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IN THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICE OF ADMINISTRATIVE LAW JUDGES	EXHIBITS
	COMPLAINANT
In the Matter of:)	EXHIBITS: IDENTIFIED RECEIVED
DAVE ERLANSON, SR.) Docket No. CWA-10-2016-0109	1A 450 450
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Courtroom 4	16 414 415
Jefferson County Courthouse 210 Courthouse Way	17 415 416
Rigby, Idaho	19 438 439
	20 440 441
Wednesday,	
May 15, 2019 The parties met, pursuant to notice of the	
Court, at 8:28 a.m.	RESPONDENT
BEFORE: HONORABLE CHRISTINE D. COUGHLIN	EXHIBITS:
Administrative Law Judge	2 521 Withdrawn,
	537
APPEARANCES: For the Agency:	551
WILLIAM McLAREN, Esquire	4 through 9 521 Withdrawn,
MATTHEW MOORE, Esquire	4 through 9 521 withdrawn, 537
U.S. Environmental Protection Agency	357
1200 Sixth Avenue Suite 900 ORC-113	
Seattle, Washington 98101	
(206) 553-1938	
For the Respondent:	
DAVE ERLANSON, SR., Pro se P.O. Box 46	
Swan Valley, Idaho 83449	
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raye 329	Page 331
CONTENTS	1 PROCEEDINGS
VOIR	2 (8:28 a.m.)
WITNESSES: DIRECT CROSS REDIRECT RECROSS DIRE	3 JUDGE COUGHLIN: And we're reconvening
	4 Wednesday, May 15th. We're actually getting started a
For the Agency:	
	1 .
Dan Kenney	6 so, and the parties are present and ready to go, I
(Continuing) 332 346 379 390	7 assume.
David Lee Arthaud 409 485 513 515	8 MR. MOORE: Yes.
	9 MR. McLAREN: Yes, Your Honor.
	10 JUDGE COUGHLIN: Yes? Okay. Great. So, I
	12 were Mr. Moore, you were in the midst of your
	13 direct of Mr. Kenney, right?
	14 MR. MOORE: Correct.
	15 JUDGE COUGHLIN: So, Mr. Kenney, would you
	16 like to approach, and I'll just remind you that you
	17 remain under oath. You were sworn yesterday. So,
	18 that remains and through the rest of the proceeding.
	19THE WITNESS: I understand.
	20 JUDGE COUGHLIN: Okay. So I'll just let Mr.
	21 Moore go ahead and pick up. I assume there's nothing
	22 to discuss before we get started. From Complainant?
	22 to discuss before we get started. From Complainant?
	 to discuss before we get started. From Complainant? MR. MOORE: No.

	Page 332		Page 334
1	_	1	_
2	JUDGE COUGHLIN: Okay. All right. Great. Please go ahead Mr. Moore.	2	Q What's required by Mitigation Measure Number 3?
3	Whereupon,	3	A Mitigation Number 3 requires that a Forest
4	DAN KENNEY	4	Service or BLM biologist inspect and what we term
4 5	having been previously been duly sworn, was	5	delineate a suction dredging reach for each mining
6	recalled as a witness herein and was examined and	6	operation prior to the start of the mining. And
7	testified as follows:	7	during that delineation the biologist would take a
8	DIRECT EXAMINATION (RESUMES)	8	look at the site that the miner wanted to dredge and
9	BY MR. MOORE:	9	to assess whether there were particular areas within
10	Q Good morning, Mr. Kenney.	10	that reach which had a greater potential to harm
11	A Good morning.	11	ESA-listed and other sensitive fish and invertebrate
12	Q When we left off, we were discussing	12	species, and then the biologist would exclude those
13	Complainant's Exhibit 21. So I'll have you turn back	13	areas within the larger dredging reach from dredging
14	to Complainant's Exhibit 21, please.	14	or provide other sorts of instructions to the miner to
15	(Pause.)	15	mitigate the harm within that reach.
16	Q Mr. Kenney, just to remind the Court, what	16	Q It may be obvious in your last response, but
17	is Complainant's Exhibit 21?	17	what is the harm that the Forest Service was intending
18	A This is the Biological Assessment that was	18	to mitigate by including that Measure Number 3?
19	written by and submitted by the Forest Service and BLM	19	A Well, the disturbance associated with
20	for the excuse me for the approval of up to 15	20	suction dredging is inherent. The suction dredger
21	suction dredging operations annually on the South Fork	21	digs up the stream bottom which has various organisms
22	Clearwater River.	22	associated with it and discharges materials that moves
23	Q Did the proposed plan of operation include	23	materials to a different place in the stream channel.
24	any mitigation measures intended to mitigate the types	24	So, the the mining activities inherently disrupts
25	of harm that you testified were caused by Mr.	25	it to the habitat and sometimes to the actual bodies
	Page 333		Page 335
1	Page 333 Erlanson?	1	Page 335 of the of the organisms.
1 2		1 2	
	Erlanson?		of the of the organisms.
2	Erlanson? A Yes, that is the intent.	2	of the of the organisms. Q And, to your knowledge, did Mr. Erlanson
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	Page 336		Page 338
1	that is covered by those tailings.	1	sometimes laterally, and fill in behind with those
2	JUDGE COUGHLIN: Bless you.	2	tailings. So, some of the materials may have been
3	BY MR. MOORE:	3	moved back into the well, I'm sorry. I'm I'm
4	Q And what's the harm that the Forest Service	4	saying this wrong.
5	hoped to mitigate by requiring the rehabilitation that	5	Part of the answer is that some of the
6	you discussed?	6	material that was dredged could have been tossed off
7	A Well, again, the the mining itself,	7	to the side and not of the manipulatable size could
8	there's a certain amount of disruption of the stream	8	have been tossed off to an area that is not in the
9	bottom associated with it inherently. But if we can	9	tailings possibly we're not able to assess the volume
10	have the miner restore the site to as close to the	10	of, and some of it may have been in the form of of
11	original additional of the original condition as	11	the turbidity that was carried farther downstream and
12	possible, we believe that that would tend to reduce	12	away from the tailings pile. And part of it was
13	the long-term impacts of the dredging.	13	probably our methods that were as it's not a
14	JUDGE COUGHLIN: Could I interject with one	14	matter of saying here's here's exactly what was
15	quick question? When you talked about reducing the	15	taken out versus here's exactly what we see left.
16	amount of the stream bed that's covered by the	16	Q What's required by Mitigation Measure Number
17	tailings	17	13? It would be on the following page.
18	THE WITNESS: Uh-huh.	18	A It says, "Operators must visually monitor
19	JUDGE COUGHLIN: how exactly would that	19	the stream for 150 feet downstream in the dredging or
20	be mitigated? I mean, I understand the concept of	20	sluicing operation." This is intended to alert the
21	filling the hole. But with regard to the tailings,	21	miner that he that the turbidity is to be minimized
22	how do you mitigate that in practice?	22	and so to for the the miner to monitor that
23	THE WITNESS: Well, one one was a	23	turbidity plume as much as possible and then to stop
24	requirement to minimize to a certain depth riffle	24	dredging at least at least momentarily in order to
25	areas, so basically saying there, don't cover up	25	reduce the volumes of that plume.
	Page 337		Page 339
1	_		rage 555
	riffles more than a certain amount in their operation	1	O Would a plume extending over 220 feet
	riffles more than a certain amount in their operation.	1	Q Would a plume extending over 220 feet
2	And then the other main part of it is that whatever	2	violate this mitigation measure?
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2	And then the other main part of it is that whatever was convenient timing for the miner and definitely at the end of the mining season to take those tailings,	2	violate this mitigation measure? A Yes. A visible plume of 220 feet is more than 150 feet.
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	 And then the other main part of it is that whatever was convenient timing for the miner and definitely at the end of the mining season to take those tailings, the finer tailings and and suction them up and put them back in the hole. So, your the tailings pile that's in the photos would then be it would be possible for the miner to remove those back to the hole. JUDGE COUGHLIN: I see. Okay. Thank you. THE WITNESS: Uh-huh. JUDGE COUGHLIN: Please go ahead, Mr. Moore. BY MR. MOORE: Q And, Mr. Kenney, in regard to the Judge's question, when you observed impacts at Mr. Erlanson's site, did the volume of the pile equal the volume removed from the hole? A No. If I recall the figures, the the amount that we measured in the pile was about a third, I believe, of what we calculated was in the hole. Q So, where does the rest of that material go? A It's it's impossible for me to say exactly how Mr. Erlanson dredged beyond what Mr. 	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	 violate this mitigation measure? A Yes. A visible plume of 220 feet is more than 150 feet. Q What's required by Mitigation Measure Number 15? A "Operators must maintain a minimum of spacing of at least 800 linear feet of stream channel between active mining operations." That's intended to reduce the cumulative effects of the mining in in the operation of the of this this construct of 15 dredgers per season. It's intended to space things out such that the effects are not concentrated. Q Did Mr. Erlanson mine in a manner that was consistent with Measure Number 15? A No. Looking at Mr. Hughes' report, it's evident that Mr. Rice is only a few dozen feet, dredging only a few dozen feet upstream from Mr. Erlanson. Q And by failing to comply with the mitigation measures that we discussed, would a suction dredge operation cause increased harm to ESA-listed species in the South Fork?

	Page 340		Page 342
1	A Please.	1	for the purpose for which it was being used?
2	Q By failing to comply with the mitigation	2	A Yes, I do.
3	measures that we discussed, would a suction dredge	3	Q How so?
4	operation cause increased harm to ESA-listed species	4	A Well, I this was not intended to be a
5	in the South Fork?	5	study, a research study that could be published in a
6	A That is the intent, yes, and I believe it	6	journal. It was to provide me some information on
7	would it would it would lead to that effect,	7	which to base our our proposed dredging program and
8	yes.	8	also to to get a better idea of what might be
9	Q Thank you. So I'm going to turn you back to	9	possible in a relatively large stream like this one as
10	your report, Complainant's Exhibit Number 37, and	10	opposed to the smaller streams that we have suction
11	specifically Page 1519.	11	dredging programs on that I was more familiar with.
12	A I'm sorry. Could you repeat the page	12	Q And, sir, in your opinion, did the accuracy
13	number?	13	of your data render the information unreliable in any
14	Q 1519.	14	way?
15	A Yes.	15	A No. The the intent was to gain an idea
16	Q Besides Hole Number 5 and Pile Number 7, did	16	of the level of magnitude of the effects and also the
17	you observe other evidence of dredging at Site Number	17	persistence of the data that I gathered I believe
18	14?	18	was consistent with that goal.
19	A Yes. My technicians named five holes in	19	Q And, in your opinion, was the data helpful
20	total and seven tailing piles in total, and it's	20	in in analyzing the impacts of Mr. Erlanson's
21	the naming, the delineation of any of those holes	21	dredging activity?
22	could be it possibly could have one, two or more of	22	A Were were the were the data helpful?
23	these features together that are otherwise impossible	23	Is that what you said?
24	to tell apart. So, yes, there were more sites.	24	Q Was it helpful in analyzing the impacts of
25	Q And in general numbers were the other holes	25	Mr. Erlanson's dredging activities?
	Page 341	1	5 242
	iuge sii		Page 343
1	and tailings piles similar in size to the hole and	1	A Yes. It it gave me an idea of what was
1 2	and tailings piles similar in size to the hole and pile that Mr. Erlanson was photographed dredging?	1 2	A Yes. It it gave me an idea of what was possible at that site and the consistency of the
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2 3 4 5	 and tailings piles similar in size to the hole and pile that Mr. Erlanson was photographed dredging? A Some were larger. Some were smaller. But in general they were of a comparable size. Q And so would those features have impacts 	2 3 4 5	A Yes. It it gave me an idea of what was possible at that site and the consistency of the tailings piles that would that would be created at that site. Also an idea of the magnitude of the area that might be disturbed.
2 3 4 5 6	 and tailings piles similar in size to the hole and pile that Mr. Erlanson was photographed dredging? A Some were larger. Some were smaller. But in general they were of a comparable size. Q And so would those features have impacts similar to the impacts that were caused by the 	2 3 4 5 6	A Yes. It it gave me an idea of what was possible at that site and the consistency of the tailings piles that would that would be created at that site. Also an idea of the magnitude of the area that might be disturbed. Q And did you also use the same data in
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Page	346

	Page 344		Page 346
1	Number 7, that area. So, it when comparing that	1	THE WITNESS: Okay.
2	particular area, I'm saying and thinking on the scale	2	JUDGE COUGHLIN: So, ask what you want.
3	of the proposed project area of 40-some miles on the	3	THE WITNESS: Okay. Can can you hear me,
4	South Fork and on the on the area that's most	4	Mr. Kenney?
5	most commonly dredged on the South Fork, the actual	5	THE WITNESS: Yes.
6	area of disturbance is relatively small.	6	MR. ERLANSON: Okay.
7	Q And so, if you're focusing just on the site	7	CROSS-EXAMINATION
8	level at Site 14, would you characterize the impacts	8	BY MR. ERLANSON:
9	of Mr. Erlanson's dredging as small?	9	Q Well, I'll start with the hole. Let's go
10	A On that site level, no. The the hole and	10	back to these do you still have a copy of these big
11	the tailings pile are visually evident and completely	11	photographs?
12	transformed from what was previous what it looked	12	A Yes.
13	like previously, although I haven't seen it but what	13	O Not that one. Where is this one here.
14	is generally what is on either side and above and	14	Let me get the right one here. Can you see the one
15	below that site. So, the the actual impacts of	15	with the big plume from Mr. Rice's dredge upstream of
16	those dredge features is profound.	16	my does that that appear to be the same one?
17	Q In fact, is it your opinion that Mr.	17	JUDGE COUGHLIN: Okay. So, and once again,
18	Erlanson's impacts extended even beyond Site Number	18	I know the blow-ups are helpful for the testimony, but
19	14?	19	I need to be able to refer to it with regard to what's
20	A Yes, I believe so, yes.	20	actually in the in the exhibits. So, you're
20		20	you're talking about this one, Mr. Erlanson?
21		21	THE WITNESS: Yes, I am.
22	A Well, in particular the tailings pile did	22	,
23 24	was not present in 2016 as a as a a pile, at	23	JUDGE COUGHLIN: Okay. And so, this
	depth excuse me as a pile with thickness		corresponds to what in terms of what's in evidence?
25	compared to what it was in 2015. So, that finer	25	MR. McLAREN: Your Honor, we're willing to
			D 247
	Page 345		Page 347
1	sediment, mostly sand, was carried downstream and	1	provide that.
1 2	sediment, mostly sand, was carried downstream and would incrementally add to the the fine sediment	2	provide that. JUDGE COUGHLIN: Okay.
	sediment, mostly sand, was carried downstream and would incrementally add to the the fine sediment burden of of the South Fork.		provide that. JUDGE COUGHLIN: Okay. MR. McLAREN: That skips 01 and I believe
2	sediment, mostly sand, was carried downstream and would incrementally add to the the fine sediment	2 3 4	provide that. JUDGE COUGHLIN: Okay. MR. McLAREN: That skips 01 and I believe it's at Page 5 Page 6, 0005 of that exhibit.
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	Page 348		Page 350
1	BY MR. ERLANSON:	1	about the depth I think, the reference to it. Go
2	Q Okay. Before we go into this picture, this	2	ahead and just repeat your question.
3	picture was taken by whom?	3	BY MR. ERLANSON:
4	A Clint Hughes.	4	Q Yeah. You referenced the hole, but you
5	Q Okay. Was there any pictures taken on this	5	never saw it before you went down to measure it. You
6	site previous to July 22nd, 2015?	6	referenced that the tailings pile was one-third what
7	A I don't know.	7	you estimated the contents of the hole to be. And the
8	Q Was there did you take any measurements	8	counsel for the EPA asked you the question, "Well,
9	of Hole Number 5's area, Tailings Number 7 area before	9	what happened to the rest of it?" In other words,
10	July 22nd, 2015?	10	what happened to the other two-thirds of what you
11	A I did not personally, no.	11	estimated to be in that hole? I have a theory for
12	Q Okay. As you look at this picture on the	12	that which we
13	side over on, where the trees are, the timbered side	13	JUDGE COUGHLIN: Okay. But question,
14	let's call it the timbered side looking upstream	14	remember, question, not testimony yet.
15	that would be on the right side.	15	MR. ERLANSON: I understand.
16	A Yes.	16	JUDGE COUGHLIN: Okay.
17	Q Why are these rocks not rounded off?	17	BY MR. ERLANSON:
18	A The substrate in a stream channel is subject	18	Q So, could it be that those sharp-edged rocks
19	to a greater or lesser amount of erosion in that	19	are exposed bedrock pieces on the shoreline?
20	stream channel. It's no longer a particle that's	20	A Okay. That's your question about the
21	within the stream channel, and the more it's moved the	21	whether that's exposed bedrock?
22	more little bits and pieces are broken off and the	22	Q Yes.
23	more rounded a substrate particle becomes. The	23	JUDGE COUGHLIN: Could it be
24	material that's in a stream channel or along the edges	24	MR. ERLANSON: Could it be
25	of the stream channel can be moved either by the	25	JUDGE COUGHLIN: exposed bedrock?
	Page 349		5 951
	rage 343		Page 351
1	stream, or they can come off the off the area, the	1	Page 351 THE WITNESS: Some of it is clearly is
1 2	-	1 2	
	stream, or they can come off the off the area, the	1	THE WITNESS: Some of it is clearly is
2	stream, or they can come off the off the area, the land, in this case the slope adjacent to the stream	2	THE WITNESS: Some of it is clearly is not. They're individual pieces, but there could be
2 3	stream, or they can come off the off the area, the land, in this case the slope adjacent to the stream channel. And so, likely the less rounded rock has	2 3	THE WITNESS: Some of it is clearly is not. They're individual pieces, but there could be portions that expose bedrock there, yes.
2 3 4	stream, or they can come off the off the area, the land, in this case the slope adjacent to the stream channel. And so, likely the less rounded rock has spent less time in the stream channel and moved less	2 3 4	THE WITNESS: Some of it is clearly is not. They're individual pieces, but there could be portions that expose bedrock there, yes. BY MR. ERLANSON:
2 3 4 5	stream, or they can come off the off the area, the land, in this case the slope adjacent to the stream channel. And so, likely the less rounded rock has spent less time in the stream channel and moved less in the stream channel and hasn't had the opportunity to be rounded yet. Q Well, what concerns me is you mentioned	2 3 4 5	THE WITNESS: Some of it is clearly is not. They're individual pieces, but there could be portions that expose bedrock there, yes. BY MR. ERLANSON: Q Yes. Did you when you and your team looked at the hole, did you conclude that that hole was on the side of the river or in the thalweg of
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	Page 352		Page 354
1	MR. ERLANSON: Yes.	1	drop out the finer material which the gravel is
2	JUDGE COUGHLIN: So, that's	2	somewhere in the middle there. So, the thalweg during
3	MR. McLAREN: Page 5 of Exhibit CX-01.	3	the high-flow event would tend to have less gravel
4	JUDGE COUGHLIN: Okay. Thank you.	4	after that flow event than the areas of lower
5	MR. McLAREN: It is the right center of	5	velocity
6	that.	6	Q That's correct.
7	MR. MOORE: This photograph has the label	7	A on the surface.
8	"Rice Green Dredge and Erlanson's Blue Dredges".	8	Q Uh-huh. Now, as we look at this picture,
9	JUDGE COUGHLIN: Okay. Perfect. Thank you.	9	the same one that we were talking about, if you look
10	Go right ahead, Mr. Erlanson. Mr. Kenney, are you	10	at Rice's Green Dredge, do you see the amount of
11	there?	11	gravel on let's call it the timber side do you
12	THE WITNESS: Yes, I believe I am.	12	see the amount of gravel on the timber side as you do
13	JUDGE COUGHLIN: Okay. Great.	13	on the right side?
14	MR. ERLANSON: Are we ready?	14	A Are you referring to the gravel in the areas
15	JUDGE COUGHLIN: Yes.	15	that have been disturbed by the dredging?
16	BY MR. ERLANSON:	16	Q No. If you if you look right above his
17	Q Mr. Kenney, if you look at what is referred	17	dredge, you will see a line which is holding that
18	to as Rice's Green Dredge, if you'd take a look at	18	dredge. Can you see that line, sir?
19	that. On the right side of this photo looking	19	A Yes.
20	downstream from where this photo was taken, do you	20	Q What do you see on the left side of that?
21	see would you conclude that that is the inside of	21	Do you see gravel there from there over to the river
22	the river bank?	22	bank, or do you see exposed bedrock on that river
23	A Could you be more specific about where	23	bank?
24	you're talking about, please?	24	A It's a little difficult to tell, but for the
25	Q All the way down this, around this corner.	25	most I I can discern larger pieces of substrate
	Page 353		
	1 age 505		Page 355
1	Would that be considered the inside of the river bank?	1	Page 355 of the size of small boulders but also finer substrate
1 2	-	1 2	
	Would that be considered the inside of the river bank?	1	of the size of small boulders but also finer substrate
2	Would that be considered the inside of the river bank? Because of the amount of gravel exposed on the	2	of the size of small boulders but also finer substrate among there.
2 3	Would that be considered the inside of the river bank? Because of the amount of gravel exposed on the shoreline, the rounded gravel and, of course, you can see gravel in the stream bed there below the water if you look, too.	2 3	of the size of small boulders but also finer substrate among there. Q You see finer substrate over there. By
2 3 4 5 6	Would that be considered the inside of the river bank? Because of the amount of gravel exposed on the shoreline, the rounded gravel and, of course, you can see gravel in the stream bed there below the water if you look, too. JUDGE COUGHLIN: And where you just gestured	2 3 4 5 6	of the size of small boulders but also finer substrate among there. Q You see finer substrate over there. By "finer," what type what are you classifying as finer? A Well, the photo is not really of a close,
2 3 4 5	Would that be considered the inside of the river bank? Because of the amount of gravel exposed on the shoreline, the rounded gravel and, of course, you can see gravel in the stream bed there below the water if you look, too. JUDGE COUGHLIN: And where you just gestured with your hand, you're talking about the rightmost	2 3 4 5 6 7	of the size of small boulders but also finer substrate among there. Q You see finer substrate over there. By "finer," what type what are you classifying as finer? A Well, the photo is not really of a close, fine enough detail and close for me to say, but my
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	Page 356		Page 358
1	Would it would it not conclude that that hole was	1	it's all bedrock and I can see material that's not
2	there before any dredge operation started dredging?	2	bedrock, I I mean, that's I don't know how
3	A I I don't agree that the the stream	3	farther I can go than that. I mean perhaps I
4	bottom is all bedrock for a hundred feet or 150 feet	4	misunderstood your question.
5	above that where you're	5	JUDGE COUGHLIN: So so, the depiction of
6	Q A hundred yards.	6	material that isn't bedrock leads you to the
7	A A hundred yards.	7	conclusion then that it's not entirely bedrock?
8	Q On the right-hand side of that stream	8	THE WITNESS: Yes.
9	looking upstream.	9	JUDGE COUGHLIN: Okay. Go ahead.
10	A Perhaps we have different definitions of	10	MR. ERLANSON: I agree with his conclusion.
11	bedrock, sir.	11	It's not entirely bedrock, and that's why I was in
12	Q What's your definition of it?	12	that area.
13	A Bedrock is a the continuous	13	JUDGE COUGHLIN: Okay. Well, just ask
14	contiguous, continuous integral portion of of of	14	questions.
15	a stream bottom that it while it may have cracks	15	MR. ERLANSON: Yeah.
16	and and holes in it, it is not in separate	16	BY MR. ERLANSON:
17	particles.	17	Q Now, you stated that one-third of the
18	Q That's correct. I have the same I have	18	tailing pile you you attributed to being taken out
19	the same definition you do. But that's quite	19	of that hole. And then you also mentioned that as a
20	frankly, that's why I bought that mining claim. I'm	20	suction dredge works, if the suction dredger's doing
21	an old man. So, I can't dig through that much gravel.	21	his job properly, he tries to put the tailings into
22	So, that's why if you look at this picture, it's	22	his hole and backfill as he goes upstream. You stated
23	evident that the gravel stops right about where Rice's	23	that, correct?
24	dredge is and from there over it's solid bedrock. Now	24	A I well, first, I don't believe I said
25		25	that the tailings I I said that the measurements
	Page 357		Page 359
1	5	1	-
1 2	JUDGE COUGHLIN: Okay. Stop right there	1	Page 359 that were taken by my technicians and the calculations I made with those measures is about one-third of the
	5	1	that were taken by my technicians and the calculations
2	JUDGE COUGHLIN: Okay. Stop right there MR. ERLANSON: Okay.	2	that were taken by my technicians and the calculations I made with those measures is about one-third of the
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1 Q Yeah. How did they measure the depths of 1 A If no, I can't I can't make the 2 the tailings? 2 conclusion. It is I'm not saying it did 3 A In about the same manner. 3 but I can't make that conclusion from the 4 Q How did they know they got to the bottom of 4 my technicians took in October.	Page 362
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4 Q How did they know they got to the bottom of 4 my technicians took in October.	
	1
5 the tailings that weren't in the substrate of the 5 Q Okay.	
6 river? 6 A Some some of the material is	still above
7 A Well, when we were doing the measurements 7 the water surface. So, my understanding	ng of the I
8 together at other sites on the previous day, I had 8 think of what you're saying about the r	aking is to try
9 instructed them to observe the area which appeared to 9 to spread out the material so that it doe	sn't reach
10 be outside outside the edges of the of the 10 the surface and doesn't impede fish pas	sage and that
11 tailings pile and and individually observe the 11 sort of thing.	
12 the depth of the stream at that point and then compare 12 Q Correct. That's correct.	
13 it to the maximum height of the dredge pile. So, it 13 JUDGE COUGHLIN: Is let m	e just pop in
14 was based on the surrounding apparently not covered 14 really quickly. Mr. Erlanson has chara	cterized that
15 with tailings areas. 15 as a best management practice. Is that	consistent
16 Q Okay. So, what what you just described 16 with your opinion, that method of usin	g a rake to
17 is an approximation. Is that correct? 17 spread it out? From your from your	standpoint
18 A There are definitely approximations in the 18 would that be considered a best manag	ement practice?
19 measurements, yes. 19 THE WITNESS: I think it would	d be a part of
20 Q Was there any measurements made other than 20 a mitigation measure that the dredgers	may employ, and
21 one depth measurement at the top of the hole? 21 that would be consistent with part of w	hat we have in
22 A They were instructed to measure as best they 22 the biological opinion, some of the mit	igation
23 could the maximum depth of the hole if that's what you 23 measures. Ideally the material would be	be more than
24 mean by the top. 24 spread out because the spreading out re	educes the
25 Q Well, I'm talking about the tailings pile. 25 potential for fish passage to be impede	d, and that's
Page 361	Page 363
1 A Oh, I'm sorry. 1 more important in a smaller stream than i	n a larger
2 Q Considering that this section of of real 2 one like this. But also the mitigation mea	
3 estate is primarily bedrock and I I agree with 3 the biological opinion that should be in	the
4 your statement that your testimony that there is 4 Biological Assessment try to actually r	eturn the
5 some gravel. There's some big boulders on top of that 5 finer materials to whence they came and a	not just
6 bedrock, and there is even some small substrate behind 6 spread them out in a larger area where the	ey were
7 those boulders which would be natural. I'm sure we 7 deposited or near where they were deposited or near w	ted.
8 agree on that. But I'm concerned about the tailings 8 JUDGE COUGHLIN: Please go al	nead, Mr.
9 pile because best management practices in dredging say 9 Erlanson.	
10you don't leave tailing piles in their natural state10BY MR. ERLANSON:	
11 as some of these pictures I've seen yesterday showed 11 Q Okay. Finally as far as Hole Num	ber 5 and
	clusive proof,
12 Rice's dredging, how they had big humps. Anybody that 12 Tailings Number 7, do you have any cond	hahalf in this
13ever dredges in one of my holes or that I dredge13can you add any testimony on anybody's	
13ever dredges in one of my holes or that I dredge13can you add any testimony on anybody's14JUDGE COUGHLIN: Mr. Erlanson, you've got to14courtroom today that said that Mr. Erlans15get to the question.15hole?	on made that
13ever dredges in one of my holes or that I dredge13can you add any testimony on anybody's14JUDGE COUGHLIN: Mr. Erlanson, you've got to14courtroom today that said that Mr. Erlans15get to the question.15hole?16MR. ERLANSON: Oh, yeah. I'm sorry.16A	on made that ferring to?
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	Page 364		Page 366
1	A I believe that the photos, the the GPS	1	and and photos.
2	coordinates that Mr. Hughes' report comparison that	2	Q Okay. Did the U.S. Forest Service, U.S.
3	of the information that my technicians gathered in	3	Fish & Wildlife at NOAA conclude that suction dredging
4	October show that the dredge hole in the Hughes photos	4	would not jeopardize the continued existence of either
5	that he identified as being as you you dredging	5	the steelhead trout or the bull trout on the South
6	are a component, although not the full extent of what	6	Fork Clearwater River?
7	my technicians measured as Hole Number 5 in October.	7	A That's a very general question, suction
8	Q So, you have no conclusive proof that you	8	dredging in general. So, no, the none of those
9	can enter to this Court at this time that says that	9	entities concluded that suction dredging in general
10	Mr. Erlanson did entirely make Hole Number 5 or	10	was
11	Tailings Number 7?	11	Q This is from a letter that you wrote
12	A No, I've never stated that Hole Number 5 was	12	JUDGE COUGHLIN: Okay. What
13	created by Mr. Erlanson, the hole of Hole Number 5	13	MR. ERLANSON: on the FOIA
14	as measured in October of 2015.	14	JUDGE COUGHLIN: What are you referring to?
15	Q Okay.	15	Is it in evidence?
16	JUDGE COUGHLIN: And I think it's just	16	MR. ERLANSON: No, no, it's not, Your Honor.
17	because I agree that there's been a good deal of time	17	I I didn't add it into evidence. I'm just I
18	spent on those two particulars. And so, just so that	18	just got it because I he was on the stand and so,
19	I'm clear, what you've relied on I think you just	19	when I came today, I thought I would bring this up and
20	said this, but I just want to make sure I'm capturing	20	see if he agreed with his statement.
21	it for my own understanding. What you've relied on	21	JUDGE COUGHLIN: With a prior statement?
22	then to, if you will, link perhaps circumstantially	22	MR. ERLANSON: Yes, that he that he
23	Hole Number 5, Tailings Number 7, to activity	23	wrote.
24	attributed to Mr. Erlanson, you've identified Mr.	24	JUDGE COUGHLIN: Okay. What is that?
25	Hughes' report and photos, the GPS coordinates he's	25	MR. ERLANSON: Can I come up?
		i	
	Page 365		Page 367
1	Page 365	1	Page 367
1	provided and then your own evaluation in October?	1	JUDGE COUGHLIN: Well, show it to Mr. Moore
2	provided and then your own evaluation in October? THE WITNESS: Yes.	2	JUDGE COUGHLIN: Well, show it to Mr. Moore first.
2 3	provided and then your own evaluation in October? THE WITNESS: Yes. JUDGE COUGHLIN: Was there anything else	2 3	JUDGE COUGHLIN: Well, show it to Mr. Moore first. MR. ERLANSON: Oh, here. It's in the
2 3 4	provided and then your own evaluation in October? THE WITNESS: Yes. JUDGE COUGHLIN: Was there anything else that you relied upon other than those things to lead	2 3 4	JUDGE COUGHLIN: Well, show it to Mr. Moore first. MR. ERLANSON: Oh, here. It's in the highlighted spot down there, the maroon color, pink
2 3 4 5	provided and then your own evaluation in October? THE WITNESS: Yes. JUDGE COUGHLIN: Was there anything else that you relied upon other than those things to lead to that belief?	2 3 4 5	JUDGE COUGHLIN: Well, show it to Mr. Moore first. MR. ERLANSON: Oh, here. It's in the highlighted spot down there, the maroon color, pink color, whatever it is.
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	Page 368		Page 370
1	MR. ERLANSON: Well, I'm I'm relying on	1	purports to be an email from Dan Kenney to Norma Staff
2	his testimony, Your Honor.	2	of Forest Service I think, cc to Clinton Hughes and
3	JUDGE COUGHLIN: Yeah, I'm Okay. Mr.	3	it's with regard to a NEPA for suction dredging POOs
4	Moore.	4	and it was dated on back in February 11th of 2015.
5	MR. MOORE: Your Honor, my quick review of	5	So, I'm inclined to agree with Mr. Moore
6	that email suggests that it is a they're talking	6	that we're talking about an assessment affecting
7	about a biological assessment that was conducted at	7	another water body. So, I don't know how that's
8	least ten years before the biological assessment that	8	relevant here.
9	Mr. Kenney conducted on the South Fork. It dealt with	9	MR. ERLANSON: Well, the South Fork
10	different rivers, not the South Fork, and it could be	10	Clearwater Environmental Assessment was based on LoLo
11	prejudicial to introduce now because this is the first	11	and Moose Creeks years ago. I've got some FOIA stuff,
12	time that we're seeing it. So, I think it's limited	12	some more stuff that can prove that fact but
13	in materiality and relevance.	13	JUDGE COUGHLIN: Well, yeah. We're I'm
14	JUDGE COUGHLIN: Okay. I appreciate that.	14	not
15	I wasn't considering admitting it, but, you know, for	15	MR. ERLANSON: I
16	impeachment purposes, things, really anything can be	16	JUDGE COUGHLIN: I'm not going to expand
17	used, in my view. But if it's that dated and a	17	you're welcome to
18	different river, then it's really not material to this	18	MR. ERLANSON: Right.
19	discussion or a different water body, I should say.	19	JUDGE COUGHLIN: question him about
20	So, it why don't you just let me take a look at it.	20	anything that he's testified about on his direct.
21	MR. ERLANSON: Yeah. I I don't see where	21	MR. ERLANSON: Right. Yeah, we we don't
22	he's	22	have to bring that material in.
23	JUDGE COUGHLIN: You can approach and just	23	JUDGE COUGHLIN: But I'm but I'm not
24	let me take a look at it, and I'll just make a	24	going to expand it outside of that. Okay? Here you
25	decision. It's okay. You can approach, Mr. Erlanson.	25	go.
			Deere 271
	Page 369		Page 371
1	Thank you.	1	MR. ERLANSON: But that but that is on
2	Thank you. MR. ERLANSON: I think I see where he got	2	MR. ERLANSON: But that but that is on the record then, what you just quoted?
2 3	Thank you. MR. ERLANSON: I think I see where he got the year there, but there's another year down there.	2 3	MR. ERLANSON: But that but that is on the record then, what you just quoted? JUDGE COUGHLIN: I just read. Yeah, it's in
2 3 4	Thank you. MR. ERLANSON: I think I see where he got the year there, but there's another year down there. JUDGE COUGHLIN: Okay. Let me just have a	2 3 4	MR. ERLANSON: But that but that is on the record then, what you just quoted? JUDGE COUGHLIN: I just read. Yeah, it's in the transcript. It sure is. So, the objection is
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	Page 372		Page 374
1	because Mr. Kenney's made a lot of issue about dredge	1	THE WITNESS: It seems to me to be a very
2	holes.	2	general and variable a question a general
3	JUDGE COUGHLIN: No, no. You can ask about	3	question with a lot of variable answers to that.
4	dredge holes. But with respect to temperature as	4	JUDGE COUGHLIN: Okay. So, is that a "no"?
5	being one of the	5	THE WITNESS: No.
6	MR. ERLANSON: Well, that's the dredge	6	JUDGE COUGHLIN: Okay. All right. I'll
7	holes and the temperature are 100 percent relevant.	7	sustain the objection. Go ahead and ask another
8	JUDGE COUGHLIN: Okay. Yeah, it's	8	question, though, Mr. Erlanson.
9	MR. ERLANSON: They they	9	MR. ERLANSON: Okay.
10	JUDGE COUGHLIN: not so much	10	BY MR. ERLANSON:
11	MR. ERLANSON: They correlate.	11	Q Okay. You mentioned about the silt and fine
12	JUDGE COUGHLIN: a relevancy thing.	12	sediments impacting the fishery. Do you have any
13	MR. ERLANSON: You know	13	proof or can you give any testimony to the fact that
14	JUDGE COUGHLIN: Scope is really what	14	of how many spawning beds of any ESA-listed species
15	that's getting at is, your opportunity to ask	15	were located since 2001 to the present time between
16	questions of this witness is limited to the testimony	16	Crooked River and Newsome Spring, the confluence on
17	he's provided on direct as	17	the South Fork of Clearwater River?
18	MR. ERLANSON: That's	18	A Spawning beds of ESA-listed species?
19	JUDGE COUGHLIN: opposed to bringing up	19	Q Of of of bull trout, of the fall run
20	something new that he hasn't testified about. That's	20	of Chinook salmon, the spring run of Chinook Salmon or
21	what he means by scope, and technically that is	21	the steelhead.
22	correct. I'm trying to provide you with some latitude	22	A I have seen some estimates on fall Chinook
23	because you are representing yourself, and so, I'm not	23	salmon but not of the other.
24	being maybe as strict as I would be if you were	24	Q Okay. I have a I have a map here. Just
25	represented by counsel. That said, he's already	25	you guys can take a look and there's a whole
	Page 373		Page 375
1			
_	responded that that's not that with regard to	1	(Away from microphone.)
2	responded that that's not that with regard to temperature, that's not necessarily within his area of	1 2	(Away from microphone.) O This was part of a
2 3	temperature, that's not necessarily within his area of		Q This was part of a
	temperature, that's not necessarily within his area of expertise. So, I think continuing down that line is	2	· · · · · · · · · · · · · · · · · · ·
3	temperature, that's not necessarily within his area of	2 3	Q This was part of a JUDGE COUGHLIN: Okay. Hold on just a second. Hold on. Mr. Erlanson, we're not we're
3 4	temperature, that's not necessarily within his area of expertise. So, I think continuing down that line is not going to lead to much that's fruitful. But if you	2 3 4	Q This was part of a JUDGE COUGHLIN: Okay. Hold on just a
3 4 5	temperature, that's not necessarily within his area of expertise. So, I think continuing down that line is not going to lead to much that's fruitful. But if you want to ask a follow-up, you can, and you're certainly	2 3 4 5	Q This was part of a JUDGE COUGHLIN: Okay. Hold on just a second. Hold on. Mr. Erlanson, we're not we're not introducing new exhibits. So
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3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	 temperature, that's not necessarily within his area of expertise. So, I think continuing down that line is not going to lead to much that's fruitful. But if you want to ask a follow-up, you can, and you're certainly welcome to ask more questions about what he has testified about. MR. ERLANSON: Well, he's testified JUDGE COUGHLIN: Just go ahead and ask. MR. ERLANSON: Yeah. JUDGE COUGHLIN: That's my ruling. BY MR. ERLANSON: Q You've testified about the holes in the stream. Considering the fact that we talked about the water temperature and the 303D impairment, I understand that that's not your area of expertise. But I think anybody in this courtroom that's ever went swimming, would it be correct to say, Mr. Kenney, that the deeper you go into water, the cooler the water becomes? MR. MOORE: Just continue my objection. JUDGE COUGHLIN: Okay. I'm just going to ask a preliminary question. Are you do you feel 	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Q This was part of a JUDGE COUGHLIN: Okay. Hold on just a second. Hold on. Mr. Erlanson, we're not we're not introducing new exhibits. So MR. ERLANSON: Oh. JUDGE COUGHLIN: I'm not sure what you're pulling out a new document about. MR. ERLANSON: Well, I just I just wanted to prove JUDGE COUGHLIN: Just ask the question. MR. ERLANSON: Okay. JUDGE COUGHLIN: As I've said now a couple of times, nothing new is coming into the record. MR. ERLANSON: Okay. JUDGE COUGHLIN: So, aside from some of the earlier Respondent exhibits that were included in the pre-hearing exchange, those are certainly available to you, but nothing new. MR. ERLANSON: Okay. JUDGE COUGHLIN: So, just ask questions at this point. BY MR. ERLANSON:

	Page 376		Page 378
1	-	1	
1 2	confluence and Newsome Creek confluence?	1	MR. MOORE: Objection. I think that's asked
	A No. Bull trout are not a main stem spawning	2	and answered. JUDGE COUGHLIN: I think so but I'm not sure
3 4	species. They spawn Q Okay.	4	
5	A in the tributaries of the South Fork.	5	because we kind of got off on a little bit of MR. ERLANSON: I'm not sure either.
6	Q Do you know of any spring Chinook spawning	6	JUDGE COUGHLIN: a definition of
7	and rearing in the South Fork Clearwater River?	7	sediment. So, I think you did answer the question.
8	A I'm aware that that has been documented.	8	But I guess just out of caution, I'll overrule the
9	yes.	9	objection. So, just ask it again and let the witness
10	Q Where?	10	respond.
11	A My understanding it's mostly up on the	11	BY MR. ERLANSON:
12	the part of the river on BLM in the Elk City Township.	12	Q Okay. Is it true that sediment is essential
13	Q So, it's not down from Crooked River down to	13	to our river systems, that that organic matter is
14	Newsome Creek?	14	important for biological integrity of navigable
15	A I said, my understanding it's mostly. I	15	rivers? That is what I'm asking you. Is that true?
16	cannot say that there's not been any spawning of	16	Is that a true statement?
17	spring Chinook in the area you mentioned.	17	JUDGE COUGHLIN: And I'm going to ask you to
18	Q Okay. How about the West Slope Cutthroat?	18	in responding to that, use your own definition that
19	Has there been any spawning in the main fork of the	19	you've just explained for the record of what sediment
20	South Fork Clearwater River between Newsome Creek and	20	is.
21	up in Crooked River?	21	THE WITNESS: Okay.
22	A West Slope Cutthroat are also tributary	22	JUDGE COUGHLIN: Okay. Because you started
23	spawners.	23	out with perhaps difference of opinion. So, just
24	O How about the steelhead trout?	24	answer based on your definition of what sediment is.
25	A I have not	25	THE WITNESS: Sediment by my definition of
	Page 377		Page 379
			2 4 9 0 7 3
1	Q Same, same area, Crooked, you know, the	1	pieces of mineral and organic material are an
1 2	Q Same, same area, Crooked, you know, the Newsome Creek.	1 2	-
			pieces of mineral and organic material are an
2	Newsome Creek.	2	pieces of mineral and organic material are an inevitable part of the South Fork system, and they are
2 3	Newsome Creek. A My understanding of steelhead trout spawning	2 3	pieces of mineral and organic material are an inevitable part of the South Fork system, and they are part of the environment that the organisms in the
2 3 4 5 6	Newsome Creek. A My understanding of steelhead trout spawning in the South Fork Clearwater River is that it is ubiquitous in the river in that but that I have not seen any direct spawning counts or that sort of thing.	2 3 4 5 6	pieces of mineral and organic material are an inevitable part of the South Fork system, and they are part of the environment that the organisms in the South Fork have evolved and adapted to. BY MR. ERLANSON: Q Okay. Thank you. Would you agree that
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	D 200		5 200
	Page 380		Page 382
1	direct testimony, but I think it's worth clarifying.	1	14th.
2	Can you describe what's depicted in the bottom two	2	Q And what number did you assign it?
3	photographs of this page?	3	A 15 I'm sorry. The the page?
4	A Yes. The bottom left photo is one that I	4	Q What number did you assign that dredge pile?
5	took from the Hughes report taken on July 22nd of	5	A Oh, I'm sorry. I assigned my crew
6	2015, and according to the Hughes report it shows Mr.	6	assigned that as Tailings Pile Number 7, and the hole
7	Erlanson in his dredge in the South Fork. The photo	7	is Hole Number 5.
8	on the right is one that my technicians took on	8	Q Can you state with any degree of confidence
9	October 8th of 2015 showing an area somewhat	9	that Hole 5 is the same as the one that Mr. Erlanson
10	downstream of the main focus of the of the	10	is photographed dredging in the Hughes report?
11	left-hand photo and at a slightly different angle.	11	A I believe based on my examination of the
12	Q Can you remind us what the stars denote in	12	photos that are in the record here and also photos
13	these photographs?	13	that were taken at the same time on October 8th and
14	A Yes. In my examination of the of Mr.	14	other photos in Mr. Hughes' report that the position
15	Hughes' photos and of the photos that my technicians	15	of the tailings pile and the hole are essentially
16	took, I was I believe able to identify the star	16	they're essentially constant or in in relation to
17	excuse me the rock that is underneath that star in	17	each other, and they on 1519 the Hole Number 5 is
18	those photos as being the same rock in the same	18	shown as just upstream of Tailings Pile Number 7.
19	location.	19	MR. MOORE: Thank you, Mr. Kenney.
20	Q In the photograph on the left can you	20	JUDGE COUGHLIN: Hold on one second. I
21	observe Mr. Erlanson creating a dredge pile?	21	think Mr. Erlanson might have an objection. I just
22	A I see someone dredging. Mr. Hughes	22	want him to finish his answer.
23	identifies that person as Mr. Erlanson.	23	MR. ERLANSON: I don't have an objection.
24	Q And can you see them creating a dredge pile	24	JUDGE COUGHLIN: Okay.
25	in that photograph?	25	MR. ERLANSON: I'd like to stipulate that
	Page 381		Daga 282
			Page 383
1	A That dredge pile?	1	-
1 2	A That dredge pile? O Yes	1	Mr. Moore's questions on Hole Number 5 and Hole Number
2	Q Yes.		Mr. Moore's questions on Hole Number 5 and Hole Number 7, that that's me in that hole, and I did start that
	Q Yes.A Yes, I can see a dredge pile that looks to	2	Mr. Moore's questions on Hole Number 5 and Hole Number 7, that that's me in that hole, and I did start that hole, and I did start the tailing piles. I'll
2 3	Q Yes.A Yes, I can see a dredge pile that looks tobe the main part of it looks to be actually two	2 3	Mr. Moore's questions on Hole Number 5 and Hole Number 7, that that's me in that hole, and I did start that hole, and I did start the tailing piles. I'll stipulate that right now.
2 3 4 5	Q Yes. A Yes, I can see a dredge pile that looks to be the main part of it looks to be actually two towards the wooded shoreline of the discharge of the	2 3 4	Mr. Moore's questions on Hole Number 5 and Hole Number 7, that that's me in that hole, and I did start that hole, and I did start the tailing piles. I'll stipulate that right now. JUDGE COUGHLIN: Okay.
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	Page 384		Page 386
1	conclusions on the impacts caused by Mr. Erlanson?	1	_
1	· ·		mitigation measures, best management practices, the
2	A No, not to form some conclusions anyway.	2	best management practices, that sort of thing. But
3	Q And can you tell whether the features in	3	they're they're all intended to be activities that
4	your reports were created in 2015?	4	would tend to reduce some effect or another of a
5	A The dredge piles could you repeat that,	5	particular of a of a desired activity.
6	please?	6	Q And in your opinion, did Mr. Erlanson comply
7	Q Yes. Have you concluded that the features that you analyzed in your 2015 report were created in	7	with the mitigation measures in the BA?
8 9	2015?	8	A He may have complied with some that he felt were best management excuse me mitigation
10		10	measures, but I don't I cant' say I we we
11	A Yes. In addition to Mr. Hughes taking photos and observations of dredge piles being created,	11	discussed some of the mitigation measures that were a
12	dredge holes and dredge piles being created in July,	12	part of the Biological Assessment and noted that he
13	the characteristics of a relatively fresh dredge hole	13	did not comply with with many of those, and there
14	or dredge tailings pile are distinctive. And as I've	14	were many other measures that he perhaps did or did
15	discussed in my second report, the changes that	15	not comply with.
16	occurred to those holes and piles are distinctive from	16	Q You again characterized some of your data as
17	one between if there's a high flow event especially	17	approximations. Is that characterization primarily
18	intervening.	18	based on the fact that you were using linear
19	Q Mr. Erlanson pointed out that he dredged in	19	measurements to measure things that aren't square?
20	the thalweg of the river. Can you define what	20	A Yes, that is part of it.
21	"thalweg" is?	21	Q Did you do anything to account for that?
22	A Yes. A thalweg is a term used in hydrology	22	A Yes. I adjusted the measurements, in
23	for the portion of the stream where the stream flow is	23	particular the areas by reducing the measurement, the
24	most concentrated in highest velocity, and it can vary	24	square footage by 20 percent as an approximation of
25	in a particular site depending on the the discharge	25	what it would be rounded.
	Page 385		Page 387
			rage 507
1	level of the stream.	1	Q And remind the Court when you did your first
1 2	level of the stream. JUDGE COUGHLIN: Can you can you spell	1 2	_
			Q And remind the Court when you did your first
2	JUDGE COUGHLIN: Can you can you spell	2	Q And remind the Court when you did your first post-dredge study after the dredging season in 2015.
2 3	JUDGE COUGHLIN: Can you can you spell that?	2 3	Q And remind the Court when you did your first post-dredge study after the dredging season in 2015.A That was October 7th and 8th, 2015.
2 3 4	JUDGE COUGHLIN: Can you can you spell that? THE WITNESS: Thalweg. It's a German word,	2 3 4	 Q And remind the Court when you did your first post-dredge study after the dredging season in 2015. A That was October 7th and 8th, 2015. Q And what was the date of Mr. Erlanson's
2 3 4 5	JUDGE COUGHLIN: Can you can you spell that? THE WITNESS: Thalweg. It's a German word, T-H-A-L-W-E-G.	2 3 4 5	 Q And remind the Court when you did your first post-dredge study after the dredging season in 2015. A That was October 7th and 8th, 2015. Q And what was the date of Mr. Erlanson's dredging? A The dredging that was documented by Mr. Hughes was July 22nd, 2015.
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	Page 388		Page 390
1	after dredging?	1	Q Is your definition of "sediment" the same as
2	A In my 20 in my report on the 2015	2	Mr. Erlanson's definition?
3	dredging that is based on the sampling in October of	3	A I'm I'm not sure what he meant.
4	2015 I that was the baseline for later measurements	4	Q Regardless, would you classify your
5	in 2016 and in 2018. So, I I did not make any I	5	definition of "sediment" the same as it would be
6	don't believe I made any statements other than general	6	defined in the Clean Water Act?
7	ones that that the features would suffer some	7	A As I said, I'm not that's not entirely my
8	attenuation of by high-flow events.	8	area of expertise. But when it comes to impairment of
9	Q In 2016 were the holes somewhat smaller?	9	water bodies, it is the finer sediments that are
10	A Yes, yes, it was. The hole and the the	10	considered to be impairment. So, that is not exactly
11	tailings pile were both smaller than they were in 2015	11	consistent with what I said.
12	as measured in yeah.	12	Q In your opinion, can sediment cause an
13	Q When you conducted your Biological	13	adverse impact to ESA-listed species?
14	Assessment and you were analyzing the impacts of	14	A Fine sediment can. Larger sediment
15	suction dredge mining, were you focused on permitted	15	typically is not.
16	or unpermitted suction dredge mining?	16	MR. MOORE: No further questions. Thank
17	A Permitted and not just by Forest Service but	17	you, Mr. Kenney.
18	by the EPA and the state.	18	JUDGE COUGHLIN: All right. Thank you. Mr.
19	Q Is it likely that impacts from unpermitted	19	Erlanson, any questions?
20	suction dredge mining would be greater than those of	20	MR. ERLANSON: Yeah, just a couple, Your
21	permitted suction dredge mining?	21	Honor.
22	A It is often going to be the case. Of	22	JUDGE COUGHLIN: Okay.
23	course, it depends on on what practices the	23	RECROSS EXAMINATION
24	individual miner takes.	24	BY MR. ERLANSON:
25	Q Mr. Erlanson spent some time having you	25	Q We talked about Hole Number 5 and Tailings
	Page 389		Dama 201
	2090 000	1	Page 391
1		1	
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	Page 392		Page 394
1	A I I there has been permitted dredging	1	you. That's helpful. Do are you based on your
2	on the South Fork in the years that I talked about,	2	expertise, do you feel you can weigh in on that in
3	and there has been some unpermitted dredging. I don't	3	some way?
4	know the full area of it, and I don't recall the exact	4	THE WITNESS: Yes.
5	number that it would be.	5	JUDGE COUGHLIN: Not necessarily with a
6	Q That's correct. That's fair, Mr. Kenney.	6	number per se, but just with really the the
7	Would you say in your expert opinion that a high-water	7	ultimate point which is the extent of harm that
8	event like a spring runoff contributes much more	8	suction dredging may or may not cause relative to
9	sediment, suspended solids, turbidity, rock, gravel	9	other factors regarding these threatened species.
10	displacement within a river ecosystem than a suction	10	THE WITNESS: Yes, I think I can and I think
11	dredge working	11	I I did to some extent yesterday. I explained the
12	A At what scale?	12	natural processes with high flows and sediment moving
13	Q I'm talking the whole river compared to 2	13	or sediment substrate particles moving and that
14	percent of the river. A high-water event is 100	14	occurring at a different time of year than when the
15	percent of the water level. So, would you would	15	suction dredging would occur under different
16	you consider we're talking about the ESA species	16	conditions, that the organisms that live in the South
17	and how they can survive and how it seems to me like	17	Fork are adapted to to surviving during high-flow
18	testimony has been given throughout the whole court	18	events.
19	process here where suction dredging is is is	19	For example, fish will move to the edges of
20	harmful for these fish, that they cannot survive	20	the stream to stay out of the high water. They might
21	because of or there's serious impacts about it	21	if the water's high enough, they might move into
22	about suction dredging with these ESA-listed species.	22	the trees or the bushes. So, they the organisms
23	But if a suction dredge only pertains to 2	23	that are present and have been present in the South
24	percent of the South Fork Clearwater River and a	24	Fork for millennia are adapted a rhythm that occurs in
25	high-water event contributes to 100 percent of that	25	the in the stream conditions of the South Fork.
	Page 393		Page 395
1	Page 393 Clearwater River, how do these species survive? I	1	_
1 2	-	1 2	Page 395 The typical conditions, the typical natural conditions in the summer when the dredging would occur are
	Clearwater River, how do these species survive? I	1	The typical conditions, the typical natural conditions
2	Clearwater River, how do these species survive? I	2	The typical conditions, the typical natural conditions in the summer when the dredging would occur are
2 3	Clearwater River, how do these species survive? I mean, to me, from 2 percent to 100 percent is quite a	2 3	The typical conditions, the typical natural conditions in the summer when the dredging would occur are different than those and are not something they're
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	Page 396		Page 398
1	that according to the water quality standard for the	1	EPA's general permit of 150 feet?
2	South Fork Clearwater River? I was under the	2	THE WITNESS: No. I I testified as to
3	impression it was 500 feet.	3	what was in the BA and and the there were
4	JUDGE COUGHLIN: Okay. Hold on one second.	4	mitigation measures, one that mentioned 150 feet and
5	Do you have an objection?	5	one that mentioned the 800-foot spacing between
6	MR. MOORE: I do. I don't think that this	6	dredgers.
7	subject was covered in my redirect, so it's outside	7	JUDGE COUGHLIN: Okay. Again, technically a
8	the scope.	8	sustainable objection.
9	JUDGE COUGHLIN: With regard to the length	9	MR. ERLANSON: Yeah.
10	of feet?	10	JUDGE COUGHLIN: So, I'll sustain it. But
11	MR. MOORE: I don't think that we talked	11	let me just ask you if you know where that 150 is
12	about turbidity specifically in my redirect, and we	12	derived, from what it's derived, if you know? And if
13	certainly didn't talk about water quality standards.	13	you don't, then that's fine too.
14	JUDGE COUGHLIN: Okay. Was that covered in	14	THE WITNESS: Yes, I could speak to that.
15	your direct, though?	15	JUDGE COUGHLIN: Okay.
16	MR. MOORE: Yes.	16	THE WITNESS: So, the as I previously
17	JUDGE COUGHLIN: Okay.	17	stated, there are other suction dredging areas on the
18	MR. MOORE: Not water quality standards but	18	Forest, and we have conducted consultations previously
19	turbidity, certainly.	19	on these other suction dredging areas. And to tell
20	JUDGE COUGHLIN: Okay. Yeah, I thought	20	you the truth, I inherited a set of mitigation
21	that's what I thought, too. Okay. Technically you're	21	measures that I basically kind of pasted into our BA
22	correct, but I'm going to overrule the objection just	22	when I went from consultation to consultation just for
23	to allow some questions that maybe weren't asked	23	the ease of ease of adoption and and monitoring
24	before.	24	and that sort of thing. And so, the original
25	MR. MOORE: Understood. Thank you.	25	Biological Assessments that I put together in 2013 for
	5 207		
	Page 397		Page 399
1	Page 397 JUDGE COUGHLIN: And if you know, I mean,	1	Page 399 the Moose Creek Project area and the LoLo Creek
1 2	JUDGE COUGHLIN: And if you know, I mean, if you need to follow up at all I know we typically	1 2	-
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	Page 400		Page 402
1	recollection. It's been a while since I originally	1	MR. ERLANSON: Those exhibits were entered
2	put that put that in, but I believe we have 150 feet	2	by my attorney before. So
3	in each of the one, two, three, four, five, six I'm	3	JUDGE COUGHLIN: Right.
4	sorry five Biological Assessments.	4	MR. ERLANSON: I don't see any reason why
5	JUDGE COUGHLIN: All right. Thank you. Go	5	they can't be part of the record or whatever.
6	ahead, Mr. Erlanson.	6	JUDGE COUGHLIN: Okay. So, do you and
7	BY MR. ERLANSON:	7	just to clarify whether you want to introduce them
8	Q So, is that is that a rule of the Forest	8	into evidence at this hearing as exhibits as opposed
9	Service, it's this 150 foot, is that an extra rule, or	9	to keeping them as part of the case record being
10	is it just part of a Biological Assessment?	10	mindful of the fact that my decision will only be
11	A By a rule as far as I know by a rule it	11	based on what has been produced by this evidentiary
12	is not in any sort of, you know, Code of Federal	12	hearing. So, the witnesses that testified
13	Regulations or any Forest Service handbook or anything	13	MR. ERLANSON: Sure.
14	like that. It is specific as far as I know to this	14	JUDGE COUGHLIN: the exhibits that are
15	Forest and the processes that we've done as far as	15	admitted into evidence as opposed to what's contained
16	consultation over the years.	16	elsewhere in the larger case record.
17	MR. ERLANSON: Okay. Thank you, Mr. Kenney.	17	MR. ERLANSON: I think they can be admitted
18	I'm I'm I'm fine with it. I'm done.	18	into evidence. I mean, I they were admitted
19	JUDGE COUGHLIN: Okay. No more questions?	19	before. I mean, I was I'm just
20	MR. ERLANSON: No more questions, yeah.	20	JUDGE COUGHLIN: Well, yeah, it's it's a
21	JUDGE COUGHLIN: Did that raise anything you	21	legal distinction. Your attorney provided them as
22	needed to delve into, Mr. Moore?	22	MR. ERLANSON: Okay.
23	MR. MOORE: I don't think so, Your Honor.	23	JUDGE COUGHLIN: part of the Respondent's
24	Thank you.	24	pre-hearing exchange.
25	JUDGE COUGHLIN: All right. Okay. Mr.	25	MR. ERLANSON: Okay.
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	rage ior		Page 403
1	-	1	2
1 2	Kenney, thank you very much for your testimony. THE WITNESS: You're welcome.	1	JUDGE COUGHLIN: And so, they're they've
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	Page 404		Page 406
1	much weight. But you you can still offer them in.	1	understand. That's fine.
2	MR. ERLANSON: Go ahead.	2	MR. McLAREN: Perfect.
3	MR. McLAREN: If I may if Mr. Erlanson	3	JUDGE COUGHLIN: Okay. Well, so why don't
4	would like to admit those, I I believe 2 and then 4	4	we do this? Let's take a break.
5	through 9, EPA is probably comfortable with that so	5	MR. McLAREN: Certainly.
6	long as we can admit one other item from the record.	6	JUDGE COUGHLIN: Do you have a copy of of
7	It had been previously exchanged. It's something with	7	those exhibits?
8	which Respondent's familiar. So, I'm fine with that	8	MR. McLAREN: We do. I have a copy right
9	sort of exchange.	9	here. So and we have several copies.
10	JUDGE COUGHLIN: Okay.	10	JUDGE COUGHLIN: So, you're good with we
11	MR. McLAREN: I'm a little bit less	11	don't I mean, you didn't bring copies. So, I'm
12	comfortable if it's Mr. Erlanson just proposing all of	12	again trying to provide some leniency here. Are you
13	these exhibits to be introduced without any context	13	comfortable working off of the copies you have? We're
14	authentication, et cetera. So, if if we are	14	all going to be doing that, I think. So
15	considering previously entered items in the record,	15	MR. McLAREN: That's right. I I believe
16	there's just one other item we'd like to add on top of	16	we're comfortable for the purposes of my own issues.
17	that.	17	I'll go over all the exhibits one more time just to
18	JUDGE COUGHLIN: Okay.	18	make sure I'm not leaving anything out.
19	MR. McLAREN: And that	19	JUDGE COUGHLIN: Sure.
20	JUDGE COUGHLIN: I'm not yeah, I'm not	20	MR. McLAREN: And then towards the end of
21	sure I'm I understand whether you object. I mean,	21	this once we reach the end of our testimony, I'll say
22	obviously there are going to be authentication	22	finally, yes, we're comfortable this coming in.
23	there's going to be a the extent to which I can	23	JUDGE COUGHLIN: Totally fine.
24	afford weight.	24	MR. McLAREN: Thank you, Your Honor.
25	MR. McLAREN: Certainly.	25	JUDGE COUGHLIN: Do you want a little more
	Page 405		$P_{2} \propto 107$
			Page 407
1	JUDGE COUGHLIN: But I'm also mindful of the	1	time than a five-minute break, just so you're not I
2	fact, I think, that in Complainant's rebuttal	2	time than a five-minute break, just so you're not I don't want you to have to multitask while people are
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2 3 4	fact, I think, that in Complainant's rebuttal pre-hearing exchange there were some references to some of the Respondent's exhibits.	2 3 4	time than a five-minute break, just so you're not I don't want you to have to multitask while people are testifying. MR. McLAREN: We'll probably break for lunch
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	Page 408		Page 410
1	JUDGE COUGHLIN: But I'm just trying to be	1	A I've been asked to testify of the adverse
2	as lenient as possible to everybody.	2	impacts of the suction dredge on July 22nd, 2015 from
3	MR. McLAREN: Thank you, Your Honor.	3	Mr. Erlanson.
4	JUDGE COUGHLIN: All right. I'll see y'all	4	Q And have you reviewed any documents in
5	back in about 20 minutes then.	5	reaching your expert opinion?
6	MR. McLAREN: Thank you.	6	A Yes, many.
7	JUDGE COUGHLIN: All right. Thank you.	7	Q Can you generally describe the kinds of
8	MR. ERLANSON: Thank you.	8	documents that you reviewed?
9	(Whereupon, a brief recess was taken.)	9	A Well, the exhibits and then dozens of of
10	JUDGE COUGHLIN: Okay. We're back on the	10	primary literature on scientific literature, on
11	record. It's a little bit more than 20 minutes but	11	sediment, sedimentation, turbidity, at those types of
12	close. And I I know we're going to pick up with	12	things.
13	the last witness, but do you want to deal with the	13	Q Excellent. And can you briefly summarize
14	exhibits now? Would you prefer to do it later?	14	your conclusions on the topics that you've been asked
15	MR. McLAREN: I'd prefer to do it at the end	15	to testify?
16	of this case.	16	A That suction dredging causes adverse
17	JUDGE COUGHLIN: Sure. Do you if you	17	effects, and that this incident is a typical suction
18	need more time at any stage, just let me know.	18	dredging type of activity that would cause those
19	MR. McLAREN: I will.	19	effects, and they would affect the water column, the
20	JUDGE COUGHLIN: Okay. All right. Very	20	substrate, and there would be direct effects, also.
21	good.	21	(The document referred to was
22	MR. McLAREN: Thank you, Your Honor.	22	marked for identification as
23	JUDGE COUGHLIN: Sure. So, your next	23	Complainant's Exhibit No.
24	witness.	24	33.)
25	MR. MOORE: EPA Calls David Arthaud.	25	//
	Page 409		Page 411
1	JUDGE COUGHLIN: And can you the	1	BY MR. MOORE:
2	JUDGE COUGHLIN: And can you the pronunciation again on the last name.	2	BY MR. MOORE: Q Because EPA's offering you as an expert
2 3	JUDGE COUGHLIN: And can you the pronunciation again on the last name. MR. MOORE: Arthaud.	2 3	BY MR. MOORE: Q Because EPA's offering you as an expert witness, I'm going to discuss some of your
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2 3 4 5 6	JUDGE COUGHLIN: And can you the pronunciation again on the last name. MR. MOORE: Arthaud. JUDGE COUGHLIN: Arthaud? Okay. Great. Thank you. Whereupon,	2 3 4 5 6	BY MR. MOORE: Q Because EPA's offering you as an expert witness, I'm going to discuss some of your qualifications. In doing so, I'll turn you to Complainant's Exhibit 33. (Pause.)
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Page 412	Page 414
1 management.	1 (The document referred to was
2 Q And can you describe the types of courses	2 marked for identification as
3 that you took in obtaining that degree?	3 Complainant's Exhibit No.
4 A Ichthyology, geology, ornithology,	4 16.)
5 mammalogy, ecology.	5 BY MR. MOORE:
6 Q And in what year did you graduate?	6 Q I'll turn you to Complainant's Exhibit 16
7 A 1989.	7 now.
8 Q Did you go on to do any post-graduate	8 A Okay.
9 education?	9 Q Do you recognize this document?
10 A Yes, I did. I went to the University of	10 A Yes. It's a letter of concurrence for EPA's
11 Idaho.	small suction dredging general permit for the State of
12 Q And what degree did you obtain there?	12 Idaho.
13 A Master of Science and Fishery Resources.	13 Q And what was your role in creating this
14 Q In what year?	14 document?
15 A 1992.	15 A I led the consultation and drafted this
16 Q Can you describe the types of courses that	16 letter.
17 you took in obtaining that degree?	17 MR. MOORE: EPA moves to admit Complainant's
18 A Ecology of aquatic invertebrates, ecology of	18 Exhibit 16 into evidence.
19 water pollution, advanced fisheries management, fish	19 JUDGE COUGHLIN: Any objection, Mr.
20 physiology.	20 Erlanson?
21 Q You mentioned that you currently serve as a	21 MR. ERLANSON: No. No, Your Honor.
22 Fisheries biologist for NMFS. How long have you been	22 JUDGE COUGHLIN: Okay. CX-16 is admitted.
23 in your current role?	23 //
A Nineteen years.	24 //
25 Q And what are your duties in that role?	25 //
 Page 413	 Page 415
1 A Primarily to Section to consult with	1 (The document referred to,
2 action agencies, Section 7 of the Endangered Species	2 previously identified as
Act, if wherever those activities might harm fish,	3 Complainant's Exhibit No. 16,
4 cause adverse effects on fish listed species.	4 was received in evidence.)
5 Q And in that consultation process are there	5 (The document referred to was
6 documents that you draft?	6 marked for identification as
7 A Yes.	7 Complainant's Exhibit No.
8 Q What are those documents?	8 17.)
9 A There's usually two letter of concurrence	9 BY MR. MOORE:
10 and biological opinions.	10 Q I'll have you turn now to Complainant's
11 Q And in your current role how many biological	11 Exhibit 17.
12 opinions have you authored?	12 A Okay.
13 A Fifteen about.	13 Q Do you recognize this document?
14 Q And of those how many involved your analysis	14 A Yes, I do.
15 of impacts on salmonids?	15 Q What is it?
16 A All of them.	16 A This is the Biological opinion and Magnuson
17 Q In your current role with NMFS, has your	17 Stevens Fishery Conservation Management Act on
18 work ever related to the South Fork of the Clearwater	18 essential fish habitat response for the South Fork
19 River?	19 Clearwater Small Suction Dredging Program.
20 A Yes.	20 Q And did you have a role in creating this
21 Q In what way?	21 document?
A I worked on the suction dredging program	22 A Yes. I led the consultation and wrote the
23 with Forest Service and BLM. I've worked on mining	23 bi-op .
24 restoration projects and technical assistance for	24 MR. MOORE: EPA moves to admit Complainant's
25 stream flow and other things.	25 Exhibit 17 into evidence.

	Page 416		Page 418
1	JUDGE COUGHLIN: Any objection, Mr.	1	consultation.
2	Erlanson?	2	Q Have you ever published any scientific
3	MR. ERLANSON: No, Your Honor.	3	papers on the topics that you're testifying on today?
4	JUDGE COUGHLIN: Okay. CX-17 is admitted.	4	A I have. Two.
5	(The document referred to,	5	Q And generally what were the what were the
6	previously identified as	6	topics of those papers?
7	Complainant's Exhibit No. 17,	7	A The first one was on aid to juvenile
8	was received in evidence.)	8	survival primarily related to stream flow and early
9	BY MR. MOORE:	9	rearing habitats in the Lemhi River, and then it also
10	Q Mr. Arthaud, I'm sorry to jump around, but	10	related that survival to the whole life cycle of the
11	I'll turn you back to your resume, Complainant's	11	salmon. So, we were able to look at the returning
12	Exhibit 34.	12	adults also.
13	JUDGE COUGHLIN: Thirty-four or 33?	13	MR. MOORE: At this point, Your Honor, I'll
14	MR. MOORE: I'm sorry. Thirty-three.	14	tender this witness as an expert specifically in
15	You're correct.	15	ESA-listed species in the South Fork Clearwater River
16	JUDGE COUGHLIN: Okay.	16	and the impacts of suction dredging on those species.
17	THE WITNESS: Okay.	17	JUDGE COUGHLIN: Okay. And Mr. Erlanson, do
18	BY MR. MOORE:	18	you have any objection to that?
19	Q Can you briefly describe the position that	19	MR. ERLANSON: No, Your Honor.
20	you held immediately prior to your current position?	20	JUDGE COUGHLIN: Okay. So deemed.
20	A Yes. It was Fisheries biologist also	21	BY MR. MOORE:
21	working for NMFS but on the California Coastal Team in	22	Q Mr. Arthaud, can you turn to Complainant's
22	1998 and '99.	23	Exhibit 17?
23		23	A Okay.
24	Q And what were your general responsibilities in that role?	24	-
25	in that role?	23	Q And I believe you already testified that
	Page 417		Page 419
1	A Very similar. Section 7 consultations under	1	this document is the biological opinion that you
2	the SA and technical assistant through various	2	authored regarding small scale suction dredging on the
3	projects with state and other federal agencies.	3	South Fork Clearwater River. Is that right?
4	Q And before your role with NMFS and Santa	4	A Yes.
5	Rosa, what was your job before that?	5	Q What's the what's the purpose of drafting
6	A I worked for the Shoshone Bannock tribe in	6	this document?
7	Fort Hall, Idaho. I was Anadromous Fisheries	7	A The purpose of this document is to summarize
8	biologist.	8	the existing science and knowledge on an issue that
9	Q And can you describe your duties in that	9	could have adverse effects to fish and to provide our
10	role?	10	opinion on it and offer ways to mitigate the harms,
11	A I managed anadromous fisheries for the	11	the potential harms and adversity and those usually
12	tribes and habitat restoration throughout the Columbia	12	fall under terms and conditions in the monitoring
13	Basin. And also I was there from from let me	13	plant.
14	think from 1998 back to '96.	14	Q What year was the biological opinion
15	Q And before 1996 what was your job?	15	completed?
16	A I worked for the as a resident Fisheries	16	A 2016.
17	biologist for the Shoshone Bannock tribes in Fort	17	Q And to be clear, in 2015 was suction dredge
18	Hall, managing wild trout fisheries on the Fort Hall	18	mining allowed in the South Fork Clearwater River?
19	bottoms and restoring habitat.	19	A No.
20	Q And have you ever received any awards that	20	Q Why not?
20	commended your service in the various roles that you	20	A Because the general permit that we already
22	mentioned?	22	looked at from EPA excluded it without a Land
23	A Yes, I did. I received the Bronze Medal	23	Management Agency's ESA consultation for that area.
20		1	Throughout the rest of the Idaho was okay but not in
24	award from N() A A in 2003 for leading a team of		
24 25	award from NOAA in 2003 for leading a team of scientists on the Potlatch Mill biological opinion and	24 25	the Clearwater.

	Page 420		Page 422
1	Q Please turn to Page 995 of the same exhibit.	1	designated endangered species critical habitat?
2	Are you there?	2	A Yes. The entire main stem and most of the
3	A No.	3	links of most tributaries have been designated for
4	Q Sorry.	4	Snake River Basin steelhead. Most tributaries have
5	A Okay.	5	been designated for Snake River Basin steelhead as
6	Q At the bottom of the page, Section 2.2 is	6	critical habitat.
7	titled "Range Wide Status of the Species and Critical	7	Q And why is that?
8	Habitat." In general, what topics are discussed in	8	A Because they need those areas to maintain
9	this section of the bi-op.	9	the population numbers that they're at, and those
10	A In this section first it looks at the status	10	areas are also needed for their recovery.
11	of the species. It relates current numbers and trends	11	Q And, generally, can you explain the current
12	to historic populations, and it also looks at the	12	status of critical habitat in the South Fork?
13	status of critical habitat related to past conditions.	13	A It is degraded. It varies. Most people
14	Q Can you please explain which endangered	14	I would call it fair overall and that's it.
15	species inhabit the South Fork?	15	Q Thank you. I'll turn you to Page 1007 now.
16	A The fall Chinook salmon inhabit at least the	16	A Okay.
17	lower portions for spawning, and they may invade well	17	Q There's a table on this page that lists
18	up into the system. Snake River Basin, steelhead, and	18	factors that limit critical habitat in the South Fork.
19	also Fish and Wildlife Service has bull trout listed.	19	Can you go through each of these factors explaining
20	Q Briefly describe how do each of those	20	why they're limiting?
21	species use the South Fork?	21	A Yes. The riparian and flood plume
22	A The Snake River fall Chinook salmon move up	22	conditions are poor, and they are mostly the result of
23	from downstream areas and spawn in the lower main stem	23	additional sediment that has come into the channel
24	of the South Fork, and then their juveniles spread out	24	which also affects the riparian vegetation, and
25	and rear throughout the main stem and then migrate out	25	there's a constriction by the Highway 14 that runs the
	Page 421		Page 423
1	within a year or two towards the ocean and then	1	length of the South Fork main stem. So, the flood
2	return. Snake River Basin steelhead spawn and rear	2	plain has been narrowed.
3	throughout the South Fork and its tributaries, main	3	Q And so, I think you described why the
4	stream and tributaries, and then they migrate out and	4	riparian and flood plain condition is a limiting
5	return as adults. And then bull trout, they're mostly	5	factor. Can you explain why temperature is a limiting
6	in tributaries, but they also use the main stem South	6	factor?
7	Fork during the winter and at other times.	7	A Yes. Temperature is another limiting
8	Q And can you describe what the current status	8	factor. It is for from a reduction of of
9	of these species, of these ESA-listed species, is in	9	vegetative shade is one aspect. But the main reason
10	the South Fork?	10	for temperature being a problem in the South Fork is
	A All three of these are threatened.	1 1 1	41.44.14.1.4.1.1.1.4.1.4.4.4.4.4.4.4.4.
11	A All unce of these are uncatened.	11	that it has high volumes of sand in its channel bed,
11 12	Q And help us understand their general	11	and so, the habitat's simplified and there's not as
12	Q And help us understand their general	12	and so, the habitat's simplified and there's not as
12 13	Q And help us understand their general population trends.	12 13	and so, the habitat's simplified and there's not as much shade from complex habitat.
12 13 14	Q And help us understand their general population trends.A Well, I should say they're threatened with	12 13 14	and so, the habitat's simplified and there's not as much shade from complex habitat. Q And the next limiting factor listed is
12 13 14 15	Q And help us understand their general population trends.A Well, I should say they're threatened with risk of extinction, and the general population trends	12 13 14 15	and so, the habitat's simplified and there's not asmuch shade from complex habitat.Q And the next limiting factor listed ismigration barrier. Why is that a limiting factor?
12 13 14 15 16	 Q And help us understand their general population trends. A Well, I should say they're threatened with risk of extinction, and the general population trends for Snake River Basin steelhead are well, both, 	12 13 14 15 16	and so, the habitat's simplified and there's not as much shade from complex habitat.Q And the next limiting factor listed is migration barrier. Why is that a limiting factor?A Because of heavy eroding in the basin.
12 13 14 15 16 17	 Q And help us understand their general population trends. A Well, I should say they're threatened with risk of extinction, and the general population trends for Snake River Basin steelhead are well, both, also fall Chinook, their range has been constricted 	12 13 14 15 16 17	 and so, the habitat's simplified and there's not as much shade from complex habitat. Q And the next limiting factor listed is migration barrier. Why is that a limiting factor? A Because of heavy eroding in the basin. There are many culverts and small bridges and
12 13 14 15 16 17 18	 Q And help us understand their general population trends. A Well, I should say they're threatened with risk of extinction, and the general population trends for Snake River Basin steelhead are well, both, also fall Chinook, their range has been constricted and their abundance has declined greatly from 	12 13 14 15 16 17 18	 and so, the habitat's simplified and there's not as much shade from complex habitat. Q And the next limiting factor listed is migration barrier. Why is that a limiting factor? A Because of heavy eroding in the basin. There are many culverts and small bridges and difficult passage areas, and so, that's part of it.
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12 13 14 15 16 17 18 19 20 21 22	 Q And help us understand their general population trends. A Well, I should say they're threatened with risk of extinction, and the general population trends for Snake River Basin steelhead are well, both, also fall Chinook, their range has been constricted and their abundance has declined greatly from previous. Q Thank you. I'll have you turn to Page 1004 of the same exhibit. A Okay. 	12 13 14 15 16 17 18 19 20 21 22	 and so, the habitat's simplified and there's not as much shade from complex habitat. Q And the next limiting factor listed is migration barrier. Why is that a limiting factor? A Because of heavy eroding in the basin. There are many culverts and small bridges and difficult passage areas, and so, that's part of it. And another part of it is when a channel has high bed loads of sand in it, it it causes all those conditions to be exacerbated. It's harder to keep passage open.
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	Page 424		Page 426
1	is it reduces survival greatly for rearing and	1	Q Is any portion of the South Fork considered
2	spawning. Like incubating eggs can be reduced 16	2	essential fish habitat?
3	percent survival by a 1 percent increase in fine	3	A Yes, it is. The entire South Fork watershed
4	sediment and the same way with early juvenile rearing.	4	is EFH for Coho salmon and spring-summer Chinook
5	They need to have interstitial spaces under the	5	salmon and fall Snake River fall Chinook salmon.
6	cobbles that we've been discussing, and sediment fills	6	Q Why is it classified as such?
7	those fine sediments fills those cobbles and	7	A Because it is essential for their
8	simplifies the area and removes their habitat.	8	productivity and survival.
9	Q Does the table suggest that there's a high	9	Q Thank you. Sir, I want to turn now to talk
10	amount of sediment existing in the South Fork	10	about the impacts of suction dredging generally. In
11	Clearwater River?	11	your opinion, does suction dredge mining cause adverse
12	A It does. It's excess sediments throughout	12	environmental impacts in the South Fork Clearwater
13	most of these limiting factors that contribute to	13	River?
14	them. And the very last one, habitat complexity, when	14	A Yes.
15	you get a lot of sand and fine sediment in a channel,	15	Q To break that down I want to talk about the
16	it fills the pools up and embeds the cobbles. There's	16	kinds of adverse impacts it might cause. Does suction
17	sand around all the rocks or under them, and it makes	17	dredging cause direct disturbances to the river's
18	the the channel simplified. It simplifies it.	18	substrate?
19	It's wherever you look, you have high embedded habitat	19	A It does.
20	with sand.	20	Q How does it do that?
21	Q And briefly I'll turn you back to sediment.	21	A First it's a it's an activity that recurs
22	Why why does the South Fork have a high amount of	22	repeatedly, and it often involves heavy weights like
23	sediment?	23	the dredge maybe dragged across substrates and gravels
24	A It it has a high amount of sediment from	24	than in contained aquatic invertebrates and even
25	legacy mining, placer mining that has occurred in the	25	small fish or eggs, and the dredge miner will roll
	Page 425		Page 427
1	past and that has taken 50 to 100 years to begin to	1	large boulders out of the area. Any rock larger than
2	recover. And there's also large timber harvest in	2	five inches and smaller too probably but will need to
3	uplands and additional roads, high densities of roads,	3	removed from that area so it won't clog the suction
4	and all those devolvements and activities tend to	4	dredge as he's as he's digging.
5	produce sediment, fine sediment.	5	And then there's the direct effect of the
6	Q Can you turn to Page 1036 of the same	6	hole. That was functioning habitat with an armor
7	document.	7	layer placed by high flows during the spring
8	A Okay.	8	naturally, and they dig through that and then take
9	Q So, the section on this page is entitled	9	that slurry of mixed cobbles and stones and sand and
10	"The Magnuson Stevens Fisheries Conservation and	10	then drop onto they raise it up above the water and
11	Management Act Essential Fish Habitat Consultation."	11	then drop it onto other habitats that are functioning,
12	Can you explain the obligation of federal agencies	12	and that causes crushing of invertebrates and small
13	under the MSA?	13	fish. It's a burial and suffocation from the clogging
14	A Under this act the MSA federal agencies are	14	of interstitial spaces when that happens.
15	required to consult with NMFS if their activities are	15	Q So you talked about this a little bit in
16 17	likely to adversely affect essential fish habitat.	16	your response to my last question. But so, in
	Q What's essential fish habitat?A EFH is the the sum of habitat and all its	17 18	addition to changes to the river substrate, does
18 19	A EFH is the the sum of habitat and all its components that are needed to produce strong	18	suction dredging cause direct disturbances to the organisms that are in the area?
20	populations of these salmonids which are commercial	20	A Yes, I did cover that a little bit. It
20	highly valued commercial fisheries, and those	20	it it can can cover them, bury them, crush them,
21	components of habitat are the riverbed, the substrate,	22	disturb and remove their habitat to displace them.
23	the channel shape and form, the riparian vegetation,	23	Where they lived is no longer, that type of thing
24	passage, the sum of the mostly the limiting factors	24	directly.
25	that we just read.	25	Q Are you aware of any scientific studies that
	that we just read.		

	Page 428		Page 430
1	have looked at the direct disturbances that suction	1	behavioral impacts of, more fish will leave the plume
2	dredging might cause?	2	and fish that do stay in it may are more likely to
3	A Yes.	3	exhibit coughing and, you know, mucous of the gills
4	Q And generally what are the results?	4	just like we would if we were breathing in sand.
5	A Generally the results are that it's highly	5	Q Would you classify most of those as
6	lethal to eggs and the very young embryos, larval	6	sublethal impacts?
7		1	-
	fish, higher rates of mortality for them. And then	7	A Yes, at that level, yes.
8	it's it's also lethal to younger stages of aquatic	8	Q Can turbidity cause lethal impacts?
9	invertebrates like first instars and the very young	9	A It can. Usually, that's around 100 NTUs.
10	larvae.	10	Q Does suction dredge mining also cause
11	Q Thank you. Does suction dredging also cause	11	sedimentation?
12	the suspension of sediments?	12	A Yes, it does.
13	A Yes, it does.	13	Q And what's the difference between
14	Q And how does it do that?	14	sedimentation and the suspension of sediments?
15	A It as the hole is being excavated where	15	A Suspended sediments are just that. They're
16	the miner's trying to access bedrock in places under	16	suspended in the water column or in water beneath the
17	the stream where he might think there's gold, those	17	water column in the substrates, flowing through the
18	mixed cobbles and sands and fines are lifted up and	18	substrates, but they're still suspended in water.
19	then dropped down out of run through the sluice and	19	Sedimentation is when they fall out of suspension and
20	dropped off the end of the dredge. And some of the	20	lay on cobbles or fill up interstitial spaces and
21	tailings stay right there because they're larger,	21	stop.
22	heavier, dense, and the finer particles are caught by	22	Q So does sedimentation impact mollusks or
23	the current and and do not fall out of suspension	23	invertebrates in the area?
24	immediately and form a plume or cloudy turbidity plume	24	A Yes. Some of the species of mollusks and
25	below the dredge.	25	snails are highly sensitive to it, and the literature
	Page 429		Page 431
1	Q So, does this suspension of sediments cause	1	shows that even a depth of one inch will cause
2	behavioral changes in organisms nearby?	2	mortality, and some of the mussels cannot even get out
3	A It does. Some aquatic invertebrates, often	3	of that.
4	the preferred food of salmonids and salmonids	4	Q Does sedimentation also impact plant life in
5	themselves are highly sensitive to suspended solids	5	the river?
6	and suspended grains of sand. Also, algae can be	6	A Yes, it does. First off, the cloudiness
7	affected by it also.	7	shades algae. In a flowing stream like this, there's
8	Q Focusing just on behavioral changes for the	8	not vascular plants growing up out from roots. The
9	moment, at what level of turbidity do you start to see	9	plants that are here are called diatoms, which are
10	behavioral changes?	10	algae, and they cling to rocks very tightly along the
11	A They can they can occur at very low	11	cobbles. And so the turbidity shades their
12	levels of turbidity depending on the fish and the	12	photosynthesis, reduces their primary production and
13	situation, but I usually consider maybe 20 NTUs as a	13	growth.
14	threshold for more serious displacement and behavioral	14	Q And so how does this impact to mollusks and
15	changes by fish.	15	invertebrates in plant life, how does that impact
16	Q For those of us that don't know what's	16	other species in the area?
17	what are NTUs?	17	A Well, I should also mention that for algae
18	A Nephelometric Turbidity Units are it's a	18	that it also covers it and buries that and causes, you
19	machine that measures the light refraction through	19	know, increased or reduced more reductions in
20	water and particles that are in it. It's it's just	20	production. Could you repeat the question?
20	a it's a measure of turbidity.	20	Q Yeah. No, thank you. You clarified a
21	Q Can the suspension of sediments also cause	22	previous answer. But how do these impacts to
22	physiological impacts?	23	invertebrates and plant life, how do those impacts to
23	A It can. As you as turbidity gets above	23	other species, like ESA-listed species in the area?
	1 It can. As you as turbuity gets above	L 4 1	other species, like ESA-listed species in the area:
24	20 NTUs and approaches 50, there's increasing intense	25	A Yeah. So, to think in a ecosystem or a food

	Page 432		Page 434
1	web, if you affect the primary producers and slow	1	A Yes.
2	growth of that photosynthesis, then the vertebrates	2	Q Do you agree with her assessment that
3	that graze on the algae will have reduced abundance in	3	sediment is not toxic always?
4	growth, and the invertebrates that feed on those	4	A I agree that, typically, it's inert sands
5	invertebrates will also be reduced, and it works its	5	and silica and various other minerals, but it also
6	way up the food chain to fish.	6	includes heavy metals, which she did say that it was,
7	Q Does sedimentation impact the habitat of	7	sediment was a surrogate. The amount of sediment was
8	ESA-listed species?	8	a surrogate for how many of the sometimes highly toxic
9	A Yes.	9	heavy metals are included within it. And then also it
10	Q What types of habitat might it impact?	10	should be noted that almost anything taken to large
11	A The most intensive effects that it has, the	11	degree or large doses can be toxic.
12	primary effects is to incubating eggs. They're	12	Q What are fluvial geomorphic impacts?
13	underneath the gravel in substrates, placed in a nest	13	A Well, "fluvial" means running water and
14	by adults, and they're dependent upon the hyporheic	14	"geomorphic" is related to the types and the state and
14	flow or the subsurface flow that's actually flowing	14	the shape and all the properties of the channel and
		16	the substrate and even the bedrock under the stream,
16	horizontally underneath the flow of the stream		
17	underground, and that's all the eggs have for	17	and the valley that it flows through even is part of
18	aeriation, for oxygen and fine sediment. It reduces a	18	it.
19	diffusion across the membranes for the eggs to even	19	Q And does suction dredging cause fluvial
20	breathe oxygen. So it tends to reduce growth and	20	geomorphic impacts?
21	reduce survival of eggs.	21	A Yes, it does. It digs right into the
22	Q And so is that impact specific to spawning	22	geomorphology of the stream. It digs holes, excavates
23	habitat?	23	down to bedrock. It exposes bedrock that wasn't
24	A It is, but it also, what I just described	24	exposed before. It piles. The holes can entrain
25	is, but there's also the early rearing juveniles.	25	current laterally and against the bank and cause
		1	
	Page 433		Page 435
1	Page 433 Q And what does that mean? What are rearing	1	Page 435 erosion. The tailings piles can be piled up, and they
1 2	-	1 2	2
	Q And what does that mean? What are rearing	1	erosion. The tailings piles can be piled up, and they
2	Q And what does that mean? What are rearing juveniles?	2	erosion. The tailings piles can be piled up, and they form dams and can drop increased sedimentation above
2 3	Q And what does that mean? What are rearing juveniles? A So, when the eggs hatch and the larval fry	2 3	erosion. The tailings piles can be piled up, and they form dams and can drop increased sedimentation above them, where they slow the velocity of the water, and
2 3 4	Q And what does that mean? What are rearing juveniles?A So, when the eggs hatch and the larval fry emerge from the cobbles, they have to swim out through	2 3 4	erosion. The tailings piles can be piled up, and they form dams and can drop increased sedimentation above them, where they slow the velocity of the water, and they can also steer laterally the current.
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Page 4	436 Page 438
1 into the active channel and mobilized through the	1 Q What does "sublethal" mean?
2 stream flow for miles potentially.	2 A "Sublethal" means less than lethal. But
³ Q And is the reactivation of mercury an	3 what we oftentimes forget is that displacement as a
4 environmental concern?	4 sublethal effect increases the risk of lethal
5 A Yes. It could be highly toxic	5 predation.
6 methylmercury, and the way that it's bound, it become	omes 6 Q And have you performed any research related
7 unbound to organic matter and to sulphur when it's	s 7 to this subject in particular?
8 exposed to oxygen. So it's also a neurotoxin and ha	
9 chronic effects on fish. It also biomagnifies. It	9 (The document referred to was
10 bioaccumulates through so, if an animal eats it,	10 marked for identification as
11 then another animal eats that animal, it gets all the	11 Complainant's Exhibit No.
12 mercury that was stored in the fat of the prey, and	12 19.)
13 then it works all the way up to the highest level	13 BY MR. MOORE:
14 predators and magnifies in the food web.	14 Q Can you turn to Complainant's Exhibit 19?
15 Q Describe the likelihood that a miner	15 A Okay.
16 actually excavates mercury while he's mining.	16 Q Are you familiar with this document, Mr.
17 A It's likely, especially for other heavy	17 Arthaud?
18 metals also, like copper, lead, zinc, but it depends	18 A Yes. I'm the lead author.
19 on the natural background of does this area naturall	11y 19 Q And what's the document?
20 have mercury in it. And it also depends on legacy	20 A It is "Contrasting Life Cycle Impacts of
21 mining, how much it was used in the accessing of o	ore, 21 Stream Flow on Two Chinook Salmon Populations," a
the separation of ore in history.	22 primary research paper in the Journal of
23 Q In your opinion, can suction dredge mining	g 23 Hydrobiologia.
24 benefit the environment by removing these legacy	24 MR. MOORE: EPA moves to admit Complainant's
25 metals and mercury?	25 Exhibit 19 into evidence.
Page 4	437 Page 439
1 A It can reduce the overall load of mercury to	1 JUDGE COUGHLIN: Mr. Erlanson, any objection
2 some extent, but it mobilizes and misses more and	2 to that coming in?
3 activates more so that, overall, it is not a positive	3 MR. ERLANSON: No. No, Your Honor.
4 effect. It is strongly adverse.	4 JUDGE COUGHLIN: Okay. CX-19 is admitted.
5 Q In your opinion, are there any impacts	5 (The document referred to,
6 related to suction dredging that we haven't discussed	ed 6 previously identified as
7 yet?	7 Complainant's Exhibit No. 19,
8 A Yes. There's like the miscellaneous. The	8 was received in evidence.)
9 activity itself requires long-term camping off and on	n 9 BY MR. MOORE:
10 Forest Service lands where that might be the	10 Q Mr. Arthaud, can you describe what you
11 campgrounds might be overused. There's more foot	
12 traffic and carrying of heavy loads and weights up an	
13 down stream banks. So it can affect the riparian	13 of egg to juvenile, like smolt, like a one- or
	14 two-year-old juvenile. So, from egg emergence to
14 vegetation and thin it out or reduce it. Also,	
15 sometimes the miners move large woody debris which	that, I hoped to describe the early rearing impacts
sometimes the miners move large woody debris whichvery important for young fish for cover. And they and	ich is15that, I hoped to describe the early rearing impactsare16that habitat in a nursery stream or natal tributary
 sometimes the miners move large woody debris which very important for young fish for cover. And they an running two engines right against the water surface 	ich is15that, I hoped to describe the early rearing impactsare16that habitat in a nursery stream or natal tributary17where the fish were the eggs were laid that produce
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 sometimes the miners move large woody debris which very important for young fish for cover. And they an running two engines right against the water surface for hours at a time, so the exhaust and the risk of fuel spill can also reduce water and air quality right near the river. Q Specific to impacts to ESA-listed species, 	ich is15that, I hoped to describe the early rearing impactsare16that habitat in a nursery stream or natal tributary17where the fish were the eggs were laid that produce18the juveniles, how those affected the life cycle of19salmon.20Q21AAThe results were that the condition of
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	Page 440	Page 4	42
1	of the lifecycle of salmon and allow some prediction	1 important for survival of salmon.	
2	of adult return just by knowing the conditions that	2 Q And how does that relate to suction dredgi	ng
3	the juveniles were reared in.	3 in the South Fork?	U
4	(The document referred to was	4 A Well, suction dredging in the South Fork	
5	marked for identification as	5 simplifies early rearing and spawning habitat. It	
6	Complainant's Exhibit No.	6 clogs it within the interstitial spaces. They	
7	20.)	7 also, we didn't mention it, but the first year of	
8	BY MR. MOORE:	8 the first year or two of overwintering, the juvenile	s
9	Q I'll turn you now to Complainant's Exhibit	9 have to go under the ground all day long every da	y of
10	20.	10 the winter, and then they come out at night and fe	ed.
11	A Okay.	11 And so, if the sediments have or sand have brid	ged
12	Q Are you familiar with this document?	12 over those, they don't even need to clog the whole	;
13	A Yes.	13 interstitial space, but they just simply bridge over	
14	Q What is it?	14 it and prevent their access to it, the year class,	
15	A It is an article in Human and Ecological	15 there will be very low survival. They will either	
16	Risk Assessment, an international journal, that I	16 have to move and find habitat that's clean enough	to
17	co-authored.	17 get under the cobbles for a whole winter or they w	vill
18	Q And what was the topic of the	18 die.	
19	A The title is "Extrapolating Growth	19 Q And, Mr. Arthaud, I think a few times you	've
20	Reductions in Fish to Changes in Population,	20 testified that suction dredge mining simplifies	
21	Extinction Risks, Copper and Chinook Salmon."	21 habitat.	
22	MR. MOORE: EPA moves to admit Complainant's	22 A Yes.	
23	Exhibit 20 into evidence.	23 Q What does that mean?	
24	JUDGE COUGHLIN: Any objection, Mr.	A It just means instead of having naturally	
25	Erlanson?	25 deep pools and naturally shallow riffles of various	5
	Page 441	Page 4	143
	Lage III	i uge i	
1	MD EDI ANGONI NUM		
1	MR. ERLANSON: None.	1 sizes and diversity of rocks and other types of cover	,
2	JUDGE COUGHLIN: Okay. CX-20 is admitted.	2 that the whole thing just becomes a medium glide o	, f
2 3	JUDGE COUGHLIN: Okay. CX-20 is admitted. (The document referred to,	that the whole thing just becomes a medium glide osand like a sandbox. It's very simple when you lool	, f
2 3 4	JUDGE COUGHLIN: Okay. CX-20 is admitted. (The document referred to, previously identified as	 that the whole thing just becomes a medium glide o sand like a sandbox. It's very simple when you look at it. It's simple underneath of it. It's simple on 	, f
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25 Mr. Erlanson dredged in July 2015? 25 relate to. Page 445 Page 445 1 A Yes. I was there in early August 2014 and 1 MR. MOORE: Sure. 2 JUDGE COUGHLIN: And that way, for future 3 Q Then you've also viewed the location in 3 4 photographs? 2 JUDGE COUGHLIN: And that way, for future 5 A And I've viewed the location in photographs 3 also. 7 7 Q Have you reviewed the report drafted by 6 THE WITNESS: It's okay. I'm following 9 activity? 9 along with you. 9 activity? 9 along with you. 10 A Yes. 10 THE WITNESS: It's okay. I'm following 10 A Yes. 10 THE WITNESS: That would be on Page 5, 11 Q And were you present to hear Mr. Hughes' 11 JUDGE COUGHLIN: Right. So this is CX-1. 13 A Yes. 10 THE WITNESS: That would be on Page 5, previous years disturbance. 12 JUDGE COUGHLIN: Right. So this is CX-1. So the challenge becomes how best to mark this. 14	23	impacts related to Mr. Erlanson's activity in	23	ahead and let's mark these and then and I think it
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22 endangered species? 22 that. Sure, if you want it, if you want it. In fact,			1	
				_
1 23 We could do that I mean I don't know want to	22	A Yes, there are.	22	we could do that. I mean, I don't know if you want to
23 A res, there are. 24 Q And using the photographs, can you describe 24 tie it to the actual exhibit that it is contained in.			1	-
24 Q And using the photographs, can you describe 24 the it to the actual exhibit that it is contained in. 25 what you see that would lead you to that conclusion? 25 THE WITNESS: It might be better to say			1	
2.5 what you see that would lead you to that conclusion: 2.5 THE WITNESS. It high the better to say	2.5	what you see that would lead you to that conclusion?	25	THE WITHESS. IT HIgh be beller to say

	Page 448		Page 450
1	excuse me to just say the CX-5	1	apologize for the interruption in your testimony. So
2	JUDGE COUGHLIN: A?	2	the previous years disturbance photo is CX-1A, okay?
3	THE WITNESS: Yeah, above or upper UL, upper	3	I'm using a capital A for what it's worth.
4	left.	4	MR. McLAREN: As will we.
5	JUDGE COUGHLIN: Yeah.	5	JUDGE COUGHLIN: Okay. And you're following
6	THE WITNESS: Or something like that.	6	this too so that after the hearing there's an
7	JUDGE COUGHLIN: So I hate to interrupt your	7	opportunity to submit post-hearing briefs. So, if you
8	Bates stamp that's already in there. Of course, I	8	want to be able to submit something in writing with
9	guess it's going to anyway, isn't it?	9	your arguments about what's been presented and you
10	MR. McLAREN: Yeah, but I think as long as	10	want to refer to this, you want to make sure you refer
11	it's clear and the discussion's	11	to the right thing. So you can even just mark your
12	JUDGE COUGHLIN: On the record.	12	own copy if you want. So that previous years
13	MR. McLAREN: on the record, I think that	13	disturbance that's depicted in CX-1 on Page I'm
14	it'll be clear enough.	14	leaving out all the zeroes of the Bates stamp 5,
15	JUDGE COUGHLIN: Then we'll be okay. I	15	it's the upper left photograph that is now marked
16	mean, I went through this in a prior EPA case, so I	16	CX-1A. Okay. Great.
17	know it may be much ado about nothing, but so	17	(The document referred to was
18	should we call this CX-1A?	18	marked for identification as
19	MR. McLAREN: Sure. I think we would agree	19	Complainant's Exhibit 1A and
20	to that.	20	was received in evidence.)
21	JUDGE COUGHLIN: Is that okay? Easy enough	21	JUDGE COUGHLIN: And then the next one,
22	to reference?	22	which one do you have, Mr. Arthaud?
23	MR. McLAREN: Easy enough, yeah.	23	THE WITNESS: I think this is the next one.
24	JUDGE COUGHLIN: Okay. So I guess I'll mark	24	JUDGE COUGHLIN: Okay. With both dredges
25	just my copies, but if you can mark a set to give to	25	depicted?
	Page 449		
			Page 451
1	the court reporter.	1	Page 451 THE WITNESS: Yeah.
2	the court reporter. MR. McLAREN: Certainly.	2	THE WITNESS: Yeah. JUDGE COUGHLIN: And
2 3	the court reporter. MR. McLAREN: Certainly. JUDGE COUGHLIN: I can just use this as our	2 3	THE WITNESS: Yeah.
2 3 4	the court reporter. MR. McLAREN: Certainly. JUDGE COUGHLIN: I can just use this as our working copy, but the court reporter has the official	2 3 4	THE WITNESS: Yeah. JUDGE COUGHLIN: And THE WITNESS: And the sluice on the bank, yes.
2 3 4 5	the court reporter. MR. McLAREN: Certainly. JUDGE COUGHLIN: I can just use this as our working copy, but the court reporter has the official set of exhibits, right?	2 3 4 5	THE WITNESS: Yeah. JUDGE COUGHLIN: And THE WITNESS: And the sluice on the bank, yes. JUDGE COUGHLIN: And is that would that
2 3 4 5 6	the court reporter. MR. McLAREN: Certainly. JUDGE COUGHLIN: I can just use this as our working copy, but the court reporter has the official set of exhibits, right? MR. McLAREN: And then we can submit an	2 3 4 5 6	THE WITNESS: Yeah. JUDGE COUGHLIN: And THE WITNESS: And the sluice on the bank, yes. JUDGE COUGHLIN: And is that would that correspond to the photo immediately to the right where
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	Page 452		Page 454
1	identified which photo it is, so we'll call this one	1	for lunch, period?
2	CX-1C for Charlie.	2	MR. MOORE: Eventually, yes.
3	(The document referred to was	3	JUDGE COUGHLIN: Okay, because that's really
4	marked for identification as	4	the question. I think Mr. Erlanson's okay to power
5	Complainant's Exhibit 1C and	5	through. Well, all right. So why don't we take a
6	was received in evidence.)	6	brief break now for lunch and whatever, and then we
7	MR. McLAREN: Yes, Your Honor. Thank you.	7	can reconvene. I think last time we took 45 minutes.
8	JUDGE COUGHLIN: Okay. All right. Perfect.	8	Is that enough? Do you need more time?
9	MR. McLAREN: And pardon me for introducing	9	MR. McLAREN: That's more than enough for
10	that confusion, by the way. I meant it for the ease	10	us. You gave us the extended break earlier this
11	of the witness.	11	morning. So we could do 45.
12	JUDGE COUGHLIN: No, no worries.	12	JUDGE COUGHLIN: Forty-five is good? Okay.
13	THE WITNESS: Yeah.	13	So why don't we do that. We'll break for 45. So I
14	JUDGE COUGHLIN: I mean, they seem to have	14	guess let's just call it 12:30 that we'll come back
15	been very useful to both of you and to the witnesses,	15	and finish off then.
16	so it just makes sense to include them if you both	16	MR. MOORE: Thank you, Your Honor.
17	agree to do so, which you have. So it's fine.	17	MR. ERLANSON: Thank you.
18	(Pause.)	18	JUDGE COUGHLIN: All right. Great. Thank
19	MR. MOORE: And, Your Honor, just a note on	19	you all very much.
20	timing.	20	(Whereupon, at 11:40 a.m., the hearing in
21	JUDGE COUGHLIN: Sure.	21	the above-entitled matter recessed, to reconvene at
22	MR. MOORE: This would be sort of a natural	22	12:30 p.m. this same day, Wednesday, May 15, 2019.)
23	stopping point. I imagine that I still have under an	23	//
24	hour but close to an hour of testimony with Mr.	24	//
25	Arthaud.	25	//
		<u> </u>	
	Page 453		
	_		Page 455
1	JUDGE COUGHLIN: Okay.	1	AFTERNOON SESSION
2	JUDGE COUGHLIN: Okay. MR. MOORE: And I leave it to your	2	AFTERNOON SESSION (12:30 p.m.)
2 3	JUDGE COUGHLIN: Okay. MR. MOORE: And I leave it to your discretion whether you want to push through for a late	2 3	AFTERNOON SESSION (12:30 p.m.) JUDGE COUGHLIN: We are back on the record,
2 3 4	JUDGE COUGHLIN: Okay. MR. MOORE: And I leave it to your discretion whether you want to push through for a late lunch or if you'd take advantage of the natural	2 3 4	A F T E R N O O N S E S S I O N (12:30 p.m.) JUDGE COUGHLIN: We are back on the record, right on time, and I think we're all ready to go with
2 3 4 5	JUDGE COUGHLIN: Okay. MR. MOORE: And I leave it to your discretion whether you want to push through for a late lunch or if you'd take advantage of the natural stopping point.	2 3 4 5	A F T E R N O O N S E S S I O N (12:30 p.m.) JUDGE COUGHLIN: We are back on the record, right on time, and I think we're all ready to go with your continued examination of Mr. Arthaud.
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	Page 456		Page 458
1	photograph to describe what those indications are?	1	BY MR. MOORE:
2	A First, you can see some primary production	2	Q Are you able to approximately estimate the
3	is going on there, and you can also see it in CX-1C	3	level of turbidity in that plume?
4	with the algae on the rocks, so that's a food base and	4	A Yes. I would call it something medium high
5	a refugia habitat for invertebrates. So they're going	5	that might be 30 or 40 NTUs, something like that.
6	to follow along. And then there's a good mix of large	6	Q And on what do you base that estimate?
7	cobbles throughout the area, so they provide some	7	A Just because I can't see through it in very
8	stability and physical structure in a sand run stream.	8	shallow water.
9	And so that makes it more likely that there will be	9	Q Do you have experience in estimating
10	mussels and fish in this habitat.	10	turbidity?
11	JUDGE COUGHLIN: And can you just where	11	A Yes. I've looked at many turbidity plumes
12	you were just pointing I know it's difficult with	12	throughout the years, and oftentimes there's a
13	photographs. Can you just try and describe that for	13	turbidity meter around and just compares by
14	the written transcript, those kind of I think those	14	comparison. And there's also Fultz 2008, the Forest
15	larger	15	Service literature where they did the same thing when
16	THE WITNESS: Should I relate it to this?	16	they were removing culverts. They took a picture of
17	JUDGE COUGHLIN: Yeah. We're talking about	17	the plume and then measured it with a turbidity meter.
18	CX-1B, but when you had just gestured to the larger,	18	So
19	like, boulders, if you will	19	Q Did that study inform your opinion on the
20	THE WITNESS: Oh, okay.	20	approximate
21	JUDGE COUGHLIN: just kind of relative to	21	A Yes, it did. It was a good recalibration
22	where it appears on the page would suffice.	22	that, you know, you're in the range kind of thing for
23	THE WITNESS: Okay. So, in the foreground,	23	me.
24	you can see a mix of larger boulders and cobbles mixed	24	Q Based on your knowledge of the South Fork
25	in with the sand and the gravels. And then, in the	25	Clearwater, are there any indications that dredging in
	Page 457		Page 459
1		1	
1 2	background, on the left bank looking downstream in	1	this area specifically would cause turbidity?
	background, on the left bank looking downstream in this same picture, you can see larger rocks along the		this area specifically would cause turbidity? A Yes, because it has one of those primary
2	background, on the left bank looking downstream in this same picture, you can see larger rocks along the bank, and those provide structure.	2	this area specifically would cause turbidity? A Yes, because it has one of those primary limiting factors of sand, heavy loads of sediment and
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	Page 460		Page 462
1	-	1	-
1	than Rice's, maybe 25 or 30 NTUs.	1	A Because it builds up almost to the surface
2	Q And on what do you base that estimate?	2	in the water column, and so it's very suspended, very
3	A For the same general reasons as I described	3	well suspended, whereas sand and coarser particles
4	already, but the more specific reasons here is that	4	tend to shoot or roll just above the cobbles. They
5	he's in faster current slightly, releasing the plume	5	don't get as high in the water column.
6	even in the thalweg rather than putting it up on a bar	6	Q Do the impacts of discharges of sand differ
7	and so and I can see through it more even though it's at a distance. So that I believe it has coarser	7	from the impacts of discharges of finer material?
8 9		8	A Yes. As an overall group, they both have
10	material in it, you know. JUDGE COUGHLIN: Sorry. I just want to	10	the same general facts. But silt and clay fines can
11	interject because I may have misheard you. When you	11	be more lethal to eggs and younger fish, and they fill interstitial spaces by entering under the substrate
12	estimated Mr. Erlanson's turbidity to be less than	12	and then sinking to the very bottom of the
13	that of Mr. Rice's, and you estimated it around 25 or	13	interstitial space. It might be three feet below the
14	30 percent	14	stream and then filling that space from the bottom up,
15	THE WITNESS: Twenty-five to 30 NTUs.	15	whereas coarse, a mix of coarse and fine sand, the
16	JUDGE COUGHLIN: Okay. Maybe I misheard	16	fine particles are filling from the bottom up, but the
17	you. What do you estimate Mr. Rice's to be?	17	coarse particles bridge over the very top of the
18	THE WITNESS: At 30 or 40, I think,	18	interstitial space right at the substrate surface or
19	something like that.	19	just below, so that a mix of coarse and fine sand can
20	JUDGE COUGHLIN: Okay. All right. Okay.	20	fill more interstitial spaces or block fish from those
21	Thank you.	21	spaces in a very rapid manner.
22	(Pause.)	22	Q And which impact is worse?
23	JUDGE COUGHLIN: Okay. Please go ahead, Mr.	23	A The mix. The mixed sand is worse because it
24	Moore. Thank you, Mr. Arthaud.	24	takes a lot of fines to fill all the interstitial
25	//	25	spaces from three feet below the water, let's say, or
	Demo (C1	1	
	Page 461		Page 463
1	BY MR. MOORE:	1	Page 463 below the substrate surface to the surface, whereas
1 2	-	1 2	
	BY MR. MOORE:	1	below the substrate surface to the surface, whereas
2	BY MR. MOORE: Q Does the proximity of Mr. Erlanson's dredge	2	below the substrate surface to the surface, whereas the bridging of the larger particles of sand can fill
2 3	BY MR. MOORE: Q Does the proximity of Mr. Erlanson's dredge to Mr. Rice's dredge inform your opinion of the	2 3	below the substrate surface to the surface, whereas the bridging of the larger particles of sand can fill or can block the interstitial space right at the
2 3 4	BY MR. MOORE: Q Does the proximity of Mr. Erlanson's dredge to Mr. Rice's dredge inform your opinion of the approximate turbidity of Mr. Erlanson's plume?	2 3 4	below the substrate surface to the surface, whereas the bridging of the larger particles of sand can fill or can block the interstitial space right at the surface very quickly.
2 3 4 5	BY MR. MOORE: Q Does the proximity of Mr. Erlanson's dredge to Mr. Rice's dredge inform your opinion of the approximate turbidity of Mr. Erlanson's plume? A Yes. You can see them side by side, so that	2 3 4 5	below the substrate surface to the surface, whereas the bridging of the larger particles of sand can fill or can block the interstitial space right at the surface very quickly. Q Thank you. Have you reviewed the
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	Page 464		Page 466
1	-	1	
1	some of it was released as turbidity directly from the	1	behavioral changes that you noted was displacement.
2	disturbance of his dredge. The rest of it was	2	And my question was whether invertebrates or smaller
3	entrained through the dredge, put through the sluice,	3	fish have the same opportunity to leave a turbid area?
4	and then dropped onto other substrates which make up	4	A No. It's more difficult for them to get out
5 6	the tailing pile here. JUDGE COUGHLIN: And the "here" is which?	5	of the cobbles itself to move, and then, once they do
7	Is it	7	decide that they have to move because of habitat loss,
8		8	then they're very vulnerable to predation.
° 9	THE WITNESS: Oh, figure the lower left just downstream from Hole Number 5 on the 2015 picture.	9	Q Thank you. So I want to turn and talk about some of the other impacts that Mr. Erlanson caused.
10	JUDGE COUGHLIN: Okay.	10	Mr. Kenney testified that the volume of the hole
11	THE WITNESS: And then I should say that	11	that Hole Number 5 that he measured in October 2015
12	because that activity occurred, not all the sediment	12	was approximately 15.4 meters cubed. On that Page
13	are piled in this tailings pile. Roughly a half or	13	1527 of Exhibit 38
14	two-thirds were suspended and sent downstream likely.	14	A Uh-huh.
15	BY MR. MOORE:	15	Q can you describe the likely impacts using
16	Q And you approximated that the plume coming	16	the photo resulting from the creation of a hole that
17	from Mr. Erlanson's dredge was about 25 to 30 NTUs.	17	size?
18	Can you describe what types of impacts would be caused	18	A And the volume was 15?
19	by a turbidity of that level?	19	Q 15.4 cubic meters.
20	A Displacement, behavioral displacement. Some	20	A Okay. So, in this hole, 15 cubic meters
21	fish and sensitive invertebrates would leave that area	21	were removed. They were excavated and they're no
22	of that plume. It's high enough NTUs where there may	22	longer there. Some of that was released as turbidity
23	be coughing and other irritating effects on fish and	23	from that activity. The rest of it was entrained and
24	invertebrates, and then many invertebrates have	24	went through the dredge and the sluice. We see a
25	respiratory apparatus like siphons and tubes and ways	25	portion of that volume here in the tailings, and then
	Page 465		Page 467
1	Page 465 to breathe that are very small. And so it doesn't	1	Page 467 the remainder of that volume of that hole was released
1 2		1 2	_
	to breathe that are very small. And so it doesn't	1	the remainder of that volume of that hole was released
2	to breathe that are very small. And so it doesn't take too much turbidity to clog those and cause greater sublethal effects or even level effects depending on how well they got clogged. There's also	2	the remainder of that volume of that hole was released and suspended and went downstream with the current. I
2 3	to breathe that are very small. And so it doesn't take too much turbidity to clog those and cause greater sublethal effects or even level effects depending on how well they got clogged. There's also some invertebrates that they spin nets to catch food,	2 3	the remainder of that volume of that hole was released and suspended and went downstream with the current. I should also say that when you dig a excavate a hole out of packed armored substrates, there's a swell factor of roughly 20 percent on average. So there's
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	Page 468		Page 470
1	these pictures. We have a deeper thalweg with faster	1	sticking up above the stream surface.
2	current on the center left bank on these pictures. We	2	JUDGE COUGHLIN: Okay. Let me see where
3	have some boulders. We have some bedrock. Those are	3	you're pointing to in order to try and describe it.
4	places that not only hold invertebrates because	4	Yeah, I don't think there's a blow-up of that one.
5	they're pretty much ubiquitous throughout the stream,	5	THE WITNESS: If you look, you can see that
6	but mussels and snails really go to those bedrock	6	it's so shallow that the gravel tailings are causing a
7	areas because they're very stable, and fish really key	7	riffle right there.
8	in to the bedrock areas because the water's cooler	8	JUDGE COUGHLIN: Okay. So what Mr. Arthaud
9	there and the hyporheic flow, they have more spaces	9	is pointing has pointed to as I looked closer is
10	under the stream bottom to access.	10	I'll try to describe this and maybe with your aid so I
11	Q You just used the word "hyporheic flow."	11	don't botch anything here.
12	A Hyporheic.	12	THE WITNESS: Okay.
13	Q Can you define that for us?	13	JUDGE COUGHLIN: But, as I look at that
14	A So, when we look at a stream, we see the	14	photograph 2015, CX-38 and it's Page 1527, the bottom
15	surface we see the bottom of the stream. That's	15	left from 2015, not quite but almost dead center is
16	the substrate surface. And a few inches below that	16	kind of what looks like this boulder sticking out of
17	surface that we can see, maybe down five or six	17	the water, and you're referencing the riffles that you
18	inches, is called the benthos or the benthic layer,	18	identified just below that and slightly to the left of
19	and that's mostly what we've been talking about. But	19	that. Is there if there's a better way to describe
20	up to a meter below the substrate is the hyporheic or	20	it, please go ahead.
21	the hyporheos, and that includes its own it's a	21	THE WITNESS: Yeah, it's almost in the
22	shallow underground flow of a stream. So, when we see	22	direct center, absolute center of the photograph just
23	a stream flowing above a substrate, there's also a	23	in front of the line of rocks, larger cobble, and you
24	stream below a substrate flowing through the substrate	24	can see a riffle point like where the top of the pile
25	and that's called the hyporheic zone.	25	is sticking up above or right to the surface.
	Page 469		Page 471
1	Page 469 JUDGE COUGHLIN: Mr. Jones, do you need the	1	Page 471 BY MR. MOORE:
1 2	_	1 2	_
	JUDGE COUGHLIN: Mr. Jones, do you need the		BY MR. MOORE:
2	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that?	2	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr.
2 3	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one.	2 3	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts
2 3 4	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you.	2 3 4	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile
2 3 4 5	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE:	2 3 4 5	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered
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2 3 4 5 6 7 8	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a	2 3 4 5 6 7 8	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough
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2 3 4 5 6 7 8 9 10 11	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a tailings pile that is that size?	2 3 4 5 6 7 8 9 10 11 12 13	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough to reach the surface of the water. So that's going to be causing an impediment to the flow through that area because the mound is large enough to so the hole is
2 3 4 5 6 7 8 9 10 11 12	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a tailings pile that is that size? A Well, first off, the area around all of that is the area that was covered of functioning habitat before. It was functioning habitat that did not have	2 3 4 5 6 7 8 9 10 11 12 13 14	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough to reach the surface of the water. So that's going to be causing an impediment to the flow through that area because the mound is large enough to so the hole is going to direct it to the left in the far bank, and
2 3 4 5 6 7 8 9 10 11 12 13 14 15	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a tailings pile that is that size? A Well, first off, the area around all of that is the area that was covered of functioning habitat before. It was functioning habitat that did not have those sediments or tailings on it before he put them	2 3 4 5 6 7 8 9 10 11 12 13 14 15	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough to reach the surface of the water. So that's going to be causing an impediment to the flow through that area because the mound is large enough to so the hole is going to direct it to the left in the far bank, and the sediment pile is going to direct it to the left in
2 3 4 5 6 7 8 9 10 11 12 13 14	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a tailings pile that is that size? A Well, first off, the area around all of that is the area that was covered of functioning habitat before. It was functioning habitat that did not have those sediments or tailings on it before he put them there from his dredge. And then secondly, the pile	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough to reach the surface of the water. So that's going to be causing an impediment to the flow through that area because the mound is large enough to so the hole is going to direct it to the left in the far bank, and the sediment pile is going to direct it to the left in the far bank, and what's below or at this gravel bar
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a tailings pile that is that size? A Well, first off, the area around all of that is the area that was covered of functioning habitat before. It was functioning habitat that did not have those sediments or tailings on it before he put them there from his dredge. And then secondly, the pile itself extends above the surface of the water. So we	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough to reach the surface of the water. So that's going to be causing an impediment to the flow through that area because the mound is large enough to so the hole is going to direct it to the left in the far bank, and the sediment pile is going to direct it to the left in the far bank, and what's below or at this gravel bar around this pile will receive less current because of
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a tailings pile that is that size? A Well, first off, the area around all of that is the area that was covered of functioning habitat before. It was functioning habitat that did not have those sediments or tailings on it before he put them there from his dredge. And then secondly, the pile itself extends above the surface of the water. So we know that it's causing a damming or a barrier for a	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough to reach the surface of the water. So that's going to be causing an impediment to the flow through that area because the mound is large enough to so the hole is going to direct it to the left in the far bank, and the sediment pile is going to direct it to the left in the far bank, and what's below or at this gravel bar around this pile will receive less current because of those tailings. And then I should also say that the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a tailings pile that is that size? A Well, first off, the area around all of that is the area that was covered of functioning habitat before. It was functioning habitat that did not have those sediments or tailings on it before he put them there from his dredge. And then secondly, the pile itself extends above the surface of the water. So we know that it's causing a damming or a barrier for a portion of the stream right there.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough to reach the surface of the water. So that's going to be causing an impediment to the flow through that area because the mound is large enough to so the hole is going to direct it to the left in the far bank, and the sediment pile is going to direct it to the left in the far bank, and what's below or at this gravel bar around this pile will receive less current because of those tailings. And then I should also say that the tailings, wherever they're more than an inch deep,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a tailings pile that is that size? A Well, first off, the area around all of that is the area that was covered of functioning habitat before. It was functioning habitat that did not have those sediments or tailings on it before he put them there from his dredge. And then secondly, the pile itself extends above the surface of the water. So we know that it's causing a damming or a barrier for a portion of the stream right there. Q And can you identify in the photograph where	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough to reach the surface of the water. So that's going to be causing an impediment to the flow through that area because the mound is large enough to so the hole is going to direct it to the left in the far bank, and the sediment pile is going to direct it to the left in the far bank, and what's below or at this gravel bar around this pile will receive less current because of those tailings. And then I should also say that the tailings, wherever they're more than an inch deep, piled more than an inch deep on top of the substrates,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a tailings pile that is that size? A Well, first off, the area around all of that is the area that was covered of functioning habitat before. It was functioning habitat that did not have those sediments or tailings on it before he put them there from his dredge. And then secondly, the pile itself extends above the surface of the water. So we know that it's causing a damming or a barrier for a portion of the stream right there. Q And can you identify in the photograph where you see that?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough to reach the surface of the water. So that's going to be causing an impediment to the flow through that area because the mound is large enough to so the hole is going to direct it to the left in the far bank, and the sediment pile is going to direct it to the left in the far bank, and what's below or at this gravel bar around this pile will receive less current because of those tailings. And then I should also say that the tailings, wherever they're more than an inch deep, piled more than an inch deep on top of the substrates, that brings into play higher mortality of mussels.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a tailings pile that is that size? A Well, first off, the area around all of that is the area that was covered of functioning habitat before. It was functioning habitat that did not have those sediments or tailings on it before he put them there from his dredge. And then secondly, the pile itself extends above the surface of the water. So we know that it's causing a damming or a barrier for a portion of the stream right there. Q And can you identify in the photograph where you see that? A Yeah. It's on you see in the middle of	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough to reach the surface of the water. So that's going to be causing an impediment to the flow through that area because the mound is large enough to so the hole is going to direct it to the left in the far bank, and the sediment pile is going to direct it to the left in the far bank, and what's below or at this gravel bar around this pile will receive less current because of those tailings. And then I should also say that the tailings, wherever they're more than an inch deep, piled more than an inch deep on top of the substrates, that brings into play higher mortality of mussels. Q Thank you. Can you turn to Complainant's
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a tailings pile that is that size? A Well, first off, the area around all of that is the area that was covered of functioning habitat before. It was functioning habitat that did not have those sediments or tailings on it before he put them there from his dredge. And then secondly, the pile itself extends above the surface of the water. So we know that it's causing a damming or a barrier for a portion of the stream right there. Q And can you identify in the photograph where you see that? A Yeah. It's on you see in the middle of the tailings pile there's some larger rocks in a line.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough to reach the surface of the water. So that's going to be causing an impediment to the flow through that area because the mound is large enough to so the hole is going to direct it to the left in the far bank, and the sediment pile is going to direct it to the left in the far bank, and what's below or at this gravel bar around this pile will receive less current because of those tailings. And then I should also say that the tailings, wherever they're more than an inch deep, piled more than an inch deep on top of the substrates, that brings into play higher mortality of mussels. Q Thank you. Can you turn to Complainant's Exhibit 37 and specifically Page 1519. I want to draw
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	JUDGE COUGHLIN: Mr. Jones, do you need the spelling on some of that? MR. JONES: I already got that one. JUDGE COUGHLIN: Okay. Great. Thank you. BY MR. MOORE: Q Mr. Kenney also concluded that the tailings pile that Mr. Erlanson created was approximately five meters cubed. That was his adjusted volume. Using that same photograph on the bottom left of Page 1527, can you describe the likely impact resulting from a tailings pile that is that size? A Well, first off, the area around all of that is the area that was covered of functioning habitat before. It was functioning habitat that did not have those sediments or tailings on it before he put them there from his dredge. And then secondly, the pile itself extends above the surface of the water. So we know that it's causing a damming or a barrier for a portion of the stream right there. Q And can you identify in the photograph where you see that? A Yeah. It's on you see in the middle of	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	BY MR. MOORE: Q Thank you. And so I interrupted you, Mr. Arthaud, but you were explaining the likely impacts from a dredge pile that's the size of Dredge Pile Number 7, and I think you talked about covered habitat, and you were describing the importance of those rocks that are piled above the surface. So please continue. A Okay. Thank you. Yeah. So we know that it extends up from the substrate a certain amount, enough to reach the surface of the water. So that's going to be causing an impediment to the flow through that area because the mound is large enough to so the hole is going to direct it to the left in the far bank, and the sediment pile is going to direct it to the left in the far bank, and what's below or at this gravel bar around this pile will receive less current because of those tailings. And then I should also say that the tailings, wherever they're more than an inch deep, piled more than an inch deep on top of the substrates, that brings into play higher mortality of mussels. Q Thank you. Can you turn to Complainant's

Page 4	7	4
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	rage 472		rage 474
1	other than Hole Number 5 and Tailings Pile Number 7,	1	BY MR. MOORE:
2	do those photos indicate that there were additional	2	Q Were you present for Mr. Kenney's testimony
3	impacts caused by suction dredge mining in this area?	3	that approximately 55 percent of Hole Number 5 and
4	A Yes. Hole Number 5 and 7 are not isolated.	4	63 percent of the area of Piling 7 remained in 2016?
5	There are several, what, four holes above them, very	5	A Yes.
6	close to them, and they each have most of them seem	6	Q Were you also present for Mr. Kenney's
7	to at least have tailing piles that go with them.	7	testimony regarding his visit to the site in 2018?
8	There are six tailing piles above the Tailing Number	8	A Yes.
9	7. The Hole 5 and 7 take up roughly half the width of	9	Q In preparation for this hearing, did you
10	the stream, and the other holes are taking they're	10	review any photographs that Mr. Kenney took during his
11	crossing the entire stream in some occasions, like	11	2018 visit?
12	Hole 3 and Tailing 5, and then just upstream from	12	A I did.
13	there, there's multiple holes and tailings that are	13	Q And in those photographs, are there
14	affecting the entire width of the channel. And then	14	indications that adverse impacts from Mr. Erlanson's
15	you can see from the drawing here that they're all	15	dredging continued in 2018?
16	here in this same area. And just looking at the	16	A Yes. They were partially restored, but I
17	drawing, I would say that disturbance between holes	17	see a higher proportion of fines and sand mixed in
18	and tailings minus the turbidity and the sedimentation	18	with those gravels than I believe would otherwise be
19	that would come from that, we're looking at over half	19	there if it was just open channel and the dredging had
20	of the stream that's been disturbed in this reach.	20	occurred in the immediate vicinity.
21	Q And so you're focused on the percentage of	21	Q And what are the impacts associated with the
22	stream area that's been disturbed in these	22	continued presence of those features?
23	photographs. Why is that an important metric?	23	A The fine sediment, remember 1 percent
24	A It goes to fluvial geomorphology that you	24	increase can reduce egg survival by 16 percent. So
25	didn't disturb just one little place out in the middle	25	all successive broods that come in to spawn for a
	5 1		1
	Page 473		Page 475
1	_	1	_
1 2	Page 473 of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank,	1 2	Page 475 number of years will be affected and have lower egg survival and lower early rearing survival than if this
	of a large stream. You disturbed it from bank to bank		number of years will be affected and have lower egg
2	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank,	2	number of years will be affected and have lower egg survival and lower early rearing survival than if this had not occurred.
2 3	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank, like a third of it. So the water has to get around	2 3	number of years will be affected and have lower egg survival and lower early rearing survival than if this
2 3 4	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank, like a third of it. So the water has to get around those tailings piles and just the overall area of	2 3 4	number of years will be affected and have lower egg survival and lower early rearing survival than if this had not occurred. Q Thank you. I want to turn you back to
2 3 4 5	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank, like a third of it. So the water has to get around those tailings piles and just the overall area of habitat that's been lost either because the hole has	2 3 4 5	number of years will be affected and have lower egg survival and lower early rearing survival than if this had not occurred. Q Thank you. I want to turn you back to Complainant's Exhibit 17, please, and specifically
2 3 4 5 6	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank, like a third of it. So the water has to get around those tailings piles and just the overall area of habitat that's been lost either because the hole has removed it or because the tailings are covering other	2 3 4 5 6	number of years will be affected and have lower egg survival and lower early rearing survival than if this had not occurred. Q Thank you. I want to turn you back to Complainant's Exhibit 17, please, and specifically Page 1032.
2 3 4 5 6 7	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank, like a third of it. So the water has to get around those tailings piles and just the overall area of habitat that's been lost either because the hole has removed it or because the tailings are covering other habitat, it becomes 50 percent of the stream if this	2 3 4 5 6 7	number of years will be affected and have lower egg survival and lower early rearing survival than if this had not occurred. Q Thank you. I want to turn you back to Complainant's Exhibit 17, please, and specifically Page 1032. A 1032?
2 4 5 7 8	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank, like a third of it. So the water has to get around those tailings piles and just the overall area of habitat that's been lost either because the hole has removed it or because the tailings are covering other habitat, it becomes 50 percent of the stream if this drawing is to scale.	2 3 4 5 6 7 8	number of years will be affected and have lower egg survival and lower early rearing survival than if this had not occurred. Q Thank you. I want to turn you back to Complainant's Exhibit 17, please, and specifically Page 1032. A 1032? Q Correct.
2 3 4 5 7 8 9	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank, like a third of it. So the water has to get around those tailings piles and just the overall area of habitat that's been lost either because the hole has removed it or because the tailings are covering other habitat, it becomes 50 percent of the stream if this drawing is to scale. Q And can you describe how that additive	2 3 4 5 6 7 8 9	number of years will be affected and have lower egg survival and lower early rearing survival than if this had not occurred. Q Thank you. I want to turn you back to Complainant's Exhibit 17, please, and specifically Page 1032. A 1032? Q Correct. A Okay.
2 3 4 5 6 7 8 9 10	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank, like a third of it. So the water has to get around those tailings piles and just the overall area of habitat that's been lost either because the hole has removed it or because the tailings are covering other habitat, it becomes 50 percent of the stream if this drawing is to scale. Q And can you describe how that additive impact might affect ESA-listed species in the area?	2 3 4 5 6 7 8 9 10	 number of years will be affected and have lower egg survival and lower early rearing survival than if this had not occurred. Q Thank you. I want to turn you back to Complainant's Exhibit 17, please, and specifically Page 1032. A 1032? Q Correct. A Okay. Q What was NMFS's overall conclusion regarding
2 3 4 5 6 7 8 9 10 11	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank, like a third of it. So the water has to get around those tailings piles and just the overall area of habitat that's been lost either because the hole has removed it or because the tailings are covering other habitat, it becomes 50 percent of the stream if this drawing is to scale. Q And can you describe how that additive impact might affect ESA-listed species in the area? A Yes. A key factor is the environmental	2 3 4 5 6 7 8 9 10 11	number of years will be affected and have lower egg survival and lower early rearing survival than if this had not occurred. Q Thank you. I want to turn you back to Complainant's Exhibit 17, please, and specifically Page 1032. A 1032? Q Correct. A Okay. Q What was NMFS's overall conclusion regarding the proposed action, specifically, allowing suction
2 3 4 5 6 7 8 9 10 11 12	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank, like a third of it. So the water has to get around those tailings piles and just the overall area of habitat that's been lost either because the hole has removed it or because the tailings are covering other habitat, it becomes 50 percent of the stream if this drawing is to scale. Q And can you describe how that additive impact might affect ESA-listed species in the area? A Yes. A key factor is the environmental baseline: is this habitat fully functioning, properly	2 3 4 5 6 7 8 9 10 11 12	 number of years will be affected and have lower egg survival and lower early rearing survival than if this had not occurred. Q Thank you. I want to turn you back to Complainant's Exhibit 17, please, and specifically Page 1032. A 1032? Q Correct. A Okay. Q What was NMFS's overall conclusion regarding the proposed action, specifically, allowing suction dredging in the South Fork?
2 3 4 5 6 7 8 9 10 11 12 13	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank, like a third of it. So the water has to get around those tailings piles and just the overall area of habitat that's been lost either because the hole has removed it or because the tailings are covering other habitat, it becomes 50 percent of the stream if this drawing is to scale. Q And can you describe how that additive impact might affect ESA-listed species in the area? A Yes. A key factor is the environmental baseline: is this habitat fully functioning, properly functioning, or has it already been degraded to some	2 3 4 5 6 7 8 9 10 11 12 13	 number of years will be affected and have lower egg survival and lower early rearing survival than if this had not occurred. Q Thank you. I want to turn you back to Complainant's Exhibit 17, please, and specifically Page 1032. A 1032? Q Correct. A Okay. Q What was NMFS's overall conclusion regarding the proposed action, specifically, allowing suction dredging in the South Fork? A Specifically regarding the Forest Service
2 3 4 5 6 7 8 9 10 11 12 13 14	of a large stream. You disturbed it from bank to bank or at least from large proportions of bank to bank, like a third of it. So the water has to get around those tailings piles and just the overall area of habitat that's been lost either because the hole has removed it or because the tailings are covering other habitat, it becomes 50 percent of the stream if this drawing is to scale. Q And can you describe how that additive impact might affect ESA-listed species in the area? A Yes. A key factor is the environmental baseline: is this habitat fully functioning, properly functioning, or has it already been degraded to some level and each new activity is a successive	2 3 4 5 6 7 8 9 10 11 12 13 14	 number of years will be affected and have lower egg survival and lower early rearing survival than if this had not occurred. Q Thank you. I want to turn you back to Complainant's Exhibit 17, please, and specifically Page 1032. A 1032? Q Correct. A Okay. Q What was NMFS's overall conclusion regarding the proposed action, specifically, allowing suction dredging in the South Fork? A Specifically regarding the Forest Service and BLM program and all their protective measures and
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	Page 476		Page 478
1	followed with terms and conditions that require that	1 are k	nown are not mitigated. They're just they're
2	and that a monitoring plan is implemented that	2 left,	and do you you don't want me to go through
3	requires the measuring of these piles and holes and	3 spec	ific ones?
4	various other activities, that it be done every year.	4 Q	No. Just generally.
5	Q Can you turn to Page 987 of this document?	5 A	Yeah.
6	A Okay.	6 Q	Thank you. Turning away from that subject,
7	Q This section is entitled "Mitigation and	7 are y	ou aware of claims from miners regarding the
8	Monitoring." Why does the biological opinion include	8 bene	ficial impacts of suction dredge mining?
9	a discussion regarding mitigation and monitoring?	9 A	Yes.
10	A Because it is very important to make sure	10 Q	I want to discuss some of those claims. Do
11	that the proposed the conservation measures, the	11 you	agree that suction dredging has a beneficial
12	protective measures are followed and the monitor	12 impa	et because it creates pools that might serve as
13	well, you asked for mitigation and monitoring, right?	13 fish	habitat?
14	Q Correct.	14 A	No.
15	A Okay. So the mitigation is very important	15 Q	· · · · ·
16	because the mitigation is loaded with protective		A suction dredge hole is not a pool. It
17	measures that will reduce the likelihood of will		not have the functions of a pool. It's not being
18	reduce harm and incidental take of the listed species,		y current where natural high flows and the
19	and it will reduce harm or alteration of the critical	•	norphology of the channel created it to maintain
20	habitat from the activity. And then as I started off		's just a hole, like an empty well. So was it
21	to say that the monitoring is very important because	-	hat? Was it a specific question for that one
22	there's validity monitoring to make sure that the	22 thing	·
23	action agencies implemented the program as they said	23 Q	
24	they would, and then there's effectiveness monitoring	24 A	5 5
25	to see if our protective measures actually protected	25 Q	Do you agree that suction dredge mining is
	Page 477		Page 479
1	Page 477	1 benef	Page 479
1	habitat and fish like we thought they would.		icial because it might dislodge invertebrates
2	habitat and fish like we thought they would. Q Does NMFS have some role in deciding what	2 that c	icial because it might dislodge invertebrates ould be prey for a species in the area?
2 3	habitat and fish like we thought they would. Q Does NMFS have some role in deciding what mitigation measures end up in the biological opinion?	2 that c 3 A	icial because it might dislodge invertebrates ould be prey for a species in the area? No. Invertebrates would never show
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A Because the mechanisms for adversity that

Q Do you agree that tailings piles can create

	Page 480		Page 482
1	additional substrate for spawning?	1	is a much lower form of habitat.
2	A No, because they do produce some clean	2	Q And I just want to clarify for the record,
3	gravels, but they're they stick up from the	3	when you started your response, you said, yeah, and
4	substrate of the stream, so it's a mound on the	4	then continued in your response. My question was, do
5	substrate, and they're readily dislodged by higher	5	you agree that suction dredging may be beneficial
6	flows. So, if a fish comes in and finds some cleaner	6	because it breaks up embedded stream bottom?
7	gravels in a tailings pile and decides to spawn there,	7	A I'm sorry. No.
8	the lowest high flows would the red would not be	8	Q And that's consistent with the remainder of
9	stable. The nest would not be stable, whereas, in	9	your response?
10	natural conditions, fish come in, find the proper kind	10	A Yes.
11	of substrate and gravel, and they use their tails and	11	Q Do you agree that suction dredge mining
12	they dig out a hole, a depression in it, and spawn	12	might have a beneficial effect because it can create
13	inside that depression, and then the high flows go	13	interstitial habitat that young fish or invertebrates
14	over that depression and the nest remains safe.	14	could use?
15	Q Because I don't think we've done so as of	15	A No. I don't know how it would even do that.
16	yet, can you define what "red" means.	16	Q Is it possible that suction dredge mining
17	A "Red" is a nest, a salmon nest, and they're	17	would remove sediments in the system to create
18	in the ground in the substrate.	18	interstitial spaces?
19	Q And you talked about some instability where	19	A Oh. No. It's not designed to go through
20	that nest may be. What's the result of that	20	and carefully suck out interstitial or fines from
21	instability?	21	interstitial spaces. It's designed to excavate
22	A If the red is if the gravel within the	22	relatively large areas and complete holes, and in that
23	red is vibrated or moved, eggs can be crushed. And if	23	process, there's always more fine sediment released
24	the gravel that the nest is in is moved or displaced	24	than there was before because of swell even.
25	or eroded, then the entire nest can be lost, and they	25	Q Do you agree that turbidity created during
		1	
	Page 481		Page 483
1	have usually, salmon, somewhere between 3500 and 4500	1	natural high-flow periods is greater than turbidity
2	have usually, salmon, somewhere between 3500 and 4500 eggs per nest.	2	natural high-flow periods is greater than turbidity caused by suction dredge mining?
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	Page 484		Page 486
1	fish, and it's just hard to relocate in those	1	state, and there are many reports of spring-summer
2	conditions.	2	Chinook spawning throughout the reach where you mined
3	Q Can you describe the type of flow that would	3	and above it and below it. None for fall Chinook.
4	be experienced in the river in July 2015?	4	And steelhead, it should be noted, and it didn't go
5	A It was a very low flow year. Two hundred	5	there with Mr. Kenney's testimony, but they're spring
6	CFS or less, right in there.	6	spawners and they spawn during high turbid flows. So
7	Q And what's CFS?	7	there's almost no reports of steelhead spawning
8	A Cubic feet per second.	8	anywhere.
9	Q Do you agree that scientists have differing	9	The Chinook reds, they're fall spawners when
10	opinions regarding whether suction dredge mining	10	the flows are very clear and low, so we could see them
11	causes an adverse or a beneficial impact?	11	and count them, so they're readily available through a
12	A Say the first part of that again especially.	12	simple spawning survey. But the steelhead spawning
13	Q Does does the do the sorry. Does	13	surveys are rare to nonexistent.
14	the do scientists agree whether there's adverse	14	Q Can I ask you how the steelhead could spawn
15	impacts from suction dredge mining or beneficial	15	in a high water event? We're talking about smothering
16	impacts from suction dredge mining?	16	the eggs with sand silt sediment. Explain that.
17	A There's large agreement of the adverse	17	A That's a good question. They actually spawn
18	effects.	18	after the high water event. So, on the downward
19	MR. MOORE: I have no further questions at	19	you know, if the flows are low and there are not very
20	this time, Your Honor.	20	many peak flows, they'll go ahead and spawn out
21	JUDGE COUGHLIN: All right. Mr. Erlanson,	21	throughout the entire spring, roughly from end of
22	are you ready to offer your questions, or would you	22	March through the end of June or middle of June
23	like a break before doing so?	23	especially. But if the flows are if it's a much
24	MR. ERLANSON: No. I'm ready, Your Honor.	24	higher peak flow year, they will tend to wait because
25	JUDGE COUGHLIN: Okay. Go right ahead.	25	the water temperature is also colder during those
	Page 485		Page 487
1	CROSS-EXAMINATION	1	-
			conditions and they tend to snawn in May and June
2	BY MR. ERLANSON:	1	conditions, and they tend to spawn in May and June later. So it would be on the descending limb of the
2 3	BY MR. ERLANSON: O Okay, We'll go back to the beginning, You	2	later. So it would be on the descending limb of the
2 3 4	Q Okay. We'll go back to the beginning. You		later. So it would be on the descending limb of the peak flows.
3	Q Okay. We'll go back to the beginning. You mentioned in the biological assessment, Mr. Arthaud,	2 3	later. So it would be on the descending limb of the peak flows. Q The South Fork Clearwater River is listed
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1	Red River, and those have really large legacy mining	1	flooded. And because it's cold in the spring and
2	damages to them that have really changed the flows and	2	there's lots of water available above the banks and
3	added lots of sand. So those tributaries are coughing	3	because that habitat's available, the fish will move
4	out large volumes of sand into the main stem, and so	4	to the periphery. They will go into tributaries or
5	there's a canyon below where you mined, and then	5	whatever they do. They will actually try to escape
6	there's sand at high volumes above where you mined,	6	that flow.
7	and there's like a eight- or nine-mile sweet spot	7	Q Okay. How about the insects and micro-
8	right where you're at that's readily wadeable, which	8	invertebrates that you say get smothered from suction
9	means it's consistently shallow for early rearing	9	dredging? Wouldn't these high water flows do the same
10	fish, and it's available for spawning, and that's the	10	thing but on a much greater scale?
11	type of habitat they actually pick.	11	A Yeah. The high flows the high water with
12	Q Okay. But you don't, like you said, you	12	them and the high turbidity with them, they don't
13	don't have any knowledge of any fish spawning there?	13	readily they aren't readily able to move. So a lot
14	A For spring-summer Chinook, I do. They fall	14	of them go underground in the stablest of areas that
15	under essential fish habitat in the MSA but not under	15	they can find, and they lock down to something solid
16	the ESA because they're not listed. And then, for	16	and they weather the thing. They don't grow, they
17	steelhead, we have various reports from Fish and Game	17	don't feed. But usually the floods are over, you
18	and the Nez Perce Tribe of seeing steelhead in the	18	know, after two or three days and the worst of the
19	area, potential steelhead reds, but	19	peak is over, and then they manage to survive through
20	Q Potential.	20	that, and then they also then spawn. Most of them
21	A Right. But, when I actually analyzed the	21	spawn really quickly right after that or during the
22	photographs, it's hard to tell that it's 100 percent	22	cold spring.
23	certain a red because it's so muddy. You could see a	23	Q Well, considering that a high-water event
24	clean spot there, but it's so muddy. You just don't get	24	constitutes 100 percent of the waterway and a suction
25	the records of those reds. And we've actually had	25	dredge a wide plume, have you ever seen a suction
20	the records of those reds. And we ve actually had	25	dredge a wide plane, have you ever seen a suction
	Page 489		Page 491
1	Page 489	1	Page 491
1	them go out to do that, and they've just been turned	1	dredge on the South Fork operating that made the
2	them go out to do that, and they've just been turned back because they couldn't see into the water. So	2	dredge on the South Fork operating that made the entire river turbid?
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1	fall spawners. So the reason they spawn in the fall,	1	those. And at the end on August 15, it's set there so
2	it gives them adaptive advantage over spring spawners	2	that because the Chinook spawning usually doesn't
3	because they've been alive and growing as eggs that	3	start 'til early September. And so, you're right,
4	much longer. So they typically emerge from the red in	4	that is the open window where the least amount of very
5	very early spring at, you know, maybe 40 millimeters	5	young fish would be harmed.
6	fork-length, and with that would be two to three	6	Q When you fishery people and I'm speaking
7	months of rearing, something like that before the	7	in generalizations all over the northwest when you
8	early part of the summer. I would say many are	8	figure out a season, do you do it on a bell-shaped
9	approaching 80 millimeters fork-length, something like	9	type deal where the most spawning is at the top of the
10	that. If it's a very dense year class, they won't	10	bell and then there's spawning before the bell and
11	grow as fast, and there might be plenty of like 60	11	there's spawning after the bell, and that's how you
12	millimeter length fish in there. If it's a sparse	12	decide the season dates?
13	year class with good conditions	13	A That's a reasonable approach, yes, because
14	Q Would it be safe then for me to write down	14	the top of that bell is the best statistical number we
15	60 to 80 millimeter on an average?	15	can come up with, the median or the mean, central
16	A Sure, sure.	16	tendency.
17	JUDGE COUGHLIN: And I think you used a term	17	Q Yeah, exactly.
18	"fork-length," which is I believe just from some	18	A But then we also look at those percentiles
19	exposure to NOAA already	19	on the descending limb of that run and we try not to
20	THE WITNESS: Yes.	20	lop off that last 5 or 10 percent if we can help it,
21	JUDGE COUGHLIN: and other work that we	21	because that's 5 or 10 percent of the run. And then
22	do, a form of measurement of a fish, correct?	22	you should know that given the year, if it's a very
23	THE WITNESS: It's a form of measurement.	23	cold year, the whole bell might shift later into the
24	Thank you. It's a form of measurement of the length	24	summer, into the spring. And if it's a very warm
25	of a fish, and instead of measuring the total length	25	drought year, the whole bell might shift earlier. So
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1	_	1	-
1 2	Page 493 to the tips of its tailfin, they measure the total length to the center of the fork. They have a fork	1	Page 495 those things are all at play. Q Yeah, that's interesting there. I didn't
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	Page 496	Page 498
1	Q That's correct.	1 Q Okay. That's fine. Mr. Arthaud, did you
2	A they think they won't scour from high	2 ever state in your career that the average amount of
3	flows.	³ hours a suction dredger operated was four to five
4	Q Uh-huh, right. Have you, sir it sounds	4 hours?
5	to me like you've spent a lot of time up in the South	5 A I believe the biological opinion has
6	Fork, so I have a question here. Have you ever done a	6 something. Is that where you got that statement from?
7	water quality study on the South Fork from Newsome	7 Q I got it from a FOIA request, but, yes.
8	Creek up to Crooked River? I mean a water quality	8 A Yeah. If you wanted to look, CX-17 on Page
9	study for the plumes that are in the stream.	9 4 of the biological opinion, inside the proposed
10	A Oh, like for heavy metals and things?	10 action we grappled with this issue. From our
11	Q Yes.	11 monitoring on LoLo Creek and Moose Creek and the
12	A I have not done one myself, but I've read	12 others, we saw a wide range. Some went out there to
13	several, including the best one, most recent probably	13 hang out and hardly dredged at all. Others worked two
14	is the IEDQ flights where they flew over sampled	14 crews
15	I'm not sure how they made every sample. But,	15 Q Yeah.
16	basically, they sampled all the Clearwater streams,	16 A sunup to sundown and moved a lot of
17	the water itself, and then they used very fine	17 Q Material.
18	testing, like nanograms	18 A sediment
19	Q Oh, really?	19 Q Yeah.
20	A of amounts in the water, which tell them	20 A and cobble. And so, typically, when we
21	how much is in the sediment below the water.	21 see things like that, we'll apply monitoring to the
22	Q When was that? Could you tell me? Do you	22 problem to make sure what it is, and then we will
23	remember?	23 provide an expectation. So we expect it's somewhere
24	A Fairly recent. 2012? I'm just totally	24 in the middle between those two extremes, and that's
25	guessing. It's in the bi-op. What CX was that?	25 probably what it came down to, a half a day, four
	Page 497	Page 499
	raye 497	raye 499
1	MR. MOORE: I believe it's 17. I also could	1 hours of dredging.
1 2	_	
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	Page 500		Page 502
1	BY MR. ERLANSON:	1	BY MR. ERLANSON:
1		1	
2 3	Q Okay. We covered that. Are there any ESA	2	Q I think we covered a little bit of this earlier. I don't think there's any sense in going
4	species that inhabit the South Fork that are allowed to be taken or caught by sports fishermen, either for	4	over the steelhead thing here, Mr. Arthaud. Do you
5	threatened or endangered species?	5	have any information on the other species, like
6	A Yes.	6	Chinook salmon, either the fall or the spring run, how
7	Q Okay. Could you mention those?	7	may reds have been observed since 2001 in that section
8	A They would be part of typically part of a	8	of the river? I mean, I'm basically not talking my
9	mixed stock fishery where there might be some unlisted	9	section or where this occurred.
10	and listed fish altogether moving up a stream down in	10	A Just the whole river main stem?
11	a lower river or in the ocean. So there's commercial	11	Q I'm talking from Newsome Creek up to Crooked
12	fisheries in the ocean that could take some. But you	12	River.
13	asked for sport fishing. There's sport fishing,	13	A Oh, Newsome Creek up? The fall Chinook reds
14	carefully managed fisheries in the lower Columbia and	14	from Newsome Creek up, I can't remember how far they
15	Snake River. I don't think well, they probably go	15	went. They went up into the canyon a ways. The
16	for steelhead up into the South Fork too.	16	spring-summer Chinook, yes, in that reach and
17	JUDGE COUGHLIN: Is there a particular	17	downstream. They tend to be heaviest at the mouths of
18	terminology associated with that type of taking?	18	tributaries, and where there's thermal refugia or good
19	THE WITNESS: It is	19	quality water coming out of a tributary, they will
20	JUDGE COUGHLIN: Is it a particular type of	20	distribute down the main stem below that area. But
21	take?	21	there's also scattered spawning throughout.
22	THE WITNESS: It's an incidental take	22	JUDGE COUGHLIN: And just for my own
23	JUDGE COUGHLIN: Okay.	23	reference, those areas that you're referring to, where
24	THE WITNESS: because they cannot keep	24	are they in relation to the area in which Mr. Erlanson
25	the wild fish in most in almost all those	25	was dredging?
	Page 501		
	Page 501		Page 503
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2	fisheries. And if they have an adipose fin, they're required to immediately release them without removing	2	THE WITNESS: They're above, below it, and through it for the
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	Page 504		Page 506
1	still falls within the 500-foot mixing zone and would	1	Q Well, he states that although visible,
2	be legal according to the regulations that are on the	2	dredge plumes have little direct consequences to fish
3	books, correct?	3	and invertebrates. That's a conclusion of his study
4	A That's not correct.	4	done in 1988.
5	Q Okay.	5	A Was that
6	A Because EPA, under the general permit and	6	Q You have a tendency to disagree with that.
7	the Forest Service BLM program, the consultation that	7	JUDGE COUGHLIN: Hold on one second. Got an
8	allows that says it can be no longer than 150 feet	8	objection.
9	visible plume.	9	MR. ERLANSON: Oh, I'm sorry.
10	Q Right.	10	JUDGE COUGHLIN: Go ahead.
11	A So, if IDWR or somebody else says something	11	MR. MOORE: I object to the extent that
12	different, it's still is not correct.	12	that's testimony. If there is a study that Mr.
13	Q Right. But, at the end of 150 feet, what is	13	Erlanson has and wants to give the witness a chance to
14	the NTUs allowable?	14	review it, I might be okay with some questions. But,
15	A They don't the 150-foot is a surrogate,	15	without having him review it, I'm hesitant to allow
16	is an observational surrogate for plumes that will	16	him to answer.
17	include harmful effects somewhere along their	17	JUDGE COUGHLIN: Okay. I think that's a
18	distance. So, if the miner has a plume that's visible	18	sustainable objection. Do you have the report?
19	more than 150 feet, he's required to stop or slow down	19	MR. ERLANSON: No, I don't have all these
20	until that plume lessens in distance. And then we	20	reports. It would take 500 pages. I don't have them,
21	expect all the way from nearly below his sluice	21	no.
22	throughout the whole visible length of the plume that	22	JUDGE COUGHLIN: Okay.
23	it will be less than the harmful levels.	23	MR. ERLANSON: I just have the conclusions
24	Q What is the harmful level?	24	of the reports.
25	A Well, as I said before, they start becoming	25	JUDGE COUGHLIN: Okay. Yeah, then I would
	D		
			$D_{e} = E \cap 7$
1	Page 505	1	Page 507
1	behaviorally harmful, an annoyance or irritation,	1	just move on to your next question then.
2	behaviorally harmful, an annoyance or irritation, around 20 NTUs, and then they increase from there	2	just move on to your next question then. MR. ERLANSON: Okay, Your Honor.
2 3	behaviorally harmful, an annoyance or irritation, around 20 NTUs, and then they increase from there until, by the time you're 40 or 50 NTUs, you know,	2 3	just move on to your next question then. MR. ERLANSON: Okay, Your Honor. BY MR. ERLANSON:
2 3 4	behaviorally harmful, an annoyance or irritation, around 20 NTUs, and then they increase from there until, by the time you're 40 or 50 NTUs, you know, there's actually injurious effects of clogging in the	2 3 4	just move on to your next question then. MR. ERLANSON: Okay, Your Honor. BY MR. ERLANSON: Q You mentioned oh, okay. You stated that
2 3	behaviorally harmful, an annoyance or irritation, around 20 NTUs, and then they increase from there until, by the time you're 40 or 50 NTUs, you know, there's actually injurious effects of clogging in the gills and coughing and	2 3 4 5	just move on to your next question then. MR. ERLANSON: Okay, Your Honor. BY MR. ERLANSON: Q You mentioned oh, okay. You stated that you were down in the area of these tailing piles, in
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	Page 508		Page 510
1	activity, how could you accurately come up with a	1	bottom left. That's I know it's 1527.
2	conclusion like that?	2	JUDGE COUGHLIN: Yeah. I think that might
3	A I am basing it on the monitoring reports	3	be CX-38 maybe. I'm just looking at my notes, which
4	that were presented here and the pictures and the	4	may or may not be take a look at that exhibit, Mr.
5	volumes that were measured therein.	5	Erlanson, and see on Page 1527 if that's what your
6	Q Yeah, you sir, you mentioned that five	6	question's related to.
7	meters, cube meters were taken out of the hole	7	MR. ERLANSON: Yeah. There we go.
8	according to those reports that you cited in the	8	JUDGE COUGHLIN: Okay.
9	testimony, and you mentioned that 20 percent of that	9	MR. ERLANSON: Yeah, I've got it.
10	would be it would be actually 20 percent less than	10	BY MR. ERLANSON:
11	that because of compaction factor, like when you're	11	Q You mentioned the rocks being an impediment
12	building a road and you're filling a culvert, it	12	to fish travel there. And considering all the fish
13	always sinks. You can fill it in with the same	13	would be free swimmers, do you can do you
14	material and you'll have a hump on it and	14	believe that the fish can't swim to either side of
15	A Uh-huh.	15	those rocks as they would an in-stream boulder or I
16	Q it takes time to compact it.	16	A No, I do not believe that they can't do
17	A Right.	17	that. I think they can swim around something like
18	JUDGE COUGHLIN: Wait. Hold on one second.	18	this. Most of the fish at that age
19	I want to make sure I'm following. Is this the	19	Q Right.
20	reference to the testimony about swell?	20	A and size, but it does provide a very
21	MR. ERLANSON: Yes.	21	shallow highly exposed substrate for them to have to
22	JUDGE COUGHLIN: Is that what you're asking	22	swim across at risk of predation, or they have to go
23	about?	23	around to the thalweg over on the far side.
24	MR. ERLANSON: Yes, yeah. Compacted	24	Q I agree. I agree. I just wanted to clarify
25	JUDGE COUGHLIN: Okay. I'm not sure if it	25	that. So, when you look at oh, I guess we could
	Page 509		Page 511
1	Page 509 was characterized in quite that way, but Mr. Moore?	1	Page 511 look at any one of these. Let's look at CX-1B. And
1 2	_	1 2	
	was characterized in quite that way, but Mr. Moore?		look at any one of these. Let's look at CX-1B. And
2	was characterized in quite that way, but Mr. Moore? MR. MOORE: I think it wasn't characterized	2	look at any one of these. Let's look at CX-1B. And we want to take a look what I want to look at is
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	Page 512		Page 514
1	asking you, by looking at these pictures, can you	1	suction dredge mining were those from permitted
2	determine that the water has went down measurably?	2	activities?
3	A Yes, I believe I can in that the in the	3	A Yes.
4	CX-1B, you could see more of Rice's tailings piles,	4	Q And that those activities were in compliance
5	and you can start to look at rocks along the shoreline	5	with the terms and conditions of the bi-op?
6	until the water's slightly deeper than it is in the	6	A Fully, yes.
7	1527 lower left photograph.	7	Q If I understood it correctly, you just
8	Q Right, correct.	8	testified that in Exhibit CX-01B, the water level is
9	JUDGE COUGHLIN: Now I just want to hop in,	9	higher than the water level in the photograph in the
10	though, because you made reference to this being a	10	bottom left of Page 1527 of Exhibit 38. Is that
11	Hughes photograph.	11	right?
12	MR. ERLANSON: I think Mr. Hughes took these	12	A That's what I just said. If you can point
13	photographs.	13	me to a rock or a boulder that changes that
14	JUDGE COUGHLIN: Okay. Okay.	14	Q Even if that is true, does that in any way
15	THE WITNESS: Yeah, yeah.	15	affect your opinion regarding the impacts of Mr.
16	JUDGE COUGHLIN: Hughes, CX-1B being the	16	Erlanson's dredging activity?
17	Hughes photograph. Okay.	17	A No, it doesn't. It just means that there's
18	MR. ERLANSON: Oh.	18	still what I said before is still the same, that
19	JUDGE COUGHLIN: I thought you were	19	there's a hump there, and when the water level
20	referring to the one in CX-38.	20	dropped, it was the first thing to go above the water
21	MR. ERLANSON: Oh.	21	level. The tailings are still extending above the
22	JUDGE COUGHLIN: So that's fine. Okay. You	22	water level
23	were referring to the CX-1.	23	Q Does it in any
24	MR. ERLANSON: Yeah.	24	A surface.
25	JUDGE COUGHLIN: Okay. Thank you.	25	Q I'm sorry.
	Page 513		Page 515
1	BY MR. ERLANSON:	1	
1 2	Q Okay. So then you mentioned that half of	2	A Above the surface.Q Does it in any way call into doubt your
3	the stream had been disturbed in this area. But, if	3	conclusions regarding the presence of a pile in the
4	the water went down, let's say, 15 inches, the stream	4	bottom left photograph on Page 1527?
5	would be wouldn't it be much wider, sir?	5	A No. I'm trying to say that it asserts that
6	A If the water went down, the stream width	6	there is a pile there. I'm using that as evidence.
7	would likely decrease. I don't think it went down 15	7	MR. MOORE: Thank you. No further
8	inches. I could still see boulders on the far bank	8	questions.
9	that match up, and it looks more like maybe six or	9	JUDGE COUGHLIN: Okay. Did that raise
10	seven inches.	10	anything else you needed to ask?
11	MR. ERLANSON: Okay. It's opened up. So	11	MR. ERLANSON: One question.
12	that I just that was a point, you know, I wanted	12	JUDGE COUGHLIN: Okay.
13	to make. Okay. We took care of that. I'm done.	13	RECROSS EXAMINATION
14	JUDGE COUGHLIN: Okay. Do you have some	14	BY MR. ERLANSON:
15	redirect?	15	Q On 1527 on that left-hand bottom photo,
16	MR. MOORE: Just a few, Your Honor.	16	you're saying the dredge pile, the dredge tailings are
17	JUDGE COUGHLIN: Sure.	17	out of the water. I do see one, two, maybe three,
18	REDIRECT EXAMINATION	18	four rocks out of a surface area there of probably
19	BY MR. MOORE:	19	I don't know you could estimate it. You're
20	Q Mr. Arthaud, when you drafted the biological	20	probably better at estimating than me, but I'd say
21	opinion and created the terms and conditions in that	21	there's 100 square feet there or something. But do
22	document, including things like the suction dredge	22	you see the little yellow circle that I think denotes
		1	

23

24

25

document, including things like the suction dredge
time period -A Uh-huh.

25 Q -- were you assuming that the impacts of

Q And then down below there's a tailing pile.

Hole Number 5. Do you see that, sir?

A Yes.

	Page 516		Page 518
1	A Right.	1	MR. McLAREN: And, Your Honor, to clarify,
2	Q There's one big rock right at the edge of	2	Complainant has no further testimonial evidence to
3	that hole that I'm sure that whoever was dredging	3	present.
4	there at the time couldn't move, but that's beside the	4	JUDGE COUGHLIN: Okay. All right. So were
5	point. But the rest of it's all tailings, and I only	5	you do you wish to make any kind of closing remark
6	see I mean, I see water going over them tailings	6	or do you waive?
7	except for them, like I said, there's like three or	7	MR. McLAREN: We will waive and submit in
8	four rocks there, and they look like they're in a	8	the form of a post-hearing brief if that's acceptable
9	pretty much straight downstream line. Is that	9	to Your Honor.
10	A Yes. And now look a half inch in the	10	JUDGE COUGHLIN: Okay. That's fine.
11	photograph below those lined up rocks just above the	11	MR. McLAREN: Okay.
12	upper rock and the line, and you'll see some riffling	12	JUDGE COUGHLIN: And, Mr. Erlanson, how
13	areas.	13	about you? I mean, you haven't actually presented a
14	Q Right.	14	case, but did you wish to make any closing comments
15	A That's where the tailings pile is extending	15	before we deal with housekeeping matters?
16	above the surface or so close to the surface that it's	16	MR. ERLANSON: Well, I wrote down a couple
17	causing it to riffle. And so it's	17	things.
18	Q Right. But there's still water running over	18	JUDGE COUGHLIN: Okay.
19	it right there?	19	MR. ERLANSON: During my opening remark, I
20	A Yes.	20	mentioned that there was no NPDES permit available to
21	MR. ERLANSON: Okay. That's all I wanted.	21	me on July 22, 2015. I think through the
22	JUDGE COUGHLIN: Okay. Anything else?	22	cross-examination of EPA witnesses here I've proven
23	MR. MOORE: Nothing, Your Honor.	23	that. I think that the EPA failed to prove that the
24	JUDGE COUGHLIN: All right. Thank you very	24	Defendant, in fact, by himself made Hole 5 and
25	much, Mr. Arthaud.	25	Tailings Number 7. I believe that EPA Witness Martich
	Page 517		Page 519
		1	rage JIJ
1	THE WITNESS: Thank you.	1	-
1 2	THE WITNESS: Thank you. (Witness excused.)	1 2	stated that Erlanson's case was, she quoted "a usual
	-		-
2	(Witness excused.)	2	stated that Erlanson's case was, she quoted "a usual circumstance," which is an occasional disregard for
2 3	(Witness excused.) JUDGE COUGHLIN: We have some I assume no	2 3	stated that Erlanson's case was, she quoted "a usual circumstance," which is an occasional disregard for not having a NPDES permit. And so I'd like the Court
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	Page 520		Page 522
1	MR. McLAREN: Your Honor contextualized that	1	and RX-4 through 9.
2	very well. I will still lodge an objection for the	2	MR. McLAREN: And I believe we've submitted
3	record on RX-2, RX-4 through 9. So, understanding the	3	a copy, what EPA had, to Your Honor and to Mr.
4	choice to allow them in on the basis of leniency,	4	Erlanson. Is that correct? Do you have
5	despite the fact that there's no testimony,	5	JUDGE COUGHLIN: I don't have a copy from
6	Complainant objects based on their relevance to the	6	you, but I don't need one.
7	questions at issue in this case, the fact that they've	7	MR. McLAREN: Certainly.
8	not been authenticated by any witness, the fact that		JUDGE COUGHLIN: I actually we I have
9	Complainant has not had an opportunity to direct	9	it available already as part of the pre-hearing
10	examine or cross-examine a witness as to the veracity	10	exchange.
11	or the contents thereof or the general reliability of	11	MR. McLAREN: Yes.
12	the exhibits themselves, and just quite generally	12	JUDGE COUGHLIN: My only concern was that
13	based on the prejudice to Complainant on the admission	13	the court reporter had a copy. But I think you had an
14	of seven documents of evidence without any of the	14	extra that you had offered or no?
15	typical introduction requirements. So, beyond that,	15	MR. McLAREN: We must. We have so many.
16	though, Complainant has no other objection.	16	JUDGE COUGHLIN: Oh, okay. I don't mean to
17	JUDGE COUGHLIN: Okay. And I get it.	17	impose that on you. It's not your responsibility,
18	MR. McLAREN: Right, right.	18	but
19	JUDGE COUGHLIN: I do and so I appreciate	19	MR. McLAREN: It's the nature of the
20	it. I'm glad you put those on the record. They're	20	circumstances.
21	noted. I'm going to accept them into evidence.	21	JUDGE COUGHLIN: Okay.
22	//	22	MR. McLAREN: Mr. Jones, did we give you a
23	//	23	copy of what looks like this? It would look like
24	//	24	this.
25	//	25	THE COURT REPORTER: No, I didn't get a
	Page 521		Page 523
1	(The documents referred to	1	binder.
1 2	were marked for	2	
3	identification as	3	MR. McLAREN: Okay. We ought to have an extra of these, and those are the exhibits if I
4	Respondent's Exhibit Nos. 2	4	may?
5	and 4 through 9 and were	5	JUDGE COUGHLIN: Yes, sure.
6	received in evidenced.)	6	MR. McLAREN: Those are the exhibits that
7	,	7	
	JUDGE COUGHLIN: And, obviously, when you're		Mr. Erlanson brought early yesterday. THE COURT REPORTER: Right. They were not.
8	preparing your post-hearing briefing, apart from what	8	
9	you've already stated, if you wish to make any	9	MR. McLAREN: Those were not admitted in. I
10	additional arguments as to what, if any, weight I	10 11	don't know if the court reporter nonetheless needs them.
11 12	could attribute them, you can certainly do that.		
ΤZ			
1 0	MR. McLAREN: I understand, Your Honor.	12	JUDGE COUGHLIN: Yes. I think they should
13	MR. McLAREN: I understand, Your Honor. JUDGE COUGHLIN: And, actually, Mr.	12 13	JUDGE COUGHLIN: Yes. I think they should be included in what you have because my ruling on
14	MR. McLAREN: I understand, Your Honor. JUDGE COUGHLIN: And, actually, Mr. Erlanson, the same holds true for you with regard to	12 13 14	JUDGE COUGHLIN: Yes. I think they should be included in what you have because my ruling on excluding them was done at this evidentiary hearing,
14 15	MR. McLAREN: I understand, Your Honor. JUDGE COUGHLIN: And, actually, Mr. Erlanson, the same holds true for you with regard to what's been accepted into evidence already by	12 13 14 15	JUDGE COUGHLIN: Yes. I think they should be included in what you have because my ruling on excluding them was done at this evidentiary hearing, and it's part of the transcript. Thank you. So yes
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1	Page 524		Page 526
	that then for the court reporter?	1	MR. McLAREN: It's not a proposed exhibit.
2	MR. ERLANSON: Sure.	2	It's an aspect of the publicly available docket. So
3	JUDGE COUGHLIN: Okay. Let's go ahead and	3	it's not a proposed exhibit in this case.
4	hand that to him right now.	4	JUDGE COUGHLIN: Okay. So is that oh,
5	MR. McLAREN: Great.	5	dear. My computer's freezing up. It's not on the
6	JUDGE COUGHLIN: Yeah. I knew there was	6	disk?
7	some exchanging going on yesterday.	7	MR. McLAREN: It's not on the disk.
8	MR. MOORE: And for the record, Your Honor,	8	JUDGE COUGHLIN: Okay.
9	that binder does include the exhibits that you	9	MR. WRIGHT: It was filed.
10	excluded in response to our motions in limine.	10	JUDGE COUGHLIN: It was filed, though?
11	JUDGE COUGHLIN: Okay. So we're still on	11	MR. McLAREN: It was filed.
12	the record here. So the binder, if you could just	12	JUDGE COUGHLIN: Okay. But I just want to
13	hand that to Mr. Jones. Great. So that is the binder	13	oh, darn. My computer's freezing up.
14	of Respondent's exhibits that had been proposed as	14	MR. McLAREN: I have copies.
15	part of the pre-hearing exchange. They're RX-1	15	JUDGE COUGHLIN: If you have copies, great.
16	through RX-9. All I'm permitting to be admitted into	16	MR. McLAREN: Yes.
17	evidence is RX-2 and RX-4 through RX-9. RX-1 and RX-3	17	JUDGE COUGHLIN: One for you, one for Mr.
18	were previously excluded in my order in response to	18	Erlanson, and any extras.
19	Complainant's first motion in limine. So, if it's	19	JUDGE COUGHLIN: Just for the court
20	helpful, we can pull those out. We can pull out RX-1	20	reporter.
21	and RX-3. You can do that? Okay. All right. Thank	21	MR. McLAREN: The court reporter? There you
22	you, Mr. Jones. But, otherwise, I think it's very	22	go, Mr. Erlanson.
23	clear from the record. I've said it I don't even know	23	MR. ERLANSON: Yeah.
24	how many times at this point, and the case record	24	MR. McLAREN: If I may approach?
25	certainly reflects my order on the other two.	25	JUDGE COUGHLIN: Yes.
	Page 525		Page 527
1	Okay. So something else before I confirm		
-	Okay. So something else before i commin	1	THE COURT REPORTER: Thank you.
2	the exhibits?	2	MR. McLAREN: Your Honor.
	the exhibits? MR. McLAREN: Complainant has one two	2 3	MR. McLAREN: Your Honor. JUDGE COUGHLIN: Thank you.
2 3 4	the exhibits? MR. McLAREN: Complainant has one two other items.	2 3 4	MR. McLAREN: Your Honor. JUDGE COUGHLIN: Thank you. MR. McLAREN: And I bring this up at this
2 3 4 5	the exhibits? MR. McLAREN: Complainant has one two other items. JUDGE COUGHLIN: Okay.	2 3 4 5	MR. McLAREN: Your Honor. JUDGE COUGHLIN: Thank you. MR. McLAREN: And I bring this up at this time because Your Honor said earlier that you wouldn't
2 3 4 5 6	the exhibits? MR. McLAREN: Complainant has one two other items. JUDGE COUGHLIN: Okay. MR. McLAREN: Due to the sort of novel	2 3 4 5 6	MR. McLAREN: Your Honor. JUDGE COUGHLIN: Thank you. MR. McLAREN: And I bring this up at this time because Your Honor said earlier that you wouldn't consider other items in the administrative record for
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	Page 528		Page 530
1	MR. McLAREN: Okay.	1	JUDGE COUGHLIN: And they're basically
2	JUDGE COUGHLIN: Mr. Erlanson, do you	2	asking me to rely on it again in making a decision.
3	recognize this?	3	MR. ERLANSON: Yeah, I'll read it over.
4	MR. ERLANSON: Not really.	4	JUDGE COUGHLIN: Okay. So why don't we
5	JUDGE COUGHLIN: I think it might have been	5	take I don't want you to be rushed. Why don't we
6	referenced.	6	take 15 minutes?
7	MR. ERLANSON: Not really. I don't, Your	7	MR. ERLANSON: Five minutes is enough. If I
8	Honor, but I'm trying to read it over here.	8	just have five minutes here, I could read this.
9	JUDGE COUGHLIN: Okay.	9	JUDGE COUGHLIN: Okay. All right. We'll do
10	MR. McLAREN: And, again, the context here,	10	five minutes, come back then, and then we'll just
11	this was submitted along with Respondent's opposition	11	finish up.
12	to Complainant's motion for accelerated decision. You	12	MR. ERLANSON: Sure.
13	relied upon it in your order on that accelerated	13	JUDGE COUGHLIN: Okay. Thank you.
14	decision, and a mistake made at the beginning of	14	(Whereupon, a brief recess was taken.)
15	hearing is I believe this was fair game for the	15	JUDGE COUGHLIN: Okay. We're back on record
16	purposes of the entirety of the record.	16	after a brief break. So, Mr. Erlanson, any reason I
17	JUDGE COUGHLIN: Okay. Yeah, Mr. Erlanson,	17	shouldn't accept your declaration as an exhibit?
18	take a look at it because I'm inclined I'd like you	18	MR. ERLANSON: Your Honor, I didn't sign
19	to just confirm that this is the declaration that had	19	this, number one. Number two, I understand my
20	been submitted by your attorney. And so take a look	20	attorney apparently signed this in my behalf, but I'm
21	over it, and I think actually maybe it might be	21	not familiar with half the stuff that's written in
22	helpful to just take a 5-, 10-minute break.	22	here. I'm sorry. I mean, there's some stuff in here
23	MR. McLAREN: Certainly, Your Honor.	23	that I think is fine, but I think there's other stuff
24	JUDGE COUGHLIN: Give you some time to	24	here that I don't know anything about it. I was
25	review it. You understand where this comes from?	25	JUDGE COUGHLIN: Did you read the last
	Page 529		Page 531
1	This was when Complainant moved for accelerated	1	sentence? "I hereby declare that the foregoing is
2	decision, which was the vehicle by which I granted it	2	true and correct to the best of my knowledge and
3	and established liability for the charged violation.	3	recollection under penalty of perjury of the laws of
4	Okay? That's kind of the buzz word there. In	4	the United States"?
5	response to their motion for accelerated decision, you	5	MR. ERLANSON: I understand that. I
6	at the time had been represented.	6	understand that.
7	MR. ERLANSON: Right.	7	JUDGE COUGHLIN: Well, it was submitted. I
8	JUDGE COUGHLIN: And there was a response to	8	considered it in my accelerated decision.
9			-
	that motion by your attorney on your behalf, and this	9	MR. ERLANSON: Yes, I
10	declaration by your automey on your benait, and this declaration by you was included.	9 10	MR. ERLANSON: Yes, I JUDGE COUGHLIN: Issued order.
10 11			
	declaration by you was included. MR. ERLANSON: Right. JUDGE COUGHLIN: And, in fact, referred to	10	JUDGE COUGHLIN: Issued order. MR. ERLANSON: read that, Your Honor, but I didn't sign it. I don't have a typewriter to sign
11	declaration by you was included. MR. ERLANSON: Right. JUDGE COUGHLIN: And, in fact, referred to in my order on accelerated decision.	10 11 12 13	JUDGE COUGHLIN: Issued order. MR. ERLANSON: read that, Your Honor, but I didn't sign it. I don't have a typewriter to sign it even. So I don't my attorney might have put
11 12 13 14	declaration by you was included. MR. ERLANSON: Right. JUDGE COUGHLIN: And, in fact, referred to in my order on accelerated decision. MR. ERLANSON: Okay.	10 11 12 13 14	JUDGE COUGHLIN: Issued order. MR. ERLANSON: read that, Your Honor, but I didn't sign it. I don't have a typewriter to sign it even. So I don't my attorney might have put this in in my behalf. I it seems like he did. I'm
11 12 13 14 15	declaration by you was included. MR. ERLANSON: Right. JUDGE COUGHLIN: And, in fact, referred to in my order on accelerated decision. MR. ERLANSON: Okay. JUDGE COUGHLIN: So this is what Complainant	10 11 12 13 14 15	JUDGE COUGHLIN: Issued order. MR. ERLANSON: read that, Your Honor, but I didn't sign it. I don't have a typewriter to sign it even. So I don't my attorney might have put this in in my behalf. I it seems like he did. I'm trying to realize when what threw me off here is
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11 12 13 14 15 16 17	declaration by you was included. MR. ERLANSON: Right. JUDGE COUGHLIN: And, in fact, referred to in my order on accelerated decision. MR. ERLANSON: Okay. JUDGE COUGHLIN: So this is what Complainant is seeking to introduce into evidence since I've taken in your exhibits and since you've been sworn and made	10 11 12 13 14 15 16 17	JUDGE COUGHLIN: Issued order. MR. ERLANSON: read that, Your Honor, but I didn't sign it. I don't have a typewriter to sign it even. So I don't my attorney might have put this in in my behalf. I it seems like he did. I'm trying to realize when what threw me off here is No. 14 if you want to look at it. It said "A joint"
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11 12 13 14 15 16 17 18 19 20 21 22 23 24	declaration by you was included. MR. ERLANSON: Right. JUDGE COUGHLIN: And, in fact, referred to in my order on accelerated decision. MR. ERLANSON: Okay. JUDGE COUGHLIN: So this is what Complainant is seeking to introduce into evidence since I've taken in your exhibits and since you've been sworn and made some statements here and there, to be able to respond and defend against any of that. So take a look through it. Let me know if you have any cause for concern or anything like that. MR. ERLANSON: Uh-huh. JUDGE COUGHLIN: I've relied on it in the past.	10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	JUDGE COUGHLIN: Issued order. MR. ERLANSON: read that, Your Honor, but I didn't sign it. I don't have a typewriter to sign it even. So I don't my attorney might have put this in in my behalf. I it seems like he did. I'm trying to realize when what threw me off here is No. 14 if you want to look at it. It said "A joint" JUDGE COUGHLIN: Well, we don't I don't I'm not looking MR. ERLANSON: Oh. JUDGE COUGHLIN: to discuss it. MR. ERLANSON: Oh, okay. JUDGE COUGHLIN: You're not you've chosen not to testify. So there's no need to engage in a
11 12 13 14 15 16 17 18 19 20 21 22 23	declaration by you was included. MR. ERLANSON: Right. JUDGE COUGHLIN: And, in fact, referred to in my order on accelerated decision. MR. ERLANSON: Okay. JUDGE COUGHLIN: So this is what Complainant is seeking to introduce into evidence since I've taken in your exhibits and since you've been sworn and made some statements here and there, to be able to respond and defend against any of that. So take a look through it. Let me know if you have any cause for concern or anything like that. MR. ERLANSON: Uh-huh. JUDGE COUGHLIN: I've relied on it in the	10 11 12 13 14 15 16 17 18 19 20 21 22 23	JUDGE COUGHLIN: Issued order. MR. ERLANSON: read that, Your Honor, but I didn't sign it. I don't have a typewriter to sign it even. So I don't my attorney might have put this in in my behalf. I it seems like he did. I'm trying to realize when what threw me off here is No. 14 if you want to look at it. It said "A joint" JUDGE COUGHLIN: Well, we don't I don't I'm not looking MR. ERLANSON: Oh. JUDGE COUGHLIN: to discuss it. MR. ERLANSON: Oh, okay. JUDGE COUGHLIN: You're not you've chosen

	Page 532		Page 534
1	MR. ERLANSON: Well, if it's been	1	this if he offers that. I believe, again, due to the
2	JUDGE COUGHLIN: But it's concerning to me	2	novel nature of his testimony and questions throughout
3	that something that's represented	3	the course of the hearing, that items in the record
4	MR. ERLANSON: Yeah, I	4	that would otherwise undermine those items or the
5	JUDGE COUGHLIN: to be true and correct	5	statements that he's made, not to mention something
6	with that declaration, if you're saying, in fact, it	6	that's a signed and sworn affidavit, should be
7	isn't.	7	acceptable regardless of RX-2 and then 4 through 9.
8	MR. ERLANSON: Your Honor, I'm not familiar	8	So I would still posit to attempt to enter it for your
9	9 with some of the things in this that's written in		consideration in the absence of those items.
10	10 here. If Mark Pollot did it on my behalf and he did,		JUDGE COUGHLIN: Okay. And, I mean, I
11	then he did. But, like I said, I'm not familiar with	11	understand that.
12	some of this stuff in here, and I'm just, I'm trying	12	MR. McLAREN: Certainly.
13	to use my brain to recollect, but I just I do now	13	JUDGE COUGHLIN: But, to the extent there
14	understand I was denied a joint permit. We put a	14	were any statements made by Mr. Erlanson that you
15	permit in.	15	might construe as testimony, I do not. So I would not
16	JUDGE COUGHLIN: Yeah, again, I don't want	16	be relying on those statements. I mean, where there
17	to hear any I mean	17	were questions posed and answers given, that is
18	MR. ERLANSON: Yeah. So	18	reasonably within the confine of cross-examination.
19	JUDGE COUGHLIN: I'm not interested in	19	To the extent there were comments interspersed, I'm
20	any dialogue.	20	not going to construe that as testimony because Mr.
21	MR. ERLANSON: That's what	21	Erlanson has elected not to testify.
22	JUDGE COUGHLIN: So	22	MR. McLAREN: Certainly.
23	MR. ERLANSON: That's what threw me off. So	23	JUDGE COUGHLIN: Okay? I mean, if he had,
24	I don't	24	then we'd be talking about something else. But he has
25	JUDGE COUGHLIN: Well, let me put it this	25	elected not to, and that's his choice. I respect
	Page 533		
			Page 535
1	way.	1	that. It's not for me to decide. So rest assured
1 2	_	1	_
	way.	1	that. It's not for me to decide. So rest assured
2	way. MR. ERLANSON: I need to I need it's	2	that. It's not for me to decide. So rest assured that I won't be considering those ancillary comments,
2 3	way. MR. ERLANSON: I need to I need it's been a while and I need to think.	2 3	that. It's not for me to decide. So rest assured that I won't be considering those ancillary comments, if you will, as testimony.
2 3 4	way. MR. ERLANSON: I need to I need it's been a while and I need to think. JUDGE COUGHLIN: I'll give you some options	2 3 4	that. It's not for me to decide. So rest assured that I won't be considering those ancillary comments, if you will, as testimony. MR. McLAREN: Certainly, Your Honor.
2 3 4 5	way. MR. ERLANSON: I need to I need it's been a while and I need to think. JUDGE COUGHLIN: I'll give you some options here. If you want me to consider again to the extent	2 3 4 5	that. It's not for me to decide. So rest assured that I won't be considering those ancillary comments, if you will, as testimony. MR. McLAREN: Certainly, Your Honor. JUDGE COUGHLIN: Okay. So, for that reason,
2 3 4 5 6	way. MR. ERLANSON: I need to I need it's been a while and I need to think. JUDGE COUGHLIN: I'll give you some options here. If you want me to consider again to the extent that I even can in the absence of the presentation of	2 3 4 5 6	 that. It's not for me to decide. So rest assured that I won't be considering those ancillary comments, if you will, as testimony. MR. McLAREN: Certainly, Your Honor. JUDGE COUGHLIN: Okay. So, for that reason, I don't know that I necessarily need this in the I
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	Page 536		Page 538
1	I'm not going to consider them, then I just won't	1	but I, of course, accept whatever Your Honor decides
2	consider any of this declaration or those. So what do	2	here.
3	you want to do?	3	JUDGE COUGHLIN: I mean, when you say you
4	MR. ERLANSON: This case has went on so	4	sent it to him for his review, those were some kind of
5	long, Your Honor, that life goes on and this case has	5	just internal exchanges or I because I don't
6	been going on for four years. I read this in five	6	necessarily recollect being part of that.
7	minutes, and my mind wasn't on this. I think	7	MR. McLAREN: When we proposed stipulations
8	JUDGE COUGHLIN: Yeah. I'm not asking	8	in compliance with Your Honor's order by I believe
9			it's April 12, 2019
10	JUDGE COUGHLIN: you about the	10	JUDGE COUGHLIN: Okay.
11	declaration right now.	11	MR. McLAREN: we did not share the
12	MR. ERLANSON: I think what we'll do I	12	proposed stipulations because those weren't agreed
13	think in the best interest of getting this resolved,	13	upon at that point. What we did do, though, to show
14	we'll just take out those Respondent's 2 and 4 through	14	that the good-faith efforts were continuing was we
15	7. Is that	15	provided the cover letter that we sent dated and sent
16	JUDGE COUGHLIN: 4 through 9.	16	to Respondent, as well as the many filings that we
17	MR. ERLANSON: Or 4 through 9.	17	provided to Respondent for his benefit to prepare for
18	JUDGE COUGHLIN: Okay.	18	this hearing.
19	MR. ERLANSON: And we'll discontinue this	19	JUDGE COUGHLIN: Uh-huh.
20	because I haven't read this.	20	MR. McLAREN: Among those were this
21	JUDGE COUGHLIN: Okay. So let me this is	21	declaration and several other items, and that was I
22	a really kind of mixed up stage here. But I'm going	22	believe April 1 of this year. So I only offer it to
23	to ask the court reporter to just give that binder	23	say that there are several statements about this being
24	back. So I won't consider any exhibits from	24	presented to him as a surprise and this is his first
25	Respondent.	25	time seeing it and a disavowal. I would understand if
	Page 537		Page 539
1	(The documents referred to,	1	Your Honor doesn't want to enter anything else into
2	(The documents referred to, previously identified as	2	Your Honor doesn't want to enter anything else into the record. It remains the case, though, that the
2 3	(The documents referred to, previously identified as Respondent's Exhibit Nos. 2	2 3	Your Honor doesn't want to enter anything else into the record. It remains the case, though, that the validity of this signed and sworn declaration
2 3 4	(The documents referred to, previously identified as Respondent's Exhibit Nos. 2 and 4 through 9, were	2 3 4	Your Honor doesn't want to enter anything else into the record. It remains the case, though, that the validity of this signed and sworn declaration submitted by Respondent in this record and the fact
2 3 4 5	(The documents referred to, previously identified as Respondent's Exhibit Nos. 2 and 4 through 9, were withdrawn.)	2 3 4 5	Your Honor doesn't want to enter anything else into the record. It remains the case, though, that the validity of this signed and sworn declaration submitted by Respondent in this record and the fact that we have not been able to cross-examine him would
2 3 4 5 6	(The documents referred to, previously identified as Respondent's Exhibit Nos. 2 and 4 through 9, were withdrawn.) JUDGE COUGHLIN: The declaration, I	2 3 4 5 6	Your Honor doesn't want to enter anything else into the record. It remains the case, though, that the validity of this signed and sworn declaration submitted by Respondent in this record and the fact that we have not been able to cross-examine him would push me to ask for you to consider this declaration.
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	Page 540		Page 542
1	concerns. But it's not going to substitute for	1	our understanding, Your Honor.
2	testimony in the	2	JUDGE COUGHLIN: Okay. Great. All right.
3	MR. McLAREN: I	3	No Respondent's exhibits have been admitted. The
4	JUDGE COUGHLIN: in the absence of Mr.	4	witnesses, that's all going to be clear from the
5	Erlanson now being under oath attesting to the truth	5	transcript. Any other housekeeping matter? I need to
6	and accuracy of it.	6	just give a rundown on the post-hearing process, but
7	7 MR. McLAREN: I won't push the envelope,		apart from that?
8	8 Your Honor.		MR. MOORE: Yeah, I have one additional
9	JUDGE COUGHLIN: I mean, I understand your	9	evidentiary clarification, I think.
10	point and, you know, I'm glad you've made the comments	10	JUDGE COUGHLIN: Sure.
11	on the record.	11	MR. MOORE: In Respondent's motion that was
12	MR. McLAREN: Certainly.	12	dated April 5, 2019, the motion to file out of time
13	JUDGE COUGHLIN: I understand that, but I	13	for additional witnesses, an affidavit of Ron Miller
14	don't think I can, in the absence of it being adopted	14	was included. Pursuant to Rule 22.22(c) of the
15	for this evidentiary hearing for which testimony must	15	consolidated rules, witnesses may admit written
16	be sworn, rely upon it in lieu of that.	16	testimony in lieu of oral testimony only if that
17	MR. McLAREN: Certainly, Your Honor.	17	witness is subject to cross-examination. Obviously,
18	JUDGE COUGHLIN: If that makes sense. So	18	Mr. Miller was not presented here. And so we ask that
19	what I'll do is hand this back to you.	19	that affidavit not be included into the record.
20	MR. McLAREN: I'll come get it.	20	JUDGE COUGHLIN: So it's it is because
21	JUDGE COUGHLIN: And, obviously, it's within	21	we need to just be clear when we say "the record."
22	the case record, so there's certainly it's	22	MR. MOORE: Thank you.
23	certainly preserved there if you feel I've erred in	23	JUDGE COUGHLIN: It's not a criticism. It
24	this ruling. You know, just as I've said to Mr.	24	happens a lot, but it is not part of this evidentiary
25	Erlanson, you're welcome to argue about that on	25	proceeding. There were there was no presentation
	Page 541		Page 543
1	Page 541 review. But I don't feel like it's going to serve the	1	Page 543 of a case on behalf of Respondent, no witnesses, no
1 2	2	1 2	-
	review. But I don't feel like it's going to serve the		of a case on behalf of Respondent, no witnesses, no
2	review. But I don't feel like it's going to serve the purpose of to replace testimony in this hearing.	2	of a case on behalf of Respondent, no witnesses, no exhibits. So I won't be considering that affidavit.
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	Page 544		Page 546
1	get a copy of the transcript. Once we get it from the	1	made, you can file a motion to that effect and then
2	court reporting service, we then send it to the	2	I'll rule accordingly.
3	parties. Is there a preference as to you may have	3	MR. ERLANSON: Am I allowed to call Mike and
4	covered this pre-hearing, but since I'm not involved	4	ask him a question about it, you know, whether this is
5	in those pre-hearing conferences, let me just confirm.	5	significant or not or what do you
6	Is there a preference as to whether you receive that	6	JUDGE COUGHLIN: Yeah, it's really not for
7	transcript electronically or on paper? From	7	him to decide.
8	Complainant?	8	MR. ERLANSON: Oh, it's
9	MR. McLAREN: We would like to receive it	9	JUDGE COUGHLIN: Just read through the
10	electronically, please.	10	transcript and
11	JUDGE COUGHLIN: Okay. And Mr. Erlanson?	11	MR. ERLANSON: Okay.
12	MR. ERLANSON: To be honest with you, Your	12	JUDGE COUGHLIN: if you see any glaring
13	Honor, what's cheaper?	13	errors, then you can write us and let us know. Okay?
14	JUDGE COUGHLIN: It really doesn't matter.	14	MR. ERLANSON: Okay. Thank you. Yeah.
15	We send it to you, so it's just how	15	JUDGE COUGHLIN: All I'm trying to say is
16	MR. ERLANSON: Oh. There's no cost	16	usually the types of errors that we tend to encounter
17	involved?	17	are minor.
18	JUDGE COUGHLIN: No. It's how you'd like to	18	MR. ERLANSON: Okay.
19	receive it.	19	JUDGE COUGHLIN: But it doesn't mean that
20	MR. ERLANSON: Oh, paper.	20	something non-minor can't exist, I suppose. But you
21	JUDGE COUGHLIN: Okay. Mike, you got that?	21	just read it and decide for yourself. Okay?
22	MR. WRIGHT: Yes.	22	MR. ERLANSON: Okay.
23	JUDGE COUGHLIN: Okay. All right. So we'll	23	JUDGE COUGHLIN: And then we'll also include
24	be sending you that. There will be, as I said, an	24	some deadlines for the post-hearing briefing.
25	opportunity to file any motion to conform the	25	Typically, you know, I start with Complaint. I give
	Page 545		Page 547
1	transcript, and that's really more for just	1	the Complainant the first initial briefing deadline,
2	typographical errors and, you know, just like an	2	and that's simply because they tend to bear the
3	errata type situation, not for any substantive changes	3	initial burden in these cases, and so I have them go
4	generally. Do you have a question about that?	4	first. Then it'll be followed by a deadline for
5	MR. ERLANSON: No, Your Honor, but so	5	Respondent to submit his initial post-hearing brief.
6	it's just typographical stuff that we're going to try	6	And then there will be the opportunity for reply
7	and you can't change the transcript, right?	7	briefs, again staggered with Complainant replying
8	JUDGE COUGHLIN: I mean, there should not be	8	first and then Respondent replying thereafter.
9	significant substantive changes. Sometimes it's a	9	You don't have to submit a brief if you
10	question of often, with the use of acronyms and	10	don't want to, but it is available to you, and it is a
11	things like that, there can be slight misspellings or	11	point only to make argument because I won't be
12	things like that.	12	receiving any new evidence. Once this hearing closes,
13	MR. ERLANSON: Oh, okay.	13	that closes the record of evidence that I'll receive
14	JUDGE COUGHLIN: So it's really more for	14	and upon which I'll base a decision. So the
15	those types of corrections. I mean, if there's	15	post-hearing briefing is purely for argument about
16	something really significant, then you could certainly	16	what has been presented.
17	alert me to it, but that's not often what transpires.	17	MR. ERLANSON: Okay. Got you.
18	It's usually just more of a typo.	18	JUDGE COUGHLIN: After that, I then
19	MR. ERLANSON: What's that like when you say	19	undertake the task of going through everything and
20	"significant"? What do you mean by that?	20	issuing an initial decision, which I, you know, will
21	JUDGE COUGHLIN: Well, you be the judge. I	21	do as quickly as I can, but I'm pretty thorough and
~ ~		1	
22	mean, you read it	22	I'd like to think pretty detailed. So it takes time.
22 23		1	

24

25

- 23 MR. ERLANSON: Oh.
 24 JUDGE COUGHLIN: -- through and if you feel
- 25 like there are significant changes that need to be

55 (Pages 544 to 547)

and then that'll be sent out to you once it's issued.

Any questions before we depart?

	Page 548		Page 550
1	MR. McLAREN: None from EPA.	1	JUDGE COUGHLIN: Okay. Yeah.
2		2	MR. ERLANSON: Yeah.
3	JUDGE COUGHLIN: Okay. MR. ERLANSON: I have one, Your Honor.	3	JUDGE COUGHLIN: So that's where the appeal
4	JUDGE COUGHLIN: Sure.	4	language is, and I think, you know, we refer to it in
5	MR. ERLANSON: Depending on the outcome of	5	the initial decision, but you can it's publicly
6	the case, when you rule on the case	6	available. You can just pull it up on the internet.
7	JUDGE COUGHLIN: Uh-huh.	7	MR. ERLANSON: Yeah.
8	MR. ERLANSON: you send the parties the	8	JUDGE COUGHLIN: Okay?
9	information, your ruling.	9	MR. ERLANSON: Thank you, Your Honor.
10	JUDGE COUGHLIN: It'll be an initial	10	JUDGE COUGHLIN: Okay. And, yeah, there are
11	decision.	11	timeframes, but that'll be specified too.
12	MR. ERLANSON: Okay.	12	MR. ERLANSON: Okay. Appreciate it.
13	JUDGE COUGHLIN: That's what it's called.	13	JUDGE COUGHLIN: Sure. And then what you'll
14	It's my decision and it's written.	14	do is you'll appeal to the Environmental Appeals
15	MR. ERLANSON: Okay. And then do you	15	Bureau, and I've actually kind of referenced that
16	personally have information of how long I have to	16	already in one of my prior orders to you
17	write up an appeal?	17	MR. ERLANSON: Yeah, I've
18	JUDGE COUGHLIN: Yeah, we actually provide	18	JUDGE COUGHLIN: in response to one of
19	that with the initial decision.	19	your motions about possible interlocutory appeal. I
20	MR. ERLANSON: Oh, okay.	20	know I have made reference to them already.
21	JUDGE COUGHLIN: There's a timeframe within	21	MR. ERLANSON: Right. Okay.
22	which you do have to appeal, and I think we tend to	22	JUDGE COUGHLIN: So they review my decision
23	also include a copy of the rules. Do we, with our	23	and determine if it was correct.
24	initial decisions?	24	MR. ERLANSON: Okay.
25	MR. WRIGHT: I don't think we do.	25	JUDGE COUGHLIN: And they'll either affirm
	Page 549		Page 551
1	Page 549 JUDGE COUGHLIN: We don't? Okay. We do in	1	Page 551 it, reverse it, or remand it if they need me to do
1 2		1 2	
	JUDGE COUGHLIN: We don't? Okay. We do in		it, reverse it, or remand it if they need me to do
2	JUDGE COUGHLIN: We don't? Okay. We do in some other cases, other agency cases that we handle, so sometimes I get confused about that. But there will be language that talks about the appeal rights.	2	it, reverse it, or remand it if they need me to do something to fix a mistake. But they'll let you know
2 3	JUDGE COUGHLIN: We don't? Okay. We do in some other cases, other agency cases that we handle, so sometimes I get confused about that. But there	2 3	it, reverse it, or remand it if they need me to do something to fix a mistake. But they'll let you know what that is when they review.
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1	JUDGE COUGHLIN: All right. Great. Thank	
2	you all very much. Appreciate your time. Safe travels	
3	home. I'll just be a few moments to pack up. Please	
4	don't discuss anything further with me about the case.	
5	And the hearing's concluded. Thank you.	
6	MR. McLAREN: Thank you, Your Honor.	
7	MR. ERLANSON: Thank you.	
8	(Whereupon, at 2:50 p.m., the hearing in the	
9	above-entitled matter adjourned.)	
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	REPORTER'S CERTIFICATE	
	DOCKET NO.: CWA-10-2016-0109	
	CASE TITLE: Dave Erlanson, Sr.	
	HEARING DATE: May 15, 2019 LOCATION: Rigby, Idaho	
	LOCATION. Rigby, Idailo	
	I hereby certify that the proceedings and	
	evidence are contained fully and accurately on the	
1	tapes and notes reported by me at the hearing in the	
1	above case before the United States Environmental	
	Protection Agency, Office of Administrative Law	
1	Judges.	
1	Data: May 15 2010	
	Date: May 15, 2019	
1		
	David Jones	
1	Official Reporter	
	Heritage Reporting Corporation	
1	Suite 206	
	1220 L Street, N.W.	
	Washington, D.C. 20005-4018	
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