have a general recollection that you or your staff made recommendations pertaining to them, indicate them.

THE WITNESS: I believe I could look at them and find some things. Is that what--

THE COURT: Yes, just what you can remember offhand, and if you will need to confer further with your staff about it, at the request of counsel, why,

of course, you can do it.

- Yes, if you feel that this would be unfair for me to expect you to answer this question without having an opportunity to in detail study appendix 5, Mr. Heckman, I'm perfectly willing to allow you to have an opportunity to confer with your staff and to resume the stand for the limited purpose of answering that question.
- A I believe that would be a sensible way of handling it. Otherwise, I am going to be going through quite a bit of detail, and time --

THE COURT: In all probability you will be here tomorrow, won't you, for one reason or another? Why don't you just pass the subject and do a little checking in that area and we will carry on with it then.

Again, I am asking, maybe I am asking you some questions that it might be well to defer. I will ask you the question and then you indicate whether or not you would like to have additional time in which to respond. My question, how are you able to predict, how, for example, the Hoh regulations, as shown, the Hoh Tribe regulations as shown in appendix 5, will provide adequate spawning escapement for steelhead.

Now, would you like again to have time to review

25

those regulations before you answer these questions? First of all, I believe --A. I will propose to go through tribe by tribe, and 3 as long as you are going to be reviewing them, well, 4 my first question, would you also review them in 5 light of that question which I will ask you tomorrow? 6 I had nothing to do with the preparation of the Hoh Tribal regulations, and I would have to examine 8 them before I could enswer that question. 9 All right, an ancillary question for you to keep 10 in mind would be: How many steelhead do you think 11 12 that the Hoh Tribe would take under their regula-13 tions and in light of that take, how many steelhead do you think that the sportsmen would take in off-14 15 reservation or upstream waters, and how many steelhead do you think would be left for spawning, and 16 I will ask you those questions with regard to each 17 18 tribal regulation on each watershed in the case area. 19 THE COURT: I think you had better take that subject matter and continue it later today, 20 come back with whatever you think is the appropriate 21 answer in each instance, so far as you have any 22 23 answer to give.

THE WITNESS: I believe I could save the Court some time.

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THE COURT: Well, try.

THE WITNESS: And say that without -- if I can assume that the Hoh regulations provide measures that would satisfactorily protect the resource in all situations, including emergency situations which would be indicated by either the tribe or by an agency managing the resource; that if there was a low run or some indication of a run failure, I can assume that their regulations would protect the run at all times, and that they could regulate it. I would assume in each case that the tribe would be fishing at approximately the level that it has always fished and in the approximate locations, and that their concern forthe resource would be as it has been for many, many years, for all of the time that I know of. I could assume that with these regulations and the other rules by which the tribes live that the resource would be protected.

Mr. Heckman, I would prefer not to grant your assumption, because I don't believe they are factual. I would like you to express your views as a biologist, based upon your analysis of the regulations which I quoted.

THE COURT: And we will pass the subject until tomorrow.

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THE WITNESS: Very well.

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THE COURT: Hopefully we can make a short and concise response to each one of these, so far

as you are able.

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Again, can we use the Hoh River just as an example,

Mr. Heckman. Do you know if there are any other

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fishing rights on the Hoh River other than those

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claimed by members of the Hoh Tribe?

9

MR. PIERSON: Your Honor, I think that

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calls for a legal conclusion. He asked him about

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whether there are any rights. I don't think he is

qualified 12

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MR. CONIFF: I asked him if he knew of anyone else other than the Hoh Tribe. I didn't ask him what the tribe was.

THE COURT: It is a different question now, but now you hear it. Do you have it in mind? In substance, are there to your knowledge any other Indians claiming treaty rights to fish on the Hoh and its tributaries?

THE WITNESS: To my knowledge, the Hoh is within the, well, I am not positive. I thought it was within the Quinault treaty area, but I'm not certain.

Do you know of any river that is depicted on the

illustrative red exhibit where more than one 1 2 tribe of Indians is claiming fishing rights. 3 river, I mean watershed. 4 Yes, the Puyallup watershed. What will be the tribes claiming rights on that? 5 The Puyallup and Muckleshoot Tribes. 6 Are there any other watersheds where there are more 8 than one tribe of Indians? 9 In the case area? 10 Who you understand claim that they have some right, 11 yes, within the case area? 12 Well, pardon me, this is not quite the same question 13 now. 14 I intended it to be the same. 15 Now you are asking me what watersheds have fisheries 16 or may have fisheries by more than one tribe claiming 17 treaty fishing rights. 18 Maybe I had better reframe it, or attempt to. 19 Mr. Heckman, with regard to any of the watersheds. 20 depicted on the red map, what is your understanding 21 beyond the Puyallup system where you have indicated 22 Muckleshoots and Puyallups claiming rights, are you 23 aware of any other watersheds in the case area 24 whre more than one tribe is claiming rights to fish 25 from that watershed?

	1	A I imagine it would include a good number of the
	2	watersheds where more than one tribe falls within
	3	a treaty area, and I
٠.	4	Q Could you leave your seat and look at the exhibit
	5	which you are sponsoring and didn't indicate for the
	6	record areas and the tribes which it is your under-
·	7	standing are claiming rights to fish within the same
	8	watershed.
•	9	MR. PIERSON: For the record, Mr. Heckman
,	10	is not sponsoring that exhibit.
	. 11	THE COURT: I think that just precipitates
	12	that same argument all the time. Please avoid it.
	13	MR. CONIFF: Yes, I will, Judge.
	14	A I would assume that the Point Elliott treaty, which
	15	would include the Tulalips and the Muckleshoots and
	16	others, and would include the Snohomish, Cedar and
	17	Green watersheds, that those tribes might all claim
	18	I am not positive, I am just
ET14	19	(Continued on next page.)
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MR. PIERSON: Your Honor, for the record, I 1 would like to object to this line of questioning. 2 Heckman has admitted in cross examination that he is not an anthropologist. That he is not a lawyer is evident. 4 I don't think that this line of questioning is productive 5 at all, especially in light of the fact that Barbara Lane's reports are in evidence, they speak for themselves, they are a presentation of the plaintiffs, and they itemize each one of the water systems which each of the tribes cover. THE COURT: I think at that time you would have 10 an opportunity to explore the plaintiffs' position with respect to these matters in a much more effective and

> MR. CONIFF: I will proceed with another matter. You may resume your seat.

MR. McGIMPSEY: Your Honor, if I may, I believe that this line of questioning is appropriate because it has to do with Mr. Heckman's opinions as a biologist as to the impact of the different tribes' fishing on these water systems.

It seems to me that it is important to establish his knowledge.

THE COURT: Tomorrow we are going to hear in some detail, as I understand it, about that very subject, as related to each individual stream. I don't know how you can

useful way.

11.

do it any better than that.

MR. McGIMPSEY: But my point is that it relates to Mr. Heckman's knowledge and any opinions that he has as to the effect of Indian tribal fishing on these streams as to how many tribes are fishing on a particular stream.

of questions on that subject, the extent of his knowledge in general. I thought it had been thoroughly covered previously this morning, but if there is something more to be said about the extent of his knowledge, you are free to explore it. So can Mr. McGimpsey when it gets around to him.

MR. CONIFF: My line of questioning, I think, I have already put, having to do with the steelhead, which I understand the witness is going to review and provide us with his opinions tomorrow.

I am perfectly satisfied to leave that line of questioning where it is. I certainly don't want to preclude my colleagues from pursuing matters further which might affect the salmon and the position of the Washington Department of Fisheries.

THE COURT: Even if you wanted to, you couldn't.

Mr. McGimpsey will have his full time at bat.

Q (By Mr. Coniff) If we could move along, Mr. Heckman, again

on page 6, I would like to direct your attention to line 4, where you give your second opinion in support of an 2 opinion which you expressed on the preceding page. 3 4 There you state: 5 "Second, natural conditions existing at the time of harvesting salmon and steelhead operate to limit 6 7 the time, place, manner and amount of net harvest." 8 Do you have any data to support that statement which would indicate the timing of Indian catch of 9 steelhead on the Hoh River, to use the Hoh as an example, 10 related to the cubic feet per second flow of that river? 11 12 THE COURT: Read the question, please. 13 (Pending question read by Reporter.) THE WITNESS: No. 14 (By Mr. Coniff) Have you consulted USGS for the records 15 for the Hoh River and attempted at all to relate it to 16 anadromous fish migrations into that river system? 17 18 Д No. Have you done so for any watershed in the case area? 19.: Α Yes. 20 21 Were there more than one? Well, White River is one for sure. 22 First of all, let's establish, where was the USGS gauging 23 station located that you consulted the records of? 24 I did not personally consult the records. 25 The work was done by a member of my staff relative to the studies of the effects of the Puget Sound Power & Light project.

- Q Was this in connection with the matters being described this morning or you described earlier with regard to the White River Committee that you are chairman of?
- A Yes.

- Q Beyond the committee's activities, have you attempted --and I suppose my question should be have you attempted to relate flows on any watershed within the case area to the rate of Indian commercial harvest of any species of anadromous fish?
- A I have related the flows, but not by studying the USGS records to determine the volume of those flows specifically in cubic feet per second.
- Would it be a fair statement, then, if we again used the
 Hoh River as an example, that you would not be able to
 recommend or establish as a biologist what flow levels
 you might consider to be limiting upon the level of Indian
 commercial fishing activities on the reservation?
 - It would be a relative thing, and I can't cite it to you in cubic feet per second. Anyone familiar with the rivers in the Pacific NOrthwest, or most rivers are aware of the fact that there are high flows, periods of high flows, and periods of low flows, and that the migrations of salmon and steelhead are both affected by changes in the flow.

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- But you have made no effort to relate flow conditions to 1 time of migration in any quantitative sense, other than 2 the general sense which you have just described? 3 That's right. 4 Let's proceed on page 6 to the third reason which you 5 state in support of your opinion, which reads: 6 "Third, the salmon and steelhead runs generally 7 continue over several weeks or months although there 8 are peak periods, such Indian net fisheries are 9 incapable of capturing an entire run or major 10 segment of the entire run." 11 My first question, Mr. Heckman, is what do 12 13 you mean when you use the term "major segment"? 14 I suppose in reference to major segments, I am referring 15
 - A I suppose in reference to major segments, I am referring to races, as we spoke before. In other words, on a good number of our streams in the Pacific Northwest, we have segments, these are segments of the run that might be destined for one tributary and another major segment of the run destined for another tributary. This is what I refer to, more or less, the races of the particular species destined to the spawning areas in any given drainage.
 - Q Can you express the term as you use it, major segments in a percentage?
 - A No; because one tributary of a system might produce, say,

 30 percent of an overall run of a particular species and the

system; whereas, another tributary might produce 40 percent; 2 another one; 50 percent. I don't know. It couldn't be 3 broken down that way. Is this item 3 opinion that's expressed, is it based on 4 your personal observations? Some of it is. Α 6 Is it based on any data? I would say more than anything else, it's based on just 8 my background with the resource and the type of fisheries 9 that are conducted on it. 10 We will relate it again, if we use the Hoh as an example, 11 12 do you have any data relating to the Hoh River which would 13 support the statement contained in your testimony, the 14 third statement? If so, what is it? No specific data relating specifically to the Hoh system. 15 Would that same statement be true with regard to the other 16 watersheds in the case area? 17 A Generally. 18 Generally? 19 Q 20 Α Yes. We now turn to your fourth reason, line 11, which reads: 21 22 "Fourth, the peak periods of the runs generally occur during freshets, and the associated high water 23 24 conditions of freshets frequently preclude effective net fishing." 25.

1	My first question is, isn't this really another
2	way of stating your second reason on line 4? Isn't this
3	really the same thought or concept or idea?
4	A I believe you're right.
5	Q So that nothing really would be added by my asking you
6	these same questions again on that point?
7	A That's correct.
8	Q Rather an informational question more than anything else,
9	on page 7 of your testimony, at line 3, Mr. Heckman, you
10	state:
11	"A fairly typical example is provided by the
12	Quileute Indian net fishery for steelhead on the
13	Quileute reservation."
14	My question is why did you select the Quileute
15	as a typical example?
16	A I'm not certain what the entire question is.
17	Q Please go back and re-read it and refresh your memory.
18	A (Witness complies.)
19	THE COURT: They appear to be describing the
20	Quileute as an instance of the type of information.
21	Q (By Mr. Coniff) Is that true, Mr. Heckman?
22	A Yes.
23	Q Did you mean to imply that other river systems would not
24	be typical, such as the Hoh or the Skagit or the Nisqually?
25	You didn't mean to contrast particularly the Omillanute is

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my point? 2 No. 3 Again a point of clarification, line 11, page 7, you state: 4 "Members of the Quileute Tribe have fished by 5 means of gillnets for salmon and steelhead for many years in the Quillayute River, both within and 6 7 upstream from the reservation and Park area." 8 Did you really mean to say that, in light of 9 your statement regarding the GAme Department as it might pertain to steelhead? 10 But I include salmon in that statement. 11 Α 12 You would exclude steelhead from that statement, would you 13 not? 14 Α Yes. Now, proceeding on down the page, you indicate that you have 15 made certain observations of night fishing by Quileute 16 Indians with gillnets during the months of December, 1971 17 and January and February of 1972, and you state that the 18 19 Indian catch was predominantly, if not entirely steelhead. You go on to state that the nets -- on an average 20 21 night of fishing, about five steelhead per net were taken, 22 and I believe that you indicate that approximately twenty to thirty Indian fishermen were engaged in this fishing. 23 Now, my question to you is: Do you know how 24 25 many -- were your observations random observations or was

there a system that you followed in making those 1 observations? 2 These findings were a result of visits to the reservation, 3 discussion of the matter with tribal fishermen and other 4 tribal representatives, and by actual visit to the fishing 5 areas by boat. 6 I take it there was some hearsay information included in 7 your statements here on the average night fishing, five fishermen per night? 9 Yes, we took the word of the Indians on that. 10 Q Would you consider that reliable? 11 Yes. Α 12 According to my mathematics, if we assume twenty, which Q 13 is your lowest figure, twenty Indian fishermen catching 14 five fish per night for a month and an average of thirty 15 days per month, that would be 100 fish per night, multiply 16 that, that would come out to, I believe, approximately 17 3000 fish per month, and we would simply then multiply that 18 by the number of months that you have testified to, and 19 that would give us in your judgment a reliable figure for 20 the total catch of these Indian net fishermen who fish at 21 night for steelhead, is that correct? 22

A No.

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Q What is wrong with that statement?

A Well, Indian fishermen like weekends, they don't like to fish

1		every day. Also, there are a lot of conditions in the
2		river that preclude effective net fishing. Also, fish
3		runs are not entering the river onthe same magnitude
4		on a daily basis over a three or four months period that
5		you are talking about.
6	Ω	Well, you yourself stated an average night of fishing over
7	-	this three months' period that you took about five steelhead
8		per net, I'm taking what your assumptions were, Mr.
9		Heckman, and making my mathematical computations
10		accordingly.
11	A	I don't believe I assumed they fished every night during
12	·	that period. I just assumed that they caught an average
13		of five fish per night when they fished.
14	Q	How many nights a week did you assume that they were
15		fishing?
16	A	I didn't really assume how many nights per week.
17	Q	What validity does this information have as a biologist,
18		what validity does this information have?
19	A	I believe it serves, more than anything else, to give the
20		reader an idea of the magnitude of the fishery.
21	Q	Let's move over to page 8. Again I have a couple of
22		clarification questions, Mr. Heckman. On lines 11 and 12
23		you refer to the Chambers Creek hatchery located near
24		Tacoma; are you aware that in the answers to the Requests
25		for Admissions, the Game Department indicated that this

1	egg source was the South Tacoma hatchery, rather than the
2	Chambers Creek hatchery?
3	A That may be; they are one and the same, to my knowledge.
4	Q No, they are not
5	MR. PIERSON: I move to strike that statement
6	of counsel.
7	MR. CONIFF: It's in the Pretrial Order, so it
8	doesn't make any difference.
9	Q (By Mr. Coniff) Further on down on page 8, you state that
10	lines 23 and 24:
11	"Records of annual Indian net landings are
12	incomplete during the same period. We have estimated
13	that the Quileute Indian fishermen landed 5200
14	steelhead for each of the years 1970 and '71. This
15	was based upon information furnished by a fish buyer
16	who purchased approximately 75 percent of the steel-
17	head harvested by the Quileute Indians."
18	My question is, first, who is the fish buyer
19	who related this information to you?
20	A This was information gathered by a member of my staff,
21	and I'm not positive of the name of the fish buyer.
22	Q Is there more than one fish buyer who purchased fish
23	harvested by the Quileute Indians?
24	A I would assume that there is more than one, but this
25	particular one claimed he purchased 75 percent

1	Ω	Who was this one?
2	A	I couldn't be positive, but I think it might be Reggie
3		Ward.
4	Q	Who are the other fish buyers who purchase fish from the
5		Quileute Tribe?
6	A	I don't know all of them.
7	Q	Do you know any more?
8	A	I think one's name is Leo Williams, a gentleman by the
9	-	name of Stritmatter may buy some of the 'Hoh's fish, and
10		I'm not positive.
11	Q	But you don't know which one of these three fish buyers
12		indicated that he purchased approximately 75 percent of the
13		steelhead harvested by the Quileute Indians?
14	A	I believe it was Reggie Ward.
15	Q	Do you believe that he in fact did purchase approximately
16		75 percent of the steelhead harvested by the Quileuete
17	-	Indians?
18	A	We discussed this with some of the I didn't discuss it
19	·	personally, but a staff member did discuss it with some
20		of the tribal representatives, and they concurred that
21		che, did.
22	Q	Who is the "they concurred," who does that mean?
23	A	The tribal representatives concurred with the statement
24		made by the fish buyer that he bought 75 percent.
25	Q	Do you as a biologist consider this source of data or

information reliable? 1 I believe it's the most reliable we have at hand. 2 Α Isn't it in fact the only information you were able to 3 obtain regarding the rate of harvest by the Quileute 4 Indians? 5 That is a fact. 6 Isn't it a fact that for eleven years you haven't been able 7 to get any other type of data or information regarding the 8 9 rate of harvest of Quileute Indians of steelhead other than that related to you by fish buyers? 10 Let's clarify that by saying we had not made an attempt to 11 Α gather that information simply because we had not had the 12 manpower to go about gathering that. 13 Would that same answer be true for each of the other tribes 14 within the case area? 15 А Pretty well. 16 Turning to page 10, lines 28 through 31, do I interpret 17 you correctly in that statement, which refers to the 18 Columbia River steelhead runs indicating the target species 19 and referring to incidental harvest, is that the Compact 20 Commission or the Columbia River Compact Commission does 21 not affirmatively establish commercial fishing seasons 22 which are designed to take steelhead? 23 That's correct. 24 Turning to page 11, I am referring to the table which you 25

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1 have prepared, which you have labeled "summer steelhead," 2 and I believe this relates to the steelhead runs of the Columbia River, is that correct? 3 4 Summer steelhead runs, yes. 5 You have on line 25 a series of figures you labeled as 6 runs, and I am wondering what data you used to develop that figure? 7 This information here again was prepared by a staff member 8 9 of my staff, and I'm quite sure that he referred to the 10 Columbia River run status report, which is compiled by the 11 joint staffs of the Washington and Oregon agencies. 12 Is it true that run size is a total of what you have Q 13 labeled as commercial take, sport take -- excuse me, total 14 take -- not, it would not be, I am sorry. 15 Do you know if in the sport take column on line 27, the data includes sport take of steelhead in the 16 Columbia River main stem and tributaries above Bonneville? 17 I believe it does -- pardon me, no, it does not. 18 If it does not --19 It includes the commercial catch -- it includes the sport Α 20 catch below Bonneville Dam added to the Bonneville count. 21 22 The sport take figure -- am I correct in interpreting your answer that the sport take figure presented in your table 23 does not include sport caught steelhead above Bonneville Dam? 24

Yes, I believe it does include the sport catch above

1		Bonneville Dam.
2	Q.	Would it not follow, therefore, or then that what you have
3		labeled as percent taken in the bottom column would not
4		be correct?
5	A	Well, the total of the commercial and sport take at
6	-	64,000 would be roughly 40 percent of 161,000.
.7	Q	If the sport take is not correct, would not the percent
8	İ	taken figure be incorrect?
9	A	The sport take is included in the run size and, therefore,
10		the percent taken is correct.
11	Q	I believe that you testified that the sport take figure
12		you have shown on this table does not include sport
13		caught steelhead above Bonneville, am I correct?
14	A	The figure of the sport take does include the catch above
15		Bonneville.
16	Q	That is your final testimony on the subject?
17		MR. PIERSON: For the purposes, your Honor, of
18		his testimony, I assume the witness can correct his answer
19		later if he finds he is wrong?
20	-	THE COURT: That is the prerogative of the
21	· .	witnesses generally.
22	Q	(By Mr. Coniff) Turn over to the top of page 12, Mr.
.23		Heckman, and there you have presented the table entitled
24	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	"Winter Steelhead," and you have labeled on line 3 a
25	,	column entitled "Run Size," for four columns. My question

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1		regarding that figure is is the data represented in those
2		columns "run size," does that include any steelhead that
3		move into tributaries for spawning purposes or sports take
4		purposes and its tributaries below Bonneville Dam?
5	A	The run size of the winter steelhead is considered a
6	-	minimum run size, and it takes into account the sport and
7		commercial catch below Bonneville, plus the information
8	-	from counts at dams and other facilities in the tributaries
9 .		below Bonneville.
10	Q	How is run size determined that you have represented on
11		your table?
12	A	It is determined by adding the sport catch to the commercial
13	;	catch and applying then the other information secured at
14		counting stations, dams, and such facilities and
15	-	tributaries downstream from Bonneville.
16	Ω	Well then, how many steelhead, to your knowledge, go into
17		the Cowlitz River?
18	A	I don't have that information.
19	Q	That information is not portrayed in this figure, is it,
20		for any of the four years in question?
21	A	I don't recall when the Cowlitz began counting information.
22		an en
23		(Continued on the next page.)
24		
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What about any of the other tributaries in the lower Columbia and below Bonneville, on any of :2 those steelhead counted or represented in your run 3 size figure that you have put in column, line 3 and 4 4 T and F columns? 5 How about it? I believe that --6 I said have you included steelhead that go into 7 8 tributaries below Bonneville? Are those steelhead 9 included in numbers, in the number that you have represented here in your table on line 3, page 10 11 12? 12 There has not been an estimate included in the run 13 size that would account for the spawning escapement other than that information gained from counting 14 15 stations. Are there any counting stations on Gray's River? 16 I don't believe there is one counting there present-17 18 ly, no. 19 What is the source of your run size figures that 20 you have represented here? Can you break it down 21. for us, the data that you used in developing those 22 figures? 23 This information, as I said before, was taken from 24 the run status report prepared for the Columbia

River by the two State agencies and I'm quite certain

1	that it includes the commercial and sport catch
2	below Bonneville Dam, plus the count information
3	at whatever facilities are available in the tribu-
4	taries downstream from Bonneville, but it does not
5	include an estimate of the natural excapement to
6	the spawning ground.
7	Q. So that run size figure, in your opinion, would not
8	be totally accurate?
9	A. It is the minimum referred to, as the minimum run
10	size.
11	Q. And this figure, therefore, would actually in reality
12	be a higher figure by some unknown amount?
13.	A. That is correct.
14	Q. And therefore the percent taken figure on line 7
15	of your table, the four columns representing the
16	four years, is in error?
17	MR. PIERSON: I am not sure it is clear,
18	in error with respect to what, and I do not follow
19	the question, either.
20	THE COURT: I suppose what you mean, that
21	accordingly that percent figure might be greater
22	to some extent unknown, at least to the witness.
23.	Is that what you mean?
24	MR. CONIFF: Yes.
25	THE WITNESS: I believe, Your Honor, if we

were able to come up with a total run size estimate 1 that the total take percent would be lower, because . 2 the total run size would be larger than shown here. 3 THE COURT: Is that a good point to have 4 a recess? 5 MR. CONIFF: That's right, we will have б a recess for 15 minutes? We will resume at 2:10? THE COURT: Right. 8 9 (Recess.) THE COURT: Continue, Mr. Coniff, please. 10 (By Mr. Coniff) Mr. Heckman, returning to your 0. 11 testimony, page 12, we have now reviewed the data 12 13 that you have presented. Do you believe that the 14 conclusions that you have reached in line 9 through 15 23 are correct? 16 Yes. I want to direct your attention to page 13, and I 17 18 asked the bailiff during the recess to place on the 19 wall behind Mr. Heckman, Plaintiffs' Exhibit 67B, 20 which purports to be an illustration of the Fraser I believe that this is an exhibit which has 21 River. 22 been admitted into evidence, and that you testified 23 with regard to the fisheries in the Fraser River. My first question is: Isn't it true, Mr. Heckman, 24 25 that by far the major fishing efforts of any

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sort commercially is for sockeye in the Fraser 2 River? 3 In the Fraser River? Yes. ·A And isn't it true that the steelhead runs generally 4 5 in the Fraser River occur in the early fall and 6 winter after the sockeye runs have passed through 7 the drift net fishing areas which are depicted on 8 the exhibit on the wall behind you? 9 Pardon me, but did you say commercial fishing? A, 10 I am sorry, I said, isn't it true that the steelhead 11 runs which occur in the Fraser River generally 12 migrate through the drift net fishing areas depicted 13 on Exhibit 67B during the early fall and winter after 14 the majority of sockeye runs have migrated through 15 the drift net fishing areas depicted upon the 16 exhibit? 17 Yes, I believe that would be an accurate statement. 18 You have also indicated that you have a general 0. 19 familiarity with the regulatory scheme which is 20 imposed upon the harvesting of the fish runs in the 21 Fraser River; is that true. 22 Yes. 23 And isn't it true that generally from October

31st on each year for the past ten years that there

has been a total closure of the drift net commercial

fisheries in the area depicted as drift net fishing areas on the exhibit? 2 I don't know for sure what the closing date is on 3 that. I believe there are net fisheries in the Fraser River in 10 of the 12 months of the year. I don't know. This is information I recall. Well, do you recall the date, the end of October 7 or beginning of November? Does that ring a bell 8 with regard to the institution of closures, or do 9 you know? 10 I would have to review it. 11 Do you know if there is any sport fishing for steel-12 head in the main stem of the Fraser River? 13 I believe there is. A. 14 Do you know if thre is any sport fishing for steel-15 head in the tributaries to the Fraser River? 16 Yes, to my knowledge. 17 In light of your knowledge of the regulatory situation 18 on the Fraser River runs, isn't it true that the 19 Canadians generally institute closures on the 20 commercial fisheries to a great extent to protect 21 their Chinook and coho runs into the Fraser River 22 system? 23 Generally their regulations are to protect the 24 salmon runs. 25

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0. And they are unusually tight, speaking in general 1 2 terms, unusually tight restrictions to protect the Chinook and coho runs in the commercial fishing 3 area depicted on the exhibit referring to specifically 4 those Chinook and coho runs of the Fraser River 5 6 systems? I am not exactly certain what you mean by "tight," 7 but I'm sure that their regulations are promulgated 8 9 to allow a harvest and protect the escapement. 10 Isn't it true that they don't allow nearly the 11 efficient time to the coho or Chinook runs that they allow on the sockeye? 12 13 I don't know. Now, if we turn to page 14 of your testimony, lines 14 15 22 through 24, you present the 1956 data regarding the relative strength of the runs, and note that 16 there were the largest single number of commercially 17 caught fish of sockeye, and note that you present 18 the information, 582,000 sockeye, and I believe you 19 present the information 4,000 steelhead. 20 21 Would you say based on your knowledge and 22

Would you say based on your knowledge and experience of the Fraser River runs that the respective percentage of catch between steelhead and the other species of salmon listed is about the average from 1956 to the present time?

1	I am speaking of ball park recollections.
2	A. Again I would have to review the records to answer
3	that.
4	Q You are not even able to give us in your opinion
5	is 1956 representative of typical catch conditions
6	or typical numbers of fish taken in the commercial
7	net fisheries in the Fraser River?
8	A It would probably be safe to say that the run, the
9	numbers for the individual species relative to the
10	others might be ball park.
11	Q. Do you know if steelhead is a game fish by law
12	in British Columbia?
13	A I am of the understanding that there are no
14	commercial regulations for the taking of steelhead
15	commercially.
16	Q So that the 4,000 steelhead that you referred to
17	here at line 24 would be steelhead which might be
18	incidentally taken through the catching of other
L9	species of salmon that you just
20	A. That is correct.
21	Q I note on the exhibit that you have Indian food
22	fisheries identified. Do you know where those
23	Indian food fisheries occur on the Fraser River?
24	A It is my understanding that they occur throughout
25	

the watershed.

- Q What is the source of your information?
- A. Well, this is information provided to us by the Canadian Department of Environment Fisheries Services.
- 0. Under the Canadian regulations --

MR. CONIFF: And perhaps, Judge, this might be an appropriate moment to at least for record purpose request your permission to reserve an exhibit number. My purpose in making this request, Judge, is I am intending to obtain certified copies of the Canadian laws and regulations pertaining to an Indian taking of anadromous fish for personal use and consumption on the Fraser River. Inasmuch as plaintiffs have opened this area up, I felt it was incumbent upon me to prove the foreign statutes, and with your permission I would like to advise counsel that I would like to ask the next consecutive exhibit number, which I believe is --

MR. PIERSON: It is agreeable with the plaintiffs, Your Honor.

MR. CONIFF: It would be G-20, and I would propose that the record would reflect then G-20 at this point will refer to --

THE COURT: You may have a sub number for

separate papers or documents that bear on that same subject. Is it your understanding that the Indian fisheries on the Fraser River system were for commercial use or for personal use under the Canadian regula-tions? Personal use. If you know , will you state whether or not governmental authorities in Canada enforce that limitation?

- A It is my understanding that they do. However, those incidentally taken in the commercial fishery may be sold.
- I am aware of that distinction in your testimony.

 You made reference in your testimony to the 98

 percent a year capability in the commercial net
 fisheries at the mouth of the Fraser River.

Do you agree with the findings of the International Pacific Salmon Fishing Commission that that gear, which I believe if I am correct, is drift net gear in the Fraser River estuary area is capable of taking 98 percent of the migrating salmonid stocks which pass through that area upstream?

I believe that the gear that is referred to

as the Fraser River net fishery includes both

the gill nets drifted in the river, main stem, and the salt water area out here, including an additional number of gill nets and trollers, is the one, totally according to the report of the International Pacific, capable of taking 98 percent of the fish available to it. I believe those are their words. ET17 (Continued on next page.)

1 And you agree with that conclusion? Q. 2 I don't have any information to repute it. Two final areas of questions, Mr. Heckman. I believe 3 they are short subjects. 5 Did you attend the recent meeting of the Washington State Game Commission which was held 6 7 at the Hyatt House on August 20th? 8 Yes, I was there. 9 And did you attend that meeting in, shall we say, an official capacity as a federal employee? 10 11 Yes, I was on the job. 12 Did you make any recommendations to the Washington 13 State Game Commission regarding the establishment 14 of special Indian commercial netting seasons for 15 steelhead beyond reservation boundaries? 16 A. No. 17 Why? ٥. 18 I wasn't asked. 19 Did you understand it was in the nature of a public 20 hearing where the commission was soliciting views 21 of all interested parties to make recommendations 22 to it concerning this subject? 23 Again, I was not asked to comment. 24 You were not asked by your superiors? 25 I was not asked by anyone.

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In any event, you did not offer any recommendations; 1 is that correct? 2 That's correct. A. 3 I believe you haveindicated that you were present during the testimony of Mr. Clifford Millenbach 5 on behalf of the Washington Department of Game? 6 I arrived after Mr. Millenbach had begun his 7 statement, but I was there during a good portion of 8 it, yes. 9. Did you review his written testimony? 10 A. Yes. 11 You have read it? Do you recall Mr. Millenbach 12 indicating from the fish buyer information that he 13 was able to obtain on the Nisqually for the years 14 1970-'71, the Nisqually Indians and their on-reserva-15 tion took 6,995 steelhead during the 1971 season 16 and that during the same period the sportsmen or 17 citizens of the State in off-reservation waters took 18 1,054 steelhead? 19 If you would assume that those figures are 20 21

If you would assume that those figures are reasonably correct, Mr. Heckman, would you state your opinion as to whether or not that division of catch represents a fair and equitable share to the Nisqually Indians.

. I'm not qualified to answer that question.

MR. CONIFF: I have nothing further. 2 THE COURT: Mr. McGimpsey? MR. McGIMPSEY: First of all, Your Honor, 3 fisheries has designated portions of Mr. Heckman's deposition as fisheries exhibit F-29. 5 plaintiffs have noted some objections to the 6 testimony that was designated. 7 8 The purpose for designating the testimony was 9 to, of course, cut down on the necessary cross-10 examination. And I suggest that if the court has 11 not reviewed that exhibit we postpone maybe until 12 tomorrow a ruling on the specifics, unless the 13 Court is ready to rule on the specific objections. 14 THE COURT: Where will I find that? 15 MR. McGIMPSEY: That will be Exhibit F-29. 16 THE COURT: I have read that, as I have 17 it contained in my draft. That's the part that I 18 told you is incomplete. Do you remember this morning? 19 MR. McGIMPSEY: Yes. 20 THE COURT: So, I am not sure what your 21 objections are. 22 MR. PIERSON: Your Honor, I think one of 23 the problems might be in the copy you have is that 24 in filing their exhibits the Fisheries Department took 25 the first two pages of the deposition to show what

the item was, and then in their questioning of the 1 deposition it doesn't begin until the second or 2 third day on. They skipped to where Mr. McGimpsey 3 began to examine Mr. Heckman, which is the reason for the gap. I am pretty sure that you have all 5 of the material there. 6 MR. McGIMPSEY: Yes. 7 I should make it clear to the Court that the 8 entire deposition has not be designated, but only 9 those portions of it that we felt were relevant 10 to the case. 11 THE COURT: And it starts with page 156 12 after the first two pages? 13 MR. McGIMPSEY: Yes, that is correct, Your 14 Honor. 15 THE COURT: I think that it would be 16 desirable, in view of your statement, to go ahead 17 and consider these objections. 18 MR. McGIMPSEY: At this time? 19 THE COURT: Yes. 20 MR. PIERSON: I will borrow Mr. McGimpsey's 21 22 copy here since I didn't bring mine to the courtroom. Pages 156, 157 and 158 begin by a question 23 24 which, in essence, says to Mr. Heckman from Mr.

McGimpsey, "What is your understanding of the

Indian treaty right to fish at usual and accustomed 1 stations off the reservation?" 2 My objection is that he is not competent to 3 answer that. The Court and the parties are here in this court to try to determine what that is. 5 THE COURT: Yes. And it would take, I 6 think, anthropological expertise too. However, sometimes what a witness thinks about something, 8 however ill-informed he may be on the subject, it 9 becomes in itself evidence. And now, whether this 10 is such a situation or not it is not clear to me. 11 I would not be inclined to give any weight 12 13 whatever to his opinion on the subject matter. But if what his opinions are in some way or other 14 15 relfect upon his knowledge, his experience, or understanding, or the like, that would be admissible. 16 So, the only purpose for which I would consider 17 it would be that. 18 MR. McGIMPSEY: That was the purpose of it. 19 THE COURT: As it might reflect upon his 20 credibility, not his integrity, which are two 21 different things, of course. 22 MR. PIERSON: In light of that, I withdraw 23 24 my objection.

Page 162 is the next place.

4.

* THE COURT: I have it.

MR. PIERSON: As I understand it in the questioning up there, the term "allocation" has not been defined. Moreover, the question begins:

"Aside from allocation of the harvest do you have any specific disagreements with the biological aspects of the Department of Fisheries' management of the salmon resource?

My first objection was one as to form, which I must confess I don't recall right now. The other is that that term "allocation" is not defined.

THE COURT: You are speaking of the question that starts at line 13? It's a multiple question for one thing, and multiple questions ordinarily are not desirable.

MR. McGIMPSEY: May I suggest, Your Honor, that objections as to the form are waived if they were not raised at the time of the question?

THE COURT: Yes. But he said that is his first question.

MR. McGIMPSEY: I mean they are waived if they are not objected to at the time of the deposition so that the questioner can re-form his question.

THE COURT: I am not going to exclude it on that somewhat technical ground.

Tell me what else is wrong with it.

MR. PIERSON: As long as we have an understanding of what the term "allocation" means, which was not defined at any time in the question, I would have no objection.

THE COURT: Let's ask the witness what he understood the term to mean at the time he was being interrogated.

MR. McGIMPSEY: I believe, Your Honor, even if reading the question when the witness responded there, in addition to allocation, and the question went on, aside from any allocation, in other words, conceding that you may disagree with the fact that the number of fish reaches a certain area, the number the area should receive, aside from that, that I think in itself defines what "allocation" was meant to mean.

THE COURT: I think he is on the stand now and he can tell us what he understood the term "allocation" to mean in the context of this questioning that was being made at the time.

You have scanned it there, haven't you?

THE WITNESS: Yes, sir.

THE COURT: What did you think that meant?

In responding to the question, what meaning did it

have in your mind? 1 THE WITNESS: I assume that "allocation" 2 as used there meant the division of the harvest 3 between the various user groups. 4 MR. PIERSON: Very well. We waive our 5 objection on page 163. 6 7 The next objection occurs on page 171. question to Mr. Heckman is" 8 "Do you know whether that decision" -9 and I have got to read here and see what it means. 10 I believe the decision referred to the position 11 taken by the United States government with regard 12 13 to the existence of the Puyallup Reservation. 14 THE COURT: It is of such slight evidentiary 15 value, do you think it is worth the time to evaluate? He says it may have been. 16 I knew a little, very precocious boy. You would 17 18 ask him questions, and he would always say, 19 it may or it may not." 20 That pretty well covers the territory. 21 MR. PIERSON: I will pass on that objection. 22 The next one is a little bit more to the point. 23 Basically Mr. McGimpsey is asking Mr. Heckman what 24 he understands the policy of the Department --

THE COURT: What page and line?

MR. PIERSON: Page 171, lines 10 through He is asking Mr. Heckman what he thinks the reason for the policy of the Department of Fisheries I'm willing to let this go in if the other question in his testimony which was stricken out is allowed to come in. I had asked him the same type of question on his direct, and the Court sustained the objection. (Continued on next page.) ET18 10

THE COURT: Well, here again the answer is so 1 vague, I don't know what the answer means, to tell you the 2 truth. It certainly is not very precise, and if you want 3 to object to it, I would just say that it is imprecise to 4 some extent. It is of such little probative value, I 5 don't know why you brought it up. 6 MR. PIERSON: I have one more objection which 7 appears at page 20 of the third volume, page 20 of the 8 third volume --9 THE COURT: In this document here (indicating)? 10 MR. PIERSON: Of F-29. 11 MR. McGIMPSEY: Exhibit F-29, there are three 12 volumes of Mr. Heckman's deposition testimony, and after 13 you get through with page 180, you get into the third 14 volume which begins new pagination again. 15 I have a page 29 here, but I don't THE COURT: 16 see any notes of any objection on it. 17 MR. McGIMPSEY: Page 21. 18 MR. PIERSON: Page 21 is the first page. 19 THE COURT: I have it. 20 MR. PIERSON: And the objection goes through to 21 page 25, and the question is basically asking Mr. Heckman 22 to interpret and describe the regulations which are now 23 in evidence as Dappendix' 5 and the Joint Biological 24 Statement. 25

I think one, it is not the best evidence and, secondly, it would be hearsay, any testimony he might give.

I don't mind having that testimony in, but it certainly is not probative.

THE COURT: Here again, it certainly is not the best evidence, to say the least, and has very little value, if any. But we will leave them in just because it does indicate what he thinks they provide, and how they are applied.

I will overrule the objection.

CROSS EXAMINATION

BY MR. McGIMPSEY:

- Q Mr. Heckman, in your position as Director of the Northwest Fisheries Program, how many clients do you have?
- A Before I answer that, may I correct you, Mr. McGimpsey; the Director of the Fish & Wildlife Service told me there is only one director, and I'm the Manager of the Northwest Fisheries.
- Q As Manager of the Northwest Fisheries Program.
 - If I were to just generally categorize the clients, I assume it would be the Indian tribes, the managers of the federal lands, state agencies, and any other citizen of the United States.
- Q As far as user groups of anadromous fish, are Indians your

only client? 1 No. 2 Do sports fishermen or commercial fishermen become 3 are they your clients? 4 We assume that the efforts of our program will benefit all 5 user groups, including sportsmen. 6 Are you ever concerned with balancing the needs of the Q 7 commercial and sports interests with Indian interests? 8 Α I am not sure I understand you, but I don't believe that 9 we are exercising balancing the needs of one group against 10 the other. 11 Have you ever appeared before the Department of Q 12 Fisheries hearing, regulation hearings? 13 A Yes, I have. 14 And have you ever spoken on behalf of the Indians at those 15 hearings or given testimony in behalf of the Indians? 16 On the Columbia River I have represented the Indian clients 17 briefly. :18 Have you ever represented sportsmen or commercial fishermen? 19 Indirectly I would say, yes. 20 And how indirectly? 21 I can cite an example of the recent hearings on the 22 Columbia River although I did not address the group, I was 23." participant in the preparation of the Department of 24 Interior's statement in which I strongly recommended a 25

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closure of the Indian net fishery above Bonneville Dam 1 to a greater degree than had been recommended by the 2 state agencies, to protect the brood run returning to the 3 national fish hatchery at Spring Creek. 4 Was the purpose of recommending that closure other than 5 conservation? 6 Α The primary purpose of that closure was conservation. 7 And was that in direct effect conservation of the resource 8 that you indicated was a representation of commercial 9 and sports interests? 10 A Yes. 11 Have you had any experience in drawing up regulations that 12 set seasons and gear limitations? 13 With Indian tribes and as we might comment upon the 14 regulations proposed by the state agencies. 15 Other than the experience that you have had with Indian 16 Tribes, had you ever had the responsibility and the 17 authority to draw up regulations that would affect more 18 19 than one user group on anadromous fish, and to put those regulations into effect in an attempt to preserve an 20 anadromous fish run? 21 A No. 22 Now, with regard to the experience that you have had with 23

Indian tribes, as I understand your testimony in answer

to Mr. Coniff's questions, the Muckleshoot Tribe is one of

the tribes with which you have had the greatest dealings 1 in helping assist them in the adopting of fish regulations, 2 is that correct? 3 It is one of the tribes with which we have provided --4 to which we have provided assistance. 5 How would the assistance that you have provided the 6 Muckleshoots compare with other tribes who are plaintiffs 7 in this case? 8 I would say that in comparison to the LUmmi Indians, we 9 have given no assistance to the Lummis and we have given 10 11 some to the Muckleshoots. On the other hand, we have given a good deal 12 of assistance to the Makahs, and we have given a good 13 deal of assistance to the Muckleshoots. I can't --14 In other words, you have given a good deal of assistance 15 to the Muckleshoots in helping them draw up their 16 regulations? 17 Α Yes. 18 Is it my understanding that in giving that assistance, 19 you did not make recommendations as to the areas to be 20 fished, the time for the fishing seasons, and you are 21 unsure as to whether or not you made any recommendations 22 regarding mesh sizes? 23 If that's your understanding ---24 Is that a true understanding of your testimony in response 25

to Mr. Coniff's questioning? 1 I can't recall my testimony exactly, but certainly in 2 advice to the tribe, we discussed the business of mesh size, and of probable seasons. 5 Did you recommend seasons as they are indicated on page 2 of the Muckleshoot regulations in Appendix 5 to the 6 Joint Biological Statement for the Green River? 7 I am confident the tribes set the seasons themselves. 8 9 Did you not make recommendations as to those dates indicated onthe regulations? 10 NO, I believe those are the selection of the tribe. 11 And the same is true of the White River, is it not, that 12 you did not recommend those specific dates in their 13 regulations? 14 15 I believe that's correct. What was the assistance then if you did not give -- provide 16 areas fished or the setting of the seasons, what was 17 the assistance that you provided these tribes in adopting 18 regulations? 19 We advised them on the annual basis of the general 20 predicted run size, and any precautions that might need to 21 be built into the regulations to protect the spawning 22 23 escapement. Did you at all detail the information you gave the tribe 24 so as to indicate what fish -- how much fishing time the 25

runs could withstand from their fishery? 1 2 A ON occasion we probably did. Did you make any predictions of the run size? 3. We had not made earlier run predictions, but we gathered the information that was available to us regarding the 5 run size. 6 And what information was available to you? 7 I assume you are still speaking of the Muckleshoots? Α 8 We are still speaking of the Muckleshoots, and my question 9 is, what information was available to you that you assisted 10 them in indicating the run size to them? 11 Α We got the information from the Fisheries Department 12 regarding their hatchery stocks on the systems, and 13 generally considered the run predictions made by them. 14 More recently we have considered information 15 regarding the troll fisheries by the Canadians and its 16 effect on the return of runs in the Puget Sound systems. 17 Did you have any specific facts or figures for the tribe 18 as to a predicted number of fish that you would anticipate 19 would be coming back to that river? 20 No- not a specific number. 21 Have you in fact ever made on your own a prediction of 22 run size? 23 To the Muckleshoots? 24 To the Muckleshoots or any tribe. 25

1	A	No, not a specific prediction of run size.					
2	Q	Do you havean opinion as to which of the plaintiff tribes					
3		are presently capable of regulating their off-reservation					
4		fisheries?					
5	A	I don't believe I am qualified to answer that.					
6	Q	Well, I think you are qualified to tell me whether or					
7		not you have an opinion as to whether any of the plaintiff					
8		tribes are capable of regulating their off reservation					
9		fisheries.					
10		MR. PIERSON: Is that a question or a statement?					
11	÷	MR. McGIMPSEY: It was a statement in response					
12		to his answer.					
13	Q	(By Mr. McGimpsey) My question still stands, does he have					
14		an opinion?					
15	A	I have a feeling they are capable of establishing regulations					
16	Q	Do you have an opinion that any of the plaintiff tribes					
L7		are today presently capable of regulating off-reservation					
18		fisheries?					
19	A	May I make the assumption that you are					
20	Q	You may make no assumptions, Mr. Heckman. I'm asking you					
2.1.		if you have an opinion.					
22	:	THE COURT: If you have not put it in that text,					
23 .	, ,	you can ask what the meaning of the question is, if you					
24		are not clear.					
		THE WITHITECS. The not of contributions					

are asking me do they have the jurisdiction or do they 1 2 have the physical or governmental capabilities. 3 (By Mr. McGimpsey) I am not asking you a legal question 4 as to whether any of the tribes have the legal authority 5 to enact regulations. What I am asking you is do you feel as a 6 7 biologist that the data and knowledge and your familiarity 8 with their regulations, on the basis of that information, 9 whether any of the plaintiff tribes are today presently 10 capable, from a biological standpoint of regulating an off-reservation fishery, and include in that any 11 12 assistance that you might provide them. 13 Yes, I believe there are some capable. And would you name those tribes which you think are 14 capable. 15 Well, the Makahs, and I'm not certain of all of their 16 enforcement power or their structure of their government, 17 but I'm not certain that I'm qualified to go through this 18 19 reservation by reservation, but I would assume that some of them would have the capability. 20 Other than the Makahs, are there any other tribes that 21 are in this lawsuit as plaintiffs who have the capability 22 23 within the case area to regulate their off-reservation

Well, in the broad sense I am not certain that I would

fisheries?

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1	exclude any of them.					
2	Q Do the Skagit?					
3	A No, I'm not familiar with their governmental structure					
4	or their financial status, and capabilities.					
5	Q May I assume then that your unfamiliarity with them means					
. 6	that you have no opinion?					
7	A I believe that would be correct.					
8 .	Q Of the tribes that you are familiar with, do you have an					
9	opinion that they are capable of regulating their off-					
10	reservation fisheries, other than the Makahs, which you					
11	have already mentioned?					
12	A I believe given the proper sources, economic and technical					
13	sources, that all					
14						
15	(Continued on the next page.)					
16						
17						
18						
19						
20						
21						
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24						
25						

1	Q.	That is not my question, Mr. Heckman. My question
2	;	is which tribes are presently capable as we have
3		discussed the term "capable" in one of the earlier
4		questions, and I should advise that I am going to
5.		ask you for each tribe that you feel is capable
6		of regulating, the basis of your opinion.
7	A.	All right, then, I assume that all of those tribes
8		that I am familiar with are capable of regulating
9		off-reservation fishery.
10	Q.	And which tribes are those?
1	A.	The Quinault, the Quileute, the Hoh, Makah, Lower
12		Elwha.
13	Q.	They are not plaintiffs in this case.
4	A.	I'm sorry. Skokomish, Squaxin, Nisqually, Puyallup,
l 5		Muckleshoot, Tulalip, Swinomish
ا6	Q.	Tulalip and Swinomish are not in this case.
l 7	A.	Lummi.
l 8	Q.	Now, in order to presently be capable of regulating-
9		MR. HOVIS: Were you finished, Mr.
20, .		Heckman?
21		THE WITNESS: Are the Yakimas a plaintiff?
22 .		Are they an intervenor?
23		MR. HOVIS: They are plaintiff intervenor.
.4		THE WITNESS: I have question about the
5		canability of the Vakima

MR. McGIMPSEY: My apologies to Mr. Hovis, 2 In order to have a present, existing capability 3 to regulate an off-reservation fishery, is it necessary that an Indian tribe be able to predict 5 the run size, of the runs that come within its 6 regulatory jurisdiction? 7 It would be ideal. 8 Is it necessary, if the regulations are going to 9 achieve conservation ends that they be able to 10 11 predict run size? 12 A. Yes. Is it necessary if the regulations are to achieve 13 14 conservation ends that they be adopted on an annual 15 basis? Yes. 16 Is it necessary if the regulations are to achieve 17 18 conservation ends that they have emergency clauses 19 in them to adjust the run size -- to adjust fishing 20 effort to reflect the run size? 21 Yes. A. 22 Is it necessary if the regulations are to achieve 23 conservation ends that they provide penalties for 24 violations of them? 25 I would assume that this might make them more

effective. 2 Is your answer yes? 3 I would say, penalties, a penalty clause would be 4 an essential part of any regulation. 5 You think that State regulations need a penalty 6 clause in order to make them effective to achieve 7 conservation? 8 I assume that any regulation must have implicit 9 in it some penalty to pay for violation of the 10 regulation. 11 Is your answer yes? 12 I will say yes. 13 Is it necessary that their regulations are to achieve 14 conservation that they be enforced, and that there 15 be an enforcement structure? 16 Yes. A. 17 Now, the plaintiff tribes that you have indicated 18 are presently capable of regulating their off-reser-19 vation fisheries, which tribes have off-reservation 20 fishery regulations, to your knowledge? 21 I am afraid I would have to go through the appendix 22 to name all of those. 23 Was that not a consideration when you listed the 24 tribes as being capable of presently regulating 25 an off-reservation fisheries?

1		THE COURT: Is it that they presently
2	,	have them or are capable of adopting them?
3		MR. McGIMPSEY: That they presently
4		have off-reservation regulations.
5	A.	I believe your question was, could they regulate,
6		and I assume that if they do not have regulations
7		that they could promulgate regulations.
8	Q.	(By Mr.McGimpsey) I believe my question was, which
9		tribes do you feel are presently capable of
10		regulating their off-reservation fisheries, and
11		you answered, listing approximately twelve
12		tribes. Now, of those tribes, which do you
13		know have present off-reservation fishing regula-
14		tions?
15	A.	I am not sure that I can give a complete answer
16	-	to that question: Do you feel
17		THE COURT: What one do you just offhand
18		know about?
19		THE WITNESS: I know about is this
20		only off-reservation?
21		THE COURT: Off-reservation.
22	Ç.	Off-reservation is all we are concerned with.
23	'A.	The Quileute, the Hoh, Makah, Nisqually, Puyallup,
24		Muckleshoot, Tulalip, Swinomish.
25	Q.	Neither of which are plaintiffs.

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of run size.

Oh, pardon me. Again, I am not certain about the Lummi, and 2 there is one other tribe, the Yakima. 3 Do you know whether the Yakima have currently 4 existing off-reservation regulations within the 5 case area? 6 No. A. 7 You don't know, or they don't? 8 I don't know that they have regulations relating 9 to the case area. 10 Do you feel that a tribe would have to have off-11 reservation regulations to effectively regulate 12 its tribal members in off-reservation areas? 13 I believe they should have. 14 Now, you indicated approximately five things 15 that tribes should have if their regulation of 16 off-reservation fisheries would achieve conserva-17 tion. 18 The first one is to predict run size. Do you 19 know which of the tribes that you have identified 20 as being capable of a capacity to predict run 21 size --22 I believe that they are all capable of consulting 23

whatever sources are necessary to make a prediction

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You have testified now that you have never predicted run size to date so far with your work 2 with the Indian tribes; is that correct? 3 We have considered the predictions of run size. A. 4 You considered the predictions promulgated by .5 a State department? 6 That has been the regular pattern, yes. 7 A. Have you ever attempted to predict run size Q. 8 9 independently of what State prediction of run size 10 is? I don't believe, I don't believe we have ever 11 done so. 12 Is there any reason to believe that any of the 13 0. 14 tribes are presently capable of run size other than to do what you have done, and that is review 15 16 the State regulations or State prediction? 17 I think, I repeat my answer in that case, that 18 they are capable of considering the same data from 19 the same sources that the Department does to make 20 that run prediction. 21 0. If the Department in the regulatory plan were 22 required to accept tribal regulations off-reserva-23 tion at some early date so that it could structure

the rest of its regulatory scheme to accomodate

the tribal regulation, on what basis would the

covered?

tribes, when they formed their regulations be 1 2 able to predict run size? On the basis of the same information that the 3 4 State does. 5 Is it your testimony that each of these twelve 6 tribes would be capable today of analyzing that information and predicting run size to their 7 8 river streams, prior to the predictions and the 9 promulgation of regulations by the State Department 10 of Fisheries? I assume that they would all be capable of seeking 11 12 the sources of this information. It might come 13 from the Washington Department of Fisheries, to 14 a certain extent. 15 Is there more to predicting run size than just 16 having the data available to you? 17 Yes, I believe there is a necessity to be able 18 to interpret the data. 19 Would you explain to us how a biologist interprets 20 data, what date he relies on in predicting run 21 size? 22 I believe that is fairly well covered in the 23 Joint Biological Statement. Would you refer me to the page where that is 24

1	A. I believe it probably starts on page 73.					
2	Q And it continues to pardon me, I believe it					
3	starts on page 51, beginning with subsection					
4	2.2.2.					
5 .	Are there any other sections besides 2.2.2?					
6	THE COURT: You mean that bear on predict-					
7	ing run size?					
8	MR. McGIMPSEY: That bear on predicting					
9	run size.					
10	MR. PIERSON: Your Honor, from the look					
11	of the testimony we are going to be quite a while.					
12	I suggest this might also be something Mr. Heckman					
13	could answer in thirty seconds if given the					
14	opportunity to puruse the document.					
15	I don't suppose you are grading him on his					
16	knowledge of this.					
17	MR. McGIMPSEY: I would agree that my					
18	examination will go on at some length. I do have					
19	if Your Honor is considering adjourning for the					
20	day					
21	THE COURT: Well, if you have no obejction					
22	I will terminate at this point.					
23	Ordinarily I allow the interrogator to get					
24	to some point in his interrogation that he can					
25	readily pick up at the next session, so I never					

call the shot on the closing minute, as it were, so if you are agreeable, we will recess now, as far as the interrogation of the witness is concerned until tomorrow at 9:00 a.m.

MR. McGIMPSEY: I am agreeable. I do have three other matters.

One, I would like for the witness in reviewing the Joint Biological Statement to pick out those factors that he considers necessary to achieve run size, and then my question will be as to the capabilities of the respective tribes to predict run size prior to predictions being issued by the Department of Fisheries, based on that information.

THE COURT: In that connection, why don't you get a copy that you can mark or something, for speed of presentation. You can just underscore the particular line or whatever is the case and call attention to them by page and line, and that would be it, subject to further cross-examination.

THE WITNESS: Very well, Your Honor. (Continued on next page.)

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THE COURT: And if you could get it from Mr. 1 McGimpsey at least a little while before we start in the 2 morning, that would speed it up a little more. 3 MR. McGIMPSEY: I have two hypothetical questions which are going to take a little time for 5 the witness to examine the data and the information 6 that are in evidence in order to answer them. 7 would like at this time to give those questions to the 8 witness so that he might have whatever amount of time 9 10 he would feel necessary to work on them. THE COURT: I think that is a very good plan. 11 Many times if a hypothetical question is 12 elaborate in detail, I suspend and give the witness an 13 opportunity to review it before he has to answer it. 14 That makes a much sounder and better and quicker response, 15 I think. 16 So, I commend you for making that proposal 17 and suggest you do it. 18 19 MR. McGIMPSEY: The first question will probably not take a great deal of time. 20 THE COURT: If you have them written, why 21 don't you give him the written draft? 22 MR. McGIMPSEY: I have the second question 23 written. 24 All right. THE COURT: 25

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MR. McGIMPSEY: The first question -- and
I should preface these remarks because I haven't
laid any preparatory testimony, and there may be an
objection to it -- but the basis of these remarks,
I believe is generally Mr. Heckman has testified on
direct testimony that there are means by which the
Department of Fisheries could restrict other than Indian
fisheries to increase the number of fish that would
enter into the Indian fisheries.

The plaintiff tribes have proposed that the standard which should be guiding the Department of Fisheries and this Court is a standard based on the present and future needs of Indians and that this standard can be expressed in a quota of fish, also.

So, I will ask that Mr. Heckman look at Table 51 in the Joint Biological Statement, which records the Puyallup Indians' catch in gillnets taken in the Puyallup River. As it appears in that table, that catch has varied anywhere from 2001 fish, as far as pink salmon go, from 2001 fish to 531,7425 fish.

My question is, if the Court or somebody were to set a quota for Puyallup pink salmon to be caught by the Puyallup Indians, of 10,000 pink salmon in the year 1971 where the chart shows they have caught 6173, what regulatory changes would you need to have

1	made in the Department of Fisheries' regulations for
2	the 1971 season?
3	I should advise the Court that those
4	regulations and all amendments to them are contained
5	in the Joint Biological Statement.
6	THE COURT: Then the second question is
7	written?
8	MR. McGIMPSEY: My second hypothetical
9	question I will read into the record:
10	Assume that optimum spawning escapement
11 -	as defined in Exhibit
12	MR. PIERSON: Your Honor, I don't think it
13	is necessary for him to read it.
14	THE COURT: It can be made an exhibit,
15	and that will be quicker.
16	MR. McGIMPSEY: That is fine.
17	THE COURT: Give the next number for the
18	Department of Fisheries to this exhibit.
19	THE CLERK: 37.
20	MR. McGIMPSEY: The Exhibit will be F-37,
21	your Honor.
22	THE COURT: That exhibit is to be admitted
23	in evidence, to be used in connection with the testimony
24	of this witness on cross examination.
25	MR. McGIMPSEY: Thank you.

(Exhibit Number F-37 was marked for identification and admitted in evidence.) THE COURT: Again, I wish you a pleasant afternoon and evening, and look forward to seeing you at nine o'clock in the morning. (At 3:10 p.m. proceedings were adjourned.)

We, the undersigned official court reporters in and for the United States District Court for the Western District of Washington, do hereby certify and affirm that the foregoing transcript of proceedings is a true and accurate transcript of our shorthand notes of the matters herein reported.

1		<u>I N D E .</u>	<u>X</u>	· -	
2	WITNESS		DIRECT	VOIR DIRE	CROSS
3	JAMES L. HECKMAN		1171-P		
4			1186-P	1178-Mc	
5				1196-Mc	
6			1199-P 1213-G		
7	•		1218-Z		1220-C
8					1344-Mc
9	EXHIBITS	ADMITTED	-		
10	PL-77	1193			
11	PL-81 - 84	1205			
12	PL-76 F-37	1211 1365	• •		
13 14					
15	Legend:				
16	P- Pierson G- Getches				
17	Z- Zionzt C- Coniff		,		
18	Mc- McGimpsey	· · · · · · · · · · · · · · · · · · ·	1		•,
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